1-1-1992

A study of transportation needs of selected samples of frail elders in Las Vegas

Carolyn Worth Martin

University of Nevada, Las Vegas

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A study of transportation needs of selected samples of frail elders in Las Vegas

Martin, Carolyn Worth, M.S.W.
University of Nevada, Las Vegas, 1992

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A STUDY OF TRANSPORTATION NEEDS
OF SELECTED SAMPLES OF FRAIL ELDERS IN LAS VEGAS

by
Carolyn W. Martin

A Thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Social Work

The School of Social Work
University of Nevada, Las Vegas
May 1992
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May 1992
Abstract

The most striking demographic change to occur in this country in the past 30 years has been the aging of the nation's population. Normally such a shift in demographic conditions would create additional demands for various kinds of social services. In order to have access to the basic needs of life such as food and clothing, in addition to health services, one has to have a dependable means of transportation. Inadequate transportation for over 25 million older Americans is a problem in all parts of the nation. Without transportation, the elderly person may be unable to take care of his/her needs for medical care, food, income, socialization and recreation.

The purpose of this research was to assess if frail elders in the Las Vegas community had transportation problems and were unable to satisfy their needs. A survey of 103 randomly selected residents (65 and above), was made.

The results of the study indicate that a number of factors have a significant relationship with the elders' inability to move or get around. Variables such as low income, health impairments, age related sensory problems and the design and service features of the Las Vegas mass transit systems appear to adversely affect the elders' ability to drive an automobile and/or to make use of public transportation facilities. As a result, their ability to get
around seemed to be impaired.

The results further suggest that there is a need for a more in-depth and detailed study to make a more realistic and objective assessment of the real impact of these variables on the elders' ability to get around and satisfy their needs.
Acknowledgments

I wish to express my appreciation to the many people who provided help in completing this thesis. Specifically, I want to thank my husband, Bob, who gave of his love, support and encouragement and late-night runs to Kinkos, during my entire MSW program. Without you, Bob, I would not have been able to finish this paper.

To Dr. Hailu Abatena, my chairperson, I would like to express my sincere appreciation for all the time and energy he spent on helping me to complete this paper. In my opinion, Dr. Abatena not only represents the essence of outstanding teaching ability, but he also is a faculty member who genuinely cares about students.

To my committee members, Dr. Shirley Cox, Dr. Gerald Rubin, and Dr. Lynn Osborne, my sincere thanks for your guidance and support.

I would also like to thank Carla Sloane and Donna Hall for their time, guidance and valued assistance in my preparation of this paper.
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A Study Of Transportation Needs
Of Selected Samples Of Frail Elders In Las Vegas

Chapter I

Introduction

Statement of The Problem

Transportation is a vital lifeline to independence and integration into the community. Millions of able bodied healthy Americans have the ability to get into their automobile on a moment's notice and drive to work, or to the supermarket, visit a doctor, attend church or pursue recreational activities on a daily basis. Although everyone has on occasion, experienced being without a car and having to rely on a friend or family member to take them somewhere, they knew this situation was only temporary. Usually adequate transportation is taken for granted. How would they feel, however, if their mobility was to be permanently affected due to a lack of transportation? It is obvious that most people would not like it at all.

In our youth oriented society there seems to be a forgotten population, the frail elders, who do not have the luxury of owning and operating an automobile, or who are in poor health and cannot use public transportation. For them, getting from place to place can become a series of
insurmountable obstacles. As a result, their ability to get around to satisfy their needs can be severely affected.

In 1987, about fifteen percent, or five million older Americans lacked the transportation they needed to take care of such basic needs as: grocery shopping, medical care, social services and recreation (U.S. Senate Special Committee on Aging, 1987). A lack of adequate transportation can restrict one from having social contact and activities with others, thereby limiting social support systems and increasing social isolation which can result in far reaching adverse consequences. Gove and Hughes (1980) state that the old are the group most likely to be socially isolated and social isolation has been found to have a strong association with increased suicidal vulnerability (pp. 1157-1177).

A lack of adequate income may adversely affect the elders' access to a viable means of transportation. Also, due to the processes associated with aging i.e., vision and hearing impairment and slowed motor responses, many elders may lose their ability to drive safely. Others experience chronic health problems such as arthritis and cardiovascular problems which not only could limit the ability to drive, but may also create barriers to using public transportation that is primarily designed for younger more able bodied persons.

Mobility contributes to the independence of the elderly
population, yet the role of transportation in connecting people to places seems to have received little attention by policy planners. It appears that those who have planned and designed transportation facilities for those who need the most of such services have not fully recognized the broader environment within which all transportation systems function. Historically, there has been an interdependence among various transportation networks, jobs, services and human settlements. During the past three decades there has been a marked trend toward suburbanization and decentralization which has undermined the economic feasibility of most modes of public transit systems in metropolitan areas. Atchley (1980) states that for the first time, we have more people living in suburban neighborhoods than in inner-city environments, the former of which are scattered and dispersed in an unequal distribution around a town or a city. The net result of this development is the reduction of mass transportation facilities or services in these areas. As a result, those who need such services the most are adversely affected. The inability to get from place to place not only limits the possibilities for taking care of one's personal needs, but it also can lead to a loss of independence and eventually to a loss of self esteem.

The purpose of this study is to explore how much low income, age related sensory problems, and health impairments
impact on the elders' ability to gain access to the services they need. In addition to this, the results of the study may indicate whether or not there is a need for additional transportation facilities for this population in the Las Vegas area. To accomplish this, a community survey was conducted at six service sites in the Las Vegas area. These sites included: Humana Sunrise Hospital, Montevista Hospital, Cannon Senior Center, Dula Center, and the Aida Brents Garden and Arthur McCants Terrace housing complexes.
Chapter II

Literature Review

Description of the Problem

During the past decades there has been a considerable increase in the elderly population across the nation. According to Atchley (1985) there were 16.7 million elderly persons living in the United States in 1985. Cockerham (1991) states that, in 1987, there were 29.8 million elderly people living in the United States. He also indicated that the average life expectancy in 1987 for females was 78.3 years compared with 71.5 years for males.

With the advancement of medical technology, improved life styles and better nutrition, there has been a steady increase in life expectancy and the proportion of the elderly population. While the population aged 65 and over was expected to more than double between 1985 and 2020, the fastest growing segment of the aged population has been those at the upper extreme of the longevity structure, i.e., persons age 85 and over, often characterized as the frail or vulnerable elders. The 75-84 age group (9.3 million) became 12 times larger in the period between 1960 and 1980, whereas the oldest-old cohort (85 and over) increased by 141 percent between 1960 and 1980 (U.S. Senate Special Committee on Aging, 1988). Cockerham (1991) states that Census Bureau projections indicate that an additional increase of 117
percent of the oldest-old will take place between 1980 and 2000. In terms of actual numbers, this group will grow from 2.9 million in 1987 to 4.9 million in 2000.

**Historical Background Of Social Service Policies For the Elderly**

At some point in their lives many frail older persons have a need to have access to social services such as: grocery shopping, obtaining medical prescriptions, medical, mental health and legal services. This is especially true of those who live alone and have limited resources. With increasing life expectancy and growing elderly population, increasing physical disabilities and declining ability to drive, along with a reduction of personal income, the transportation need for this segment of the community is becoming a problem that cannot be ignored any longer. Therefore, community urban planners need to be cognizant of this fact and address this issue properly and appropriately.

At a national level a wide variety of problems regarding the transportation needs of older Americans have existed since the 1950's but did not catch the attention of legislators until the 1960's. According to Atchley (1985) the Civil Rights movement of the early 1960's raised the nation's consciousness about massive injustice beneath the "affluent society." At the root of this movement was a doctrine of social justice through law, and an assertion of individual rights and entitlements. The elderly were among
the disadvantaged section of the population with special needs who received attention.

Harris and Cole (1980) note that the issue of transportation for older people was not given major policy attention by the federal government until the passage of the Urban Mass Transportation Act (UMTA) of 1964. This act provided for a long-term commitment by the federal government to the development of new and improved transit facilities for the elderly and handicapped.

In addition to the initial impetus of the Civil Rights Movement, the passage of the Older Americans Act (OAA) of 1965 also had a major influence on the policy and programs for older adults. A direct outcome of this act was the establishment of an Administration on Aging (AOA) as part of the Department of Health, Education and Welfare. This act authorized grants for planning, and coordination of services for older Americans. (U.S. House of Representatives, Select Committee on Aging, 1991).

The Administration on Aging (AOA) with funding sanctioned by the Older American's Act, was directed to implement the provisions of the Older Americans Act and to administer the funds for transportation. Under Title III of this act, states are required to spend an adequate proportion of their funds on three categories of services which included: transportation, in-home and legal services (U.S. House of Representatives, Select Committee on Aging, 1991).
Other federal programs that provide transportation opportunities for elders are the Social Services Block Grant, the Community Services Block Grant and to some extent Medicaid. Although the Older American's Act had encouraged the development of an array of social services through these grants (including transportation for elders), in most communities funding for these services were at spartan levels. This was due to other critical services needed by elders and others taking precedence over transportation needs. For example, through the Older American's Act, Social Services Block Grant funds were funneled to local agencies through state and local welfare departments. Because the states and local agency administrators had great latitude in determining how these federal dollars were to be spent, usually medical and in-home services for elders took precedence over transportation needs (Atchley 1985).

In the 1970's, as individual states began to experience significant increases in the elderly population, the major emphasis among social service providers appeared to be on developing enough services so that the varied needs of older persons could be met. The thrust was to develop a continuum of services. These social service providers began to see that for some older persons, the lack of transportation to reach the services, or even adequate information about what services were available, were preventing elderly individuals from utilizing the services that existed (Gelfand 1988).
This problem was brought to the attention of Congress in 1978 which resulted in the 1978 amendments to the Older Americans Act. In the 1978 amendments, the three priority areas were services which included: transportation, outreach, information and referral (Gelfand, 1988).

A 1970 amendment to the Urban Mass Transportation Act authorized that a proportion of the 1964 act's funding (1.5 percent) be directed toward the special transportation needs of elders and the handicapped (Harris & Cole 1980). With the passage of the 1970 amendments to the Urban Mass Transportation Act (UMTA) which added section 16, this marked the beginning of special efforts to plan, design, and set aside funds for the purpose of modifying transportation facilities, and for improving access to elders and disabled persons (U.S. House of Representatives Select Committee on Aging, 1991). With the passage of this amendment there was a tacit recognition that the elders and the handicapped had special mobility problems, different from those of the general public.

The Federal-Aid Highway Act of 1973 permitted states under certain conditions to transfer funds from interstate highway systems to public transit funds. Urban areas also were permitted under certain conditions to use revenues from the Highway Trust Fund for mass transit improvements. Grants and loans were provided to private nonprofit corporations and other organizations through the amendments
to this act to aid in providing transportation to meet the special needs of the elderly population and the handicapped (Harris and Cole, 1980).

The needs of the elderly population were further recognized by the National Mass Transit Act of 1974 which made reduced transit fares available to elders. Due to the provisions in this act, fares paid by elders and handicapped individuals during off-peak hours could not be more than half of those paid by general users during peak hours. Further consequences of the Urban Mass Transportation Act of 1964 led, in 1979, to all new public transit buses purchased with federal assistance to be required to have barrier-free design features that would make them more accessible to elderly and handicapped people. Although the meaning of "barrier free" includes a wide variety of interpretations, new buses were required to have a floor height not to exceed 22 inches and also were required to be equipped with either a ramp or a hydraulic lift for boarding (Harris & Cole 1980).

Wilson (1984) states, that transportation problems of older persons have been the subject of numerous conferences and workshops supported by the federal government. The 1971 White House Conference on Aging, which was authorized by the Older Americans Act and called by President Nixon, introduced the issue of transportation as a problem. The issues paper of the 1971 White House House Conference on
Aging stated that available systems of transportation were not meeting the needs of the older population. In this conference concerns were voiced about the elders' lack of access to facilities, maneuverability problems, the impact of crime and associated fear of public transit, higher energy costs, and higher insurance rates, or a lack of coverage for older drivers (Donahue, 1979). Although attention to these issues had increased during the 1970's and numerous programs were initiated through community service projects under the Older American's Act, the planners for the 1981 White House Conference recognized that transportation issues had not changed much since the 1971 conference, and identified transportation for the elderly as a priority issue.

In 1986 the issue of transportation for older Americans was addressed again by the House Select Committee on Aging which held a hearing entitled, "Elderly Transportation: 1986 and Beyond", (U.S. House of Representative Select Committee on Aging, 1991). After hearing testimony from many witnesses, the Committee decided that, although some progress had been made in that existing programs were working to serve seniors, many older Americans were still not receiving the services to which they were entitled. In February, 1990, another hearing was held by the U.S. Subcommittee on Human Resources, and transportation emerged again as a critical problem. At this hearing Aging
Commissioner Joyce Berry presented the Administration on Aging's unmet-needs study, mandated by Congress in 1987. As a result of this study, transportation emerged again as a key unmet need across the nation (U.S. House of Representatives Select Committee on Aging, 1991).

In spite of increasing efforts and funding on the part of the federal government to improve the transportation situation of the elderly citizens, the problem still remains.

**The Local Las Vegas Transportation Needs Of Elders**

According to *Perspectives, A Biennial Report of Nevada State Agencies*, (1990), Nevada has the fastest growing elderly population (65 years and older) in the nation. During the first nine years of the 1980 decade, Nevada's elderly population expanded by 83 percent, or about twice as fast as the nation's elderly population growth. The continued growth of Nevada's elderly population is probably assured given existing plans for several long-term retirement communities in the Las Vegas area.

In recent years, Nevada's maturing baby boomers, those from 25-44 years, have significantly increased (Cooper 1990). Between 1980 and 1989 this age group grew at 5.1 percent annually. After the year 2010 the elderly population of the state should increase substantially as the "baby boomers" become senior citizens.
Due to its mild winter weather and reputation as an entertainment center, Las Vegas has experienced rapid growth as a retirement community, contributing to the currently growing elderly population. According to the 1990 census, Clark County had 77,678 elderly persons between the ages of 65 and 85. (U.S. Census, Department of Commerce 1990). Conservative estimates of the present elderly population, in 1992, are expected to be well over 78,000 (Cooper, 1990).

The great majority of the county's elderly population lives in Las Vegas. Las Vegas has not planned in the past for the unique needs of elders in regard to transportation.

Factors To Be Considered

The factors which might be related to the mobility of elderly persons may include: (a) an automobile-oriented society (b) low income (c) health problems (d) age related sensory problems and (e) the design and service features of the available transportation facilities.

The Dominance Of The Private Automobile

The dominance of the private automobile in society has become part of the American Dream. Society has fostered the idea that one cannot be successful without a private car that can be put to use on a moment's notice, and eliminate the need to wait for public transportation, or taking a time-consuming walk to get to needed services. Today, as family members become of age, the pressure on each member to
have their own car has become a norm. As a result of this norm, there has been a major decline in the demand and subsequent availability of public transportation, most of which has fallen into financial decline and disuse. This is inherently the root of many transportation problems for older people.

As the number of people surviving into their late seventies, and eighties, and nineties increases, the issue of mobility takes on an added priority. Flaningam (1988) notes that the problem for these elders comes in the form of declining abilities to operate automobiles. According to the Highway Users Federation (1985), as cited by Barakat and Mulinazzi (1987), older drivers suffer from reduced vision, alertness, range of motion and risk evaluation and decision-making skills (p. 194). Yet for the suburban elders many destinations can only be reached by private automobile.

Low Income

A primary factor which contributes to the transportation problem of elderly individuals is probably low income (Lowry 1979). Although within the last fifty years we have seen a decrease in poverty for older persons, and major gains have been made in their economic status, poverty may increase as one becomes older. In the past the poverty rate for persons 65 years and older has generally been higher than for the total population (Bell & Revis 1983).
The U. S. Bureau of Census (1989) reported that 11.4 percent of the elderly population were living in poverty. This is 1.4 percentage points below the poverty rate for all persons. To make matters worse, nationally one out of five "near poor" persons were elders. Many elders tend to have lower incomes than younger age groups. Their income is usually in the form of fixed income such as Social Security or pensions. Those elders over 85 experience nearly twice as much poverty as those 65 to 74 (U.S. Senate Special Committee on Aging (1986).

Older women are significantly poorer than older men. Older women are thought to be poorer than men due to minimum Social Security benefits which they receive, and lower employment opportunities. Usually they are in such a predicament because they have had the tendency to be dependent on their spouses (Jones 1987). Poverty rates for older women of ethnic minorities are even higher than any other group in the nation.

Furthermore, a lower percentage of older households, than younger ones, have automobiles (Brail, Hughes & Arthur 1976). Generally, low income inhibits elderly individuals from owning and maintaining automobiles. Some elders cannot afford to own a car, and for those who do, a lack of sufficient income may force them to give them up because they cannot afford the high cost of gasoline, maintenance, and insurance costs. Insurance rates tend to be higher for
the elderly population, if they can obtain insurance at all. A lack of sufficient income tends not only to limit the elders' ability to have access to private transportation, but it also limits their use of public transportation. For some older persons bus fares of one dollar or higher are beyond their means. Atchley (1980) reports there are about ten million older people who cannot afford available transportation, and that this lack of transportation severely limits their independence and social involvement. Today most transit companies offer reduced fares to senior citizens to ease the cost of public transportation. However, in spite of this reduction in fare, many elders do not use public transportation due to health problems, the inconvenience of routing, or the inaccessibility of transportation where they live.

Health Impairments

Shanas and Maddox (1985) note that usually around the age of 65 many older persons begin to develop health problems. While nearly half of the oldest elders enjoy good health and have no serious physical disability, according to Shanas and Maddox (1985) the incidence of health problems and physical disability increases with age, particularly for those over 75. The physical health ailments of older people are predominately chronic with no cure, rather than acute, and multiple concerns are usually the norm. Although it has been estimated that only four percent of elders are severely
disabled (Hooyman and Kiyak 1988), fifty percent of those aged 75 to 84 and sixty percent of those over 85 experience significant limitations in functioning (Maldonado 1987).

Impairments in health can range from minor aches and pains to long-term disability. Some common chronic conditions among elders include: high blood pressure, arthritis, rheumatism, hypertension, heart disease, orthopedic impairments, arteriosclerosis, dementia and numerous neurological problems. Of the large percentage of elderly people who can afford to own and operate cars, many of them seldom drive due to the above stated health problems. These conditions not only have the tendency to impair driving, but also impair elderly individuals' ability to make use of public transportation facilities (Brail, Hughes and Arthur, 1976).

**Age Related Sensory Problems**

Prevost (1976) cites that most senior adults develop mobility problems at some point. These mobility problems consist of age related sensory changes, such as declining sight and hearing. These sensory changes limit the ability to drive as well as the ability to use mass transit systems that are designed for younger persons.

Leslie Libow (1970) cites how the normal aging processes can influence the number of people over sixty-five who drive. She discusses the following age related health conditions which make driving difficult and sometimes
impossible for the elders. These are: (1) far-sightedness and loss of peripheral vision, (2) increased sensitivity to glare and poor adaptation to dark (3) hearing loss (4) poor coordination and slowed reaction times and (5) decreased and slower movement in general. Francis Carp (1970) suggests that some elders may be plagued by the "tyranny of habit", and as a result they might feel uncomfortable if forced to adopt and adapt to new modes of transportation.

Brail, Hughes and Arthur (1976) note, that motor performance declines with age. Older people are slower in sizing up situations regarding oncoming cars and traffic lights. This slowness of behavior in older persons is due to processes associated with aging within the central nervous system. An older person adapts to slowness of response by avoiding situations that might require quick responses. Many are uncomfortable in heavy traffic and on freeways where they feel they are being forced to drive at higher speeds than they are comfortable with.

Golant (1976) states that even though elderly drivers may possess considerable driving experience, if declines occur in their sensory and perceptual processes and motor skills, reaction time is slowed. The result of a slowness in reaction time increases the probability of an accident in demanding urban situations. As a result of a decline in visual acuity and peripheral vision, the elderly driver has more difficulty interpreting traffic lights and signs and in
seeing cars approaching from the side.

**Other Driving Related Problems**

In addition to health and sensory problems which may impair the ability, or even prevent elders from driving, there are other problems which may likewise adversely affect their mobility. For instance, normally the elders find it difficult to get their driving license renewed or to obtain automobile insurance. Many states, like Nevada, require a re-examination for licenses at specified age levels with varying renewal periods and restrictions.

**Problems Of Public Transportation - System Design And Service Features**

Conventional public transportation systems poses numerous difficulties for the aged. Riding buses or trolleys requires a high degree of speed, mental agility, and quick reactions. Declining sensory acuity, strength and agility make it difficult for elders to cope with the demands of rapid transit. Walking long distances to bus stops can cause fatigue. Elders with health problems have less endurance to walk or wait for buses. Neurological impairments, arthritis and orientation problems can pose serious difficulties for elders who have to ride buses for long periods of time. A potentially dangerous and unsafe situation could occur if an older person becomes sick, loses their balance, falls or faints while using mass transit.
Also, the use of public transportation requires alertness, and quick movements at times. Many elders are able to travel independently, given time but experience difficulties if required to perform certain movements quickly.

Although there are many interrelated factors that may pose difficulty for the aged in regard to transportation, such as age related sensory problems, low income, and health impairments, the principal one was addressed at the 1971 White House Conference on Aging. The issues paper of the 1971 White House Conference on Aging stated that the available systems of transportation were not meeting the needs of older people because the transportation system designs and service features pose serious maneuverability and orientation problems for older people (White House Conference on Aging, 1971).

Confronted with limited funding and scarce resources, most municipalities have had to convince taxpayers that new services are absolutely essential (Harel, Erlick, & Hubbard, 1990). The argument heard most by city planners has been that not enough elderly and/or disabled people need or could use barrier-free transportation systems to make them cost-effective.

Atchley (1980) reports that older persons tend to avoid the use of public transportation systems. He suggests that systems are designed to get people back and forth to work and that the transportation needs of the elderly population
are seldom a concern of the designers and operators of such programs. Atchley estimates 54 percent of the seniors who have problems are those who could use public transit systems but are not able to because they include: those who need to be picked up and returned to their homes due to health problems, and those who live where there is no public transportation. The present public transit system in Las Vegas is designed to get people back and forth to work, and often fails to provide reasonably direct connections between the seniors and their destinations.

Older people with low income often reside in areas isolated from needed facilities, and are either unserved or poorly served by existing transit systems. Route inflexibility is a barrier that often confronts elders with health problems. Elders may not use public transportation due to services being minimally available in the area where they live. Even if older people have enough money to use public transportation, they may have to walk long distances to bus stops. Walking may not only sap the strength of older persons, but it may create difficulties for elders if they have problems with motor performance. When they step off the curb, they do so more cautiously and often have to monitor their movements visually to avoid losing their balance.

Brail, Hughes and Arthur (1976) state that conventional transit planning theories assume that high population
densities are usually necessary to support a fixed route and
schedule system. However, they say that this assumption may
not be applicable to transit planning for the disadvantaged.
Service routes for mass transit are usually characterized by
fixed route systems and calculated on the expected
ridership. The routes traveled by most mass transit
vehicles are established in terms of cost-benefits and cost
effectiveness. These routes are usually clustered around
businesses, medical and educational establishments, and
shopping malls. In addition, most mass transit is on a
fixed schedule. To use a fixed route and scheduled bus, the
rider must be able to read and understand the schedule, be
at the pick-up point in time to catch the bus, be able to
recognize the appropriate vehicle, and be able to board, pay
the fare and exit at the appropriate stop. For the
physically or mentally handicapped seniors these functional
requirements may pose insurmountable barriers.

Bus design also contributes to the difficulties
encountered by the elderly people using public transit.
Entrance steps are often too high, and the vehicle halts for
too short a time. The Elderly Market for Urban Transit (U.S
Department of Transportation, 1980) reports, that older
people have trouble with distances from curb to vehicle,
high steps, trouble getting in and out of seats, reaching
for handrails, finding a place for packages, and seeing
landmarks out of windows, which could lead to excessive
walking. If seats are not available older people often experience awkwardness in having to stand. Being untrained in the needs of older people, drivers seldom provide assistance when needed.

Even with the required modifications that have been made on recent buses, such as wheelchair ramps, lifts, lowered stairs and extra grab bars, riding a bus for some elderly people may pose problems. The frail elderly are often confronted with orientation problems which make the use of mass transit difficult, and even dangerous due to unexpected jerky starts and rough stops.

Nondisabled persons may become uncomfortable riding for extended periods of time. However, the elderly person with a chronic illness may find it painful to sit in a vehicle for any period of time, as well as also finding it psychologically stressful.

**Psychological Barriers To Public Transportation**

Psychological barriers tend to keep many elderly people from depending on public transportation. Huttman (1985) notes how elders are especially vulnerable to crime. At bus stops, or on buses in urban areas, they are easy targets for people hungry for money. Lowry (1979) cited the most serious obstacle to the frail elders' use of public transportation is their psychological reluctance to use public transit. Older people are simply unwilling to face the uncertainties, terrors, and dangers associated with
riding public transportation. Many elderly people are afraid to walk between their homes and the bus stops for fear of street crime.

These fears are not necessarily unfounded. The Institute of Medicine/National Research Council (1988) stated that the inner city and suburban seniors are victims of crime while traveling on public transit to a far greater extent than other groups because they make up a disproportionate share of transit users. Being relatively dependent on transit, these elderly people are singled out as easy targets by criminals. The seniors who have to depend on public transit are frequently victimized by criminals who prey on people walking to and from bus stops. Muggings, purse snatchings, and pickpocketing are common crimes committed against elders patronizing public transit systems.

Other factors related to psychological barriers for older people in the use of mass transit include the fear of falling or getting lost. Bus schedules are often printed in small type and are difficult to understand. Bus drivers do not usually talk loud enough for the seniors who have hearing problems. Most seniors are aware of the losses they are suffering due to the aging process. While trying to adapt, some are embarrassed about their hearing loss or slowness getting on and off buses. Some elderly people have vision or hearing problems and have given up using mass
transit due to their inability to quickly decipher bus labels and route numbers. It is frightening and stressful for them to miss their stop and as a result, become stranded.

Dependency on public transportation reduces the mobility of the elderly population because it reduces individual control over decision making and spontaneity in travel (Bell & Revis 1983). Depending on public transit means accepting a limited selection of possible destinations, negotiating physical barriers, and exposing oneself to the risks of victimization by criminals.

Social Isolation, Depression and Suicide

Social isolation and loneliness often leading to depression, are serious problems for many elders. In our society elders often find themselves isolated from the community and a social network. Several recent aging studies have shown that a strong correlation exists between psychosocial factors such as social support, and the mental and physical health of seniors and social isolation and possibly depression. Although past research on the elderly population has not been able to determine how social support and meaningful activity contributes to the mental and physical health of older persons, there is a strong correlation that it does (Deleo and Diekstra 1990). Findings further suggest that social isolation has been found to have a strong association with increased suicidal
tendencies (Deleo and Diekstra, 1990).

Many frail elders suffer the pain of social isolation and solitary confinement due to health impairments or physical disabilities. De Leo and Diekstra (1990) found that physical health problems have been one of the most consistent predictors of vulnerability to depression and suicide in old age. Additionally, their studies cited that a form of social isolation can exist even when an older person lives with family members, because of their loss of independence and subsequently self-esteem. This isolation can result in depression and suicidal ideations.

The risk of suicide increases with increasing age, and depression is closely linked to suicide (Winokur, 1978). Manton, Blazer, & Woodbury (1987) noted that older people made up about 11% of the population, but they accounted for 25% of all suicides. Reker and Wong (1985) found the following conditions present as an explanation for suicide: loss of satisfying roles and relationships, lack of meaningful activity, conflicts around needing others and the resulting feelings of lessened self-esteem, depression, loneliness and hopelessness.

A Case in Point

A personal interview conducted in March of 1991 with an elderly lady, 85 years old, vividly illustrates some of the problems which might be encountered by older Americans who find transportation to be a problem. For confidential
reasons this individual will be called Cora.

Cora had always lived an active full life until her 76th birthday. At that time her license to drive was revoked due to a progressive loss of hearing and vision. To compound this problem she also developed a neurological condition which affected her brain and occasionally caused her faint or to forget where she was.

These impairments not only forced Cora to give up driving her car, but she also had to move to another state to live with her daughter. This meant leaving familiar surroundings, her home, and saying goodbye to life long friends. In addition to these adjustments, Cora had to make the added adjustment of moving in with her daughter's family, causing a strain on everyone.

Out of financial necessity everyone in the household worked. Cora's daughter had to often take time off from work to tend to her mother's medical needs as well as other personal needs that she might have. This caused resentment on the daughter's part as she was not paid for these absences from work. As a result of the strain in caring for her mother, she would often snap at Cora and complain about her added responsibilities.

Also, due to everyone in the family working, Cora was left alone for most of the day by herself. She would often look out the window at her car, parked in the side yard of her daughter's house, and comment that someday, when she got
well, she was going to take a drive. The car at that time
had been sitting beside the house for 3 years without being
used.

Unable to drive or use public transportation, or even
walk very far for fear of getting lost, Cora became
depressed and began to have suicidal ideations. She would
often talk about what a burden she must be on her family,
and how taking a few extra pills of medication would help
her go to sleep.

Cora died in March, 1992 of a heart attack. Before her
death she was overheard to say that, "being without the
ability to get in your car and go, is like being behind bars
and watching the world go by." Although this case study
does not apply to every frail elderly individual, it points
out how age related sensory problems and health impairments
can affect the quality of life for an older individual.

Although a lack of transportation cannot be said to be
a direct cause of suicide in the elderly population, it
certainly leads to a lack of social support and the
accessibility to needed resources such as mental health care
and related facilities.

For those elderly people without serious health
disabilities, a lack of transportation may, also, create
some psychological problems. In the process of aging older
persons suffer a number of psychological losses. Older
adults are often confronted with social isolation and
loneliness due to: estrangement from family, loss of role status, loss of a spouse, and sometimes loss due to relocation (DeLeo and Diekstra (1990). Those individuals who had once managed to live independently and who thought that they had escaped the experience of needing others for assistance and emotional support discover the contrary. This realization has an impact on their self-esteem and often leads to depression. In order to adapt to these losses an older person must have access to mental health facilities and other social support systems.

Factors Associated with Local Transportation Problems

Las Vegas is a community that was first oriented around the Sante Fe Railroad and later the Las Vegas strip. Although most of today's major thoroughfares (involving automobile traffic) have a East-West and North and South orientation, these major streets of today were essentially "blocked" first by the railroad, then by the Las Vegas strip, and finally by the freeway to the extent that no mass transit actually crosses from the East side of town to the West. Ultimately Las Vegas became a city oriented toward the private automobile, with mass transit functioning mainly for the tourist market from downtown out to the strip and servicing only the East side of town.

As people grow older they tend to lose their mobility and can drive their vehicles less and less. As a result, seniors in the Las Vegas area today are not only plagued by
the aging processes which prevent them from driving safely, but they are also hindered by the limited availability of mass transit since it is oriented toward strip traffic of the younger generation.

In the past city planners have failed to take into consideration the special needs of this segment of our population. Transportation for the frail elders in Las Vegas has been a problem since the early 1970's, and through the years has become even more critical. In 1970, it was estimated that there were 3,000 frail elders in the Las Vegas area. These elderly people had no means of transportation other than the Economic Opportunity (EOB) Bus, friends, or family. It was reported in 1970 that EOB transported 2000 elderly citizens. (Nevada Department of Transportation Study, 1970).

**Surveys Assessing Need**

A survey undertaken by United Way Services, Inc. (1990) of its sponsored non-profit agencies indicated that there was a critical need for more transportation for elderly citizens, especially the frail elders, and the handicapped. This survey concluded that the frail elders and the handicapped of the Las Vegas area were at a distinct disadvantage in obtaining needed services due to inadequate transportation facilities. In addition, the survey revealed that Clark County Social Services reported that during January 1, 1990 and August 31, 1990, a total of 206 clients
could not be provided with transportation due to a lack of drivers and vehicles.

According to Wyman (Division of Aging Services, 1991) there is a critical need for adequate transportation for frail elders in the Las Vegas area in order for them to obtain needed social services. Many of these frail elders have no way to attend to essential medical needs other than to rely on family members or neighbors. Some of these elderly people are poor, live alone, and live in areas poorly served or not served at all by public transportation. Others can afford transportation but are not able to ride buses alone because health impairments prevent them from doing so safely.

A federal statute, The Rehabilitation Act of 1973, Section 504, states that service for elders and the handicapped population must be available throughout the same service area as the service for the general public (Regional Transportation Commission of Clark County, 1990). Although many municipalities have tried to comply with this statute, through the years inflation and federal cuts in spending for human services have left many state and city governments with limited funding.

However, the American Association For Retired Persons (AARP) and other influential advocate groups for the elders and the handicapped have forced the issue through recent legislation. A great part of the solution to the elders'
transportation problem may be found in The Americans With Disabilities Act of July, 1990. This Act prohibits discrimination based on disability in employment, public services, telecommunications and public accommodations. Besides providing accessible bus service, public transit agencies must provide complimentary door-to-door paratransit service comparable to regular fixed route bus service to persons unable to use regular bus service because of disabilities. The Regional Transportation Commission (RTC) has five years, until January 19, 1997, to implement its plan for meeting all supplemental service requests for trips. As a result, those members of the frail elderly population who are disabled as defined in the Act should be accommodated with adequate transportation within five years. The remainder of the elderly population, who are not disabled remains, however, at bay.

Due to the enormous population increase that has taken place in Las Vegas, the Regional Transportation Commission engaged a transportation firm in California (SR Associates) to do a study on ways to relieve traffic congestion. This survey was undertaken in October, 1990. Although SR Associates was engaged to assess transit services already available, they concluded that the present mass transit system was inadequate to meet the needs of the general public, as well as the elderly population. Additionally, the survey indicated that the general public and the elderly
population had voiced a high level of dissatisfaction with the present transportation system. Mobility concerns were clearly in the minds of the general public as well as the elderly when they expressed their desires for a more coordinated system of public transportation.

According to the May 1990, Interim Report on Transit Technical Study, the public bus system needs to be extended and better service routes need to be designed for older people (SR Associates, 1991, p. 15). This study revealed the following: (a) the Las Vegas Transit (LVTS) service is generally infrequent (b) the circuitous routing and the lack of interlining of buses on most LVTS routes makes traveling from one side of the city to the other by public transit difficult and time consuming. (Interlining is defined as maximizing the opportunity to match bus trips with passenger origin and destination demands) (c) LVTS generally operates only that level of service which is supported by the market (i.e., farebox revenues).

Las Vegas Boulevard is the only corridor in the valley with sufficient demand to create a profitable environment for transit. Thus the LVTS follows the pattern of service of private operators in that it operates only what the market will support. The most frequented routes are those on the Strip and in downtown areas. Circuitous routes in outlying areas are less frequently serviced by the transit system.
This survey also highlighted the fact that there is a severe limitation of low-cost public transportation available to residents of Clark County who lack access to automobiles, or who are unable to drive themselves, the transportation disadvantaged. A patchwork of techniques has been used by local public and social service agencies to respond to the transportation problems of their clients.

Social service agencies find themselves in the transportation business out of necessity in order to allow their clients to gain access to the services offered. Many of these agencies have complained that the frail elders and handicapped often do not have families they can depend on to transport them to needed medical appointments, assist in obtaining prescriptions, and provide transportation to other needed services. For those who do have families, this often involves the family members taking off from work. If a family member is not available, the agency assumes this responsibility.

In November of 1989, representatives of local social service agencies met to discuss their concerns regarding the transportation needs of their clients in the Clark County community. The focus of this meeting was on "facilitating service". According to the attendees, the term "facilitating service" best described the activities of the majority of the agencies. The Interim Report Transit Technical Study (1990) validated the information received in
survey responses. Many agencies, in order to facilitate services for their clients, must become involved in the transportation business.

These agencies have had to do the following: (a) use staff or volunteers to provide transportation (b) use their own funds to subsidize or pay for rides, (c) purchase their own vehicles, (d) arrange for low cost or donated taxi service, and (e) purchase and distribute LVT bus passes. The variety of approaches used has heralded a patchwork transportation system for those who are not able to afford taxi service, or for whom public transportation is not accessible or available. Although data on expenses incurred by these agencies is limited or non-existent, one agency reported that they had spent between $5,000 and $7,000 annually on taxicab fares for clients.

In its survey on public transportation SR Associates (1990) requested information on unfulfilled demand from various social service agencies. In response, some agencies related that if the demand is legitimate, they do not deny the client but spend agency funds on transportation for those who need it. One representative of an agency commented that spending agency funds to provide transportation was an inefficient means of solving the problem.

This representative felt it was important to emphasize that spending agency funds to provide needed transportation
did not help the agency achieve its objectives, and agency resources were being strained as a result. Limited funds were being diverted away from the primary mission of the agency. This diversion of funds denied benefits to the clients that it was established to serve.

The conclusion of the SR Associates survey revealed that seven of the fifteen agencies contacted in the survey responded to a request for figures on unfulfilled demand. These agencies reported turning away transportation requests for a combined total averaging over a 100 people per week. The report also indicated that transportation of the elderly population is draining agency resources; these agencies have to depend on limited funding. Those agencies operating transportation services, and those facilitating transportation, report having turned away a combined total of over 150 transportation requests a week during 1991.

In March of 1992, a telephone interview with Carla Sloane at the Cannon Center revealed that this Senior Center receives about 2,000 calls a month from seniors or their families requesting information about services. Twenty-five percent of these calls are requesting information about transportation, due to need.

Joanne Wyman (Division of Aging Services) discussed the problems local employers encounter in the area of transportation for seniors. Employees often have to take off time off from work to transport relatives to needed
services. Personnel employees at Edgerton, Germeshausen and Grier (EG&G) (interview April 1991) cited lost time due to workers having to take care of the needs of elderly relatives.

Public Transportation - Fixed Route Systems

The general public in the Las Vegas Metropolitan area is served by two fixed route operators: (1) The Las Vegas Transit System and (2) The City of Las Vegas Trolley. These providers are under the authority and jurisdiction of the Regional Transportation Commission of Clark County (RTC), which was founded in 1965 by the authority of the Nevada State Legislature.

The Las Vegas Transit System, RTC's current fixed route transit provider, provides service within the city limits of the cities of Las Vegas, North Las Vegas, Henderson, and portions of the urbanized area of Clark County. The City of Las Vegas Trolley system primarily provides service to tourists and residents within the downtown area, and secondarily between the Downtown Transportation Center and the Meadows Mall. This service is mainly used by tourists and downtown residents.

Paratransit Provider

The current paratransit service provider is a local community service agency, the Economic Opportunity Board of Clark County (EOB). The EOB provides demand-responsive and
fixed route services to senior citizens and handicapped persons in urbanized areas of Clark County who have limited or no means of accessing public transportation. It serves handicapped persons and those over the age of 55. Although some of these buses and vans are equipped with lifts and are wheelchair accessible, like mass transit systems, there are problems that exist in this mode of transportation also.

As a result of inflation, the EOB has been unable to purchase the additional vehicles it needs, and has had problems keeping up with necessary repair and maintenance requirements. Another problem has been the inability to hire drivers who are sensitive to the needs of elders and handicapped riders.

Many elderly riders become disoriented because of the speed of travel. Alzheimer clients are usually too disoriented to travel without a personal escort. Clients have to make an appointment twenty-four hours in advance, and then some have to ride for long periods of time before they reach their scheduled destinations. In addition, family members have complained about buses and vans not arriving on time, and that they are afraid to leave their elderly relatives on the street corner, or at home alone, while waiting for the vans to arrive. Vans sometimes arrive too early or too late for appointments. Drivers are supposed to help the elderly on and off the bus, but some do not. Some frail elders cannot ride the bus due to medical
instability, or other health problems.

In addition to EOB, eight other agencies own and operate demand responsive vehicles which provide low cost transportation for seniors. The Sunshine Bus Committee is one such organization. It is a non-profit organization which provides private door-to-door transportation for seniors who are 60 years of age and who have no other form of transportation. Sunshine gives first priority to grocery shopping and second priority to other shopping needs. It provides some assistance to frail elders, but its clients do not necessarily have to be frail. Many of the clients taking advantage of Sunshine's service do not have serious mobility problems. The fleet in the Sunshine service consists of seven vehicles which carry approximately 7 to 9 passengers at a time. Two of the vehicles are wheelchair equipped. The drivers are well trained and help the elderly in and out of the vans if need be. Although most seniors are pleased with this organization's service, the company has been plagued with funding problems, and has at times been unable to use all of the vans due to upkeep and maintenance problems. Sunshine vans are usually filled to capacity, and there is a waiting list for service.

**Social Service Providers**

Clark County Social Services is a provider which has had to purchase vans because its clients have no other means of viable transportation. This agency mainly provides
transportation for its clients to hospitals for dialysis treatments, to medical clinics, and to pharmacies for prescriptions. It also provides transportation for clients to the Social Security office to pick up checks and to other destinations that are considered vital to the health and survival of its clients. However, it does not provide transportation for shopping or recreation. Clark County Social Services has had to turn clients away due to a shortage of funding and staff. Due to inflation and government cut backs, most non-profit and government agencies have had to operate on limited budgets.

Buses and mass transit are clearly not the best suited means of transportation for frail elders, yet in Las Vegas they are the major means of transportation provided for this segment of the population, other than families who lend support through a private automobile.

**Taxi-cabs**

Taxi-cabs provide a highly personalized, door-to-door demand-responsive service which is safer than the bus, but they are considerably more expensive. The Nevada Taxicab Authority provides a subsidized transportation service to seniors in the Las Vegas area. Reduced rates are offered through the purchasing of fare coupons, however, these coupons restrict the amount of travel within a given period of time. This program does not appear to be fully utilized. It appears to be perceived as too expensive by the target
market, and there is no emphasis on shared riding which would reduce the cost per passenger. Also, drivers tend to stay near the Strip or at the airport where most of the business is.

Seniors have complained about drivers being rude and openly complaining about poor tips. It has been reported that some drivers do not even bother to show up because business is more profitable around downtown, the Strip and the airport.

Of all the forms of transportation that are available, Catholic Community Services provides services that seem to best suited to the particular needs of seniors. However, this agency is limited in the number of vans that are wheelchair equipped. Catholic Community Services provides escort transportation to seniors via private automobiles and vans which transport them to their needed destinations. These services are not limited to any particular transportation need. However, medically unstable clients are not accepted. Although a small donation is requested, this is not mandatory. Inflation, maintenance costs and rising insurance rates have had an adverse affect on the services that can be provided by this agency.

Transportation services in the Las Vegas community (other than public transit) that would be suitable for frail elders are either too expensive, fragmented, have funding problems, and/or are usually filled to capacity with elders
who are not frail, or other special clients, such as the handicapped who are not seniors.

In summary every aspect of life in today's specialized interdependent society depends on some degree on being mobile, and having a convenient safe access to medical care, grocery stores, businesses, and recreational facilities. If seniors are to live at their optimum levels of independence and maintain a satisfactory lifestyle, they must be provided with a community-wide environment that considers their special needs. Based on the research provided the process of aging changes the needs and resources of elderly people in the area of transportation in several ways. The present transportation system in Las Vegas is inadequate to meet the special needs of the frail elderly population. This is due partially to the huge increase in this population. Many of the very old (age 75 and above) do not own, or cannot drive an automobile. Lowered income forces still others to give up their cars or use them sparingly. The design and service features of the present mass transportation systems pose maneuverability and orientation problems for the frail elderly population.
Chapter III

Methodology

As previously discussed, one of the greatest problems facing an increasing population of elderly people today is a lack of adequate transportation to take care of their basic needs. Transportation is a crucial factor in elders being able to obtain food, medical care, social services and maintaining relationships with family and friends or being able to attend social events.

A review of the literature has indicated that the following factors may have contributed to the problem. For elders on fixed or low incomes, the cost of purchasing and maintaining an automobile may prove too expensive to the point that they may be forced to choose between this and other basic needs such as food, housing and medical care, etc. Furthermore, due to declining physical and mental processes and health conditions, they may not be able to drive and operate an automobile. In addition to this, health impairments may also prevent them from using public transit.

This research is designed to investigate if the elderly population in Las Vegas has experienced this problem. To accomplish this, a survey of a selected segment (103 elderly residents) of the population was made. The following hypotheses were formulated to make systematic investigations
Hypotheses

1. Lack of adequate income tends to limit the elderly person's ability to have access to private transportation facilities.

2. Age related sensory problems tend to impair the elderly person's ability to use available transportation facilities.

3. Health problems tend to impair the elderly person's ability to make use of private and/or public transportation facilities.

4. The design and service features of the available transportation facilities tend to limit the elderly person's mobility.

Operational Definitions

The following are the operational definitions of the preceding hypotheses:

Frail Elder - An elderly person sixty-five years or older who has a physical or mental disability, or health problem that limits his or her ability to drive safely or ride a bus.
Age Related Sensory Problems - Impairments in sight, hearing, or mobility due to old age.

Private Transportation - Transport in a private automobile, either self-driven or being driven by a relative, friend or neighbor.

Public Transportation - Buses, trolleys, taxi cabs or any other means of transport used by the general public.

Mobility - The capability to move freely from place to place, either by walking or by using various conveyances, such as automobiles, buses, taxicabs, etc.

Income - Monetary compensations or earnings, either through work, pension or Social Security.

Health Problems - Problems associated with physical and mental health, such as heart disease, arthritis, and psychiatric problems such as mood disorders and depression.
Research Design and Method of Data Gathering

A survey was utilized to conduct this study. A self-administered questionnaire was designed and distributed to a randomly selected group of 103 frail elderly respondents to determine their transportation needs. The respondents were sixty-five-years or older and lived in the Las Vegas area. The data in this questionnaire consisted of questions regarding demographic characteristics such as: income, age, gender, health, family circumstance, marital status, support systems and ethnicity. In addition, questions regarding transportation needs of seniors and their available means of transportation were also included. The subjects were informed of the purpose of the study and were told that they could refuse to participate if they so desired.

The elderly respondents who were able to write, filled out their questionnaires independently. However, many could not hear and see well enough to fill out the questionnaires by themselves. On these occasions, they were assisted through the use of personal interviews by the surveyor.

Coverage

The population for this study consisted of approximately 1,300 elderly people who were either visiting the following locations at the time of data gathering or who resided at the location. These locations were: Humana Sunrise Hospital, The Cannon Center, The Dula Center, Montevista Psychiatric Hospital, and the residents at two
locations of the Las Vegas Housing Authority, which included, Aida Brents Gardens and Arthur McCants Senior Residence Center.

**Sampling**

Because of the lack of proper sampling frame - i.e., a lack of complete listing of the entire elderly population in Las Vegas - strictly random sampling procedure could not be used. To offset this limitation, the following procedure was carefully designed and utilized. First, a series of continuous numbers ranging from 001 to 200 was generated. Then each number was written on a separate sheet of paper and rolled up separately. Then the different agencies which cater to the elderly population were assigned proportionate sample sizes from which the total sample for the study could be pooled. Then the order in which the drawing of the different agencies was to be made was randomly determined.

Sample size for each location was determined by the agency's population size during a specified period of time. Information on approximately how many seniors receive services or who reside at the location, was obtained through interviews with supervisors and records at the agencies.

Humana Hospital regularly cares for approximately 210 elderly patients in a period ranging from seven to nine days. During the first two weeks of December in which the survey was conducted, the Cannon Center had 1,083 people coming through their agency for various reasons. According
to their records they estimated that on a daily basis they 
may serve approximately 108 seniors. The Dula Center has 
400 senior citizens who frequent this senior center daily. 
Aida Brents and Arthur McCants senior residences have a 
total of 140 occupants. Montevista Psychiatric Hospital 
served approximately 30 patients during the months of August 
through December. This group included in-patients as well 
as patients attending the day care program.

The following breakdown shows the relative sample sizes 
which were drawn from the various agencies: (a) Humana 
Hospital 21 (b) Cannon Center 25 (during two day period). 
(c) Dula Center, 40 (d) Arthur McCants and Aida Brents 14 
and (e) Montevista Psychiatric Hospital 3.

Prior to drawing the samples each agency was assigned 
a series of numbers within the numbers which had already 
been generated, corresponding to their respective sample 
sizes. The first 21 numbers, i.e., - 001 to 021 in the 
series were randomly assigned to the first agency to be 
surveyed, i.e., Humana Sunrise Hospital. Similarly, the 
other agencies were assigned a series of numbers which 
corresponded to their respective sample sizes.

Using this procedure and sampling with replacement, the 
respondents at each of the agencies were allowed to draw 
numbers from a list containing all the 200 numbers in the 
series. Those who drew the numbers which were randomly pre-
assigned to the agency were selected as a sample
representing that agency. Using this procedure, a total of 103 respondents were selected and filled out the questionnaire.

Data Processing and Analysis

After the completed questionnaires were collected, they were edited for incomplete or unclear responses. A code book was prepared to log the responses representing the different variables, then the data was put on a computer and processed by SPSS. Then descriptive analysis involving frequency distribution and some correlations were run.

Limitations of Study

There are several limitations to this study. This study could not cover the entire elderly population in Las Vegas due to the lack of a proper sampling frame. Another constraint involved limitations on a true random sampling procedure. This could not be done because of the confidentiality of the list of names which the agencies were not willing to disclose. Also, it was not possible to locate the elderly people who do not use the services of agencies and who are not aware of transportation systems. However, the study was meant to be exploratory, and the descriptive results could be used to get some idea about the immediate transportation needs of this population, as well as to determine future research needs in this area.
Chapter IV

Results

This study was designed to explore how factors associated with the aging processes might influence the elders' (65 and over) ability to gain access to the services they need. Also, the research was intended to determine if there is a need for additional transportation facilities for elders in the Las Vegas area. A questionnaire was designed to gather data about such factors as: Income, age related sensory problems, health, and the design and service features of public transportation facilities. In addition to these factors an assessment was made to explore how the impact of having, or not having the ability to drive an automobile might influence the elders' ability to get around. The results of the study covering these and other relevant issues will be reported in the following pages.
Background Characteristics

The data in Table 1 summarizes the major background characteristics of the respondents. The majority (68%) of the respondents are female and a great majority (80%) of them are not married. A sizable proportion (41%) are widowed. (See Table 1).

Table 1: The Distribution of the Background Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Characteristic</th>
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<tr>
<td>Divorced</td>
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</tbody>
</table>

The respondents' ages ranged from 65 to 89. A large majority (76%) of the respondents are in the 65-79 age group, and 82 percent of them are caucasian.
**Income**

Nearly all (95%) of the respondents indicated that they receive Social Security. About a tenth (9%) receive income from investments. Two respondents were still working and receive income from employment. 72% percent of the respondents have annual income under $10,000, while 22% indicated that they earn income ranging from $10,000 to $20,000 annually. Only one senior received income from $40,000 to $50,000 annually. A majority (74%) of the respondents felt that their income is not sufficient to meet their needs. Furthermore, only about a fifth (21%) of the respondents indicated that they own a home. In short, it appeared that the group has very limited financial resources, or a good majority (72%) of them earn income below the poverty line.

**Living Arrangements**

A majority (62%) of the respondents live alone, while (18%) live with a spouse. 14% live with their children, and only 4% live with relatives and/or friends. The majority of seniors stated that they lived in locations other than their own home which included: Apartments (29%), housing projects (28%), and in a senior complex (15%). 21% lived in homes they owned. Comments from the seniors living alone indicated they preferred living alone to living with their children or other relatives. These seniors appeared to
value a state of independence that such an arrangement would provide.

**Health**

The majority (57%) of the respondents indicated that they are not in good health, while nearly half (43%) of them said they are in good health. Of the group who said they are in good health, visual observation and interviews of several respondents did not bear this out. In addition to various other health problems identified by the respondents, 57% of those interviewed had muscular/skeletal health impairments such as osteoporosis, arthritis, or problems resulting from falls. About a fifth (21%) of the respondents indicated that they had visual impairments, while 17% of them noted cardiovascular problems as their major health problem.

**Descriptive Analysis**

In the following section a descriptive analysis of the results of the study will be presented. The first part of this will involve simple frequency distributions regarding the respondents' assessment of their transportation needs and the type of transportation means which they have been using. The second part will mainly focus on a correlation analysis of the variables which may directly or indirectly impact on the elders' ability to get around.
Transportation Needs

It is significant that 80% of the respondents stated that they had transportation needs. The data in Table 2 indicate that the majority of them need transportation for such things as medical appointments and grocery shopping and to meet other needs. Furthermore, it is interesting to note that comments on the questionnaire revealed that, although some seniors are dependent on family members for transportation, they do not like this arrangement as it tends to lower their self-esteem due to the loss of their independence.

Table 2: The Distribution Of Respondents' Transportation Needs

<table>
<thead>
<tr>
<th>Specific Need</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Appointments</td>
<td>73</td>
<td>70.9</td>
</tr>
<tr>
<td>Grocery Shopping</td>
<td>64</td>
<td>62.1</td>
</tr>
<tr>
<td>Recreation</td>
<td>46</td>
<td>44.7</td>
</tr>
<tr>
<td>Religious (Church)</td>
<td>27</td>
<td>26.2</td>
</tr>
<tr>
<td>Friends</td>
<td>27</td>
<td>26.2</td>
</tr>
</tbody>
</table>
Use of Automobiles and Public Transportation

Nearly half (48%) of the respondents stated that they have access to a dependable means of transportation. Over a third of them (38 and 35%) said they could drive and they have a valid driver's license, respectively. Furthermore, nearly half (45%) of the respondents own automobiles, whereas 55% do not. In addition to this, 56% are capable of using public transportation facilities, however, only 23% use public transportation. Reasons given for not utilizing public transportation include the following: (a) bus stop is too far from residence (b) poor routing (c) takes too long to reach destination (d) too painful to get on and off buses. In short, most respondents cited that public transportation was too inconvenient for them to use.

Factors Which May Be Associated With the Elders' Mobility

A number of variables may influence the elders' mobility or their inability to get around. These may include, but are not limited to: (a) ability to drive an automobile (b) ability to use available public transportation (c) income, and (d) various kinds of health problems. The results regarding the analysis of these variables will be presented in the following pages.
**Ability To Drive**

The elders' ability to drive an automobile may, at least in part, influence how much they can get around and be able to satisfy some of their needs. The data in Table 3 indicate that there is a significant relationship between the respondents' ability to drive a car and the ability to get around. 26% of the respondents who said they can get around can drive an automobile in sharp contrast to 75% of those who said they cannot get around and yet can drive. This suggests that elderly persons cannot get around, not because they cannot drive, but perhaps because of other reasons such as not having a car, not having money to buy gas or to maintain an automobile. This is further confirmed by the fact that there was no significant relationship between having a drivers license and the ability to get around.

**Table 3: Cross Tabulation Of The Respondents Driving Ability By The Ability To Get Around**

<table>
<thead>
<tr>
<th>GET AROUND</th>
<th>CAN DRIVE</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>16</td>
<td>26</td>
<td>46</td>
<td>74</td>
<td>62</td>
</tr>
<tr>
<td>NO</td>
<td>21</td>
<td>75</td>
<td>7</td>
<td>25</td>
<td>28</td>
</tr>
</tbody>
</table>

χ² (1, N = 90) = 19.28, p < 0.01
Ability To Use Public Transportation

The ability to use available public transportation facilities may, at least in part, influence how far elders can get from place to place in order to satisfy some of their needs. The data in Table 4 indicate that there is a significant association between the ability to use public transportation facilities such as buses and the ability to get around. 56% of those who said they can get around can use public transportation in contrast to 88% who said they can use public transportation, yet they cannot get around. This could be due to a lack of money for bus fare or because a bus may be inaccessible to them. (See Table 4).

Table 4: Cross Tabulation On The Respondents Ability to Use Public Transportation By The Ability To Get Around

<table>
<thead>
<tr>
<th>GET AROUND</th>
<th>CAN USE</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>31</td>
<td>56</td>
<td>24</td>
<td>44</td>
<td>55</td>
</tr>
<tr>
<td>NO</td>
<td>21</td>
<td>88</td>
<td>3</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>

χ² (1, N = 79) = 7.20, P < 0.01
Income

Income may directly or indirectly affect the elders' mobility or their inability to get around and satisfy their needs. This may happen by way of limiting their ability to own and maintain an automobile or pay transportation fees or fare. The data in Table 5 indicate that there is a significant association between income and automobile ownership; that is, the higher the income, the more likely that the respondents would say they owned an automobile.

<table>
<thead>
<tr>
<th>INCOME</th>
<th>OWN AUTO</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>N</td>
<td>%</td>
<td>NO</td>
<td>N</td>
</tr>
<tr>
<td>$10,000&lt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>25</td>
<td>37</td>
<td>NO</td>
<td>43</td>
</tr>
<tr>
<td>$10 TO $20,000</td>
<td></td>
<td>6</td>
<td>76</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>$20 TO $30,000</td>
<td></td>
<td>2</td>
<td>67</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>$30 TO $40,000</td>
<td></td>
<td>1</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO RESPONSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

$\chi^2 (4, N = 94) = 12.53, \ P < 0.01$
Health

The elders' health condition may in various ways influence their mobility or their inability to get around and satisfy their needs. First, their general health condition may influence their ability to drive an automobile or to make use of public transportation facilities. The data in Table 6 indicate that there is a significant association between the respondents' general health condition and their ability to drive an automobile. 55% of the respondents who said they are healthy can drive an automobile compared to 29% of those who are not healthy but yet they can drive. Proportionately more of those in good health can drive as compared to those who say they are not in good health but can drive.

Table 6: Cross Tabulation Of The Respondents' Health By Their Driving Ability

<table>
<thead>
<tr>
<th>HEALTHY</th>
<th>CAN DRIVE</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>22</td>
<td>55</td>
<td>18</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>NO</td>
<td>16</td>
<td>29</td>
<td>39</td>
<td>72</td>
<td>55</td>
</tr>
</tbody>
</table>

χ² (1, N = 95) = 6.48, P < 0.01
Furthermore the data in Table 7 indicate that there is a significant correlation between being in good health and being able to use public transportation. 84% of the respondents who stated that they are in good health can use public transportation as compared to 50% of those who said they are not in good health, but can still use public transportation. Proportionately a larger number of elders in good health can use public transportation than those who are not in good health. This suggests that maybe the design and service features of public transportation pose barriers to elders who suffer from health problems.

<table>
<thead>
<tr>
<th>HEALTHY</th>
<th>CAN USE PUBLIC TRANSPORTATION</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>31</td>
<td>84</td>
<td>6</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>NO</td>
<td>23</td>
<td>50</td>
<td>23</td>
<td>50</td>
<td>46</td>
</tr>
</tbody>
</table>

\[ x^2 (1, N = 83) = 10.3, P < 0.01 \]
The preceding result is further confirmed by the fact that there is a significant relationship between the respondents' health and their use of public transportation facilities as shown in Table 8. 44% of the elderly who state they are in good health use public transportation in contrast to only 15% of those who are not in good health that use public transportation. This might be due to the inconveniences associated with public transportation such as: long walks to bus stops, waiting at bus stops, long uncomfortable bus rides, jerky starts and stops, and pain associated with getting on and off buses. Comments by seniors who do not use public transportation due to health problems included such things as: (a) fear of fainting or falling due to neurological problems (b) dizziness due to hypertension, and (c) pain associated with muscular/skeletal problems.

Table 8: Cross Tabulation Of The Respondents' Health By Their Use Of Public Transportation Facilities

<table>
<thead>
<tr>
<th>HEALTHY</th>
<th>DO USE PUBLIC TRANSPORTATION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>YES</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>NO</td>
<td>8</td>
<td>45</td>
</tr>
</tbody>
</table>

$\chi^2 (1, N = 89) = 9.38, P < 0.01$
Secondly, in addition to general health conditions, the respondents' specialized health problems such as cardiac and muscular/skeletal problems may influence their ability to get around. A few of the results of this study suggests this to be the case. Cardiac problems seem to have an effect on the elders' ability to drive. The data in Table 9 indicate there is a significant association between the respondents' cardiac problems and their ability to drive. 18% of the respondents who said they were afflicted with cardiac problems also stated that they could still drive in contrast to the 44% of the respondents who stated they have no cardiac problems and drive. This association suggests that proportionately a higher percentage of the elders with no cardiac problems drive as compared to those who are afflicted, and yet still drive.

Table 9: Cross Tabulation Of Cardiac Problems By Driving Ability

<table>
<thead>
<tr>
<th>CARDIAC PROBLEMS</th>
<th>CAN DRIVE</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>N</td>
<td>%</td>
<td>NO</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>YES</td>
<td>3</td>
<td>18</td>
<td></td>
<td>14</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>36</td>
<td>44</td>
<td></td>
<td>45</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>81</td>
<td>100</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

χ² (1, N = 98) = 4.21, P < 0.05
As age increases, the tendency for the elders to develop muscular/skeletal problems increases. Such problems as osteoporosis, arthritis, rheumatism and injury from falls are common conditions and might limit the elders' ability to drive and/or to make use of public transportation facilities. The data in Table 10 indicates that there is a significant correlation between having muscular/skeletal problems and having the ability to drive an automobile. 26% of the respondents who said they have muscular/skeletal problems can drive in contrast to 49% of those who do not have these problems and are capable of driving. Proportionately, fewer of the respondents who have muscular/skeletal problems can drive in contrast to a larger percentage of those who do not have these problems.

Table 10: Cross Tabulation Of The Respondents' Muscular and Skeletal Problems By Their Driving Ability

<table>
<thead>
<tr>
<th>MUSCULAR SKELETAL PROBLEMS</th>
<th>DRIVING ABILITY</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>10</td>
<td>26</td>
<td>29</td>
<td>74</td>
<td>39</td>
</tr>
<tr>
<td>NO</td>
<td>29</td>
<td>49</td>
<td>30</td>
<td>51</td>
<td>59</td>
</tr>
</tbody>
</table>

$\chi^2 (1, N = 98) = 5.42, P < 0.05$
Furthermore, many elders with muscular/skeletal problems may avoid using public transportation due to the pain or inconvenience associated with getting on and off buses, or having to walk long distances to bus stops. The data in Table 11 indicate that there is significant relationship between the utilization of public transportation by elderly who are afflicted with muscular/skeletal problems and those that are not. Proportionately fewer (44%) of the people that have muscular/skeletal problems can use public transportation in contrast to a larger proportion (79%) of the people who do not have the problem. For example, relatively more of those who do not have the problem use the available transportation facilities compared to those who have the problem.

Table 11: Cross Tabulation Of Respondents With Muscular And Skeletal Problems By the Ability To Use Public Transportation

| MUSCULAR SKELETAR PROBLEMS | CAN USE PUBLIC TRANSPORTATION |   |  |  |  |  |
|-----------------------------|--------------------------------|---|---|---|---|
|                             | YES                           | N | % | N | % | N | % |
|                             | YES                           | 15| 44| 19| 56| 34| 100|
|                             | NO                            | 41| 79| 11| 21| 52| 100|

\(\chi^2 (1, N = 86) = 10.92, P < 0.01\)
Chapter V

Summary and Conclusion

The problem of a lack of transportation for frail elders has existed for over thirty years. In 1964, the mobility needs of elders became an explicit element of national transportation policy. At that time, federal, state and local governments began to spend millions of dollars in an attempt to solve this problem. Despite this commitment, however, there is today no clear consensus on the most effective or efficient way to use public resources in solving the dilemma.

Adequate and dependable transportation is an essential element to the physical and mental well-being of elders so that they will be able to have access to basic needs and services. Having access to grocery stores, medical care, friends, recreation and social activities can determine the quality of life for older persons. In addition, many elders suffer from physical and psychological losses as they age. This can lead to depression which compounds the problem. Therefore, access to social contacts and supportive social services will contribute to elders' adjustment and adaptation to these losses. Having adequate and dependable transportation can provide elders with a sense of independence and integration, and may help them to fit and feel well within the community.

The purpose of this study was to explore if there was a
need for additional transportation facilities for frail elders in the Las Vegas community and to understand how much certain factors might be influencing their ability to use the available transportation facilities. It was hypothesized that such factors as income, health, age related sensory problems and the design and service features of available transportation facilities might adversely affect the elders' ability to gain access to the services they need.

The findings suggest that these factors are associated with the elderly person's inability to get around. The results also bear out that transportation is a problem for frail elders in the Las Vegas area since over three-fourths of the respondents stated that they have critical transportation needs.

A significant correlation was found between income and automobile ownership. Those elders with higher incomes tended to own an automobile, whereas those of lower income did not own, maintain, or drive a car. Most of the respondents do not have sufficient income to meet their needs, as a great majority had incomes below the poverty level.

Due to the growth of the city and the popularity of the private automobile with the general population in Las Vegas, the use of public transit has become more geared to the tourist rather than the resident. As a result of
limited ridership and scarce resources, the routing of buses appears to be concentrated in those areas where demand is the greatest by tourists. Routes are usually along main thoroughfares and the Las Vegas strip. Routing to low income suburban neighborhoods is limited, and as a result, some elders have limited or no access to bus stops.

The results also suggest that health tends to affect the ability of older persons to drive. The majority of the respondents said they are not in good health, and only a small percentage of these individuals stated that they can still drive. In addition, the data indicated that cardiac and muscular skeletal problems were found to have a significant association with driving ability. Those individuals who have these problems are less likely to drive than those who do not have these problems.

Unfortunately, the transportation problem is compounded by the fact that those who have health impairments or age related sensory problems have disabilities which prevent them from using public transportation. A small group of respondents listed age related sensory problems such as loss of vision and hearing as their reasons for not driving or using public transportation. However, those with serious sensory problems have a tendency to rely on family, friends or neighbors to take them places, thereby increasing their dependency on others.

Comments from elders indicated that the design and
service features of public transit pose barriers to their ability to ride buses. Although some seniors complained about long uncomfortable bus rides and pain associated with getting on and off buses, predominately the majority complained about the long walks to bus stops, and waiting.

While the above stated results indicated that there was an association between elders' health and their ability to use public transportation, the findings further substantiated an actual lack of use of the public system by elders. Almost half of those who stated they were in good health used public transportation while only a few in poor health would ride buses. It, therefore, appears that those in poor health who do use bus transportation do so because they cannot afford to do otherwise. Also, ridership by those with specialized impairments such as muscular/skeletal problems is limited to approximately 15% of those surveyed. In addition to these problems, all respondents indicated that poor routing, inaccessibility to bus stops and indifferent or unconcerned bus drivers were their reasons for not utilizing public transportation.

In conclusion, the results indicate that most of the elders in Las Vegas have transportation needs. At present, several social service agencies are attempting to address this need by providing limited transportation services so that elders may have access to needed services. However, these transportation services are not sufficient to meet the
increasing demand by the elderly population.

Since this was an exploratory study, limited in scope, it is recommended that a more in-depth study be conducted, specifically of the elderly population. It is further recommended that all those agencies in Las Vegas which provide services to elders be included in city transportation planning. Note should be taken of areas where city agencies are competing with each other, and such agencies should be encouraged to coordinate their efforts for effectiveness.

**Implications Of The Findings of This Study For Social Work Practice**

Throughout history, some tribal societies have been known to abandon their old. According to Zastrow and Kirst-Ashman (1987) the Crow, Creek, and Hopi tribes built special huts away from the tribe where the old were left to fend for themselves and die. The Eskimos left the incapacitated elderly in snowbanks or had them paddle away in a kayak. Generally, the reason such societies have been forced to abandon their elderly has been scarce resources. Although we might consider these customs to be barbaric in our civilized society today, have we not also abandoned many of our elders, using the excuse of scarce resources when it comes to providing adequate transportation? Transportation is a vital lifeline not only in meeting basic needs, but it
is also vital to independence and integration within a community. Elders have often become a forgotten population in our youth oriented society which values survival of the fittest and youthful energy and productivity.

The quality of life and future of millions of older persons may lie in the hands of social workers as agents of change and policy makers. Due to their holistic orientation, education, and training, social workers are the group most likely to understand and be in touch with the needs of the elderly population. Therefore, social workers need to be more sensitive and must assume responsible and creative roles in their efforts to effect change in the lives of our frail elderly population.

While working with the frail elders, the social worker should make a careful and serious assessment of an elderly client's total needs. Whether or not elderly clients can utilize the services that are available within the social service agencies in this city is in part dependent upon their ability to find a means of transportation to the agency. Therefore, one of the key aspects that social work professionals will have to pay particular attention to in their assessment of their elderly clients needs is not only the client's social service needs but also whether the client has the ability to get to the agency to make effective use of the available services.

This also means determining ways of helping the elderly
to overcome their transportation needs such as by lobbying for policy legislation in order to improve upon and meet the transportation needs of the elderly and/or making home visits to provide services at the residence of the client.

Social workers can develop a sense of social responsibility by becoming advocates for frail elders and by mobilizing and energizing concerned individuals, groups and organizations within the Las Vegas community to address the problem of inadequate transportation. They should not only address this need within the community, but also at the state and national level they should actively foster legislation which would make provisions for transportation facilities to serve this group. This may involve organizing some kind of public education campaign at the community and higher levels. These efforts must stress the value, strengths and needs of our older population.

Through creating supportive networks and organized active participation in such organizations as the local NASW chapter, social workers in the Las Vegas community could use their creative talents to work together to bring the public's attention to the barriers which hinder the elders from meeting their needs. One must realize that if the transportation problems that our elders face today are ignored, as our society continues to grow older, everyone will eventually be affected.
Chapter VI

References


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Perspectives: A biennial report of Nevada state agencies. Carson City, Nevada: Nevada Department of Administration.


Sloane, C., Interview (March 1992) at Cannon Senior Center.


Wyman, J., Interview (March 10, 1991) at Division Of Aging Services, Cannon Center.

Appendix A

Survey - Instrument
Appendix A

SURVEY OF SENIOR TRANSPORTATION NEEDS

I am Carolyn Martin, a graduate student at the University of Nevada, Las Vegas. To fulfill the requirement for graduation I am conducting a survey of the transportation needs of senior citizens in Las Vegas. Will you please kindly agree to participate in the study and help me identify your personal transportation needs by answering the following questions? This information will be kept confidential, therefore, DO NOT PUT YOUR NAME ON THIS FORM.

The first group of questions will help me to identify you as a member of our senior population.

Answer all questions as completely as possible by circling the correct answer, or by filling in the blanks.

A. Background Data

1. Gender:
   A. Male  B. Female

2. Are you:
   A. Married  B. Single  C. Widowed  D. Divorced

3. Age:
   A. 65-69  B. 70-74  C. 75-79  D. 80-84
   E. 85-89  F. 90 or above

4. Racial Background:
   A. Black  B. Caucasian  C. Oriental
   D. Other (list _________________________)

5. What type of income do you receive? (Circle all that apply).
   A. Social Security  B. Retirement
   C. Investments (stocks and bonds)  D. Work
   E. Other ___________________________________.
6. Annual Income:
   A. Less than 10,000 a year
   B. 10,000-20,000
   C. 20,000 - 30,000
   D. 30,000-40,000
   E. 40,000 - 50,000
   F. 50,000 or above
   G. Refuse to answer

7. Do you consider your income to sufficient for your needs?
   A. Yes
   B. No

8. Do you own a home?
   A. Yes
   B. No

9. If Yes, is your home already paid off?
   A. Yes
   B. No

10. With whom do you live?
    A. Alone
    B. With Spouse
    C. With Children
    D. With Relatives
    E. With Friends
    E. Other (Specify)

11. Where do you reside?
    A. In your own home
    B. In an apartment
    C. Housing project
    D. In a Senior Complex/Retirement Home
    E. Other (Specify)

B. Health

12. Do you believe yourself to be in good health?
    A. Yes
    B. No
13. Do you have any kind of health problem or disability which prevents you from driving, walking, or getting around on your own (by yourself)?

A. Yes B. No

14. If Yes, please indicate the specific kind of impairment with which you are afflicted.


C. Transportation Needs

The following questions pertain to your transportation needs.

15. Do you have any transportation needs?

A. Yes B. No

16. If Yes, please indicate your transportation needs. (Circle all that apply)

A. Medical Appointments B. Grocery Shopping
C. Visit Friends D. Recreational Activities
E. Church F. Other (Specify)

17. Are you capable of driving a car now?

A. Yes B. No

18. Are you currently licensed to drive an automobile?

A. Yes B. No

19. If No, please explain why? (Circle answer below)

A. Vision Problems B. Poor Coordination
C. Physical/Mental Disability
D. Uncomfortable on the highways and freeways (EOB)
E. License Revoked
F. Other (Specify)
20. Do you own an automobile?
   A. Yes    B. No

21. Do you have access to a dependable means of transportation?
   A. Yes    B. No

22. Are you capable of using public transportation facilities?
   A. Yes    B. No

23. Do you use public transportation?
   A. Yes    B. No

24. If No, please indicate (specify) why not.

25. Would you use public transportation if it were available and if it fit your exact needs?
   A. Yes    B. No

26. What is your current source of transportation?
   A. Drive my own car    B. Depend on family member
   C. Depend on neighbors and friends
   D. Economic Opportunity Bus (EOB)
   E. Another organization's bus (Specify organization)
   F. Taxi    G. Walk    H. Public buses

27. Any additional remarks or comments you would like to make:

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