

DISSERTATION

RELATIONSHIP BETWEEN THE CHARACTERISTICS OF  
ELDER CAREGIVERS AND CARE RECIPIENTS  
IN COMMUNITY SERVICE UTILIZATION

Submitted by

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In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

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## ABSTRACT OF DISSERTATION

### RELATIONSHIP BETWEEN THE CHARACTERISTICS OF ELDER CAREGIVERS AND CARE RECIPIENTS IN COMMUNITY SERVICE UTILIZATION

The objective of this study was to investigate the relationship between the characteristics of the elder caregiver and care recipient in community service utilization.

The dramatic effect on the prevalence of elder caregiving is a great concern in the United States as the elder population 65 and older increases (Whitlack & Noelker, 1996). This study focused on the relationship between the characteristics of the caregiver and care recipient in the use of community services in elder caregiving. Cross tabulation and chi-square, factor analyses, and independent *t*-tests were employed as statistical analyses to evaluate the caregiver's and care recipient's characteristics in community service use. Cross tabulation and chi-square tests revealed significant differences in the use of community services and the caregiver's ethnicity, income level, education, marital status, and gender. A factor analysis revealed a significant difference in the caregiver's attitude and the use of community service. Two independent *t*-tests were performed and revealed differences on the care recipient's characteristics (age and functional ability) in the use of community services.

An analysis of the data suggested that there was a relationship between the caregiver's and care recipient's characteristics in the use of community services.

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## CHAPTER I

### INTRODUCTION

The increasing life expectancy of the elder population in the United States contributes to heightened interest in estimated demands for long-term care services in the elder population (Tennstedt & Chang, 1998). Approximately 75 million baby boomers (those persons born between 1946 and 1964) will soon join the ranks of older Americans. The baby boomer generation is expected to bring about the greatest spurge in growth between the years of 2011 and 2029 as they reach the age of 65. At that time, it is predicted that 20 percent of the United States population will be over the age of 65, 10 percent will be over the age of 80, and one million will be over the age of 100 (Spencer, 1989). The term, older adult, refers to the population 65 and older (Center on an Aging Society, 2005). Most of these baby boomers are already providing care for an aging parent. Caregiving for older adults is becoming a normative experience for United States families (Wagner, 1997). It is estimated that family and friends (informal caregiving) are the primary source of assistance for the elderly in our country (Center on an Aging Society, 2005; Lyons & Zarit, 1999; National Alliance for Caregiving [NAC] & American Association of Retired Persons [AARP], 1997; Tennstedt, 1999). For this study, elder caregiving is defined as unpaid services provided to a relative or friend who is age 50 or older in assisting him or her to remain

independent in the community (NAC & AARP). The act of caregiving is an expression of a bond that connects the caregiver to their loved ones and allows them to express intimacy, love, and other basic human emotions. This expression for elder caregivers is necessary to maintain continuity in values, self-respect, and identity. It is essential to understand the body of literature on elder caregiving for the various definitions of the terms, caregiver and caregiving. Elder caregivers provide older adults (care recipients) assistance with activities of daily living (ADL) and instrumental activities of daily living (IADL) in order that they may remain independent in the community (NAC & AARP). ADL are defined as activities that are usually performed by a person in a course of a normal day. These activities generally include a person's ability to bathe, dress, undress, groom, eat, and transfer from a bed to a chair (NAC & AARP). IADLs are defined as activities that a person may not necessarily do daily, but which are important for independent living. IADL include activities such as preparing meals, doing housework and laundry, shopping, using transportation, managing money, using the telephone, and doing home maintenance (NAC & AARP).

The growing rate of elder adults in the United States has had a dramatic effect on the prevalence of elder caregiving over the past decades (Whitlack & Noelker, 1996). Twenty percent of the United States elderly population needs assistance with ADL and IADL in order to assist them in maintaining a sense of independence at home. Informal (family and friends) caregivers provide 71 percent of long-term care and 85 percent of home services to elder adults (Whitlack & Noelker).

The purpose of this study was to investigate the relationship between the characteristics of caregivers and care recipients and utilization of community services (formal services) in elder caregiving. The first objective was to investigate differences in the caregiver's ethnicity, household income, educational level, marital status, gender, and attitude towards the use of community services (formal services) in elder caregiving. The second objective was to investigate if the care recipient's age and functional ability (measured by the care recipient's ability to perform their ADL and/or IADL) made a difference in the use of community service in elder caregiving.

Understanding the interface between the informal and formal systems of support was extremely important in elder caregiving (Bass, Noelker, & Rechlin, 1996). In order to understand the interface between informal and formal elder caregiving, it was important to understand the systems that support older adults and caregivers. I will begin by defining the systems of support in elder caregiving as the Older American's Act and formal and informal as systems of support.

#### Legislative Foundation of Social Programs and Services Supporting Older Adults

The Older American's Act (OAA) was signed by President Lyndon B. Johnson on July 14, 1965. The OAA is largely responsible for the development of what is frequently referred to as the aging network (Wacker, Roberto, & Piper, 1998). The OAA is legislated law mandated to bring together uncoordinated and fragmented public and private community services to meet the base needs of older adults at the community level (Lee, 1991). The advocacy and coordination of the OAA plays a significant role in encouraging our nation's social support system of community

services to come together and do a better job in meeting the needs of older Americans (Wacker et al.). The coordination of community services enables the aging network to be better informed, counseled, and prepared to assist older adults and their families in identifying community services in order to be able to confront the issues of elder caregiving (Takamura, 1999). Area Agencies on Aging (AAA) are local community agencies mandated by OAA legislation to offer community-based programs to assist older adults to maintain their sense of independence (Wacker et al.). Local AAAs are responsible for working with older adults and their families to (a) develop area plans for a comprehensive and coordinated system of community services to meet the needs of the elder population, (b) fund agencies that provide formal services, and (c) serve as advocates and focal points for older persons within the local communities (Wacker et al.). In spite of the coordination and availability of formal services offered by OAA to meet the needs of older Americans, few caregivers and older adults use these services (Center on an Aging Society, 2005; Wacker et al.). The Center on an Aging Society reported a decrease use of formal services by older adults. The findings showed formal service use by older adults with limited functional abilities who had previously relied on formal services for their long-term care needs decreased from 9 percent in 1989 to 7.8 percent in 1994. Little is known why elder caregivers and older adults make these choices or if current community services fail to meet their needs (NAC & AARP, 1997).

### *Informal Support System*

The informal support system or unpaid family services consists of services provided by relatives, close friends, and neighbors (Cantor, Brennan, & Sainz, 1994). When seeking assistances from the informal system, usually older adults experience a hierarchical preference from spouses and children first when present, then neighbors and friends as the base of the informal network (Cantor et al.). Older adults turn to the informal system with whom they are familiar and involved in their daily lives (Wacker et al., 1998). The informal support system provides the intimacy and the immediate availability of assistance to the frail elderly in times of need (Cantor et al.). Informal support is often defined as a person's natural accordance when encountered by a problem or the need to seek advice from someone they know such as a friend or family member rather than a resource from the formal system (Wacker et al.). Informal caregivers are important for a number of reasons. They provide a high volume of caregiving hours. If they did not provide this care, the government or other forms of care services would not be able to provide equivalent care or may not be able to afford to do so (World Health Organization, 2002).

### *Formal System*

The terms, community services and formal system, will be used interchangeably throughout this study. The formal system can accomplish two crucial goals for elder caregivers: (a) assist in enhancing the quality of life for older adults, and (b) improve the caregiver's skills taught to them by formal care providers (Piercy & Dunkley, 2004). Formal services are defined as contractual services for elder care

recipients that are provided by paid professionals for a limited amount of time (Bass et al., 1996; Wallace-Williams & Dilworth-Anderson, 2002). Paid professionals include nurses, social workers, therapists in adult paid centers, home health care aides, homemakers, and privately hired assistants who provide caregiving services to older adults. Formal services are (a) an important adjunct to traditional medical care for elders with chronic illness when they are unable to manage the everyday ADL; (b) elective services, usually requiring substantial patient initiative(s) promoted as being low-cost, readily available, and often targeted towards the indigent population; and (c) typically a group focus rather than an individual focus (Shaw et al., 2000). Formal services are community programs that are called to replace what previously has been informal or unpaid family care services for elder adults (Spillman & Pezzin, 2000).

#### Interface between the Formal and Informal Systems of Social Support for Elder Caregiving

The interface between informal and formal services in elder caregiving has been a public policy interest in response to today's changing trends, such as (a) smaller family size, (b) increased family mobility structure, (c) greater participation of women in the workforce, and (d) rising rate of marital disruption (Tennstedt, 1999). These trends will decrease the availability or willingness of family members (informal caregiving) to provide assistance to a disabled elder (Takamura, 1999; Tennstedt). The expected growth spurge by the baby boomer generation between the years 2011 and 2029 (Spencer, 1989) and today's changing trends in family structure (Tennstedt) support the importance of understanding the interface of the informal and formal systems of caregiving (Bass et al., 1996).

In spite of the coordination and availability of formal services by OAA legislation to meet the needs of older Americans, few caregivers and older adults use formal services to meet the caregiving needs of older adults (Center on an Aging Society, 2005; Cox & Monk, 1993; Doty, 1986; Lyons & Zarit, 1999; Wacker et al., 1998). It is often assumed that older adult caregivers use formal services only as a last resort when they have exhausted all other forms of informal assistance (Whitlack & Noelker, 1996). More research is needed, including reasons why elder caregivers do not use community services or use services only for a limited time (Zarit, 2005).

#### Factors that Determine Service Use

In deciding when formal services are used in elder caregiving, Tennstedt (1999) found that the caregiver's limited functional ability and decreased health determined the use of formal services for the care recipient. Whitlack and Noelker (1996) and Spillmam and Pezzin (2000) reported that elder caregivers use community services (formal services) only when they have exhausted all forms of informal assistance. Wagner (1997) and Tennstedt (1999) found that as the care recipient's functional ability deteriorated so did the caregiving relationship with informal services. The deteriorating relationship caused by the care recipient's decrease in functional ability initiated the use of formal services by caregivers.

#### Trends of Elder Caregiving

It is estimated that family and friends are the primary source of assistance for the elderly in our country (Center on an Aging Society, 2005; NAC & AARP, 1997; Tennstedt, 1999). According to Whitlack and Noelker (1996), 35 percent of the older

population in the United States exclusively uses informal care services to assist them in managing tasks of ADL and IADL, whereas 29 percent have no assistance, 20 percent rely exclusively on formal services, and 16 percent combine informal and formal services.

In a nationwide random sample of elder caregivers, ages 18 and over, the NAC and AARP (NAC & AARP, 1997) reported over 23 percent of all United States households are currently providing caring services for a relative or friend who is at least 50 years of age or older. The remaining 24 percent reported they had previously provided informal care services to a relative or friend within the past 12 months and/or were currently continuing to provide caregiving services at home. The NAC and AARP (NAC & AARP, 1997) survey findings reported the number of estimated households providing caregiving services for an elder adult, relative, or friend in the United States is 18,290,000 for non-Hispanic White families, 2,380,000 for Black families, 1,050,000 for Hispanic families, and 400,000 for Asian families. Asian and Black families have a higher prevalence rate of providing informal caregiving services for elder adults (31.7 percent and 29.4 percent, respectively), followed by Hispanic families (26.8 percent) and non-Hispanic White families (24 percent) (NAC & AARP, 1997).

As more baby boomers reach retirement age, the most pressing issue for the United States in the 21<sup>st</sup> century will be providing caregiving activities for its elders (NAC & AARP, 1997). Projected increases in older adults contribute to the estimated demands for elder caregiving services for elder adults (Tennstedt & Chang, 1998). The

rapid increase in the elderly population and changing trends in family structure casts doubts about the availability of family members to fulfill the caregiving role (Takamura, 1999; Tennstedt, 1999). In spite of the fact that there is legislated law (OAA) that governs community services for older adults in order that they maintain their level of independence, most older adults and their caregivers do not use these services or use them in limited amounts (Doty, 1986; NAC & AARP, 1997; Tennstedt, 1999; Whitlack & Noelker, 1996). According to Whitlack and Noelker and Spillman and Pezzin (2000), it is often assumed that elder caregivers use formal services for elder caregiving only when they have exhausted all forms of informal assistance. More research is needed, including reasons why elder caregivers do not use community services or use services only for a limited time (Zarit, 2005).

#### Needs Statement

Elder caregiving is becoming a normative experience for most Americans (Wagner, 1997). Baby boomers (born between 1946 and 1964) will soon join the ranks of older Americans between the years of 2011 and 2029. As the intensifying demands of meeting the needs of the older population increase, the most pressing issue for most baby boomers will be providing caregiving activities for their elder population (Spillman & Pezzin, 2000).

Legislative foundations (OAA) and social programs (formal services) have long been in place to assist older adults to maintain their sense of independence in the community (Wacker et al., 1998). The advocacy and coordination of formal services by the OAA play a significant role to come together to meet the demands of older

Americans (Wacker et al.). In spite of the coordination of formal services, it is estimated that family and friends (informal caregiving) are the sole source of assistance for the elderly in our country (Doty, 1986; NAC & AARP, 1997; Tennstedt, 1999). It is often assumed that elder caregivers use formal services for elder caregiving only when they have exhausted all forms of informal assistance (Spillmam, & Pezzin, 2000; Whitlack & Noelker, 1996). Little is known why caregivers make these choices or if current formal services fail to meet the needs of elder adults and caregivers (NAC & AARP, 1997).

Current changing trends such as (a) smaller family sizes, (b) families' increased mobility structure, (c) greater participation of women in the workforce, and (d) rising rates of marital disruption will decrease the availability or willingness of family members to provide informal caregiving to older adults (Takamura, 1999; Tennstedt, 1999).

#### Research Questions

This study was designed to examine the following research questions:

1. Is there a significant difference between community service utilization and the caregiver's ethnicity?
2. Is there a significant difference in the caregiver's age and the use of community service?
3. Is there a significant difference between community service utilization and the caregiver's household income level?

4. Is there a significant difference between the caregiver's educational level and community service utilization?

5. Is there a significant difference between the caregiver's marital status and community service utilization?

6. Does the caregiver's gender make a difference in community service utilization?

7. Is there a difference between the caregiver's attitude and community services utilization?

8. Is there a difference in the care recipient's age and utilization of community service?

9. Is there a difference in community service utilization and the care recipient's functional ability (ADL/IADL)?

#### Delimitations

The Weld County Needs Assessment Caregiver's Survey used for this study was limited to caregivers who were or who had provided caregiving services to elders over the age of 60 in their home in Weld County.

Sampling from one geographic location limits my ability to generalize results to other regions of the country. Another limitation of this study is that 91 percent of the survey respondents were non-Hispanic White, and only 9 percent were of other ethnicity. The low numbers of participants with different ethnic backgrounds limited my ability to generalize ethnic differences since the sample size did not represent equal representation of diverse populations. Additionally, since the survey was offered only

in English, this limited households that had caregivers who could read and write the English language to participate in the survey.

## CHAPTER II

### LITERATURE REVIEW

#### Introduction

This chapter will discuss the demographic trends in the aging population in the United States and the challenges encountered by caregivers as they provide caregiving services for their loved ones and the informal care system of elder adults. I will then introduce the caregiver and care recipient profiles as seen in the review of literature, discuss the interaction between the systems of support (informal and formal caregiving) and how these systems interface in the care of elder adults, and review the general history of under service use of community services in elder caregiving. I will introduce the Andersen and Newman (1973) model of service used and how the framework was used to guide this study. Finally, the literature regarding the relationship between the characteristics of the elder caregiver and care recipient as they relate to the use of community services in elder caregiving will be discussed.

#### Demographic Trends of the Aging Population

As the United States experiences increasing changes in social trends including smaller family size, an increase in geographic mobility, a greater rate of women in the workplace, and an increase in marital disruptions, these trends may decrease the

availability, or willingness of family members to manage caregiving activities of elder adults (Presidents Council on Bioethics [PCBE], 2005).

Families in the United States have experienced a dramatic effect in the prevalence of elder caregiving as the growing percentage of elder adults 65 and older continues to increase (PCBE, 2005; Whitlack & Noelker, 1996). In 1980, 11 percent of the United States population was 65 years and older. In 1993 the population of elder adults 65 and older increased to nearly 13 percent. The population increase for elder adults 65 and older is expected to increase by 20 percent by the year 2050 (Whitlack & Noelker). In America age 65 is looked at as the cut-off between middle age and old age, between work and retirement, between pension and income, between private health insurance and public health care. We have “young old” as those that despite having reached the official retirement age of 65 continue to live vigorous and productive lives. Then there are the “old old” who may have slowed down but still lead relatively healthy and active lives. Finally, there are the “oldest old,” those 85 and older who tend to be mainly dependent on the care of others. These age definitions are more about chronological age rather than a person’s bodily and psychological condition (PCBE, 2005).

In 2000, more than a quarter of adult Americans reported they had provided caregiving activities for a disabled family member. This translates to more than 50 million caregivers (PCBE, 2005). The challenges faced by elder caregivers as they manage caregiving activities for their loved ones will increase as social trends in the United States continue to change. The use of community service utilization (informal

caregiving) by elder caregivers to support their role as caregivers is a concern from a clinical perspective in terms of timely and effective use of community services to ensure the health and safety of the elder caregiver and care recipient.

### *Informal Care of Older Adults*

Family and friends are the primary source of assistance for the elderly in our country (Center on an Aging Society, 2005; Doty, 1986; National Alliance for Caregiving [NAC] & American Association of Retired Persons [AARP], 1997; PCBE, 2005; Tennstedt, 1999). The majority (70 percent to 80 percent) of elder care is provided by the informal sector, mostly by families, with the rest coming from formal paid services provided by professionals (Center on an Aging Society). As the longevity of elder Americans increases so will the need for informal caregiving. The rising concern arises from increased longevity, lower birth rates, and the baby boomer generation that is now between the ages of 40 and 60. Not only are the baby boomers getting older, they also have fewer children than their parents, which means less children will be available to care for an elder parent.

The growing mass of today's geriatric society will affect every dimension of human and social life: the culture of the workplace, the consumer market, the housing market, and most deeply the character and rhythm of family caregivers. The implications are that every married couple, each with two still living parents, can expect to be involved and may be fully responsible for the care of at least one and more likely two of these four parents (PCBE, 2005).

Arno, Levine, and Memmott (1999) used the NAC and AARP (1997) data to estimate the economic value of informal caregiving. With a market wage approach of informal caregiving cost and a single wage rate, three estimates were developed: low, mid-range, and high for the value of care. Based on approximately 18 weekly hours of care at \$8.18 an hour and 25.8 million caregivers, the mid-range national estimate economic value of informal caregiving care in 1997 was \$196 billion, when compared to the national spending for home care (\$32 billion), nursing home care (\$83 billion), and total health care \$1,092 billion. The economic value of informal care is approximately 18 percent of the national health care spending and exceeds spending for home care and nursing home care combined (Tennstedt, 1999).

#### Elder Caregiving

##### *Elder Caregiver's Profile*

Findings from the National Survey Final Report (NAC & AARP, 1997) revealed data that identifies the typical caregiver in America. The typical American elder caregiver has been reported to be female, age 46, high school degree, average income of \$35,000, and working full-time while taking care of her 77-year-old mother, mother-in-law, or grandmother. The average length of time providing informal caregiving activities was 5 years in 1987 and 4.5 years in 1997 (Wagner, 1997).

##### *Care Recipient's Profile*

Most elder adults have the capability to live independently. Should the need arise in the case of disability, they may become unable to undertake the tasks that are necessary for biological or social survival. These tasks include obtaining, preparing,

and consuming food and drink; remaining safe from fall and other injuries, fire, and attack; keeping clean, warm, and dressed; and maintaining a clean and safe dwelling (World Health Organization, 1990). Older adults are more likely than younger adults to experience chronic illness that may result in disability and require long term, often permanent, management rather than a cure. The National Center for Health Statistics (1990) reports more than 80 percent of older adults over the age of 65 have at least one chronic condition. The most frequent chronic conditions experienced by older adults are arthritis, hypertension, hearing impairment, and heart disease.

In 1997, the NAC and AARP data reported the average age of elder adults (care recipients) requiring assistance in managing daily activities as 77 years of age. Approximately two in three of the elder adults (64 percent) were over 75 years of age, and almost one in four (42 percent) were over 85 years of age. The mean age of the non-Hispanic White elder adult was 77.6 years, compared with 75.2 for Blacks, 74.7 for Hispanics, and 74.4 for Asians (NAC & AARP, 1997). The functional ability of the care recipient data revealed 7 in 10 caregivers (71 percent) reported their care recipient's illness or medical condition to be long-term or chronic in nature. The main illness or problem was aging and second was the care recipient's functional impairment. Ninety-eight percent of caregivers reported assisting the care recipient with at least one instrumental activities of daily living (IADL), and more than four or five assisted with three or more IADL. Fifty-one percent of caregivers assisted the care recipient with at least one activities of daily living (ADL), and 29 percent assisted with at least one ADL (NAC & AARP, 1997).

## Systems of Social Support in Elder Caregiving

### *Informal Support System*

The informal support system is often defined as a person's natural accordance to seek advice when encountered by a problem from someone they know such as a family member or friend rather than a resource from the formal support system (Wacker, Roberto, & Piper, 1998). The informal support system provides the intimacy and the immediate availability of assistance to the frail elderly (Cantor, Brennan, & Sainz, 1994). Elder adults experienced a hierarchical preference when seeking assistance from the informal support system, first from spouses and children when present, then neighbors and friends (Cantor et al.; Doty, 1986).

### *Formal Support System*

The terms, community services and formal support services, will be used interchangeably throughout this study. The formal system of social support in elder caregiving is defined as contractual services provided by paid professionals for a limited amount of time (Bass, Noelker, & Rechlin, 1996; Wallace-Williams & Dilworth-Anderson 2002). Formal services are (a) an important adjunct to traditional medical care for elders with chronic illness when they are unable to manage the everyday activities of daily living; (b) elective services, usually requiring substantial patient initiative; (c) promoted as being low-cost, readily available, often targeted towards the indigent population; and (d) typically have a group rather than an individual focus (Shaw et al., 2000).

Formal services are community programs that are called to replace what previously has been informal care or unpaid family caregiving services for elder adults (Spillmam & Pezzin, 2000). In spite of the coordination and availability of formal services mandated by legislative law (Older Americans Act [OAA]) to assist elder caregivers, the Center on an Aging Society (2005) revealed formal services used by older adults with limited functional abilities decreased from 9.0 percent in 1989 to 7.8 percent in 1994. Little is known why elder caregivers make these choices or if current community services fail to meet the need of the elder caregiver or care recipient (NAC & AARP, 1997).

*General History of Low Utilization of Community  
Services (Formal) in Elder Caregiving*

Numerous community services (informal services) are available to assist elder adult caregivers as they provide caregiving activities for elder adults. Informal services do not provide primary medical care services but focus on assisting elder adults to maintain an independent lifestyle. The interaction between informal services, the frail elderly, and elder caregivers is of great importance in maintaining and assisting the elder adult in maintaining an independent lifestyle. Community service utilization in elder caregiving assists caregivers to maintain their own lifestyle as they provide caregiving activities for elder adults. Some of these informal services include nursing home, respite, transportation, and nursing care services. Although these services may be available in most communities, available services often go unused by elder caregivers (Gottlieb & Johnson, 2000; Miller et al., 1996). Increased family involvement in

the elder caregiving role has long been associated with a decrease use of formal care services (Tennstedt, 1999).

There is a growing body of knowledge in elder caregiving research that is tempered by the presence of informal support services. Kosloski, Montgomery, and Youngbauer (2001) found the need for community service use in elder care is tempered by the presence of informal support services available to the caregiver and care recipient.

The use of formal services in elder caregiving may not only be appropriate but also clinically necessary as the health of the frail elder decreases. From a clinical perspective, it is important to determine the optimal mix of formal and informal services in order to ensure the well being of both the care recipient and the caregiver (Tennstedt, 1999).

#### Theory of Community Service Utilization in Elder Caregiving

##### *Social Behavior Model of Service Use*

The Social Behavior Model of Service use (Andersen, 1995) has been used as one of the most frequent models used to focus on the different individual characteristics of potential users of community service utilization in elder caregiving. This researcher will use the Social Behavior Model to identify the relationship between the caregiver and care recipient characteristics as predisposing, enabling, and perceived need factors of community service utilization. These factors enable or impede community service utilization and the need for elder care (Forbes & Janzen, 2004; Kosloski, Montgomery, & Karmer, 1999; Miller et al., 1996; Toseland, McCallion, Gerber, &

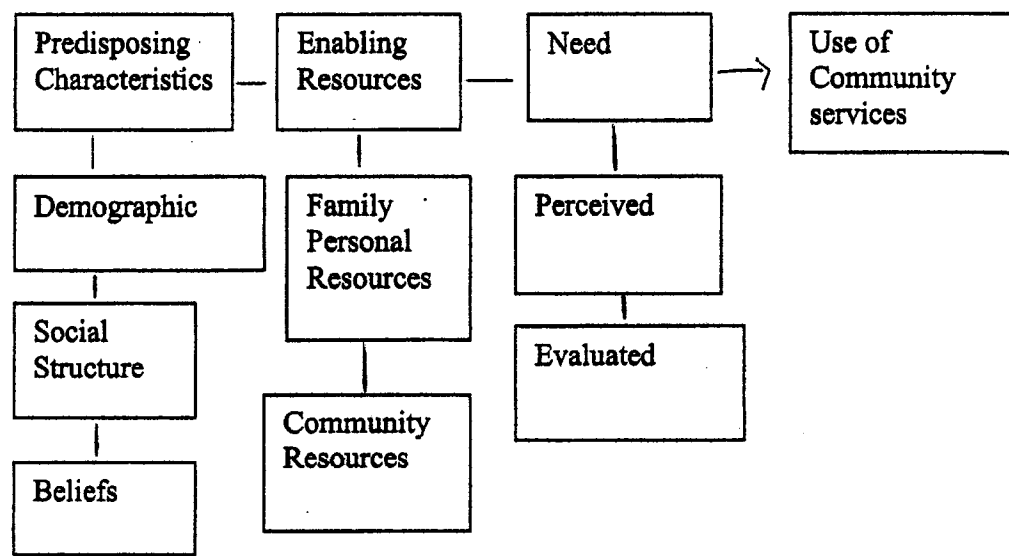


Figure 2.1. Social behavior model. From “Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?” by M. A. Andersen, 1995, *Journal of Health and Social Behavior*, 36, p. 2.

Banks, 2002). The Social Behavioral Model identifies three factors as primary determinants of service use: (a) predisposing, (b) enabling, and (c) perceived need. Predisposing factors are demographic, social structure, and health beliefs. Enabling factors are personal/family and community factors that hinder or enable service use. Finally, perceived need factors are conditions that give rise to the need for service utilization, such as illness or dependency (Andersen, 1995).

In this literature review, the Andersen and Newman (1973) Social Behavior Model was used as an analytic framework to identify the relationship of caregiver and care recipient characteristics in the use of community service utilization in elder caregiving. Classification of the independent variables focused on identifying the

relationship between caregiver and care recipient characteristics in the use of community service utilization.

The independent and dependent variables for this study were identified utilizing the Andersen and Newman (1973) Social Behavior Model. Predisposing factors are (a) ethnicity, (b) age, (c) income, (d) educational level, (e) marital status, and (f) gender. Enabling needs factors are identified as (a) the caregiver's attitude towards the used of community services and (b) the social support system. The social support system are formal and informal services that are used in the care of the elder adult. Perceived need is identified as the care recipient's age and level of functional ability (ADL/IADL). These variables were measured in the Caregivers of Weld County Needs Assessment Survey. Although, the care recipient's age, functional ability, and the caregiver's attitude are not identified in the original work of Andersen and Newman's Social Behavioral Model, this researcher felt they were important characteristics to identify the relationship to community service utilization in elder caregiving.

This section will discuss the relationship between the demographic characteristics of elder caregivers and the care recipients in utilization of community services as found in the review of literature. I will began by discussing two major quantitative studies that I quoted throughout this chapter that focused on various issues in elder caregiving. The AARP and The Traveler's Foundation (1988) and the NAC and AARP (1997) expansion of the same study.

The discussion of predisposing factors as founded in the review of literature will follow. The caregiver's ethnicity and income will be discussed together. Age, educational level, marital status, and gender will be discussed separately. This section will be followed by discussion on the enabling factors: the caregiver's attitude (towards community service use), trust (in the formal system to take care of their loved ones), and responsibility. The elder adults' characteristics, age, and functional ability as perceived needs of community services will be followed by the summary for this chapter.

In 1988, AARP and The Travelers Foundation preformed a quantitative study on informal care provided by family members in elder caregiving. The telephone survey provided data on 754 informal elder caregivers as well as data of those receiving care (care recipients). In 1997, the NAC and AARP expanded on the AARP and The Travelers Foundation data to (a) compare trends in informal care provided by families in elder caregiving, (b) to understand the level of demand on elder caregivers presented by the caregiving situation, and (c) to understand the impact of elder caregiving on the caregiver's attitudes and how it effects their lives. The NAC and AARP (1997) data was designed as a telephone survey used nationwide to randomly sample elder caregivers, ages 18 and over, who were providing caregiving activities to an elder adult. The 1997 data was screened using the definition of caregiving as providing informal care (unpaid services) to a relative or friend ages 50 or older and also included elder caregivers who had provided informal care to such a person at some point during the past 12 months. In order to address a lack of minority elder

caregivers in the previous 1988 data, the 1997 data included a supplemental sample of 755 households to represent Blacks, Hispanics, Asians, and other non-White households. The telephone survey was conducted in the fall of 1996 with respondents capable of answering all telephone questions in English. A total of 1,509 (non-Hispanic Whites = 623, Blacks = 306, Hispanics = 307, and other races = 9) English-speaking elder caregivers (NAC & AARP, 1997) found 74 percent of elder caregivers used one or more formal services to assist them in fulfilling their caregiving role. In the 1997 study by NAC and AARP, service utilization was measured as (a) acquiring a wheel chair, walker, or other device; (b) personal or nursing care services; (c) home modification; (e) home delivered meal services; (f) assistance with housework; (g) financial information; (h) transportation; (i) respite care; (j) adult day care/senior center; and (k) support groups.

#### Predisposing Factors

##### *Ethnicity and Income*

In 1997, the NAC and AARP caregiving data measured the use of community services in elder caregiving by ethnicity. The findings revealed Asian caregivers were less likely to report having used community services (62 percent) compared to non-Hispanic Whites. Hispanics and other categories of caregivers reported using 72 percent compared to 76 percent non-Hispanic Whites. When comparing the use of personal or nursing services, Non-Hispanic White, Black, and Hispanic caregivers were more than twice as likely as Asian caregivers to have used personal or nursing services (32 percent to 44 percent versus only 15 percent of Asians). Black and

Hispanic caregivers were more likely to have used transportation services (20 percent more by each group) than non-Hispanic Whites (only 14 percent). Blacks were more likely than non-Hispanic Whites to have used adult day care or senior centers (14 percent versus 9 percent). Only 8 percent of Asian caregivers used respite care services compared to 15 percent of non-Hispanic Whites.

In another study, Tennstedt and Chang (1998) compared non-Hispanic White elders to African American and Puerto Rican elders to better understand how elder care is influenced by socioeconomic status and ethnicity. A quantitative study was conducted with elders' primary caregivers. Details regarding elder caregiving activities, types, and amount were gathered from the caregiver. Variables considered for the investigation included the elders' ethnicity, age, and functional ability. Ethnicity was defined as self-reported, African American (defined as non-Hispanic Black), Puerto Rican, or White (non-Hispanic White). The community-residing sample included African American, Puerto Rican, and non-Hispanic White elders 60 years of age. Tennstedt and Chang controlled for the elder's functional ability and socioeconomic status. They found ethnicity had a strong effect both directly and indirectly on the amount of community service utilization received by elder minorities. The results revealed ethnic minority groups were (a) more likely to have limited functional abilities, (b) used more informal care, and (c) used less community services compared to their non-Hispanic White elders. Cultural differences rather than economic differences explained the between group differences. The socioeconomic status had no effect on the amount of community service utilization. That is, in spite of lower

socioeconomic status by minority elders, they were still less likely to utilize community services compared to the non-Hispanic White elder caregiver. Whatever the reason given that minority elders use less formal services, minority elder caregivers are shouldering a greater responsibility given the lower socioeconomic status, lower functional ability, and greater use of informal services (Tennstedt & Chang).

Kosloski et al. (1999) performed a quantitative study to examine the moderating effects of ethnicity on need factors within the framework of the Andersen and Newman (1973) Social Behavioral Model of Service Use. A hierarchical logistic regression model was used to separately determine the use of three discretionary services (adult day care, in-home respite, and meal services) and one non-discretionary service (home health care). The quantitative study was composed of 2,947 subjects: 1,486 non-Hispanic Whites, 703 Blacks, and 758 Hispanics. Five sets of predisposing variables were analyzed for the caregiver: (a) age, (b) gender, (c) employment status, (d) relationship to the care recipient, and (e) ethnicity. The predisposing need variables identified to determine community service use for the elder care recipient were identified as (a) level of functional impairment (ADL/IADL) and (b) if the care recipient had Alzheimer's disease (even though Alzheimer's Disease is well known in the review of literature in elder care, the presence of the disease itself was not taken into account in these study). Kosloski et al. (1999) tested how ethnicity moderates the way in which need (represented by the elder's ADL, IADL, and diagnosis) characteristics affect service use on discretionary (adult care, in-home respite, and meal services) and non-discretionary (home health care) services in elder caregiving. Kosloski et al.

(1999) found the caregiver's predisposing factors (ethnicity, elder's age, caregiver's gender, relationship of the caregiver to the elder, and caregiver's employment status) with the perception of need to influence the use of discretionary services but did not affect the use of non-discretionary services in elder caregiving. The ethnicity factor was found to be more important with respect to the use of discretionary services but unrelated to the use of non-discretionary services. Predisposing factors were more important with respect to service use (adult day care) among Blacks and Hispanics compared to non-Hispanic Whites. In this study the caregivers' income data was characterized by high level of non-responsive questions. Wolinsky and Johnson (1991), in their application of the behavioral model, noted that in most survey data, missing information on income is a norm. Most importantly, Wolinsky and Johnson found income has no substantial impact on community service use since most services are subsidized on an ability to pay basis or have third party payers. Rather than using only the income data for caregivers who provided the information, the income variable was deleted completely from their study (Kosloski et al., 1999).

In a different study with different results, Miller et al. (1996) used the Andersen and Newman (1973) Model of Service Use to determine (a) the effect of socioeconomic status, family structure, and health status on long-term care services; and (b) the reliability and validity of resources across three national data sets (Supplement on Aging [SOA], National Long-Term Care Survey [NLT], and National Medical Expenditure Survey [NMES]). A comparative analysis in elder caregiving revealed no ethnic differences in the use of community service use. Comparison of the

sample population by race (non-Hispanic Whites, Hispanics, and African Americans) was done across all three sets. Miller et al. reported no race differences in the use of home-based services, senior centers, or any type of community service in elder caregiving. The pattern of predictor of community service use was inconsistent across all three sets of data. The most consistent finding was in home-based services. The predictors for home-based service use across all three data sets were education, use of Medicaid, and decreased functional ability of the care recipient. The predictor of income on the odds of community service use was higher at very low and very high levels of income. In the middle income level, there was a reported lower use of services.

Based on a large longitudinal and three companion ethnography studies, Magilvy, Congdon, Martinez, Davis, and Averill (2000) explored home health care and health care transitions of elder Hispanics. They reported a shift of increased service use by Hispanic caregivers. Several reasons were identified as being responsible for the increased use of community services in the Hispanic culture: (a) economic pressure forcing family members to relocate due to employment opportunities, (b) evolving attitudes of younger Hispanics, and (c) loss of touch with traditional cultural roots (Magilvy et al.). Magilvy et al. found home health care was acceptable for the Hispanic elder in congruence with the decision of the elder to stay at home or the home of a family member. Nursing home placement was viewed as the last resort for the Hispanic elder, until the caregiver struggled with his or her health. At that point it became permissible to let the elder adult to be moved to a nursing home.

Kosloski et al. (2001) undertook a study to identify factors that are associated with the use or nonuse of available respite care services in elder caregiving. Respite care service refers to assistance provided to caregivers formally by public or private agencies or informally by family and friends (Kosloski et al., 2001). The goal of the study was to understand a pattern of service utilization in caregiving. In this study, formal respite service referred to the use of a specific publicly funded respite program in the caregiver's county of residence. The study focused on two questions: (a) what factors distinguished caregivers who use the service, and (b) among caregivers who are nonusers of the service, are there demographic characteristics that distinguished caregivers who inquire about the service (seekers) and those do not inquire about the service (nonusers)? The latter question acknowledges the fact that nonuse of community services in elder caregiving may be associated with the characteristics of the caregiver or the caregiving context. Nonuse of community services may also reflect a caregiver's belief about the appropriateness and/or accessibility of existing services. Kosloski et al. (2001) focused on four sets of factors to hypothesize the use or nonuse of respite care in elder caregiving. These factors were (a) need for services, (b) background and demographic characteristics of the elder caregiver, (c) beliefs about personal responsibility, and (d) characteristics of the service programs and providers. The need for assistance was assessed in two ways: the functional ability (ADL) and the problematic behaviors of the elder care recipient. ADL was assessed using a four-item measure based on Wolinsky and Johnson's (1991) basic ADL factor. The ADL factor focused on the amount of assistance required by the elder care recipient with personal

activities such as toileting, bathing dressing, and getting in and out of bed. The reliability for the four-item scale composite (Cronbach's alpha) was .89. The impact of the characteristics of the service programs and providers will not be discussed in this study. The total subject count was 458 White and Black participants. The results revealed 93 percent of the White population were users of the service, 86 percent were seekers, and 83 percent were nonseekers of respite care. In the Black population, 7 percent were users, 14 percent were seekers, and 17 percent were nonseekers. The findings revealed elder adults with higher levels of ADL assistances and White caregivers used more services compared to African Americans.

The NAC and Equitable Foundation (NAC, 1998) report compared women who provided care to elder adults from the NAC and AARP, 1997, report a year later. This longitudinal two-survey report allowed a comparison among women in terms of their pattern of financial hardship. When comparing the NAC and Equitable Foundation (NAC, 1998) study to the NAC and AARP (1997) data, the findings were (a) in the NAC and AARP (1997) report, the use of financial services was more common among caregivers when the care recipient was more functionally impaired, and (b) the NAC and Equitable (NAC, 1998) results reported caregivers who spent 11 hours or more a week providing caregiving services to an elder adult and those whom sought information about two or more community services were more likely to report an increased level of financial hardship.

In a different study, Bass and Noelker (1987) found family income to be an enabling factor to community service utilization in elder caregiving. Families with

higher income levels used more hours of community services to assist them in the caregiving role. In the Bass and Noelker study, elder adults participating in the study were eligible for Medicare and/or Medicaid programs, which covered the cost of respite services and home health aides; these programs were restricted to the duration and amount of service use. The limited nature of these programs was more apparent when the elder's care was defined as "unskilled," more intense, and long-term in duration. A substantial portion of the elderly in this study met the need for unskilled care. Thus, many elders received in-home services only when they or their families were able to assume the cost of these services. For the most impoverished families, the absence of such community services in elder care fosters the income-related discrepancy in the United States (Bass & Noelker).

#### *Gender*

In the elder caregiving research, gender has reported some major key findings. First, most elder caregivers are female (Kosloski et al., 1999; NAC & AARP, 1997; Scharlach et al., 2001). Second, men and women fulfilled their caregiving roles differently (Kosloski et al., 1999; NAC & AARP, 1997; Scharlach et al.; Tennstedt, 1999; Wagner, 1997). Third, women reported greater levels of stress than did males (Scharlach et al.). Women were more likely than men to assist the care recipients with ADL and IADL activities, where men were more likely to manage elder care by utilizing community services (Kosloski et al., 1999; NAC & AARP, 1997; Tennstedt; Wagner).

In 1998, the NAC and AARP conducted a national survey of elder caregiving women baby boomers to find out what type of community resources would assist them in their caregiving role. These 267 women, ages 33 to 51, had previously been identified as elder caregivers in a survey called "Family Caregiving in the US" (NAC & AARP, 1997). The respondents in this survey were asked if they had sought assistance in their caregiving role during the past year from 11 sources of community services. These community services included health professionals, friends or relative caregivers, hospital discharge planners, library/bookstore, social service organizations, organizations about disease, organizations about aging, resources at job, geriatric care managers, internet/computer, and Veteran's Administration. The NAC and AARP (1998) findings revealed females who used community elder caregiving services sought more information from particular services more often than those who used informal services. The comparison between women and men of the most frequent services sought between 1997 and 1998 were health professionals (71 percent versus 55 percent), social organizations (26 percent versus 12 percent), organizations about disease (22 percent versus 12 percent), organizations on aging (19 percent versus 8 percent), and a geriatric care managers (15 percent versus 6 percent). Overall, female caregivers reported that as the caregiving situation became more difficult to manage, community services related to health, medical treatment, and in-home services were the most important resources of community services to assist female caregivers in their caregiving role. The NAC and AARP (1997) data revealed female caregivers were more likely than male caregivers to use assistance devices such as wheelchairs and

personal nursing care services to assist them providing caregiving activities to elder adults.

The Center on an Aging Society ( 2005) reports that although women continue to provide the majority of elder caregiving, the growing rate of men providing elder caregiving is larger now than it was 10 years ago. In 1989, women providing elder caregiving services accounted for almost three-fourths of informal caregivers, and in 1999 women accounted for slightly more than two-thirds of elder caregivers. Factors that may influence these changes are increased life expectancy of men, increased employment status for women, changing composition of families, and socialization of gender roles. The increased rate of male caregivers may potentially increase the number of caregivers in the future (Center on an Aging Society).

#### *Age*

Bass and Noelker (1987) reported the average age of the elder caregiver as 63.5 years of age. In the work of Bass and Noelker, the predisposing age factor of the elder caregiver had no effect on community service utilization in elder caregiving. The Center on an Aging Society (2005) reports the proportion of family caregivers age 65 and older has decreased from 49 percent to 47 percent between 1989 and 1999. Today, caregivers, age 45 to 64 years of age, represent a larger portion of caregivers than in 1989, 40 percent and 35 percent, respectively. Caregivers age 45 and under have decreased from 16 percent in 1989 to 13 percent today. The average age of the informal elder caregiver has increased from 60.3 years of age in 1989 to 62.7 years of age in 1999 (Center on an Aging Society).

The Final Report on Caregiving in the United States (NAC & AARP, 1997) revealed the relationship between the caregiver's age and the use of community services in elder caregiving. The NAC and AARP survey (NAC & AARP, 1997) reported 74 percent of elder caregivers used one or more community services to assist them in their caregiving role, and caregivers age 65 and older are more likely than younger caregivers to use community services.

#### *Marital Status*

The literature does not support the findings that married caregivers used more community services than non-married caregivers. According to Montgomery and Kosloski (1999), spousal caregivers tend not to identify themselves as caregivers until the care recipient's functional ability decreases and they begin to provide more hands-on assistance. This makes it unlikely that they will seek community services during the beginning stages of elder caregiving. Therefore, the relationship between the caregiver and the care recipient can make it difficult to seek community services. Lyons, Zarit, and Townsend (2000) and Wacker et al. (1998) found married caregivers to be more likely to receive assistance from family members (informal services) in elder caregiving activities and less likely to use community services. Piercy and Blieszner (1999) reported that married caregivers sought assistance from community services only when they found the need to balance their personal needs, marital status fulfillment, and the safety needs of the care recipient. Married caregivers sought assistance from community services in order to balance their personal needs and fulfill their marital obligations and the safety needs of their loved ones (Piercy & Blieszner).

### *Educational Level*

In the caregiving literature the caregiver's education is seen as an enabling factor in the use of community service use in elder care. The educational level of the caregiver is seen as a proxy for knowledge of services that may influence service use (Bass & Noelker, 1987). The higher the education level of the caregiver, the more knowledgeable they are and know how to seek community service.

The literature review supports the findings for this study associated with the caregiver's higher levels of education and increased service utilization in elder caregiving. The Family Caregiving in the U.S.: Findings from a National Survey (NAC & AARP, 1997) reported caregivers with college degrees or higher levels of educational attainment are more likely than caregivers of lower educational levels to use homemaker services, adult day care, or a senior center to assist them with their caregiving activities. Wallace-Williams and Dilworth-Anderson (2002) assessed the relationship between the caregiver's education level and the use of community service. Their findings revealed a direct relationship between the use of community services and the caregiver's education level. The higher educational level of the caregivers with one to three years of college was directly related to the increased use of community services use compared to caregivers with less educational levels.

### Enabling Factors

Enabling factors facilitate or impede the use of community services and/or the need for service utilization (Andersen, 1995; Andersen & Newman, 1973). In order for

elder caregivers to use community services, certain conditions must be met to enable them to use the service (Kosloski et al., 1999).

The literature review for this section focused on the caregiver's attitude towards the use of community service use in elder caregiving. In this study, the caregiver's attitude was measured by (a) the caregiver's response to their level of trust in others (community services/formal care) to care for their loved ones, (b) the caregiver's perception as being their responsibility to provide caregiving services to their loved ones, and (c) the caregiver's knowledge of community services available to assist them in the caregiving role. The caregiver's trust in others (informal system) to care for their loved ones, the responsibility they felt towards providing elder caregiving activities for their loved ones, and their knowledge of the formal system/community services in elder caregiving will be discussed separately as found in the review of literature.

### *Trust*

There is limited literature in the caregiving research in the relationship between the caregiver's trust and the use of community services. The Piercy and Bliesner (1999) findings support the findings for this study. The use of community services in elder caregiving is associated with the caregiver's inability to trust non-family member care providers (Piercy & Blieszner). The use of community services in elder caregiving were sought by caregivers only when (a) the care recipient's functional ability decreased, (b) family members felt it was not safe for the caregiver to provide services, and (c) when the caregiver needed time for family life. The findings revealed the need

for service use as being associated with the decreased functional ability of the elder care recipient and the need to balance elder caregiving and family roles. The extent of the caregiver's trust and satisfaction with formal services led to continued use of services.

### *Responsibility*

To tap into the meaning elder caregivers assign to attitudes and reasons for not using community services in elder caregiving, Piercy and Blieszner (1999) measured the links between the perceived responsibility of the caregiver and community service use. Piercy and Blieszner found caregivers did not make decisions about community service use based on solitary considerations such as family responsibility alone or reactions to community service use. They examined the links between the adult caregivers' perceived need for assistance and the elder care recipient's level of functional ability. The safety of both the care recipient and the caregiver was the link that determined the need for community service use. They found elder adult caregivers felt it was their responsibility to provide an environment that was safe and comfortable for both the care recipient and the elder caregiver. It was imperative to be sensitive to the care recipient's emotional needs and desires to have as much autonomy as possible. However, when it became evident that the care recipient's behavior might be harmful to themselves or that the caregiver, the perceived responsibility to both the care recipient and the caregiver was the decision to use community services. Piercy and Blieszner found the decision to use community services for caregivers positively

related to the perceived safety need and responsibility to both the caregiver and the care recipient.

Kosloski et al., (2001) focused on four sets of factors to hypothesize on the use or nonuse of respite care in elder caregiving. These factors were (a) need for services, (b) background and demographic characteristics of the elder caregiver, (c) beliefs about personal responsibility, and (d) characteristics of the service programs and providers. The caregiver's beliefs and personal responsibility on providing informal services were assessed by asking the caregiver to rate the extent to which they felt it was their duty and the extent to which they felt morally bound to take care of their elder loved one. Caregivers were identified as users, seekers, and nonseekers of services. All three groups expressed a high level of perceived (responsibility) duty to provide care for the elder adult. Nonseekers expressed a higher level of perceived duty to provide caregiving activities than the caregivers who used respite care. Elder caregivers' who feel it is their responsibility to provide caregiving services are more likely to experience emotional and physical conditions (Tennstedt, 1999).

#### *Knowledge*

In the caregiving research the caregiver's education is seen as an enabling factor in the use of community service use in elder care. The educational level of the caregiver is seen as a proxy for knowledge of formal services in elder caregiving, which may influence service use (Bass & Noelker, 1987). The higher the education level of the caregiver, the more knowledgeable they are about community services and more likely to seek community services.

In the NAC and AARP Final Report on Caregiving in the United States (NAC & AARP, 1997), 74 percent of elder caregivers reported using community services to assist them in caregiving activities. Eighteen percent of all elder caregivers reported lack of knowledge of community services in elder caregiving as the second most frequent reason for not using community services. Caregivers who provided care to the more functionally impaired elder adult are more likely to be less knowledgeable about informal services offered in the community setting.

The elder caregivers' expressed need for information and knowledge of community resources in elder caregiving stimulates the need for educational research. As the care recipient's age increases and their functional ability decreases, the more likely caregivers will express the need to become more knowledgeable about community services (Kosloski et al., 1999). England (2001) identified elder caregivers to perceive the need to learn and be more knowledgeable about community resources as they provide and manage the care of elder parents. England found caregivers to have primary needs such as (a) coping, (b) relating, and (c) mastery of caregiving. Secondary caregiver needs were relating to information about (a) life processes such as aging and chronic illness, (b) how to access resources for elder care, and c) freedom from threat or harm.

*Perceived Need as the  
Care Recipient Characteristics*

The care recipients' need factors pertain to illness or functional impairment levels necessitating the use of community services and the perceived need of the caregiver to access community services to meet the care recipients needs (Andersen,

1995). The care recipient's age and functional ability (ADL and IADL) have been the most frequent approaches used in explaining the need for community service use (Andersen, 1968, 1995; Andersen & Newman, 1973). This section will discuss the relationship of the care recipients' characteristics' age and functional ability in determining the use of formal services.

#### *Care Recipient's Age*

Deitz (1997) used data from the National Survey of Hispanic Elderly People data to evaluate the differences of elderly Mexican Americans who obtained informal care services, those who used community services, a combination of informal and formal services, and those who did not use any assistance at all. Only elders who had ADL/IADL limitations were included in the study. Numerous independent variables were measured including age, gender, functional ability, income, and educational level.

In this study, 60 percent of the elder adults were between the ages of 65 and 74 years of age, 32 percent were between 75 and 84 years of age, and 7 percent were 85 years of age and older. The care recipient's age emerged as an important factor in identifying significant differences between group differences in assistance with activity limitations. When controlling for the age of the care recipient, significant differences emerged between those who received no assistance and those who received some formal assistance. In all groups those who had not received assistance had a lower mean age than care recipients who received assistance with ADL/IADL. The association between the care recipient's age and the use of formal services is, as the

care recipients age increases so does the need for community services (Dietz, 1997; Kosloski et al., 1999).

#### *Care Recipient's Functional Ability*

Kosloski et al. (1999) used the Andersen and Newman (1973) Social Behavior of Service Use to measure the use of three discretionary services and non-discretionary services in elder caregiving. The functional level (ADL/IADL impairment) of the elder care recipient was used as a need factor to determine community service utilization. Hispanic elders were reported to need less assistance with ADL/IADL compared to both non-Hispanic White and Black care recipients. In predicting community service use, the elder's functional ability was an important factor in the use of all three discretionary services. Increased service use was associated with a frail elder's health. Kosloski et al. (1999) found community services such as day care and meal services generally serviced elders who had higher levels of functional abilities. Such a relationship could be because meal services are often provided in congregated settings that required the elder adult to be present for services.

Bass and Noelker (1987), Deitz (1997), Kosloski et al. (2001), Lyons et al. (2000), Piercy and Blieszner (1999), and Wallace-Williams and Dilworth-Anderson (2002) found a relationship between the elder's decreased level of functional ability and the need for community service utilization in elder caregiving. The correlation in these studies reported a positive relationship between the care recipient's number of ADL/IADL's and the use of community services. As the care recipient's health

deteriorates, the more likely caregivers will seek formal services to assist them in their caregiving role.

AARP and The Travelers Foundation (1988) conducted a survey to compare trends in family caregiving and to understand the level of demand presented by the informal caregiving situation on families. The data included 754 households of elder caregivers in America. Caregivers were identified as age 18 and over who provided elder caregiving assistances with at least two or more IADL or at least one ADL activity to an elder adult over the age of 50. Caregivers were classified into one of five levels of elder caregiving. Level 1 was the lowest intensity of elder caregiving and level 5 was the highest. Each level involved a higher degree of caregiving, responsibility, or demand. Elder caregivers in Level 1 were less likely than caregivers in level 3 to 5 to have used community services or devices to assist them in their caregiving role. The more intense level of care (level 5) provided by the elder caregiver signified the increased use of service (respite care, adult day care, and support groups). Nineteen percent of caregivers reported they did not need any formal services to assist them in their caregiving role. Twenty-seven percent of elder caregivers reported they had not used any community services offered to them or devices such as wheel chairs or walkers.

There was no difference by the level of care in use of meal services, assistance with housework, or transportation services (NAC & AARP, 1997). Most meals services are often provided in a congregated setting requiring elder adults to be mobile, which excludes elders with decreased functional abilities.

The functional ability of the care recipient revealed 7 in 10 caregivers (71 percent) reported their care recipient illness or condition to be long-term or chronic in nature. The main illness or problem was aging and second was the care recipient's functional impairment. Ninety-eight percent of caregivers reported assisting the care recipient with at least one ADL, and 81 percent assisted their care recipient with three or more IADL.

Kosloski et al. (2001) undertook a study to identify factors that were associated with the use or nonuse of available respite care services in elder caregiving. The study focused on two questions: (a) what factors distinguished caregivers who use the service, and (b) among caregivers who are nonusers of the service, are there characteristics that distinguish caregivers who inquire about the service (seekers) and those who do not inquire about the service (nonusers)? The latter question acknowledges the fact that nonuse of community services may be associated with the characteristics of the caregiver or the caregiving context. Nonuse of community services may also reflect a caregiver's belief about the appropriateness and/ or accessibility of existing services. Kosloski et al. (2001) focused on four sets of factors to hypothesize on the use or nonuse of respite care in elder caregiving. These factors were (a) need for services, (b) background and demographic characteristics of the elder caregiver, (c) beliefs about personal responsibility, and (d) characteristics of the service programs and providers. The need for assistance was assessed in two ways: the functional ability (ADL) and the problematic behaviors of the elder care recipient. The ADL factor focused on the amount of assistance required by the elder care recipient with personal activities such

as toileting, bathing, dressing, and getting in and out of bed. The findings revealed elder adults with a higher level of ADL assistance and non-Hispanic White caregivers used more community services compared to African Americans.

Tennstedt and Chang (1998) compared non-Hispanic White elders to African Americans and Puerto Ricans in the use of community services after controlling for the elder's functional ability, ethnicity, and socioeconomic status. The results revealed minority elders to be more functionally impaired, have lower socioeconomic status, and use less amounts of community services. Minority elders rely more on the informal caregiving system to meet their caregiving needs. Whatever the reason given, that minority elders utilized less community services, and shouldered a greater responsibility given the lower functional ability of the minority elder, lower socioeconomic status, and greater use of informal services.

#### Summary

Today's society is experiencing changes in socio-demographics of our older population, specifically the baby boomer population. We can expect projected changes in active life styles and the compression of disability, meaning higher needs for care over shorter periods of time in advanced age. Generally speaking, the variables that supported service utilization in the literature review were (a) gender, women provide more services than men, (b) caregivers' higher levels of education and income levels are associated with increase levels of service use, (c) married caregivers use less services than non-married caregivers, and (d) the care recipients decreased levels of functional ability and increase age were associated with community service use.

## CHAPTER III

### METHODOLOGY

The primary goal of this research was to measure quantitatively barriers faced by caregivers as they provide caregiving services to adults 60 years and older. This investigation measured the relationship between the characteristics of elder caregivers and care recipients in community service utilization. Pre-existing data for this study originated from the results of the Caregivers of Weld County Needs Assessment Survey (Wacker, 2002). The data used for this study was obtained from the Weld County Needs Assessment Caregiver Survey and approved by the University of Northern Colorado and Colorado State University Human Subject Committees.

#### Location and Setting for Data Collection

The Caregivers of Weld County Needs Assessment Survey (Wacker, 2002) was conducted in Colorado, Weld County, by Robbyn Wacker, Ph.D., Dean of the College of Health and Human Sciences at the University of Northern Colorado. The goal was to assist the Weld County Area Agency on Aging (WCAAA) in identifying the needs of Weld County elder caregivers and to identify programs and resources to assist in addressing the needs of elder caregivers. The criteria for sample selection included (a) Weld County residence, (b) households over the age of 40, and (c) currently caring or had been caring for (in last 6 months) an individual over age 60.

During the time period of July 1, 2002, through August 4, 2003, approximately 8,831 households were contacted by telephone to see if they met the criteria. Approximately 364 caregivers were identified as meeting the criteria. Once identified, caregivers were called, the needs assessment survey was explained, and they were asked to participate in the study. If they agreed, they were mailed the needs assessment survey, postage paid return envelope, help source referral guide, information about a respite program, and a pill box.

#### Instrumentation

The Caregivers of Weld County Needs Assessment Survey was developed by Robbyn Wacker, Ph.D., to assess the needs of Weld County caregivers who were providing caregiving services for elders 60 years and older. Dr. Wacker incorporated questions for the survey instrument from various published national caregiver studies and presented the refined questionnaire to the WCAAA Advisory Committee for final approval. The Caregivers of Weld County Survey was pretested with elder caregivers solicited from local agencies in Weld County (e.g., Eldergarden, local support groups, and WCAAA). Feedback obtained from the pretest survey was incorporated into the questionnaire survey to improve the comprehensibility and logic of the survey.

The survey instrument consisted of 32 questions specific to the caregiver and care recipient. The caregiver demographics (see Table 3.1) obtained by the survey were (a) age, (b) health, (c) ethnicity, (d) income level, (e) marital status, (f) gender, (g) educational level, (h) employment status, (i) relationship to care recipient, (j) length of time providing caregiving services, (k) utilization of community services, (l)

other family members or friends who assisted with caregiving services, (m) importance of assistance with caregiving services, and (n) questions specific to measuring the caregiver attitude in regard to community service utilization. Caregivers were asked to answer questions about the care recipient: (a) age, (b) illness, (c) instrumental activities of daily living/activities of daily living (IADL/ADL) functional ability, and (d) behavior problems.

The Caregivers of Weld County Needs Assessment Survey was approved by the University of Northern Colorado Human Research Subject Committee and Colorado State University. Participant information was obtained from the analysis of 224 completed surveys.

#### Procedure for Data Collection

Once households of elder caregivers were identified as meeting the criteria set by the committee, they were called and the survey was explained. If participants from the survey agreed to participate in the study, a survey was mailed to their home address with a postage paid return envelope.

For this study, the Anderson and Newman (1973, 1995) social behavior model was used to determine the impact of societal and individual determinants on community service utilization by elder caregivers (see Table 2.1).

#### Results from the Caregivers of Weld County Needs Assessment Survey

##### *Caregivers Demographics*

Table 3.1 summarizes the demographic characteristics.

Table 3.1

*Summary Demographic Characteristics of 224 Survey Respondents*

| Characteristic                    | Number | Percent |
|-----------------------------------|--------|---------|
| <b>Gender</b>                     |        |         |
| Male                              | 51     | 23.4    |
| Female                            | 167    | 76.6    |
| <b>Age</b>                        |        |         |
| < 50                              | 48     | 22.0    |
| 51 - 60                           | 63     | 63      |
| 61 - 70                           | 63     | 28.9    |
| 71+                               | 44     | 20.2    |
| <b>Ethnicity</b>                  |        |         |
| White                             | 200    | 91.3    |
| Hispanic                          | 12     | 5.5     |
| Asian American                    | 3      | 1.4     |
| Mixed race                        | 4      | 1.8     |
| <b>Marital status</b>             |        |         |
| Married                           | 163    | 75.1    |
| Widowed                           | 18     | 8.3     |
| Never married                     | 13     | 6.0     |
| Divorced/separated                | 23     | 10.6    |
| <b>Education</b>                  |        |         |
| Less than high school             | 10     | 4.6     |
| High school/GED                   | 67     | 31.0    |
| Some college                      | 59     | 27.3    |
| College graduate                  | 37     | 17.1    |
| Graduate degree                   | 27     | 12.5    |
| <b>Household members under 18</b> |        |         |
| None                              | 164    | 78.5    |
| 1 - 2 persons                     | 36     | 17.2    |
| 3 or more persons                 | 9      | 4.4     |

(Table continues)

Table 3.1 (continued)

| Characteristic            | Number | Percent |
|---------------------------|--------|---------|
| Residence in Weld County  |        |         |
| Greeley/Evans             | 155    | 69.2    |
| Rural                     | 69     | 30.8    |
| Length of time caregiving |        |         |
| < 1 year                  | 34     | 15.7    |
| 1 - 2 years               | 48     | 22.1    |
| 3 - 4 years               | 53     | 24.2    |
| 5 - 6 years               | 33     | 15.2    |
| 7 - 8 years               | 11     | 5.1     |
| 9+ years                  | 38     | 17.5    |
| Health status             |        |         |
| Excellent                 | 66     | 30.1    |
| Good                      | 133    | 51.6    |
| Fair                      | 36     | 16.4    |
| Poor                      | 4      | 1.8     |

*Note.* From 2002 WCAAA Caregiver Assessment by R. Wacker, 2002, unpublished data.

### *Age*

Twenty-two percent of caregivers were under the age of 50 with the mean caregiver's age of 58.9.

### *Health*

More than three-fourths (81.7 percent) reported their general health as good or excellent. Sixteen percent felt their health was fair, and 1.8 percent reported poor health.

*Ethnicity*

The majority of caregivers (91.3 percent) were White, 5.5 percent were Hispanic, with Asian Americans and persons of mixed race representing the remainder of the respondents.

*Marital Status*

Slightly more than 75 percent (75.1 percent) were married, 10.5 percent reported they were divorced or separated, followed by 8.3 percent widowed and 6.0 percent never married.

*Education*

Thirty-one percent of respondents reported their highest level of education as being high school graduates or recipients of a General Equivalence Diploma (GED). The descending frequency of the other respondents was reported as 27.3 percent with some college, 17.1 percent with a bachelor's degree, 12.5 percent with a graduate degree, 7.4 percent with an associate degree, and 4.6 percent reporting less than a high school education.

*Residency*

One hundred fifty-five (62.2 percent) respondents reported residency in urban locations, and 69 (30.8 percent) resided in rural locations in Weld County.

*Employment*

Slightly over half (50.5 percent) reported that they were employed, with the average hours worked per week as 36.

*Income*

Thirty-one respondents (13.8 percent) refused to divulge their annual income; of those who did respond, 12.4 percent reported an annual income of less than \$15,000, 18.1 percent reported \$15,000 to \$24,999, 17.6 percent reported \$25,000 to \$34,999, 15.5 percent reported \$35,000 to \$44,999, 14.4 percent reported \$45,000 to \$54,999, 7.3 percent reported \$55,000 to \$64,999, 7.8% reported \$65,000 to \$74,999, and 10.9 percent reported \$75,000 or more.

*Care Recipient Characteristics**Age*

The age of the care recipients ranged from 60 to 101 (see Table 3.2), and the average age was 82.6 years. Slightly more than 7 percent (7.4 percent) cared for someone between the ages of 60 and 70, 31 percent of the care recipients were between the ages of 71 and 80, 43 percent were between the ages of 81 and 90, and 18.1 percent were over the age of 90.

*Residency*

Forty-four percent of caregivers reported caring for a care recipient who was living in their own residence, 28 percent reported a care recipient living with the caregiver, 9 percent in nursing homes, and 9 percent in assisted living.

*Behavior Problems*

Caregivers were asked how frequently care recipients exhibited various behavior problems such as not being able to be left alone in the house, being awake in

Table 3.2

*Summary Age and Functional Level of the Care Recipient*

| Characteristic  | Number | Percent |
|---|--------|---------|
| Total   | 218    |         |
| Age   |        |         |
| 60 - 101  |        |         |
| Average age 82  |        |         |
| Function Ability: IADL/ADL<br>caregiver provided care   |        |         |
| Instrumental activities of daily living (IADL)  |        |         |
| Running errands   |        | 91.4    |
| Transportation  |        | 88.7    |
| Grocery shopping  |        | 75.5    |
| Assistance/medical appointments   |        | 73      |
| Housework   |        | 72.2    |
| Laundry   |        | 62.8    |
| Activities of daily living (ADL)  |        |         |
| Dressing  |        | 30.8    |
| Bathing   |        | 25.8    |
| Transfer from bed   |        | 23      |
| Feeding   |        | 22.1    |
| Toileting   |        | 20.1    |
| Most of care recipients had difficulty with<br>a chronic condition or conditions including mobility |        | 59.6    |

Note. From *2002 WCAAA Caregiver Assessment* by R. Wacker, 2002, unpublished data.

the night, forgetting things, being confused or refusing to cooperate, embarrassing me or others, becoming upset and/or yelling, and becoming violent. Almost two-thirds (62.5 percent) of the care recipients frequently or occasionally were awake in the night; 58.4 percent of care recipients were forgetful, confused, and uncooperative; 33.5 percent were unable to be left alone in the house; 29 percent became upset or yelled; 23.5 percent embarrassed the caregiver; and 6.5 percent become violent.

#### Analysis of the Research Questions

Research questions were developed to measure the relationship between the caregivers and care recipients in community service utilization.

#### Independent Variables

The independent variables measured the relationship between the characteristics of elder caregivers and care recipients in community service utilization and were identified as the caregiver's ethnicity, age, household income, educational level, marital status, gender, attitude towards community service utilization, care recipient age, and functional ability.

#### Dependent Variables

Utilization of community services was measured by asking the caregiver if they had used community services to assist them in elder caregiving activities. This study considered community services offered in Weld County to measure service utilization of elder caregivers.

## Research Questions

The following research questions will be addressed in Chapter IV.

1. Is there a significant difference between community service utilization and ethnicity?
2. Is there a significant difference between the caregiver's age and community service utilization?
3. Is there a significant difference between community service utilization and the caregiver's household income?
4. Is there a significant difference between the caregiver's educational level and community service utilization?
5. Is there a significant difference between the caregiver's marital status and community service utilization?
6. Does the caregiver's gender make a difference in community service utilization?
7. Is there a difference between the caregiver's attitude and community service utilization?
8. Is there a difference in community service utilization and the care recipient's age?
9. Is there a difference in community service utilization and the care recipient's IADL/ADL functional ability?

### Measurement of Variables and Statistical Analysis

Ethnicity was measured by asking caregivers the following question. What is your ethnicity? The choices were Hispanic, Asian, White, Black, Native American Indian, and Mixed Race. The data was coded 1 = Hispanic, 2 = Asian, 3 = White, 4 = Black, 5 = Native American Indian, and 6 = Mixed Race. The ethnicity data was recoded into two groups with the White population representing group one and Hispanic, Asian, Black, Native American Indian, and Mixed Race representing group two. In order to determine if there was a significant difference between community service utilization and the caregiver's ethnicity, a cross-tabulation and chi-square statistical analysis was performed.

Age was measured by asking caregivers their age. In order to determine if there was a significant difference in the caregiver's age and community service utilization, an independent *t*-test analysis was performed.

Income level was measured by asking caregivers their total household income. In order to determine significant differences between community service utilization and the caregiver's income level, a cross-tabulation and chi-square statistical analysis was performed.

Educational level was measured by asking caregivers their highest level of educational experience. The educational data was recoded into three groups: Group 1 – less than high school graduate and high school graduate, Group 2 – college/associate degree, and Group 3 – bachelor's and/or graduate degree. In order to determine

significant differences between the caregiver's educational level and community service utilization, a cross-tabulation and chi-square statistical analysis was performed.

The marital status of caregivers was recoded into two groups. The two groups were (a) currently married with partner and currently never married as the married group, and (b) currently divorced or separated and currently widowed as the non-married group. In order to determine if there was a significant difference between the caregiver's marital status and the utilization of community services, a cross-tabulation and chi-square statistical analysis was performed.

For gender, caregivers were asked to indicate their gender. In order to determine significant differences in the caregiver's gender and community service utilization, a cross-tabulation and chi-square statistical analysis was calculated. The data were not recoded.

Caregiver's attitude of utilization of community service was measured by asking caregivers to indicate if they agreed or disagreed with a series of 18 attitudinal questions. Elder caregivers were asked to respond to both negative and positive opinions. An example of a question: Is it hard to trust someone from community services to help with the care for my loved one? The answers were strongly agree, agree, disagree, and strongly disagree.

A factor statistical analysis was calculated on the series of 18 questions used to measure the caregiver's attitude. Eighteen constructs used to measure caregiver attitude were recoded into three categories: (a) trust, (b) responsibility, and (c) knowledge. A *t*-test was performed on each of the three constructs.

### Care Recipient Characteristics

Elder caregivers were asked to provide the age of the care recipient. The raw age of the care recipient's data was used. In order to determine if there was a difference in community service utilization and the care recipient's age, an independent *t*-test was calculated.

### Functional Level of the IADL/ADL Care Recipient

In order to assess the care recipient's functional ability, caregivers were asked to respond to the question: Please tell us if you help with the activities we have listed below and how much help you provide. Do you help the person you care for (a) get around with a wheelchair or other assistive device; (b) get in and out of bed; (c) get dressed; (d) give shots; (e) give medications or pills; (f) bathe; (g) with toileting; (h) with feeding; (i) with housework; (j) with pet care; (k) with laundry; (l) with meal preparation; (m) manage finances and/or pay bills; (n) take telephone calls; (o) write notes, cards, or letters; (p) make medical appointments; (q) with Medicare, Medicaid or other types of government assistance; (r) with grocery shopping; (s) run other errands; and/or (t) with transportation needs? The respondent's options were 1 = yes, or 2 = no. If they answered yes, the caregiver was directed to the following question: On the days that you help, how much assistance on an average day do you help with each task? (a) rarely provide assistance, (b) occasionally provide assistance, (c) frequently provide assistance, and (d) provide assistance at all times for this activity.

The answers were coded as 1 = rarely provide assistance, 2 = occasionally provide assistance, 3 = frequently provide assistance, 4 = provide assistance at all

times for this activity, 7 = not applicable, and 9 = missing. All 20 questions were recoded into one variable named total functional ability. In order to determine if there was a difference in community service utilization and the care recipient (IADL/ADL) functional ability, a *t*-test was calculated on each dependent variable.

### Community Service Utilization

In order to measure utilization of community service use, the survey included a comprehensive list of 19 local community services. Caregivers were asked if they had used the program or service and to respond by selecting a yes or no answer. The answers were coded as 0 = no, 1 = yes, and 9 = missing. The community services listed were (a) legal services, (b) home health care, (c) homemaker, (d) Eldergarden adult day program, (e) peer counseling, (f) senior group meals, (g) Meals on Wheels, (h) long term care ombudsman, (i) food bank, (j) grocery and prescription shopping, (k) in-home companion service, (l) area agency on aging, (m) support group, (n) hospital community care coordinator, (o) Area Agency on Aging case management, (p) nursing home respite, (q) Life Line response system, (r) Med-Van/bus or mini-bus, and (s) United Way Help Line. Caregivers were asked to respond as a yes or no answer if they had utilized the community services to assist them in their caregiving activities. If they answered no, they were asked to indicate why they had not used the service: (a) I do not know what this service could provide for me, (b) I haven't needed this service, (c) I can't afford it (d) my care recipient doesn't want to use the service, (e) the hours didn't match my needs, and (f) other reason. If they answered yes, they were asked to indicate

if the service met their needs: (a) fully met my needs, (b) partially met my needs, or (c) did not meet my needs.

## CHAPTER IV

### RESULTS

This chapter is originated around each research questions. The research questions were listed with the data analysis used for each research question followed by a data summary table and statistical results. A chi-square cross-tabulation statistical analysis was performed for Research Questions One, Three, Four, Five, and Six. In Research Questions Two, Eight, and Nine, an independent *t*-test was performed and in Research Question Seven a factorial analysis was performed followed by an independent *t*-test on each recoded construct. Due to the exploratory nature of this study, the Bonferrini statistical test was not employed. However, actual values and effect sizes were reported for all significant findings ( $< .05$ ).

Research Question One: Is there significant differences between community service utilization and the caregiver's ethnicity?

The ethnicity data were recoded into two groups with the White population representing one group and Hispanic, Asian, Black, Native American Indian, and Mixed Races representing the second group. In order to determine if there was a significant difference between community service utilization and the caregiver's ethnicity, a cross-tabulation and chi-square statistical analysis was performed.

Results for Research Question One (see Table 4.1) revealed significant differences between ethnic grouping of caregivers and the utilization of three community services. The level of significance for utilization of community services was  $p = .002$  for the *Food Bank Program*, the Phi coefficient value was .210, and the effect size according to Morgan, Leech, Gloeckner, and Barrett (2004) revealed between a small to medium effect size. The level of significance for utilization of community service for *Case Manager with Area Agency on Aging* was  $p = .023$ , the Phi coefficient value was .180, and the effect size according to Morgan et al. was small to medium. The level of significance for utilization of community service for *United Way Help Line* was .000, the Phi coefficient value was .254, and the effect size according to Morgan et al. was medium.

Minority caregivers utilized the *Food Bank Program*, *Case Manager with Area Agency on Aging*, and *United Way Help Line* significantly more than non-minority elder adult caregivers. Less than one percent of non-minorities ( $n = 12$ ) utilized the *Food Bank Program*, whereas 26 percent ( $n = 5$ ) of minorities utilized the *Food Bank Program*. Twenty-six percent of minority caregivers utilized *Case Manager with Area Agency on Aging*, whereas only 7.8 percent ( $n = 15$ ) of non-minority caregivers utilized this service. In the less than one percent ( $n = 25$ ) in the *United Way Help Line*, only one percent of non-minorities utilized the service and 26 percent ( $n = 5$ ) of minorities used the service.

Table 4.1

*Chi-Square Data Summary Data Table for Research Question One*

| Community service                    | Minority | Non-minority | Chi-square | <i>p</i> |
|--------------------------------------|----------|--------------|------------|----------|
| Senior legal aid                     | 19       | 190          | .94        | .33      |
| Home health care                     | 19       | 185          | 1.0        | .31      |
| Homemaker services                   | 19       | 188          | 2.4        | .12      |
| Eldergarden                          | 19       | 190          | 1.9        | .16      |
| Peer counseling                      | 19       | 189          | 1.2        | .28      |
| Senior group meals                   | 19       | 187          | .56        | .46      |
| Meals on Wheels                      | 19       | 189          | 1.5        | .22      |
| Long term care ombudsman             | 19       | 192          | 2.2        | .14      |
| Food bank program                    | 19       | 190          | 9.2        | .002*    |
| Grocery/prescription shopping        | 19       | 191          | 1.8        | .17      |
| In-home companion                    | 19       | 191          | .008       | .93      |
| AAA referral source                  | 19       | 191          | .004       | .95      |
| Support group                        | 18       | 190          | .002       | .97      |
| Hospital community care coordinators | 19       | 192          | 2.0        | .15      |
| Case manager w/AAA                   | 19       | 190          | 6.7        | .009*    |
| Nursing home respite services        | 19       | 188          | .46        | .50      |
| Life line referral system            | 19       | 193          | .09        | .76      |
| Med-Van, bus, or mini van            | 19       | 191          | .19        | .66      |
| United Way Help Line                 | 18       | 194          | 13.7       | .000*    |

\*  $p < .05$ .

Research Question Two: Is there significant differences in the caregiver's age and community service utilization?

In order to determine if there was a significant difference in the caregiver's age and community service utilization, an independent *t*-test analysis was performed. Caregivers were asked to provide their actual age. Caregivers reported their ages starting at 19 through 86. The actual caregivers' ages were recoded into two groups: 1 = 19 through 59 and 2 = 60 through 86. There were 99 surveys with missing age data.

Results for Research Question Two (see Table 4.2) revealed statistically significant differences between the caregiver's age and the use of community services in four community services: *Senior Group Meals*, *Meals on Wheels*, *Food Bank Program*, and *Support Group* services. The mean difference between the caregiver's age and *Senior Group Meals* was 63.76 for those who used the service and 57.37 for caregivers who did not use *Senior Groups Meals*. The mean difference between the groups was 6.40. The effect size *d* was .4, which is typical in this discipline.

The mean difference between the caregiver's age and the use of *Meals on Wheels* was 63.07 for caregivers who used *Meals on Wheels* compared to a mean group age of 57.43 for those who did not use the service. The mean difference between the groups was 5.6. The effect size *d* was approximately .4, which is typical for this discipline.

The mean difference between the caregiver's age and the use of the *Food Bank Program* was 52.41 for caregivers who used the service and 58.77 for those who did

Table 4.2

*t-Test Data Summary Data Table for Research Question Two*

| Community service                    | M (yes) | M (no) | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------|--------|----------------|----------|
| Senior legal aid                     | 57.22   | 58.33  | .269           | .788     |
| Home health care                     | 58.24   | 58.27  | .019           | .984     |
| Homemaker services                   | 59.87   | 57.84  | .933           | .352     |
| Eldergarden                          | 63.67   | 57.87  | 1.42           | .156     |
| Peer counseling                      | 55.64   | 58.34  | .729           | .467     |
| Senior group meals                   | 63.76   | 57.36  | 2.34*          | .020*    |
| Meals on Wheels                      | 63.07   | 57.43  | 2.39*          | .017*    |
| Long term care ombudsman             | 60.94   | 57.76  | 1.44           | .149     |
| Food bank program                    | 52.41   | 58.77  | 2.10           | .037*    |
| Grocery/prescription shopping        | 56.76   | 58.58  | .595*          | .553     |
| In-home companion                    | 62.25   | 58.20  | 1.13           | .257     |
| AAA referral source                  | 59.00   | 58.39  | .230           | .819     |
| Support groups                       | 66.08   | 57.94  | 2.32*          | .021     |
| Hospital community care coordinators | 56.06   | 58.85  | 1.27           | .204     |
| Case manager w/AAA                   | 62.45   | 58.00  | 1.58           | .115     |
| Nursing home respite services        | 61.52   | 57.88  | 1.37           | .171     |
| Life line referral system            | 59.51   | 58.24  | .596           | .552     |
| Med-Van, bus, or mini van            | 60.24   | 58.08  | .890           | .375     |
| United Way Help Line                 | 59.83   | 58.42  | .281           | .779     |

\*  $p < .05$ .

not use the service. The mean difference between the groups was 6.4. The effect size  $d$  was approximately .5, which is typical for this discipline.

The mean difference between the caregiver's age and the utilization of the *Support Group* was 66.08 for caregivers who used the service and 57.94 for those who did not use the service. The significant mean difference between the groups was 8.1. The effect size  $d$  was approximately one, which is larger than typical for this discipline. Another way of thinking about the differences is that there is approximately one standard deviation difference between caregivers' age who use *Support Groups* and caregivers who did not utilize the community service of *Support Groups*.

Research Question Three: Is there significant differences between community service utilization and the caregiver's household income?

The caregivers' income was used as reported by the elder adult caregivers. The categories reported for the caregivers' income were less than \$14,999, \$15,000 to \$24,999, \$25,000 to \$34,999, \$35,000 to \$44,999, \$45,000 to \$54,999, \$55,000 to \$64,999, \$65,000 to \$74,999, and \$75,000 and greater. In order to determine significant differences between community service utilization and the *caregiver's income level*, a cross-tabulation and chi-square statistical analysis were performed.

Results for Research Question Three (see Table 4.3) revealed a significant difference between utilization of community service and the caregiver's income in one service. The level of significance for *Hospital Community Care Coordinators* was  $p = .041$ . In order to determine the effect size, a Phi coefficient value was calculated. The effect size was .2, which is between small and medium according to Morgan et al.

Table 4.3

*Chi-Square Data Summary Data Table for Research Question Three*

| Community service                    | M (no) | M (yes) | Chi-square | <i>p</i> |
|--------------------------------------|--------|---------|------------|----------|
| Senior legal aid                     | 178    | 9       | 6.84       | .446     |
| Home health care                     | 109    | 74      | 9.32       | .231     |
| Homemaker services                   | 150    | 34      | 6.82       | .447     |
| Eldergarden                          | 177    | 9       | 4.14       | .762     |
| Peer counseling                      | 175    | 10      | 9.77       | .202     |
| Senior group meals                   | 165    | 18      | 7.57       | .372     |
| Meals on Wheels                      | 158    | 27      | 6.46       | .486     |
| Long term care ombudsman             | 158    | 30      | 5.63       | .583     |
| Food bank program                    | 171    | 15      | 9.35       | .228     |
| Grocery/prescription shopping        | 171    | 16      | 9.61       | .211     |
| In-home companion                    | 176    | 11      | 2.76       | .906     |
| AAA referral source                  | 165    | 22      | 6.65       | .466     |
| Support group                        | 176    | 9       | 9.77       | .202     |
| Hospital community care coordinators | 156    | 32      | 14.6       | .041*    |
| Case manager w/AAA                   | 166    | 20      | 9.11       | .245     |
| Nursing home respite services        | 163    | 21      | 13.3       | .064     |
| Life line referral system            | 156    | 34      | 3.81       | .801     |
| Med-Van, bus, or mini van            | 164    | 24      | 5.87       | .554     |
| United Way Help Line                 | 183    | 6       | 5.53       | .595     |

\*  $p < .05$ .

(2004). Thirty-two caregivers used *Hospital Community Care Coordinators*, and 156 caregivers reported they did not use the service. Because of the small cell size in each income level, results would be difficult to interpret and generalized.

Research Question Four: Is there significant differences between the caregiver's educational level and community service utilization?

The educational data were recoded into three groups: (a) less than high school graduate and high school graduate, (b) some college/associate degree, and (c) bachelor's and/or graduate degree. In order to determine significant differences between the caregiver's educational level and community service utilization, a cross-tabulation and chi-square statistical analysis was performed.

Results for Research Questions Four (see Table 4.4) revealed a significant difference in one community service associated with the caregiver's level of education. Utilization of *Hospital Community Care Coordinators* service was utilized more frequently by caregivers with higher educational levels compared to those with lower educational levels.

The level of significance for utilization of *Hospital Community Care Coordinators* was  $p = .011$ . In order to determine the effect size on the impact of the caregiver's level of education on the utilization of *Hospital Community Care Coordinators*, a Phi coefficient statistic was calculated. The Phi coefficient value was .22, and the effect size  $d$  according to Morgan et al. (2004) revealed a small to medium effect size.

Table 4.4

*Chi-Square Data Summary Data Table for Research Question Four*

| Community service                    | Group |    |    | Total | Chi-square | p     |
|--------------------------------------|-------|----|----|-------|------------|-------|
|                                      | 1     | 2  | 3  |       |            |       |
| Senior legal aid                     | 119   | 33 | 35 | 187   | 5.71       | .057  |
| Home health care                     | 117   | 32 | 34 | 183   | 2.50       | .286  |
| Homemaker services                   | 116   | 33 | 35 | 184   | 4.73       | .094  |
| Eldergarden                          | 118   | 33 | 35 | 186   | 1.68       | .430  |
| Peer counseling                      | 118   | 33 | 34 | 185   | 1.20       | .548  |
| Senior group meals                   | 116   | 32 | 35 | 183   | .598       | .742  |
| Meals on Wheels                      | 118   | 33 | 34 | 185   | 3.35       | .187  |
| Long term care ombudsman             | 119   | 33 | 36 | 188   | .029       | .985  |
| Food bank program                    | 117   | 33 | 36 | 186   | 1.61       | .446  |
| Grocery/prescription shopping        | 118   | 33 | 36 | 187   | .564       | .754  |
| In-home companion                    | 118   | 33 | 36 | 187   | .876       | .645  |
| AAA referral source                  | 120   | 32 | 35 | 187   | 2.97       | .226  |
| Support group                        | 117   | 33 | 35 | 185   | 5.49       | .064  |
| Hospital community care coordinators | 119   | 33 | 36 | 188   | 9.01       | .011* |
| Case manager w/AAA                   | 117   | 33 | 36 | 186   | 5.93       | .051  |
| Nursing home respite services        | 115   | 33 | 36 | 184   | 3.92       | .141  |
| Life line referral                   | 121   | 33 | 36 | 190   | 1.09       | .578  |
| Med-Van, bus, or mini van            | 119   | 33 | 36 | 188   | .894       | .639  |
| United Way help line                 | 121   | 32 | 36 | 189   | 2.17       | .338  |

*Note.* Group 1 = less than high school graduate and high school graduate; Group 2 = some college/associate degree; Group 3 = bachelor's and/or graduate degree.

As the caregiver's educational level increased, so did the use of one community service, *Hospital Community Care Coordinators*; 30.6 percent of caregivers with a bachelor's degree or graduate degree utilized *Hospital Community Care Coordinators* service compared to only 11 percent of caregivers who had less than a high school or high school graduate education.

Research Question Five: Is there significant differences in the caregiver's marital status and community services utilization?

The caregivers' marital status data were recoded into two groups: (a) married group, that is, currently married with partner, and currently never married; and (b) non-married group, that is, currently divorced, separated, or widowed. In order to determine if there were significant differences between the caregiver's marital status and the utilization of community services, a cross-tabulation and chi-square statistical analysis was performed.

Results for Research Question Five (see Table 4.5) revealed a significant difference between the *caregiver's marital status* in the area of one community service. The level of significance for utilization of the community service for *United Way Help Line* was  $p = .029$ . In order to determine the effect size of the impact of the caregiver's marital status on the *United Way Help Line*, a Phi coefficient statistical analysis was calculated. The Phi coefficient value was .15. The effect size according to Morgan et al. (2004) revealed a small effect size.

Research Question Six: Does the caregiver's *gender* make a difference in community service utilization?

Table 4.5

*Chi-Square Data Summary Data Table for Research Question Five*

| Community service                    | Married | Non-married | Chi-square | <i>p</i> |
|--------------------------------------|---------|-------------|------------|----------|
| Senior legal aid                     | 186     | 21          | .136       | .712     |
| Home health care                     | 183     | 19          | .241       | .624     |
| Homemaker services                   | 184     | 21          | .280       | .597     |
| Eldergarden                          | 187     | 20          | .890       | .345     |
| Peer counseling                      | 186     | 20          | 1.25       | .345     |
| Senior group meals                   | 184     | 20          | .579       | .447     |
| Meals on Wheels                      | 185     | 21          | .011       | .918     |
| Long term care ombudsman             | 187     | 22          | 2.77       | .096     |
| Food bank program                    | 185     | 22          | 2.20       | .138     |
| Grocery/prescription shopping        | 186     | 22          | .978       | .323     |
| In-home Companion                    | 186     | 22          | 3.42       | .064     |
| AAA referral source                  | 187     | 21          | .835       | .361     |
| Support group                        | 184     | 22          | .031       | .861     |
| Hospital community care coordinators | 187     | 22          | .036       | .849     |
| Case manager w/AAA                   | 185     | 22          | .009       | .924     |
| Nursing home respite services        | 183     | 22          | .217       | .641     |
| Life line referral system            | 188     | 22          | .002       | .960     |
| Med-Van, bus, or Mini van            | 187     | 21          | .380       | .538     |
| United Way help line                 | 188     | 22          | 4.76       | .029*    |

\*  $p = .05$ .

In order to determine significant differences in the caregiver's gender and community service utilization, a cross-tabulation and chi-square statistical analysis was calculated. Actual gender data obtained from the survey results were used.

Results for Research Question Six (see Table 4.6) revealed significant differences between the caregiver's gender and community service utilization in two services, *Homemaker Services* and *Senior Group Meals*.

The level of significance for *Homemaker Services* was  $p = .029$ . In order to determine the effect size on the impact of gender on the use of *Homemaker Services*, a Phi coefficient was calculated. The Phi coefficient value was .152. The effect size according to Morgan et al. (2004) revealed a small effect size. The level of significance for *Senior Group Meals* was .026. The Phi coefficient was .155 for *Homemaker Services* and *Senior Group Meals*. The effect size according to Morgan et al. revealed between a small to medium effect size.

Twenty-nine percent of male caregivers utilized *Homemaker Services*, whereas only 15 percent of female caregivers used the same service. Male caregivers were twice as likely as women caregivers to use *Homemaker Services*. Nineteen percent of male caregivers utilized the *Senior Group Meals* service compared to 7.6 percent of women caregivers. Again, male caregivers utilized the service more than twice as often as female caregivers.

Research Question Seven: Is there significant differences between the caregiver's attitudes and community service utilization?

Table 4.6

*Chi-Square Data Summary Table for Research Question Six*

| Community service                    | Female<br>( <i>n</i> = 77) | Male<br>( <i>n</i> = 23) | Chi-square | <i>p</i> |
|--------------------------------------|----------------------------|--------------------------|------------|----------|
| Senior legal aid                     | 159                        | 49                       | .499       | .480     |
| Home health care                     | 156                        | 47                       | .519       | .471     |
| Homemaker Services                   | 158                        | 48                       | 4.78       | .029*    |
| Eldergarden                          | 160                        | 48                       | 2.42       | .120     |
| Peer counseling                      | 160                        | 47                       | 1.22       | .268     |
| Senior group meals                   | 157                        | 48                       | 4.93       | .026*    |
| Meals on Wheels                      | 160                        | 47                       | 1.06       | .302     |
| Long term care ombudsman             | 161                        | 49                       | .489       | .484     |
| Food bank program                    | 160                        | 48                       | .419       | .518     |
| Grocery/prescription shopping        | 161                        | 48                       | .003       | .954     |
| In-home companion                    | 161                        | 48                       | .773       | .379     |
| AAA referral source                  | 161                        | 48                       | .454       | .500     |
| Support group                        | 159                        | 48                       | 1.57       | .209     |
| Hospital community care coordinators | 162                        | 48                       | .113       | .737     |
| Case manager w/AAA                   | 160                        | 48                       | 1.77       | .183     |
| Nursing home respite services        | 158                        | 48                       | 1.52       | .217     |
| Life line referral system            | 162                        | 49                       | .666       | .414     |
| Med-Van, bus, or mini van            | 160                        | 49                       | .009       | .924     |
| United Way help line                 | 163                        | 48                       | .394       | .530     |

\*  $p < .05$ .

A factor statistical analysis was calculated on a series of 18 constructs used to measure the caregiver's attitude on the impact of community service utilization. The 18 constructs used to measure caregiver's attitude were recoded into three categories in order to measure the caregiver's attitude on the utilization of each community service as listed on Table 4.7 (Trust), Table 4.8 (Responsibility), and Table 4.9 (Knowledge). A *t*-test was performed on each of the three recoded constructs. Each construct and results will be discussed separately.

Table 4.7 revealed statistically significant differences between the caregiver's attitude (trust) and the utilization of one community service. The mean for caregivers who used the *Meals on Wheels* was 1.86 and 2.11 for caregivers who did not use *Meals on Wheels*. The difference between the means was .255,  $p = .035$ . The effect size  $d$  was .4, which is small to medium.

Results for Research Question Seven (Responsibility) (see Table 4.8) revealed statistically significant differences between the caregiver's attitude *responsibility* and the utilization of four community services.

The mean was 1.98 for caregivers who used *Home Health Care Services* and 2.16 for caregivers who did not use *Home Health Care Services*. The mean differences between the two groups was .179,  $p = .020$ . The effect size  $d$  was approximately .3, which is smaller than typical in this discipline.

The mean was 1.89 for caregivers who used *Homemaker Services* and 2.12 for caregivers who did not use *Home Health Care Services*. The mean differences

Table 4.7

*t-Test Data Summary Data Table for Measurement of Lack of Trust*

| Community service                    | M (yes) | M (no) | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------|--------|----------------|----------|
| Senior legal aid                     | 1.86    | 2.10   | 1.12           | .262     |
| Home health care                     | 2.05    | 2.11   | .723           | .471     |
| Homemaker services                   | 1.97    | 2.10   | 1.18           | .237     |
| Eldergarden                          | 1.91    | 2.09   | .832           | .406     |
| Peer counseling                      | 2.02    | 2.08   | .342           | .733     |
| Senior group meals                   | 2.07    | 2.08   | .120           | .905     |
| Meals on Wheels                      | 1.86    | 2.11   | 2.12*          | .035     |
| Long term care ombudsman             | 2.06    | 2.10   | .353           | .724     |
| Food bank program                    | 2.07    | 2.09   | .093           | .926     |
| Grocery/prescription shopping        | 2.09    | 2.10   | .052           | .959     |
| In-home companion                    | 1.83    | 2.11   | 1.53           | .126     |
| AAA referral source                  | 2.09    | 2.10   | .104           | .918     |
| Support group                        | 1.84    | 2.10   | 1.38           | .169     |
| Hospital community care coordinators | 1.95    | 2.13   | 1.54           | .123     |
| Case manager w/AAA                   | 1.94    | 2.11   | 1.16           | .244     |
| Nursing home respite services        | 2.08    | 2.09   | .120           | .905     |
| Life line referral system            | 2.09    | 2.10   | .080           | .936     |
| Med-Van, bus, or mini van            | 2.06    | 2.10   | .344           | .731     |
| United Way help line                 | 1.76    | 2.09   | 1.29           | .198*    |

\*  $p < .05$ .

Table 4.8

*t-Test Data Summary Data Table for Measurement of Self-Responsibility*

| Community service                    | M (yes) | M (no) | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------|--------|----------------|----------|
| Senior legal aid                     | 1.81    | 2.09   | 1.25           | .211     |
| Home health care                     | 1.98    | 2.16   | 2.33*          | .020     |
| Homemaker services                   | 1.89    | 2.12   | 2.32*          | .021     |
| Eldergarden                          | 1.97    | 2.08   | .527           | .599     |
| Peer counseling                      | 2.01    | 2.08   | .406           | .685     |
| Senior group meals                   | 1.95    | 2.08   | 1.06           | .288     |
| Meals on Wheels                      | 1.95    | 2.09   | 1.37           | .172     |
| Long term care ombudsman             | 2.03    | 2.08   | .513           | .609     |
| Food bank program                    | 2.04    | 2.08   | .280           | .780     |
| Grocery/prescription shopping        | 2.06    | 2.08   | .125           | .901     |
| In-home companion                    | 1.88    | 2.09   | 1.25           | .211     |
| AAA referral source                  | 1.83    | 2.11   | 2.35*          | .020     |
| Support group                        | 1.77    | 2.08   | 1.92           | .055     |
| Hospital community care coordinators | 1.85    | 2.12   | 2.77*          | .006     |
| Case manager w/AAA                   | 1.91    | 2.09   | 1.42           | .156     |
| Nursing home respite services        | 2.05    | 2.08   | .244           | .808     |
| Life line referral system            | 1.92    | 2.11   | 1.95           | .053     |
| Med-Van, bus, or mini van            | 2.08    | 2.07   | .035           | .972     |
| United Way help line                 | 2.05    | 2.07   | .083           | .934     |

\*  $p < .05$ .

Table 4.9

*t-Test Data Summary Data Table for Measurement of Knowledge*

| Community service                    | M (yes) | M (no) | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------|--------|----------------|----------|
| Senior legal aid                     | 2.53    | 2.26   | 1.25           | .211     |
| Home health care                     | 2.18    | 2.35   | 1.85           | .065     |
| Homemaker services                   | 2.13    | 2.32   | 1.61           | .109     |
| Eldergarden                          | 1.89    | 2.29   | 1.75           | .081     |
| Peer counseling                      | 2.29    | 2.28   | .064           | .949     |
| Senior group meals                   | 1.94    | 2.30   | 2.94*          | .013     |
| Meals on Wheels                      | 2.01    | 2.32   | 2.40*          | .017     |
| Long term care ombudsman             | 2.15    | 2.31   | 1.28           | .200     |
| Food bank program                    | 2.17    | 2.29   | .686           | .493     |
| Grocery/prescription shopping        | 2.12    | 2.30   | 1.03           | .303     |
| In-home companion                    | 2.15    | 2.29   | .707           | .480     |
| AAA referral source                  | 2.27    | 2.28   | .077           | .939     |
| Support group                        | 2.27    | 2.27   | .002           | .999     |
| Hospital community care coordinators | 2.15    | 2.31   | 1.32           | .188     |
| Case manager w/AAA                   | 2.04    | 2.31   | 1.78           | .076     |
| Nursing home respite services        | 2.03    | 2.31   | 1.90           | .059     |
| Life line referral system            | 2.22    | 2.30   | .647           | .518     |
| Med-Van, bus, or mini van            | 1.93    | 2.34   | .651*          | .002     |
| United Way help line                 | 2.17    | 2.28   | .415           | .679*    |

\*  $p < .05$ .

between the two groups was  $.225$ ,  $p = .021$ . The effect size  $d$  was  $.4$ , which is small to medium.

The mean was  $1.85$  for caregivers who used *Hospital Community Care Services* and  $2.12$  for caregivers who did not use *Hospital Community Care Services*. The mean difference between the two groups was  $.272$ ,  $p = .006$ . The effect size  $d$  was approximately  $.5$ , which is medium or typical.

The mean was  $1.85$  for caregivers who used the *Area Agency on Aging* and  $2.11$  for caregivers who did not use the *Area Agency on Aging*. The significant mean difference between the two groups was  $.281$ ,  $p = .020$ . The effect size  $d$  was  $.6$ , which is medium to large.

Results for Research Question Seven (Knowledge) (see Table 4.9) revealed statistically significant differences between the caregiver's attitude (lack of knowledge) and the utilization of three community services.

The mean was  $1.94$  for caregivers who used *Senior Group Meals* and  $2.32$  for caregivers who did not use *Senior Group Meals*. The mean difference between the two groups was  $.375$ ,  $p = .013$ . The effect size  $d$  was  $.6$ , which is a medium to large effect.

The mean was  $2.01$  for caregivers who used *Meals on Wheels* and  $2.32$  for caregivers who did not use *Meals on Wheels*. The mean difference between the two groups was  $.313$ ,  $p = .017$ . The effect size  $d$  was  $.5$ , which is medium or typical for this discipline.

The mean was  $1.93$  for caregivers who used the *Med-Van, Bus* or *Mini Van* service and  $2.34$  for caregivers who did not use *Med-Van, Bus, or Mini Van*. The

difference between the means was  $.404$ ,  $p = .002$ . The effect size  $d$  was  $.6$ , which is medium to large effect size for this discipline.

Research Question Eight: Is there differences in the use of community service utilization and the care recipient's age?

The data were not transformed for the care recipient when actual age was used. Reported care recipients ranged from 60 to 101. In order to determine if there were differences between community service utilization and the care recipient's age, independent  $t$ -tests were calculated.

Results for Research Question Eight (see Table 4.10) revealed significant differences in utilization of three community services and the care recipient's age. The mean for the care recipient's age was 86.79 for caregivers who used *Meals on Wheels* and 81.92 for caregivers who did not use *Meals on Wheels*. The difference between the means was 4.87,  $p = .004$ . The effect size  $d$  was approximately  $.58$ , which is medium to large. Caregivers who used *Meals on Wheels* had care recipients who were older.

The mean level of the care recipient's age in the use of the *Long Term Care Ombudsman* was 86.12 for caregivers who used the service and 81.88 for those who did not. The difference between the means was 4.24,  $p = .007$ . The effect size  $d$  was  $.5$ , which is medium or typical for this discipline. Caregivers who used the *Long Term Care Ombudsman* had care recipients who were older.

The mean level of the care recipient's age for *Nursing Home Respite Services* was 88.81 for caregivers who used the service and 81.72 for those who did not. The

Table 4.10

*t-test Data Summary Data Table for Research Question Eight*

| Community service                    | Care recipient's mean age |       | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------------------------|-------|----------------|----------|
|                                      | Yes                       | No    |                |          |
| Senior legal aid                     | 77.86                     | 82.76 | 1.47           | .141     |
| Home health care                     | 82.69                     | 82.43 | .212           | .83      |
| Homemaker services                   | 82.29                     | 82.61 | .212           | .833     |
| Eldergarden                          | 84.75                     | 82.54 | .722           | .471     |
| Peer counseling                      | 82.10                     | 82.73 | .230           | .819     |
| Senior group meals                   | 84.74                     | 82.12 | 1.27           | .203     |
| Meals on Wheels                      | 86.79                     | 81.92 | 2.90           | .004*    |
| Long term care ombudsman             | 86.12                     | 81.88 | 2.71           | .007*    |
| Food bank program                    | 78.73                     | 82.80 | 1.81           | .071     |
| Grocery prescription shopping        | 83.67                     | 82.37 | .566           | .572     |
| In-home companion                    | 86.30                     | 82.27 | 1.46           | .145     |
| AAA referral source                  | 84.38                     | 82.41 | 1.00           | .316     |
| Support group                        | 81.09                     | 82.69 | .605           | .546     |
| Hospital community care coordinators | 81.12                     | 82.76 | 1.02           | .305     |
| Case manager w/AAA                   | 85.45                     | 82.15 | 1.65           | .099     |
| Nursing home respite services        | 88.81                     | 81.72 | 3.70*          | .000*    |
| Life line referral system            | 85.00                     | 82.13 | 1.89           | .059     |
| Med-Van, bus, or mini van            | 83.21                     | 82.40 | .476           | .635     |
| United Way help line                 | 82.20                     | 82.77 | .150           | .881     |

\*  $p < .05$ .

difference between the means was 7.09,  $p = .000$ . The effect  $d$  size was .8, which is larger than typical. Caregivers who used *Nursing Home Respite* services had care recipients who were older.

As the care recipient's age increased, so did the likelihood for caregivers to use community services such as *Meals on Wheels*, *Long Term Care Ombudsman*, and *Nursing Home Respite Services*. Caregivers who used *Meals on Wheels* and *Long Term Care Ombudsman* services had care recipients who averaged 87 years of age. Caregivers who used *Nursing Home Respite Services* had care recipients who averaged 89 years of age.

Research Question Nine: Is there a difference in community service utilization and the care recipient's instrumental activities of daily living/activities of daily living (IADL/ADL) functional ability?

Caregivers were asked to answer a series of 20 questions in order to determine the IADL/ADL functional ability of the care recipient. All 20 questions were recoded into one construct: IADL/ADL total functional ability. In order to determine if there was a difference in community service utilization and the care recipient's IADL/ADL functional ability,  $t$ -tests were calculated on each community service.

Results for Research Question Nine (see Table 4.11) revealed statistically significant differences between service utilization and the care recipient's IADL/ADL functional ability in six community services; *Home Health Care*, *Homemaker Services*, *Eldergarden*, *Area Agency on Aging*, *Case Manager with AAA*, and *Life Line Response System*.

Table 4.11

*t-test Data Summary Data Table for Research Question Nine*

| Community service                    | M (yes) | M (no) | <i>t</i> -test | <i>p</i> |
|--------------------------------------|---------|--------|----------------|----------|
| Senior legal aid                     | 12.13   | 10.12  | 1.30           | .193     |
| Home health care                     | 11.19   | 9.55   | 2.66           | .008**   |
| Homemaker services                   | 11.54   | 9.93   | 2.05           | .041*    |
| Eldergarden                          | 13.67   | 10.11  | 2.51           | .013*    |
| Peer counseling                      | 11.09   | 10.26  | .639           | .523     |
| Senior group meals                   | 9.94    | 10.32  | .359           | .720     |
| Meals on Wheels                      | 10.43   | 10.24  | .221           | .825     |
| Long term care ombudsman             | 9.59    | 10.34  | .929           | .354     |
| Food bank program                    | 9.88    | 10.29  | .373           | .710     |
| Grocery prescription shopping        | 9.40    | 10.33  | .806           | .421     |
| In-home companion                    | 12.09   | 10.15  | 1.46           | .145     |
| AAA referral source                  | 13.52   | 9.88   | 3.78           | .000**   |
| Support group                        | 10.67   | 10.17  | .385           | .701     |
| Hospital community care coordinators | 10.52   | 10.22  | .350           | .727     |
| Case manager w/AAA                   | 12.32   | 10.07  | 2.179          | .031*    |
| Nursing home respite services        | 10.95   | 10.21  | .742           | .459     |
| Life line referral                   | 11.86   | 9.89   | 2.523          | .012*    |
| Med-Van, bus, or mini van            | 10.93   | 10.20  | .821           | .413     |
| United Way help line                 | 12.67   | 10.11  | 1.44           | .150     |

\*  $p < .05$ . \*\*  $p < .01$ .

The mean for the care recipient's functional ability and the use of community services was 11.19 for caregivers who used *Home Health Services* and 9.55 for those who did not use the service. The mean differences between the groups was 1.6. The effect size  $d$  was .4, which is small to medium and is typical in this discipline.

The mean for the care recipient's functional ability and the use of community services was 11.54 for caregivers who used *Homemaker Services* and 9.93 for those who did not use the service. The mean differences between the groups was 1.6. The effect size  $d$  was .4, which is small to medium and is typical in this discipline.

The mean for the care recipient's functional ability and the use of community services was 13.67 for caregivers who used *Eldergarden* and 10.11 for those who did not use the service. The mean differences between the groups was 3.5. The effect size  $d$  was .9, which is large in this discipline.

The mean for the care recipient's functional ability and the use of community services was 13.52 for caregivers who used the *Area Agency on Aging* and 9.88 for those who did not use the service. The mean differences between the groups was 3.6. The effect size  $d$  was .9, which is large for this discipline.

The mean for the care recipient's functional ability and the use of community services was 12.32 for caregivers who used *Case Manager with Area Agency on Aging* and 10.07 for those who did not use the service. The mean difference between the groups was 2.2. The effect size  $d$  was .5, which is medium for this discipline.

The mean for the care recipient's functional ability and the use of community services was 11.86 for caregivers who used the *Life Line Referral* and 9.89 for those

who did not use the service. The mean difference between the groups was 1.9. The effect size  $d$  was .5, which is medium for this discipline.

Another way of thinking about the differences is that there is approximately one standard deviation difference between the care recipient's functional ability and the use of community services in two services: *Eldergarden* and *Area Agency on Aging*. There was approximately one half (.5) a standard deviation difference between the care recipient's functional ability and the use of four services: *Home Health Care Services*, *Homemaker Services*, *Case Manager with Area Agency on Aging*, and *Life Line Referral* system. This means that as the care recipient's functional impairment increases, so did the use of formal services.

## CHAPTER V

### DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate the relationship between the characteristics of elder caregivers and care recipients in the use of community service (formal services) utilization in elder caregiving. The first objective was to investigate differences in the caregiver's ethnicity, household income, educational level, marital status, gender, and attitude towards the use of community services (formal service use) in elder caregiving. The second objective was to investigate if the care recipient's age and functional ability, measured by the care recipient's ability to perform activities of daily living (ADL) and/or instrumental activities of daily living (IADL), made a difference in the use of community services in elder caregiving.

#### Caregiving

Caregiving refers to unpaid caregiving services provided to a relative or friend 50 years or older in order to assist them remaining independent (National Alliance for Caregiving and American Association of Retired Persons [NAC & AARP, 1997]). Caregiving may include caring for a loved one at the care recipient's home, institutional setting, or caregiver's home.

### *Care Recipient*

According to the NAC and AARP (1997) survey report, the typical elder adult defined as the care recipient is 77 years of age. Approximately 40 percent of caregivers provide caregiving activities to a parent, 5 percent to a spouse, and the remaining 55 percent to parents-in-law, grandparents, or friends and neighbors. The National Center for Health Statistics (1990) reports more than 80 percent of older adults over the age of 65 have at least one chronic condition. The most frequent chronic conditions experienced by older adults are arthritis, hypertension, hearing impairment, and heart disease.

### *Elder Caregiver Profile*

Findings from the National Survey Final Report (NAC & AARP, 1997) revealed data that identifies the typical caregiver in America. The typical American elder caregiver has been reported to be female, age 46, high school degree, an average income of \$35,000, and working full-time while taking care of her 77-year-old mother, mother in-law, or grandmother. The average length of time providing informal caregiving activities was 5 years in 1987 and 4.5 years in 1997 (Wagner, 1997).

This research study was designed to examine the following research questions:

1. Is there a significant difference between community service utilization and the caregiver's ethnicity?
2. Is there a significant difference in the caregiver's age and the use of community service?

3. Is there a significant difference between community service utilization and the caregiver's household income?
4. Is there a significant difference between the caregiver's educational level and community service utilization?
5. Is there a significant difference between the caregiver's marital status and community service utilization?
6. Does the caregiver's gender make a difference in community service utilization?
7. Is there a difference between the caregiver's attitude and community service utilization?
8. Is there a difference in community service utilization and the care-recipient's age?
9. Is there a difference in community service utilization and the care-recipient's (ADL/IADL) functional ability?

#### Descriptive Characteristics

This investigation was conducted with pre-existing data from the Caregivers of Weld County Needs Assessment Survey (Wacker, 2002). There were 224 participants in the survey. The characteristics of caregivers for this study were (a) 77 percent were female, (b) average age was 59, (c) 91 percent were non-Hispanic White, (d) 82 percent reported good to excellent health, (e) 75 percent were married, (f) 58 percent reported a high school education or General Equivalence Diploma (GED) and some

college, and (g) 36 percent reported an annual income of between \$15,000 and \$34,999.

The characteristics of the care recipients were (a) average age of 83, (b) 54 percent lived in their own residency, (c) 40 percent had three to four different types of illness, (d) majority, 60 percent, reported having mobility problems, (e) main behavior problem showed almost two-thirds of the care recipients, 63 percent, were frequently or occasionally awake at night, and (e) functional ability showed 54 percent needed assistance with IADL and 44 percent needed assistance with ADL.

### Research Questions

#### *Question One*

Is there a significant difference between community service utilization and the caregiver's ethnicity?

Results revealed significant differences between community service utilization and the caregiver's ethnicity in three services: *Food Bank Program*, *Case Manager with Area Agency on Aging*, and *United Way Help Line*. Minority caregivers utilized the *Food Bank Program*, *Case Manager with Area Agency on Aging*, and *United Way Help Line* significantly more than non-minority elder adult caregivers. In this study, one percent of non-Hispanic Whites used the *Food Bank Program* compared to 26 percent of minority caregivers who used the *Food Bank Program*. In the *Case Manager with Area Agency on Aging*, 26 percent of minority caregivers used this service compared to only 7.8 percent of non-Hispanic White caregivers. In the *United Way*

*Help Line* service, one percent of non-Hispanic Whites used the service compared to 26 percent of minorities that did use the service.

*Comparison of Findings with  
the Review of Literature*

These findings agree with the NAC and AARP Final Report on Caregiving in the United States (NAC & AARP, 1997). Kosloski, Montgomery, and Karner (1999) and Magilvy, Congdon, Martinez, Davis, and Averill (2000) also support the relationship between the caregiver's ethnic status and increased service use in elder caregiving.

In the NAC and AARP (1997) study, participants were categorized into four ethnic groups: non-Hispanic White, Hispanic, Black, and Asian. Asian caregivers were less likely to report having community services (62 percent) compared to non-Hispanic White, Hispanic, and other caregivers reporting 72 percent to 76 percent. Overall, minority caregivers (other than the Asian population) were more likely to use community services to assist them in their caregiving role compared to the Non-Hispanic White caregiver. However, several studies (Cantor, Brennan, & Sainz, 1994; Greene & Monahan, 1984; Tennstedt & Chang, 1998) report different findings. When comparing the use of community service in elder caregivers, the findings showed Hispanic caregivers were functionally impaired and used less community services compared to the non-Hispanic White caregiver. In another study, Kosloski et al. (1999) found the caregiver's ethnicity to influence the use of discretionary services (adult day care, in-home respite, and meal services) and not the use of non-discretionary services (home health care).

Miller et al. (1996) compared Hispanic, African American, and non-Hispanic White caregivers in the use of community services. The predisposing factors were (a) family composition and household structure, (b) income and health insurance as enabling factors, (c) health, and (d) the functional ability of the elder adult. They found no ethnic differences between the three groups in the use of community services in two areas: home based services and senior centers.

### *Discussion*

The subjects in my study were 91 percent non-Hispanic White and 9 percent were of different ethnic backgrounds. The small ethnic number made it difficult to generalize these results or to provide validity to more diverse populations.

In other studies, sample sizes have included an increased number of minorities as subjects. These studies increase the ability to generalize findings to a more diverse population. The Kosloski et al. (1999) sample size was 2,947 subjects, with almost half (1,461) being minority caregivers. The NAC and AARP study (NAC & AARP, 1997) had 1,509 subjects, with 877 being minorities. Overall, minority caregivers were more likely to use community services to assist them in their caregiving role compared to the Non-Hispanic White caregiver. Both of these studies (Kosloski et al., 1999; NAC & AARP, 1997) included a larger number of subjects from different ethnic backgrounds, which made it easier to generalize to a more diverse population. In another study with different findings, Tennstedt and Chang (1998) reported minority elders in spite of being more functionally impaired used less formal services and more informal services in order to meet the demands of caregiving. None of the other

community services measured in Question One approached near level of significance in community service utilization.

### *Question Two*

Is there a significant difference in the caregiver's age and the use of community service?

Results revealed statistically significant differences between the caregiver's age and community service utilization in four community services: *Senior Group Meals*, *Meals on Wheels*, *Food Bank Program*, and *Support Group*.

Older caregivers used more community services in the *Senior Group Meals*, *Meals on Wheels*, and *Support Group*. In the *Food Bank Program* younger caregivers used more services than older caregivers. Overall, older caregivers used more community services than younger caregivers.

### *Comparison of Findings with the Review of Literature*

The findings for this study are supported by the Final Report on Caregiving in the United States (NAC & AARP, 1997) that revealed the caregiver's age is associated with the use of community services in elder caregiving. The NAC and AARP survey (NAC & AARP, 1997) reported 74 percent of elder caregivers used one or more community services to assist them in their caregiving role, and caregivers age 65 and older were more likely than younger caregivers to use community services.

### *Discussion*

The NAC and AARP survey (NAC & AARP, 1997) reports older caregivers 65 and over use more community services. The caregiver's average age in the Weld

County Needs Assessment Survey (Wacker, 2002) was 59 years of age. Caregivers in this study averaged six years younger than the NAC and AARP survey (NAC & AARP, 1997), which may be difficult to generalize the results of this study to other populations (Kinney, Parris-Stephens, Franks, & Kline-Norris, 1995). None of the other community services measured in Question Two revealed near levels of significance.

### *Question Three*

Is there a significant difference between community service utilization and the caregiver's household income?

Results for Research Question Three revealed a significant difference between utilization of community services and the caregiver's income in one service, *Hospital Community Care Coordinators*. Thirty-two caregivers with income levels \$25,000 to \$45,000 used *Hospital Community Care Coordinators*, and 156 caregivers in other income categories reported they did not use the service. Because of the small cell size of subjects in each income level, results would be difficult to interpret and generalize to other populations.

### *Comparison of Findings with the Review of Literature*

While the results of the caregiver's income was related to the use of community service in one area, *Hospital Community Care Coordinators*, most of the literature reviewed for this study did not support a relationship between the socioeconomic status of the caregiver and the use of community services (Kosloski et al., 1999; Tennstedt & Chang, 1998; Wolinsky & Johnson, 1991). Tennstedt and Chang

compared non-Hispanic Whites to African American and Puerto Rican elders to explore how care for elder adults is influenced by socioeconomic and ethnicity in community service utilization. The results revealed cultural rather than a socioeconomic explanation for differences between the groups. Socioeconomic status had no effect on the amount of community service utilization.

### *Discussion*

Wolinsky and Johnson (1991) revealed income levels have no impact on relationships between service utilization and the caregiver or care recipient characteristics. This is partly because most elder caregiving services are frequently subsidized on an ability to pay basis or have third party payment. Since most survey data has missing income data, Wolinsky and Johnson recommend omitting the income variable from the Model of Service Use (Andersen & Newman, 1973) rather than omitting only respondents with missing data.

Even though the review of literature did not support the relationship between the caregiver's income and service use, the MetLife Juggling Act Survey (Metropolitan Life Insurance Company, 1999) reports that the caregiver's income can be cut severely as a result of caregiving obligations. Among caregivers reporting monetary information for the MetLife Juggling Act Survey, the total loss in wage wealth for caregivers was reported as an average loss of \$566,443, social security benefits of \$25,494, and loss of pension benefits of \$67,202. The total loss for caregivers in the MetLife Juggling Act Study was averaged as \$659,139 over the lifetime due to caregiving responsibilities. The responsibility placed on caregivers as a

result of their caregiving obligation can lead to an increased financial burden, which may lead to physical and psychological stress. We need to work together as communities, employers, and private and public sectors to develop and fund affordable community services for caregivers and care recipients.

The survey results for this study revealed 36 percent of caregivers reported average incomes from \$15,000 to \$34,999. This already low socioeconomic status can place extra stress on elder caregivers and their families.

One other community service approached near level of significance. *Nursing Home Respite Services* approached a near level of significance at .064. This service may warrant further research.

#### *Question Four*

Is there a significant difference between the caregiver's educational level and community service utilization?

Results for Research Question Four revealed a significant difference in one community service use associated with the caregiver's level of education. *Hospital Community Care Coordinators* service was utilized more frequently by caregivers with higher educational levels compared to those with lower educational levels. The overall results were as the caregiver's educational level increased, so did the use of one community service, *Hospital Community Care Coordinators*. Thirty-one percent of caregivers with a bachelor's degree or graduate degree used *Hospital Community Care Coordinators* compared to only 11 percent of caregivers who had a high school degree or less.

### *Comparison of Findings with the Review of Literature*

The literature review supported the findings for this study associated with the caregiver's higher levels of education and increased service utilization in elder caregiving. In the caregiving research, the caregiver's education was seen as an enabling factor in the use of community service use in elder care. The educational level of the caregiver was seen as a proxy for knowledge of services, which may influence service use (Bass & Noelker, 1987). The higher the education level of the caregiver, the more knowledgeable caregivers are and will know to seek community services.

The Final Report on Caregiving in the United States (NAC & AARP, 1997) reported caregivers with a college degree were more likely than caregivers of lower educational levels to use homemaker services, adult day care, or a senior center to assist them with their caregiving activities. Using the caregiver's educational level as a predictor of service utilization, Wallace-Williams and Dilworth-Anderson (2002) reported a direct correlation between the use of community service and educational level. The higher educational level of the caregivers with one to three years of college was directly related to the increased use of community services use compared to caregivers with lower educational levels.

### *Discussion*

Higher levels of education and increased community service utilization may be attributed to the caregiver's (a) increased knowledge of community services, (b) ability to better identify access to service use, (c) higher household income, and (d)

employment status. Community agencies need to do a better job in marketing and reaching populations with different educational backgrounds to assure that the same services are available to all caregivers and care recipients. Clearly, there is a need to go beyond grouping characteristics in relation to service use and identify other factors that may predict service utilization in elder caregiving. Caregivers with higher educational levels are gaining access to community services while care recipients with caregivers who have lower educational levels are not. The disparity in care between both groups can lead to an increase of caregivers with low educational levels in need of community services without the ability to access those services.

This study revealed caregivers with higher educational levels. Ninety-five percent of caregivers had a high school education and above (some college/Associate Degree, Bachelor's or Graduate degree). The higher the educational level coordinates a positive relationship to increased use of community services in elder caregiving.

There were four community services in Question Four that approached near level of significance. *Legal Senior Aid* approached a near level of significance at .057, *Homemaker Services* approached a near level of significance at .094, *Support Group* approached a near level of significance at .064, and *Case Manager with Area Agency on Aging* approached a near level of significance at .051. These near levels of significance may warrant future research.

#### *Question Five*

Is there significant difference between the caregiver's marital status and community service utilization?

Results for Research Question Five revealed a significant difference between the caregiver's marital status in the area of one community service, *United Way Help Line*. The findings showed 60 percent of married caregivers used the *United Way Help Line* compared to 40 percent of the non-married caregivers.

*Comparison of Findings with  
the Review of Literature*

The literature does not support the findings that married caregivers used more community services than non-married caregivers. According to Montgomery and Kosloski (1999), spousal caregivers tend not to identify themselves as caregivers until the care recipient becomes more disabled and they began to provide more hands-on assistance. This makes it unlikely that they will seek community services during the beginning stages of elder caregiving. Therefore, the relationship between the caregiver and the care recipient can make it difficult to seek community services. Lyons, Zarit, and Townsend (2000) found married caregivers to be more likely to receive assistance from family members (informal services) in elder caregiving activities and less likely to use community services. Piercy and Blieszner (1999) reported that married caregivers sought assistance from community services only when they found the need to balance their personal needs, marital status fulfillment, and the safety needs of the care recipient.

*Discussion*

Caregivers experience the need for community service use at different stages in their caregiving experience. Spousal caregivers and children caregivers tend to identify themselves differently during their caregiving role. Spousal caregivers tend to identify

themselves as caregivers when they start providing hands-on caregiving activities, and adult children caregivers identify themselves when the care recipient first becomes disabled (Montgomery & Kosloski, 1999). The ability for community service professionals to intervene during the early stages of caregiving for spousal caregivers may shorten the caregiving obligations and provide better outcomes for both the caregiver and care recipient.

In this study, 75 percent of caregivers were married. Only in one service, *United Way Help Line* did the results reveal significant differences. There was no relationship between the marital status of the caregiver in 18 other community services. Since most elder care recipients (54 percent) lived in their own residence, this may attribute to the significant difference in service use for the *United Way Help Line* service. Another factor that may have influenced these results is that the majority of caregivers in this study were females, 51 percent were daughters or daughter-in-laws and 13 percent were spouses. The relationship to the elder adult could influence the use or lack of use in formal services.

There were two other services that approached a near level of significance for Question Five. *In-Home Companion* service approached a near level of significance at .064, and *Long Term Care Ombudsman* approached a near level of significance at .096. These services may warrant further research.

#### *Question Six*

Does the caregiver's gender make a difference in community service utilization?

Results for Question Six revealed significant differences between the caregiver's gender and the use of two community services: *Homemaker Services* and *Senior Group Meals*.

Twenty-nine percent of male caregivers used *Homemaker Services*, and 15 percent of female caregivers used the same service. Male caregivers were twice as likely as women caregivers to use *Homemaker Services*. Nineteen percent of male caregivers utilized the *Senior Group Meals* service, compared to 7.6 percent of women caregivers. Again, male caregivers used the service more than twice as often as female caregivers.

#### *Comparison of Findings with the Review of Literature*

In the elder caregiving research, gender has been an important characteristic in determining service in elder caregiving. Some other major key findings are as follows. Most elder caregivers are female (Kosloski et al., 1999; NAC & AARP, 1997; Shaw et al., 2000; Tennstedt, 1999; Wagner 1997). Men and women fulfill their caregiving roles differently. Women are more likely than men to provide direct elder care with the care recipient's ADL and IADL, whereas men are more likely to manage care by utilizing community resources (Kosloski et al., 1999; NAC & AARP, 1997; Tennstedt, 1999; Wagner 1997). The growing number of men providing caregiving services to elder adults is growing, and the number on women caregivers is decreasing (Center on an Aging Society, 2005).

### *Discussion*

The number of male caregivers is increasing. The National Family Caregiver Association (NFCA) survey (NFCA, 2000) reported 44 percent of elder caregivers in their elder caregiving study were men. The increased number of men entering the elder caregiving role will continue to increase. Literature reveals that men and women handle their caregiving role differently. Women provide more informal services and assist with more ADL and IADL activities. Men use more formal services and do less on hands caregiving activities. This presents a challenge to communities and private and public sectors to implement community resources towards reaching the male caregiver population. Is it possible that as more men enter the caregiving role, the need for formal services will increase and a decrease of formal services will be available due to the higher demand of services.

There were no other community services for Question Six that approached a near level of significance. There were 167 female caregivers and 51 male caregivers in this study, and there was only a significant difference in *Homemaker Services* and *Senior Group Meals*. In spite of the lower number of male caregivers in this study, men used more homemaker and meal services. The literature reveals men do less hands-on activities than women caregivers. Cooking and house chores are usually not common activities that most men do. None of the other services approached a near level of significance.

### *Question Seven*

Is there a difference between the caregiver's attitude (trust) and community service utilization?

Results for Question Seven, the variable "lack of trust" revealed statistically significant differences in the utilization of one community service, *Meals on Wheels*.

Caregivers that had higher trust levels were more likely to use *Meals on Wheels*.

### *Comparison of Findings with the Literature Review*

The literature supports the findings that community service utilization is associated with the caregiver's inability to trust non-family member care providers (Piercy & Blieszner, 1999). Elder caregivers want to take care of their elder loved one at home. Community service use were sought only when (a) the care recipient's functional ability decreased, (b) family members felt it was not safe for the caregiver to provide services, and (c) the caregiver needed time for family life. The findings revealed the need for service use was associated with the decreased functional ability of the elder care recipient and the need to balance elder caregiving and family roles. The extent of their trust and satisfaction with formal services led to continued use of services.

### *Discussion*

Future research needs to be done on measuring the caregiver's level of trust in the elder caregiving. The ability to obtain trust in the formal system for elder caregivers and their families is an important issue that needs to be addressed in elder caregiving. In this study caregivers that had higher levels of trust in the formal system

were more likely to use *Meals on Wheels*. This could be due to the relationship between families and the care recipients. Most of the caregivers in this study were daughters, daughters-in-law, and spouses. The responsibility that families feel towards providing caregiving activities to their loved ones may hinder the ability to trust the formal system to provide services. There were no other community services that approached the near level of significance for question seven in the measurement of “lack of trust.”

Results for Research Question Seven “self-responsibility” revealed levels of significance in four community services: *Home Health Care*, *Homemaker Services*, *Hospital Community Care Services*, and *Area Agency on Aging Services*. Overall, caregivers who had higher ratings of self-responsibility were less likely to use these services.

#### *Comparison of Findings with the Literature Review*

Piercy and Blieszner (1999) measured the links between perceived responsibilities and community service use in elder caregivers. Elder caregivers felt it was their responsibility to provide elder caregiving services to the elder adults; however, there were limitations to the amount of responsibility they would take as caregivers. Community services were sought only when the care recipient’s functional ability decreased and it was no longer safe for them and the caregiver. The decision to use formal services was positively related to the perceived safety of both the caregiver and care recipient. Kosloski, Montgomery, and Youngbauer (2001) identified elder caregivers as users, seekers, and non-seekers of service use in elder caregiving. All

three groups expressed a high level of responsibility to provide caregiving services for the elder adult. Non-seekers of service use expressed a higher perceived need of responsibility to provide caregiving services. Elder caregivers who feel it is their responsibility to provide services are more likely to experience emotional and physical conditions.

### *Discussion*

Caregivers who feel it is their responsibility to provide caregiving services should be assessed as high-risk caregivers. A risk-assessment should be directed at (a) their feelings about caregiving responsibilities, (b) their ability to multi-task, and (c) their caregiving skills rather than what they can do. Overall in this study, most caregivers felt it was their responsibility to provide caregiving services to the elder care recipient.

Two other community services for Question Seven in the measurement of “self-responsibility” approached a near level of significance. *Support Group* approached the near level of significance at .055 and *Life Line Referral* approached the near level of significance at .053. These services may warrant further research. Again, the caregiver’s relationship to the care recipient may reflect the higher ratings of self-responsibility to provide care to their loved ones.

Results for Research Question Seven “knowledge” revealed statistically significant differences and the utilization of three community services: *Senior Group Meals*, *Meals on Wheels*, and *Med-Van Bus* or *Mimi Van*. Caregivers with higher levels of knowledge were more likely to use these services.

*Comparison of Findings with  
the Review of Literature*

In the review of literature education is seen as an enabling factor to service use in elder caregiving. The higher the level of education of the caregiver is seen as a proxy for knowledge of formal services, which may influence service use (Bass & Noelker, 1987). The NAC and AARP (1997) survey reports caregivers who provide care to the most functionally impaired elderly are less knowledgeable about informal services in the community setting.

*Discussion*

In this study, 95 percent of caregivers had a high school education and above. The physical condition of the care recipients were 35 percent had 5 or more chronic medical conditions, 40 percent had 3 to 4, and 25 percent had 1 to 2 medical conditions. Overall, caregivers had higher levels of education and almost two thirds of the care recipients had chronic medical conditions or illnesses. There were 19 community services identified in the survey, and there were significant differences in the caregivers' knowledge in only three services.

The elder caregivers' lack of knowledge on how to access community services is a great concern in elder caregiving. Agencies need to develop more effective ways to promote community services to elder caregivers. The elder caregivers' lack of knowledge in spite of higher educational levels in this study led to minimal use of community service use.

There were four other services that approached a near level of significance in the measurement of "knowledge." *Home Health Care* approached near level of

significance at .065, *Eldergarden* approached a near level of significance at .081, *Case Manager with Area Agency on Aging* approached a near level of significance at .076, and *Nursing Home Respite Services* approached a near level of significance at .059. These services may warrant further research.

#### *Question Eight*

Is there a difference in community service utilization and the care recipient's age?

Results for Research Question Eight revealed a significant difference in utilization of three community services. Caregivers who used *Meals on Wheels*, *Long-Term Care Ombudsman*, and *Nursing Home Respite Services* had care recipients who were older. Overall results showed a relationship between the care recipient's increased age and the likelihood for caregivers to use community services.

#### *Comparison of Findings with the Review of Literature*

This study's findings agreed with the review of literature that the elder care recipient's increased age is associated with the use of community services (Kosloski et al., 1999; NAC & AARP, 1997). NAC and AARP (1997) reported the average care recipient's age as 77 years of age. In a different study, The National Expenditure Survey reports the most frequent users of community service use are elders age 85 and over. The National Expenditure Survey is one of the most comprehensive national estimates of types of service used by elders 65 and older with functional disabilities. The findings for service use reported the most frequent service used in elder caregiving was Home Care (homemaker services, home aides, and other home medical services)

with senior centers, congregated meals, home meal preparation, and transportation being less used.

Deitz (1997) studied elder adults in the use of community services. The elder's age emerged as an important factor in identifying service use. Care recipients were between the ages of 65 to 74 years of age. Care recipients who did not received assistance with care giving activities had a lower mean age than those who received assistance with ADL/IADL.

### *Discussion*

In this study the elder care recipients' reported age was 60 to 101. The reported significant differences between service use and the care recipient's age was in the use of *Meals on Wheels*, *Long Term Care Ombudsman*, and *Nursing Home Respite Services*. *Meals on Wheels* and *Long Term Care Ombudsman* had care recipients who averaged 87 years of age. Caregivers who used *Nursing Home Respite Services* had care recipients who averaged 89 years of age. Overall, there is a relationship between the care recipient's age and increases in the use formal services.

In this study the majority of caregivers were (a) women (77 percent) compared to men (23 percent), (b) generally healthy, with reported health of the caregiver good to excellent (62 percent), and (c) 63 percent were daughters, daughters-in-law, or spouses. The high number of female caregivers, the reported caregiver's good health status, and the caregiver/care recipient's relationship may all be factors that contribute to the decrease service use.

There were two other services that approached a near level of significant for questions eight in the measurement of “age.” The *Food Bank Program* approached a near level of significance at .071 and, *Life Line Referral System* approached a near level of significance at .059. These near levels of significance may warrant future research.

#### *Question Nine*

Is there a difference in community service utilization and the care recipient’s ADL/IADL functional ability?

Results revealed significant differences between service utilization and the care recipient’s ADL/IADL functional ability in six community services: *Home Health Care, Homemaker Services, Eldergarden, Area Agency on Aging, Case Manager with Area Agency on Aging, and Life Line Referral System*. There was a relationship between the care recipient’s decreased functional ability and the increased use of community services. The care recipient’s decreased functional ability was associated with increase service use.

#### *Comparison of Findings with the Review of Literature*

These findings for this study agree with the NAC and AARP (Bass & Noelker, 1987; Kosloski et al., 1999, 2001; Lyons et al., 2000; NAC & AARP, 1997; Piercy & Blieszner, 1999; Toseland, McCallion, Gerber, & Banks, 2002; Wallace-Williams & Dilworth-Anderson, 2002) studies that support the relationship between the care recipient’s decreased functional ability and increased community service utilization in elder caregiving.

### *Discussion*

The review of literature supports the relationship between the care recipient's decreased functional ability being associated to community service utilization.

However, why some caregivers do not use community services to assist them in their caregiving role is difficult to understand. Could it be lack of awareness, trust in the formal system of elder caregiving, or fear of inability to pay or reciprocate? Or, could it be the care recipient's wish not to seek outside services (Piercy & Blieszner, 1999; Tennstedt, 1999).

In this study, 35 percent of care recipients reported 5 or more medical conditions or illness, 40 percent reported 3 to 4, and 25 percent reported 1 to 2. The majority (60 percent) of care recipients had mobility problems. The increase number of service use in this study indicates the increase relationship between the caregiver's decrease functional ability and the caregiver's perceived need for service use.

There were no other services that approached a near level of significance for Question Nine in the measurement of the elder's functional ability.

### **Implications for Clinical Practice in Elder Caregiving**

One implication for clinical practice is to prepare our aging population for their caregiving role, that is, assisting the caregiver to identify as a future caregiver prior to the onset of providing caregiving activities. Recognizing the need to prepare physically, mentally, and financially will determine the success of future caregivers as they continue to provide caregiving services to loved ones.

Community services that provide elder caregiving services for caregivers and care recipients need to recognize the need for early intervention in elder caregiving. Early identification of elder caregivers prior to the onset of the caregiving process may determine the outcome of the caregiving role. The health care system needs to take an active role in assisting community services to implement early interventions. Once elder adults have been identified with chronic medical conditions or illnesses, a referral to local community services would start the caregiving process for both the caregiver and care recipient. It is troubling that many caregivers are currently providing caregiving services without the knowledge or trust in the formal system of elder caregiving.

The results of this study show minority caregivers use more formal services than non-Hispanic Whites. The implication of a diverse and aging society implies the need to broaden community services, targeting different ethnic groups with different needs. Women of all ethnic backgrounds will continue to be most at risk since they are the most likely to provide caregiving services to the elder adult (Takamura, 1999). Agencies will be challenged to develop short comprehensive programs that provide the information needed in order that caregivers may continue to provide caregiving services and meet family and employment responsibilities.

With the increased longevity of older adults in America and the increased prevalence of elder caregiving (NAC & AARP, 1997), there is a need to market programs to promote awareness to elder caregivers by communities, agencies, place of employment, and public and private sectors. There is a need to develop programs that

are accessible and affordable to elder caregivers and care recipients. Programs will need to be modernized as the baby boomer generation approaches the role of elder caregivers. The need to provide caregiving services and information online may be the key to caregiving in the near future.

The findings from this study also revealed the caregivers and care recipient's increased age to be associated with the use of community services (NAC & AARP, 1997). This implies the need for agencies to be particularly cognizant of the needs of both the caregiver and care recipient early in the caregiving role. Early intervention in linking the caregiver and care recipient to community services may assist the caregiver in identifying their own health needs and those of the care recipient to provide better caregiving outcomes (England, 2001).

This study supports findings that men use more community services than female caregivers. This implies that the increased number of men entering the elder caregiving role (National Family Caregivers Association, 2000) will increase the need for more community services in elder caregiving. This presents a challenge to agencies, communities, and private and public sectors to implement community resources towards targeting the male caregiver population.

The results from the study support the caregiving research; caregivers with higher educational levels (beyond high school and college) use more community services than caregivers with less than a high school degree (NAC & AARP, 1997; Wallace-Williams & Dilworth-Anderson, 2002). The implication is that formal services will need to assess the caregiver's and care recipient's knowledge and their

cognitive ability prior to offering programs that may target a more educated population. It may be that caregivers with less education are more apt to learn visually as opposed to reading materials. Videos, tapes, and radio promotions may be better options than reading material. The possibility of interviewing the entire household to identify the best learner needs is an option. When the best learner is identified, this person will be the key student who can be the informant for other members of the caregiving household. Instead of just targeting the elder caregiver and care recipient, there will be one other member to the caregiving team, the “best learner” who can be identified as the communicator and link the caregiver and the care recipient to community services.

Montgomery and Kosloski 1999, founded that caregiving activities change over time in accordance with the care recipients increase need for care. Montgomery and Kosloski outline a trajectory of caregiving with seven benchmarks: (a) performing caregiving activities, (b) defining self as a caregiver, (c) providing assistance with personal care, (d) seeking out or using services, (e) considering institutionalization, (f) placing the care recipient in a nursing home, and (g) the termination of the caregiving role. Not all caregivers will follow these sequential markers and the order of these benchmarks. However, it is important to remember each benchmark signifies the further development of the caregiving process.

#### Conclusion

This qualitative study provided evidence that minority caregivers use an increased number of community services compared to than non-Hispanic Whites. The

results revealed significant differences between community service utilization and the caregiver's ethnicity in three services: *Food Bank Program*, *Case Manager Area on Aging Agency*, and *United Way Help Line*. Minority caregivers utilized the *Food Bank Program*, *Case Manager Area on Aging Agency*, and *United Way Help Line* significantly more than non-minority elder adult caregivers. In this study, one percent of non-Hispanic Whites used the *Food Bank Program* compared to 26 percent of minority caregivers who used the *Food Bank Program*. In the *Case Manager with Area Agency on Aging*, 26 percent of minority caregivers used this service compared to only 7.8 percent of non-Hispanic White caregivers. In the *United Way Help Line* service, one percent of non-Hispanic Whites used the service compared to 26 percent of minorities who did use the service. The caregivers in this study were 91 percent non-Hispanic White, and 9 percent were of a different ethnic background. The small ethnic number made it difficult to generalize these results or to provide validity to more diverse populations.

#### *Caregiver's Age*

The caregiver's age revealed a relationship between utilization of community services in the three services. Caregivers 64 years of age used *Senior Group Meals* compared to caregivers age 57 who did not use the service. Caregivers 63 years of age used *Meals on Wheels* compared to caregivers age 57 who did not use the services. Caregivers 52 years of age used the *Food Bank Program* compared to caregivers 59 years of age who did not use the service. In the *Support Group*, caregivers age 66 years of age used the service compared to caregivers age 58 who did not use the service. In

the *Food Bank Program*, younger caregivers used more services than older caregivers. Overall, older caregivers used more community services than younger caregivers.

#### *Caregiver's Income*

The caregiver's income revealed a relationship between utilization of community service in one service, *Hospital Community Care Coordinators*. Thirty-two caregivers with income levels \$25,000 to \$45,000 used *Hospital Community Care Coordinators*, and 156 caregivers in other income categories reported they did not use the service.

#### *Caregiver's Educational Level*

The caregiver's educational level revealed a relationship between the use of one community service. *Hospital Community Care Coordinators* service was utilized more frequently by caregivers with higher educational levels compared to those with lower educational levels. The overall results were, as the caregiver's educational level increased, so did the use of one community service, *Hospital Community Care Coordinators*. Thirty-one percent of caregivers with a bachelor's degree or graduate degree used *Hospital Community Care Coordinators* compared to only 11 percent of caregivers who had a high school degree or less.

#### *Caregiver's Martial Sstatus*

There was a relationship between the caregiver's martial status and the use of one community service. The *United Way Help Line* was utilized by 60 percent of elder caregivers compared to 40 percent of non-married caregivers.

### *Caregiver's Gender*

The caregiver's gender revealed a relationship between two community services. Twenty-nine percent of men used *Homemaker Services*, and 15 percent of women used the same service. The male caregivers were twice as likely than women caregivers to use *Homemaker Services*. In the use of *Senior Group Meals*, 19 percent of male caregivers utilized the service, compared to 7.6 percent of women caregivers who used the same service. Again, male caregivers used the *Senior Group Meals* more than twice as often as female caregivers.

### *Caregiver's Attitude: Trust, Responsibility, and Knowledge*

There was a difference between in the caregiver's trust level and the use of *Meals on Wheels*. Caregivers with higher trust level were more likely to use *Meals on Wheels*. The caregiver's self-responsibility to provided caregiving services and service use revealed differences in four community services. The caregiver's lack of knowledge of community services and service used revealed differences in *Home Health Care, Homemaker Services, Hospital Community Care Coordinators, and Area Agency on Aging*. Caregivers with higher ratings of self-responsibility were less likely to use these services. The caregiver's knowledge of community services revealed a difference in three services: *Senior Group Meals, Meals on Wheels, and Med-Van, Buss, or Mini Van*. Caregivers with higher knowledge of community services were most likely to use these services.

### *Care Recipient's Age*

There was a difference between the care recipient's age and service use in three areas. Caregivers who used *Meals on Wheels* and *Long Term Care Ombudsman* had care recipients who were 87 years of age. Caregivers who used *Nursing Home Respite Services* had care recipients who were 89 years of age. The caregiver's increased age was associated with service use.

### *Care Recipient's Functional Ability*

The care recipient's decreased functional ability was associated with the increase use of six community services: *Home Health Care*, *Homemaker Services*, *Eldergarden*, *Area Agency on Aging*, *Case Manager with Area Agency on Aging*, and *Life Line Referral System*. The decreased functional ability of the care recipient increased the use of community service utilization.

Overall, the results for this study revealed the caregivers and care recipient's characteristics as having a direct relationship in the utilization of services in elder caregiving. The caregiver characteristics of ethnicity, age, income and educational level, martial status, gender, and attitude revealed a direct relationship to the use of community services. The care recipients' decreased functional ability and increased age of 87 to 89 increased the likelihood on service use.

This investigation included participants who were recruited by telephone contact and who could speak English. Unfortunately, that limited the small size of participants with ethnic backgrounds who could not speak English. The small ethnic number of participants makes it difficult to generalize these results to more diverse

populations. The idea that we have older caregivers providing caregiving services to older care recipients is a great concern to the private and public sector. The formal system needs to identify caregivers before they identify themselves as caregivers, that is, early interventions, perhaps by physician referral, when an elder adult is identified by the health care system as needing assistance with caregiving activities. The results of this study serve as a challenge to the formal system to become involved early in the caregiving process before the caregiving role is detrimental to both the caregiver and care recipient.

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