The effects of pet ownership and attachment on caregivers' mental health

Eveleen Irene Dimaggio
Nicole Renee Hughes

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd-project

Part of the Social Work Commons

Recommended Citation
Dimaggio, Eveleen Irene and Hughes, Nicole Renee, "The effects of pet ownership and attachment on caregivers' mental health" (2005). Theses Digitization Project. 2846.
https://scholarworks.lib.csusb.edu/etd-project/2846

This Project is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
THE EFFECTS OF PET OWNERSHIP AND ATTACHMENT ON CAREGIVERS' MENTAL HEALTH

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Eveleen Irene Dimaggio
Nicole Renee Hughes
June 2005
THE EFFECTS OF PET OWNERSHIP AND ATTACHMENT ON
CAREGIVERS’ MENTAL HEALTH

A Project
Presented to the
Faculty of
California State University,
San Bernardino

by
Eveleen Irene Dimaggio
Nicole Renee Hughes

June 2005

Approved by:
Dr. Thomas Davis, Faculty Supervisor
Social Work

Adriana Bailey, Assistant Director
Inland Caregiver Resource Center

DR. Rosemary MeCaslin,
M.S.W. Research Coordinator
ABSTRACT

This study examined the potential mental health benefits for caregivers who own pets. The participants were recruited though Inland Caregiver Resource Center.

Relationships among levels of loneliness, depression, anxiety, stress, and pet attachment were examined through the use of independent t-tests, and correlation analyses. Qualitative measures were also used to determine themes associated with pet ownership. The quantitative results of this study were mixed, and suggest that there are no significant differences in the five variables that were measured among caregivers who owned pets and those who did not. The qualitative data indicates that caregivers view pet ownership as beneficial to their mental health.
ACKNOWLEDGMENTS

We would like to thank our families for all of their support, especially Mrs. Dimaggio for her assistance with the surveys. We would also like to thank Dr. Thomas Davis for his supervision and uplifting encouragement throughout the duration of this project. In addition, we are also grateful to Inland Caregiver Resource Center, specifically Adriana Bailey who worked hard to make this project happen. A big thanks to Cyndi Fiello whose research inspired this project. Lastly we would like to show gratitude to Lorann Stallones for the usage of the Lexington Attachment to Pet Scale, and the graduate advisory committee.

E.D. & N.H.
DEDICATION

To our own pets: Oreo, Sable, Pork Chop, and Barkley. They provide us with so much more than we will ever provide for them. We love you.
TABLE OF CONTENTS

ABSTRACT ......................................................... iii
ACKNOWLEDGMENTS ........................................ iv

CHAPTER ONE: INTRODUCTION

Problem Statement ............................................. 1
Family Caregiver Alliance Statistics ..................... 2
Purpose of the Study .......................................... 10
Significance of the Project for Social Work Practice ........ 12

CHAPTER TWO: LITERATURE REVIEW

Introduction ..................................................... 15
Research Studies that Confirm Benefits of Pet Ownership ........ 15
Research Studies that Contest Benefits of Pet Ownership .......... 25
Theories Guiding Conceptualization ....................... 28
Summary ........................................................ 30

CHAPTER THREE: METHODS

Introduction ..................................................... 32
Study Design ................................................... 32
Sampling ......................................................... 33
Data Collection and Instruments ............................. 34
Procedures ....................................................... 36
Protection of Human Subjects ................................. 37
Data Analysis .................................................. 39
Summary .................................................................................. 40

CHAPTER FOUR: RESULTS

Introduction ................................................................. 42
Presentation of the Findings ............................................ 42
Demographics Results ...................................................... 42
Quantitative Results ....................................................... 43
Qualitative Results .......................................................... 45
Summary ............................................................................. 48

CHAPTER FIVE: DISCUSSION

Introduction ................................................................. 50
Discussion ................................................................. 50
Limitations ................................................................. 57
Recommendations for Social Work Practice,
Policy and Research ....................................................... 57
Conclusions ................................................................. 60

APPENDIX A: QUESTIONNAIRE .............................................. 61
APPENDIX B: INFORMED CONSENT ....................................... 71
APPENDIX C: DEBRIEFING STATEMENT ................................. 74
APPENDIX D: TABLES .......................................................... 76
REFERENCES ..................................................................... 80
ASSIGNED RESPONSIBILITIES PAGE ................................. 84
CHAPTER ONE

INTRODUCTION

The contents of Chapter One present an overview of the project. The problem statement, and the purpose of the study are discussed followed by the significance to social work practice.

Problem Statement

According to Arno, Levine, and Memmott, over 25.8 million people are caring for adult loved ones with a disability or chronic illness (as cited Family Caregiver Alliance, 2004). The term most commonly used for those caring for another is "caregiver." Caregivers provide many critical functions when caring for their loved ones, the most important being able to help them with their activities of daily living (ADL’s). ADL’s consist of bathing, toileting, grooming, dressing, feeding, reminders to take medications, taking care of the loved ones finances, and other activities (Family Caregiver Alliance, 2004). Caregivers not only have to perform these time consuming duties for their loved one, but they also have to keep up with responsibilities in their own life, including caring for other family members,
maintaining a job, having leisure time, and keeping themselves healthy. Caregivers must carefully balance their own needs, with the needs of their loved one; this can be a very difficult job.

In the past, caregiving was considered a "family problem" and rarely did caregivers seek help outside of his or her own family. Little was known about caregivers and what their daily life consisted of until the formation of groups like the Family Caregiver Alliance. This group has gathered a large amount of research studies and statistics, and we now have a clear picture of who a caregiver is, and their important function in society.

**Family Caregiver Alliance Statistics**

**Gender.** According to the Department of Health and Human Services over 75% of all caregivers are female (as cited in Family Caregiver Alliance, 2004), of this 75%, 13.4% are wives, 26.6% are daughters, 17.5% are another female relative, and the remaining are female non-relatives (Spector et al., 2000). The Department of Health and Human Services also shows that female caregivers are more likely to spend 50% more time caring
for their loved one than male caregivers (as cited in Family Caregiver Alliance, 2004).

Race. The National Alliance for Caregiving, and the AARP studies find that 24% of caregivers over the age of 18 are Caucasian, 29% are African American, 27% are Hispanic, and 32% are Asian American (as cited in Family Caregiver Alliance, 2004). Research by the National Academy on an Aging Society notes that there are also racial differences on who provides care to their loved one. Caucasians are more likely to receive help from their spouses, African Americans are more likely to receive help from a non-family member, and Hispanics are more likely to get help from their children (as cited in Family Caregiver Alliance, 2004).

Age. A survey conducted of California caregivers found that their ages ranged from 19-98 years of age, with the average age being 60 (Caregiver Resource Centers, 1999). A similar survey by the Family Caregiver Alliance (2004) found that the average age of a person caring for another over the age of 20, was estimated at 43, and those caring for a loved one over the age 50 was 46 years of age.
Illness. Caregivers provide care to people who have a large variety of impairments. Impairments range from mental disabilities, brain injuries, mental illness and diseases. The impairments this study will be concerned with are: Alzheimer’s disease, Parkinson’s disease, Dementia, stroke, traumatic brain injuries, and Huntington’s disease.

While statistics show that caregiving can affect anyone at anytime, there are certain negative characteristics that caregivers do have in common. One of the biggest characteristics caregivers share is a decline in their mental well-being. The Family Caregiver Alliance (2004) notes that “studies show that among caregivers, an estimated 46%-59% are clinically depressed”. Depression is more common in females than males, and women are also more likely to suffer from anxiety, and will likely experience a greater decline in happiness (Marks, Lambert, & Choi, 2002).

Depression is also more common among caregivers that are caring for their spouses, than caregivers caring for another relative or friend. Several studies have shown that among spouse caregivers, 21-25% of husbands and 50-52% of wives are depressed (Cohen et al., 1990;
Gallagher, Rose, Rivera, Lovett, & Thompson, 1989). A similar study by the Family Caregiver Alliance (2004) found that middle-aged and older women who provided care for a spouse were almost six times more likely to suffer from depression and anxiety than women who had no caregiving responsibilities.

One contributing factor to feelings of depression among caregivers is loneliness. Research by Siriopoulos, Brown, and Wright investigated loneliness in caregivers of Alzheimer’s patients, and found that as the loved one’s condition continued to deteriorate that feelings of loneliness were pervasive. More specifically, husbands had a harder time coping with feelings of loneliness due to the fact that they could not longer communicate with their wives (as cited in, Beeson, Horton-Deutsch, Farran, & Neundorfer, 2000). Similarly, research by Beeson et al. found that caregivers who experienced the most loneliness when caring for a loved one with Alzheimer’s disease were wives, husbands, and daughters.

Caregivers experience a disconnect with family members, friends, and their community. Once a loved one, especially a spouse, is diagnosed with a disability or brain impairment, friends and family members begin to
withdraw. Often people feel awkward being near the loved one, out of fear that something will happen, and out of embarrassment of not knowing what their role is in the relationship. Many caregivers will notice a decrease in the amount of their social contacts, and will likely become even more socially isolated.

Another alarming characteristic that caregivers share are high stress levels. Caregivers often find it difficult to care for their loved one while maintaining the responsibilities of their own life. Many caregivers, especially children of the care receiver, find it very difficult to care for their parent, as well as their own family and job.

Both male and female children of aging parents make changes at work in order to accommodate caregiving responsibilities. Both have modified their schedules (men 54%, women 56%). Both have come in late and/or leave early (men 78%, women 84%) and both have altered their work-related travel (men 38%, women 27%). (National Family Caregivers Association, 2003, p. 1)

Directly related to this fact is that many caregivers experience stress due to lack of income. Caregivers with jobs usually experience a decrease in income due to lost hours, and many will be forced to quit their jobs in order to meet their caregiving
responsibilities. A large percent of all caregivers are older than age 65 and are relying on Social Security and other retirement benefits for their income. So it is no surprise that the less income a caregiver brings in, the more likely they are to experience stress (AARP, 2001).

Depression, loneliness, anxiety, and stress are only a few negative characteristics many caregivers share. While many groups such as the Family Caregiver Alliance, and the National Family Caregiver Association, are trying to educate caregivers about the negative heath effects surrounding caregiving, more needs to be done. Currently, caregivers are encouraged to attend support groups, or to seek professional help. The Department of Health and Human Services (1998) notes that caregivers spend an average of 17-20 hours a week (as cited in The Family Caregiver Alliance, 2004) providing care for their loved ones, so it may be difficult for the caregiver to receive such services. Caregivers need more options that are easier to obtain to combat feelings of depression, loneliness, anxiety, and stress.

One option that has gained popularity over the years, and will be explored in this project, is the presence of a pet. Many studies have shown that people
who own pets experience many positive mental health benefits. Research has shown pets to be a positive effect in the lives of the elderly (Dembicki & Anderson, 1996), AIDS patients (Conti, Lieb, Liberti, Wiley-Bayless, Hepburn, & Diaz, 1995), homeless youth (Rew, 2000) and single women (Zasloff & Kidd, 1994). Research has also been conducted on local caregivers by Fiello (2002). The results from this study found that caregivers over the age of 55 who owned a pet were more physically and mentally healthy than caregivers who did not own a pet.

While research into the significance of pets on different populations is very important, there is a lack of research on caregivers as a whole. In order to increase the amount of literature into this topic, this research project was conducted.

It is of the utmost importance to increase our knowledge about the benefits pets could provide for caregivers because of many pertinent issues. The first issue is the increasing number of people growing old in America. According to the Family Caregiver Alliance, by the year 2007 over 39 million American households will be caring for a person 50 years or older (2004). This is due to the large group of people called the “baby boomers.”
The American Association Retired People (AARP) defines a baby boomer as a person born between the years of 1946-1964, after World War II (2001). As baby boomers continue to age, it is likely that the number of people suffering from brain impairments will increase. More caregivers will be needed to care for this generation, and their physical and mental health will need to be taken into greater consideration. By studying possible interventions, social workers and other professions can help prevent caregivers from experiencing negative mental health effects.

Possible interventions social workers can make may be in a macro social work setting, as well as a micro social work setting. With more knowledge on the benefits of pet attachment, policies regarding the ownership of pets in particular settings, like nursing homes, may be changed with more research available on this subject.

Social workers can use research results in order to help incorporate pets into the treatment plans of caregivers, and other populations. Social workers can encourage caregivers, and other populations, to become more involved with their pet, emotionally and physically. Social workers can also use pets during therapy sessions,
and support groups, especially if a person or group is reluctant to speak. Talking about pets is something everyone can relate to, and may be a good place to start in a session. Social workers can also use pet therapy techniques when working with clients. Social workers can allow clients to stoke, hug and play with an animal, in hopes that the animal will provide an upbeat mood, and a sense of companionship when in a session.

Purpose of the Study

The purpose of this study was to examine the relationship between pet ownership and attachment and caregiver mental health. With regards to mental health, we studied four components: loneliness, depression, anxiety, and stress which are all common effects of caregiving.

The study took place at Inland Caregiver Resource Center, one of eleven Caregiver Resource Centers in California. By conducting the study at this agency we were able to draw a large sample of caregivers that live in the Inland Empire, and were able to find results that could be helpful to other caregivers living in this area.
We used both quantitative and qualitative measures in order to examine the relationship between pet ownership, attachment, and mental health. In regards to quantitative measures, we used the UCLA Loneliness Scale to determine loneliness, the Depression Anxiety Stress Scale to measure levels of depression, anxiety and stress, and the Lexington Attachment to Pet Scale to explore attachment levels. By using these three instruments, we have a clear and precise idea of the number of caregivers who are lonely, depressed and stressed. We also have a clear presentation of how pet attachment effects or does not effect caregiver mental health.

In contrast, by using a qualitative measure we were able to get a more in depth idea of how caregivers see their pets, and if they believed their pet influences their mental health. Caregivers were given five open-ended questions that allowed them to elaborate on their relationship with their pets. By combining both methods, we hoped to not only see a clear relationship between pet ownership, attachment, and mental health, but also know why caregivers believe this relationship exists.
Significance of the Project for Social Work Practice

Researching the effects of pet attachment on the mental health of caregivers, we hoped that the results will help the way social workers intervene with policies and specific client interventions.

While there are no current policies regarding pet attachment and caregiver mental health, pets in general may play a role in shaping policies surrounding other populations. For example, if additional research finds that pets help decrease depression and other negative health effects, there may be a need for policy changes in other settings like nursing homes and homeless shelters.

Research supports that the use of pets and therapeutic interventions can benefit clients. How pets are used in these interventions can vary depending on the clinician and the needs of the caregiver. First, social workers can inform the caregiver of the possible benefits of pet ownership. If a caregiver owns a pet, the social worker may encourage them to become more active with the pet by communicating with the pet more, playing with the pet, or taking the pet for short walks. Many pet owners may forget that their pet, like people, can provide them
with love, support, and joy. They can include connecting with their animal as a goal in their treatment plan. If the caregiver does not have a pet, the social worker should be careful before suggesting the caregiver buy or adopt a pet. The caregiver may want to first expose themselves and their loved one to other people’s pets. By doing this, the caregiver can see how their loved one would react to an animal in the house, and the caregiver themselves can see if they would like to add a pet to their household. The caregiver may benefit more by visiting the local Humane Society or a local dog park. They could not only interact with animals, they would not have to increase the large amount of work they already do in their homes. These ideas can also be treated as goals in a caregiver’s treatment plan.

Social workers working with this population can also use pets in other ways. A good idea may be allowing a pet to be present during a therapy session or support group. Having a pet in the room may make people more open to conversation, and may put more people at ease. The social worker should check with a caregiver or group of caregivers before bringing a dog to a session because of
potential allergies, or feelings of discomfort around dogs.

Lastly, social workers working with caregivers should remember the emotions that come to the surface when a pet dies. While most social workers know the painful feelings associated with the death of a human being, many may not know that these feelings are also associated with the loss of a pet. Social workers should be supportive and respectful to a caregiver who has lost a pet, and allow them time to grieve. There are many different ways a social worker can incorporate a pet in order to improve the mental well being of caregivers.

By researching the importance of pet attachment on the mental health of caregivers, we aimed to answer these questions:

Are caregivers who are attached to a pet less lonely, depressed, anxious, or stressed than caregivers that are not attached to a pet?

Do caregivers who own pets believe that their pets help with symptoms of loneliness, depression, anxiety or stress? If yes, why do they believe that this is the case?
CHAPTER TWO
LITERATURE REVIEW

Introduction

Chapter Two contains an examination of the applicable literature pertaining to pet ownership. Subsequent to the literature review is a discussion regarding the theories guiding conceptualization, followed by a summary of the chapter.

Research Studies that Confirm Benefits of Pet Ownership

Research suggests that there are health benefits associated with pet ownership and these findings can be generalized to people of all age groups (Sable, 1995), though some data indicates that the bond between people and animals may be stronger later in life than at any other stage (Herrald, Tomaka, & Medina, 2002; Albert & Bulcroft, 1988). Elderly people comprise a part of the population that is generally at higher risk for physical and emotional issues, including normal regression in health due to age and problems caused by stress factors such as deaths of loved ones and loneliness (Garrity et al., 1989). While many studies indicate that the benefits
of a strong attachment to ones pet may include better physical health, and decreased depression and loneliness (Dembicki & Anderson, 1996; Sable, 1995), others indicate no such effects (Tucker, Friedman, Tsai, & Martin, 1995; Raina et al., 1998).

Zasloff and Kidd (1994) examined the relationship between loneliness, pet ownership, and attachment of single women. The sample consisted of 148 women who were single undergraduate and graduate college students, did not live with a mate, significant other, or children, and were at least 21 years of age. The mean age of the participants was 28.4 with a range of 21 to 53 years. Differences in loneliness between pet owners and non-owners, as well as between dog and cat owners were studied. Loneliness was measured on a revised UCLA Loneliness Scale and pet attachment was measured on a Pet Relationship Scale. The findings of this study suggest that pet ownership is capable of decreasing feelings of loneliness, especially for women that live alone, and makes up for the lack of human company. Furthermore, it was found that there was no difference in mean loneliness or attachment among dog and cat owners. It appears that
both dogs and cats provide emotional benefits for people that live alone.

Albert and Bulcroft (1988) studied the role of the pet as a basis of affection and attachment in families, as well as how this role relates to the social structures within families. The subjects for this study were chosen through random sampling from telephone directories, and then telephone interviews were conducted with 612 pet owners and 251 non-owners. Quantitative data included questions regarding attitudes toward pet ownership, social interactional variables of relationships with pets, history of pet ownership, as well as demographics. Pet owners were asked to rate on a scale of 1-5 the degree to which they consider their pet a member of the family, with a response of 5 on the scale being that the pet is "very much" a family member. Eighty-seven percent of the pet owners surveyed responded with a 4 or 5 to this question, which indicates that a majority of pet owners consider their pets to be members of the family. Pet attachment was also studied and it was found that the stage in a family's life cycle relates to attitudes toward pets. The findings of this study suggest that pet attachment is high during the following stages: newlywed,
divorced, never married, and widowed. Pet attachment was found to be lowest among families in the middle stages of life, throughout the time where more than one child is in the household, though respondents in this group generally owned pets due to a belief that it is important for children to have pets.

The benefits of pet ownership may also be generalized across cultures. Johnson and Meadows (2002) found that, even though most of the research on this topic is done mainly with Caucasian older adults, pet ownership appears to benefit older adults of other cultures. They conducted a quantitative, cross-sectional study of descriptive design that examined the benefits of pet ownership among Latino older adults on self-perceived current physical and emotional health. A convenience sample of 24 participants consisted of dog owners that were 50 years of age or older and of Hispanic descent. The findings of this study indicate that pets are generally as important to older Latino adults as they are to older adults of Caucasian descent. The participants were generally very devoted to their pets and saw themselves as having outstanding health and less health problems than most people their age.
A large body of research indicates that pet ownership may improve the physical health of the pet owners. According to Herrald, Tomaka, and Medina (2002), the literature suggests that pets "act as stress buffers, are beneficial to well-being and health, and might facilitate recovery from illness" (p. 1110). Based on these premises, they hypothesized that the favorable effects of pets on health and recovery can reduce the probability of leaving a cardiac rehabilitation program early. A study was devised composed of 81 patients who were enrolled in a cardiac rehabilitation program at a local outpatient medical center, 69% of which were pet owners. A large number of variables which may influence adherence were assessed, including demographics, personality, self-esteem, perceived stress, activity level, and a Sickness Impact Profile that measures the degree to which an illness has impacted various areas of a person's life. Pet owners were also administered a Pet Attitude Scale in order to assess pet attachment. This study found that pet owners were considerably more likely to finish cardiac rehabilitation, since 96.5% of pet owners completed the program in comparison with 79.2% of patients who did not own a pet. It is suggested that
there are numerous reasons why pet owners would be more likely to complete cardiac rehabilitation, such as less depression, better psychological well-being, and better physical health. Additionally, this study looked at possible interference of various personality variables and found that they did not have any effects on the connection between ownership of a pet and completion of rehabilitation.

Raina, Walter-Toews, Bonnett, Woodward, and Abernathy (1998) conducted a one-year longitudinal study in order to examine the effects of pet attachment on the physical and psychological health of older people. 1,054 people from Ontario, Canada, 65 years of age and older participated in this study. Measures included social support, physical health, pet attachment, psychological well-being, and demographics. The results of this study determined that pet ownership has a statistically significant impact on the physical health of the participants. The findings suggest that the daily level of activity of non-pet owners decreased more than that of pet owners, which may be a contributing factor to the better-reported health of the pet owners. The findings of this study did not determine a significant connection
between pet ownership and psychological well-being initially, but over the 1-year period of the study pets were found to serve as social support and had a slight positive impact on psychological well-being.

Pets may also help to increase pet owners’ social networks. McNicholas and Collis (2000) examined whether pet ownership favorably affects health and well being by way of increased contact with other people. It was hypothesized that dogs can act as social catalysts that may spark conversations and expand or enhance a pet-owners social network. Two studies were conducted by McNicholas and Collis, the first attempting to record the number of interactions of a dog handler. The first study did not include environments such as dog walking areas where dog owners may meet due to their dogs’ interactions with each other. The study also took into account the possibility of the dog itself attracting attention, so the dog was presented as a Guide Dog for the Blind in its final stages of training. The researcher counted the number, and measured the length, of social interactions both with and without the dog. In addition, the gender of the interactee and whether the interactee was a friend, acquaintance or stranger was also recorded. A total of
206 encounters were observed, 156 while with the dog and 50 without the dog present. There was a significant increase in the amount of encounters when the dog was present, which shows that more social exchanges occurred while the researcher was with the dog.

The second study conducted by McNicholas and Collis explored the "robustness of the social catalysis effect of dogs," specifically whether the appearance of the dog or handler made an impact. Both the dog and handler's appearance was changed to give the impression of "a smart person with a nice pet dog and a roughly dressed person with a more aggressive looking dog" (2000, p. 65). There were 48 trials at certain street corners were conducted at 30-minute intervals each, and there were a total of 1170 interactions. The most interactions occurred in the presence of the aggressive dog, none of which were negative, whether the dog handler was smartly dressed or scruffy. The results suggest that being in the presence of a dog may serve as a catalyst to promote interactions among people.

Rogers and Hart (1993) examined the social interactions of elderly pet owners while walking their dogs. Six pet owners and six non-pet owners, 65 years of
age and older, all residing in six different mobile home parks participated in the study. The dog owners each took two walks; one with their dog and one alone, and the non-pet owners took one walk. Each participant discreetly carried a mini-tape recorder and all interactions with other people were recorded and transcribed, as well as the pet-owners' interactions with the dog. After the walks were completed, the participants completed the Older Americans Resource Survey, which consisted of 31 questions about health, social, emotional, and daily living parameters. It was found that the dog owners talked more overall, as all spoke to their dogs as well as to other people, and the conversations of the dog owners were primarily about their pets. Furthermore, dog owners reported taking twice as many daily walks as the non-pet owners, and also reported considerably less discontent with their social, physical, and emotional circumstances.

Siegel (1990) conducted a 1-year study that examined the effects of pet ownership on stress management and the use of physician services among elderly persons. A total of 1,145 people over the age of 65, enrolled in Medicare, and from a particular Southern California HMO
participated in the study. Measures of chronic illness, depression, major life events, and social networks were recorded at baseline. Depression and life events were recorded again after 6 months and 1 year, while the frequency of physician service use was assessed every 2 months. Measures regarding pet ownership included responsibility, time spent with pet, attachment, and perceived benefits. The results of this study suggest that owning a pet appears to lessen the demand for physician services, as pet owners participating in the study had less visits with their physicians during the year than non-owners. The results also indicate that companion animal’s aid in stress reduction, as the accrual of stressful life events was linked with an increased number of physician visits for non-pet owners. The most frequently reported stressful events for the participants were related to loss, including death and chronic illness.

Garrity, Stallones, Marx, and Johnson (1989) sought to find out if reported health and well-being of elderly persons was linked with pet ownership or the intensity of attachment to the pet. The participants were selected randomly from United States households. A total of 1,232
elderly persons over the age of 65 were surveyed, of which approximately one-third owned at least one pet. In this study of cross-sectional design, participants were administered telephone interviews regarding pet ownership and attachment, stress, social support, depression, and illness. The results of this study indicate a statistically significant relationship between pet ownership and lessened depression, and the findings were even more significant in comparison of attached versus non-attached pet owners. Pet ownership alone was not associated with any other emotional or physical health benefits.

Research Studies that Contest Benefits of Pet Ownership

Although a majority of the studies reviewed found evidence of physical and/or psychological benefits to pet ownership, not all found influential factors that indicate the owning of a pet as being more beneficial than not owning one. Raina, Walter-Toews, Bonnett, Woodward, and Abernathy (1998) examined the influence of pets on the psychological and physical health of elderly people over 65 years of age. In this study, 50 participants were surveyed voluntarily while waiting to
be seen by their general medical practice doctor. Measures of this study included social network activity, chronic conditions, pet ownership, physical health, and psychological well-being. The findings of this study did not indicate any statistically substantial influence on either the physical or psychological health of its participants.

Tucker, Friedman, Tsai, and Martin (1995) examined data from a longitudinal study spanning 70 years conducted by Lewis Terman. The Terman Life Cycle study was carried out from 1921 through 1991. Tucker and associates sought to find out whether health-conscious older people are more apt to play with pets, a relationship between playing with pets and improved health, and whether playing with pets predicts ones risk of mortality over a period of 13 years. The measures of this study consisted of playing with pets as an indicator of attachment, self-perceived health, behaviors associated with health, social ties in 1977, childhood psychosocial characteristics, and education. The results of this study suggest that the amount of time spent playing with pets does not have a statistically significant impact on the health of the pet owners.
Furthermore, it is suggested that interactions with companion animals may have more of a beneficial effect on the health and well-being of institutionalized individuals, and people with special needs. This study did not find a link between interactions with pets and improved health.

Miller and Lago (1990) conducted a study which sought to determine a connection between pet ownership and the well-being of elderly women. This study draws from theories of attachment and social support. The sample of this study was small, consisting of 53 female participants 65 years of age and above. Measures included attitudes regarding pet ownership, social support, usage of health and social services, and present perceived health. The findings of this study did not indicate any statistically significant relationship between pet ownership and physical or psychological health. In addition, there were no indications of a correlation between pet attachment and depression between the women that lived alone as opposed to those that lived with other people.

Fritz, Farver, Hart, and Kass (1996) studied the effects of pet ownership on the psychological health of
Alzheimer's patients' caregivers. The sample consisted of 244 caregivers ranging in age from 25 to 91 years of age. Measures included questions regarding demographics, pet ownership and social activity. The findings of this study did not indicate a statistically significant connection between psychological well-being and pet ownership, but women below the age of 40 that owned pets indicated having less stress than non-owners of the same age.

Theories Guiding Conceptualization

The importance of pet attachment can be clearly explained by Bowlby's attachment theory and the theory of social support.

Sable (1995) explored the bond that people have with their pets in relation to Bowlby's attachment theory, as defining this relationship in terms of attachment helps to further knowledge and understanding of the social behavior of humans. Attachment consists of "an affectional bond between two individuals over time, beginning with the infant and his or her mother figure, serves the biological function of protection as well as security" (p. 335). Just as children do, adults try to find proximity and security from attachment figures
pet loves and cares for them by simply observing their behavior. Pets also show value and esteem to their owners by showing respect to them, obeying commands, and reacting to human body language. Lastly, pets also provide their owners with a sense of group membership. Not only do the pet and owner form their own group, the pet may also facilitate group membership in the community. For example, a dog owner may join a group of dog walkers, or meet friends at the local dog park.

While both the attachment theory and the theory of social support are traditionally discussed in only a human sense, it is important to note that pets can also form important attachments, and provide social support to their owners.

Summary

A review of applicable literature pertaining to pet ownership and attachment indicates that there may be a relationship between owning a pet and improved physical and mental health. Some studies did not find a link between these variables, though many did. Theories guiding the conceptualization of these studies were discussed, including those of social support and
attachment. Of the many studies conducted regarding the benefits of pet ownership and psychological well-being, few focus on the well-being of caregivers. More research is needed in this area in order to better understand the needs of caregivers with regards to stress and loneliness, which the present study may help to provide.
CHAPTER THREE

METHODS

Introduction

Chapter Three describes the research methods utilized in this study. In particular, the study's design, sampling, data collection and instruments, procedures, protection of human subjects, and data analysis are discussed.

Study Design

The current study sought to determine if a correlation exists between pet ownership, attachment, and caregiver mental health. This study was of mixed design, as both quantitative and qualitative measures were utilized. Caregivers served by Inland Caregiver Resource Center were sent questionnaires in the mail, and those who chose to participate completed the survey and returned it to ICRC. The specific research question this study examined was: Are caregivers who own pets more mentally healthy than caregivers that do not own pets?

Potential limitations of this study include the limited number of participants that were surveyed, as well as the convenience sampling method that was
utilized. Additionally, the participants all reside in the same geographic area. Due to these factors, the current study could possibly have produced results that are not generalizable to the overall population.

Another possible limitation of the current study was that the caregivers may have been influenced by the interview questions asked. The results were based on self-reports, which are not always truthful. The participants may have been inclined to provide answers that they thought the interviewer wanted to hear, which could have affected the outcomes of this study.

Sampling

The sample size for this study depended upon the number of responses received, as questionnaires were sent out to 150 randomly selected caregivers. Responses from approximately 26 pet owners and 19 non-pet owners who returned the survey were included in the study. Criterion for inclusion consisted of caregivers who are over the age of 18. Data was collected from Inland Caregiver Resource Center, as they provide services to caregivers of brain-impaired adults and have nearly 500 active cases from which to draw participants from. Approval was
received from the appropriate parties at Inland Caregiver Resource Center in order to conduct the study at this agency.

Data Collection and Instruments

While pet ownership is the independent variable in the current study, the perceived attachment that pet owners feel toward their pets was measured using the Lexington Attachment to Pet Scale (LAPS). This pre-existing instrument is an ordinal level of measurement and was found to have excellent reliability. Additionally, a high degree of internal consistency was evidenced, as well as construct validity and content validity. Strengths of the LAPS include its well-defined factors of general attachment, people substituting, and animal rights. However, limitations of the instrument include a use of the word “favorite” in responding to questions about multiple pets, which may have swayed multiple-pet owners to respond in a more positive manner than they would have otherwise. Such a limitation may have resulted in an inability of the scale to measure weak attitudes in such cases (Johnson, Garrity, & Stallones, 1992).
The dependent variables that were studied with regard to mental health were loneliness, depression, anxiety and stress. The UCLA Loneliness Scale (version 3) was used to investigate caregivers’ levels of loneliness. This scale contains 20 questions and was found to be very reliable and valid. A strength of this revised scale is the change in wording of some questions in order to make it easier to understand while avoiding the use of double negatives, such as the response of “never” to the question “I do not feel alone” (Russell, 1996). This quantitative pre-existing instrument is an ordinal scale of measurement.

The Depression Anxiety Stress Scale (DASS) was utilized in order to determine levels of depression, anxiety and stress. The DASS is a 42-question quantitative instrument containing three scales, all of which are at an ordinal level of measurement. The DASS was found to have strong validity and reliability, as well as good internal consistency.

In addition to the aforementioned quantitative measures, a qualitative measure of five open-ended questions regarding pet attachment was included. This instrument was self-constructed for the purpose of the
current study due to a lack of such instruments in existence. A qualitative measure of this sort was constructed in order to obtain a more comprehensive view of how caregivers see their pets, and to determine if they believe owning a pet influences their mental well-being. The self-constructed measure included questions such as:

- Do you believe there are any downfalls to owning a pet? Why or why not?
- Do you believe that your pet affects your moods? Please explain.

Procedures

The sample was drawn from a current list of caregivers enrolled at Inland Caregiver Resource Center. Beginning in February 2005, 150 randomly selected caregivers received a self-administered questionnaire in the mail. The questionnaire took approximately 20-30 minutes to complete.

Included with the questionnaire was an introduction letter that introduced the participants to the researchers, and gave a brief introduction of the study.
Also included was an informed consent form, a confidentiality statement, and a debriefing statement.

An addressed, stamped envelope was provided to participants, and all questionnaires were to be sent back to Inland Caregiver Resource Center. In order to encourage participation, each participant was entered into a drawing to win one of three $15 Wal-Mart gift certificates. This offer was given to three participants, regardless of their participation in the project.

The returned questionnaires differed between participants who own pets, and those who do not. Participants without pets did not complete the Lexington Attachment to Pet Scale, nor did they complete the qualitative portion of the questionnaire. Due to this fact, participants who own pets required more time to complete the questionnaire.

Protection of Human Subjects

The confidentiality of the participants was a primary concern for the researchers, and many actions were taken in order to protect information provided in this study.
First, participants were provided with an informed consent form, a confidentiality statement, and a debriefing statement in order to alert them about their rights regarding participation.

The informed consent form educated participants about the study including the basic premise of the study, along with the time it would take to complete the questionnaire. The informed consent also let participants know that their participation was completely voluntary, and that they could withdraw from the study at any time.

The confidentiality statement informed participants that all information they provided on the questionnaire would be held in the strictest of confidence.

A debriefing statement was included at the end of the questionnaire. This statement told participants when the study would be finished, and who to contact if they would like a copy. Included in the debriefing statement was the phone number of Caritas Counseling Center so that participants could contact a mental health professional if participation in the study impacted them in a negative way.

Second, no identifying information was recorded by the researchers. Each questionnaire was coded with a case
number, instead of names, addresses or other personal information.

Third, a limited number of people had access to the questionnaire. Once completed questionnaires were mailed to Inland Caregiver Resource Center, the unopened questionnaires were given to the researchers, and were kept in a locked room. The two researchers, along with the CSUSB faculty advisor, were the only people with access to the questionnaires.

Finally, at the conclusion of the study all completed questionnaires were destroyed by the researchers.

Data Analysis

This study used both quantitative and qualitative research methods in order to get a complete view of the relationship between pet attachment and caregiver mental health.

The study employed descriptive statistics in order to describe demographic characteristics of the sample, such as age, marital status, and race. Measures of central tendency (mean) and dispersion (standard deviation) were also be used.
In order to measure caregiver mental health, four independent variables were chosen. The variables of loneliness, depression, anxiety, and stress were measured using an ordinal level of measurement. Loneliness was measured using the UCLA Loneliness Scale, while depression, anxiety, and stress levels were measured using the Depression Anxiety Stress Scale. Pet attachment was measured using the Lexington Attachment to Pet Scale. The Lexington Attachment to Pet Scale is ordinal in measure. Inferential statistics including t-tests and Pearson’s r were used to help establish any relationships between the independent and dependent variables.

To analyze the qualitative data, researchers transcribed the answers to open ended questions. This written material was then hand analyzed. Researchers noted themes common among the given answers. These themes were evaluated, along with quantitative findings, to describe the relationship between pet attachment and caregiver mental health.

Summary

Chapter Three reviewed the research design and methods that were used in this study. The purpose of this
study was to examine possible relationships between pet ownership, attachment and caregiver mental health (depression, loneliness, anxiety, and stress). Numerous aspects of the method of the study were described including data collection, instruments to be used, procedures, protection of human subjects, and data analysis.
CHAPTER FOUR

RESULTS

Introduction

Included in Chapter Four is a presentation of the results. First quantitative data analysis is discussed for pet owners and non pet owners. This is followed by quantitative data for pet owners only. Finally, qualitative data and analysis will be discussed using data provided by pet owners.

Presentation of the Findings

Demographics Results

Eligible participants were 45 caregivers from Inland Caregiver Resource Center. Thirteen (28.9%) were male and 32 (71.1%) were female. Most of the participants were Caucasian (32), followed by Hispanics (7), and African Americans (4). Twenty-eight of the participants were married (62.2%), followed by caregivers who were single (17.8%), and those who were widowed (13.3%). The majority of participants were ages 51-60 (31.1%), with the rest being equally dispersed among other age categories. The income level of participants ranged from under $20,000 (15) to over $80,000 (5). The majority of participants
were in the $20,000 or less range. Two (4.4%) caregivers had not completed high school, and seven (15.5%) had completed graduate schoolwork. The majority of caregivers had completed high school (20%), had college experience (37.8%), or had completed college (22.2%). As for their caregiver role, eleven participants were caring for their child (24.2%), ten were caring for their husband (22.2%) and nine were caring for their parent (20%). The majority of caregivers in this study had been providing care to their loved ones for 2-4 years (26.7%), followed by 1-2 years (22.2%).

Quantitative Results

Independent t-tests were run for the four variables studied: loneliness, depression, anxiety and stress. With regards to loneliness, the test was significant

\[ t(45) = 2.47, p = 0.18 \] (see Table 1.1) but the results were counter to the research hypothesis regarding pet ownership and loneliness. Participants who owned pets (\( \mu = 35.05, \sigma = 8.36 \)) on average were more lonely than participants who owned pets (\( \mu = 41.08, \sigma = 9.53 \)).

An independent t-test was also conducted to compare the depression scores of pet owners and non-pet owners. The test was non-significant, \( t(45) = 1.038, p = .31 \)
(see Table 1.2) but the results were also counter to the research hypothesis. Participants who owned pets ($M = 4.84$, $SD = 3.59$) did not differ in the levels of depression than participants that did not own pets ($M = 3.68$, $SD = 3.85$).

The independent t-test conducted to measure potential differences in anxiety was also non-significant $t(45) = 1.275, p = .770$ (see Table 1.3), and these results were counter to the research hypothesis. Pet owners in this study ($M = 4.0$, $SD = 4.06$) did not differ in the amount of anxiety they experienced compared to non-pet owners ($M = 2.5$, $SD = 3.47$).

Finally, an independent t-test was conducted to determine potentially differences of stress levels among pet owners and non-pet owners. The test was non-significant, $t(45) = .837, p = .538$ (see table 1.4), which was also counter to the research hypothesis. Pet owners ($M = 7.7$, $SD = 4.66$) did not experience more stress than non-pet owners ($M = 6.6$, $SD = 4.2$).

In addition to measuring the differences between pet owners and non-pet owner’s mental health, pet attachment levels among pet owners were also investigated.
Researchers conducted bivariate correlations using data given by pet owners only.

With regards to loneliness and pet attachment, the correlation was not significant $r(43) = .134$, $p < .523$ (see Table 1.5).

The correlation between depression and pet attachment was also non-significant $r(43) = -.020$, $p < .926$ (see Table 1.5).

The bivariate correlation conducted to measure pet attachment levels and anxiety levels was found to be non-significant as well, $r(43) = .116$, $p < .590$ (see Table 1.5).

Finally, a bivariate correlation was used to measure pet attachment levels and stress levels. This correlation was non-significant $r(43) = .203$, $p < .340$ (see Table 1.5).

**Qualitative Results**

Part of this research study also included a qualitative component that asked caregivers to discuss how they view pet ownership, and required that they answer five open-ended questions. Those questions were:

1. Does your pet(s) do things that make you happy? Please explain.
2. Are there any downfalls to owning a pet(s)? Please explain.

3. Do you believe that your pet(s) affect your mood? Please explain.

4. Do you believe that your pet(s) is a source of support and/or friendship? Please explain.

5. Overall, do you enjoy owning a pet(s)? Why or why not?

Researchers compiled the answers to these questions, and after hand analyzing the qualitative data, six salient categories were extracted. Of these six categories, four were of a positive nature, and two were negative. The themes that suggest that pet ownership is beneficial are as follows:

1. companionship
2. love and affection
3. acts as a mood booster
4. calming effect on mood

The themes that suggest that there are some negative aspects to pet ownership were:

1. physical and emotional costs
2. making travel difficult
Companionship. Companionship was one positive theme noted by pet owners in this study. Some examples of this include: "My pet is there for me and comforts me" and "They are always glad to see me and they always keep me company."

Love and Affection. A second positive theme mentioned by caregivers was that pets provide love and affection. Examples of this theme include: "When we are blue he comes up and kisses us" and "My cat never judges me. He just loves me the way that I am."

Acts as a Mood Booster. Pet owners also recognized that their pets played an important role in helping them to feel happier and uplifted. This is illustrated by the following examples: "He can make me laugh and make me happy. He can console me" and "My cat makes me feel better when I am sad or not feeling well."

Calming Effect on Mood. Caregivers also noted that their pets played a role in calming their negative moods. This is demonstrated by the following examples: "They give me a peaceful feeling and I enjoy watching them" and "They can soothe a bad mood."

Physical and Emotional Costs. While many positive aspects of pet ownership were noted, some negative themes
also emerged. Physical and emotional costs were one of those themes. This idea is displayed in the following examples: "Taking care of my dogs is sometimes tiring. Sometimes I don’t want to physically care for anyone" and "He destroys things, and his barking disturbs neighbors and visitors."

Difficulties Surrounding Travel. A second negative aspect that pet owners noted was that traveling was made more difficult because their pets can not be left home alone. This requires caregivers to make arrangements for the care of their pet. Examples of this idea are: "Having a pet ties you down to your home since you must always take good care of their needs also" and "The only downfall is having to leave them alone."

Summary

Chapter Four discussed the results of the quantitative and qualitative portions of this study. Quantitative data showed only one statistically significant finding that pet owners experienced higher levels of depression on average as compared to non pet owners. However, the qualitative data suggests that
caregivers who own pets receive many benefits due to pet ownership.
CHAPTER FIVE

DISCUSSION

Introduction

Chapter Five is a discussion on the findings of this project. Limitations of the findings, recommendations for social work practice, policy and research are also discussed. Finally this chapter ends with conclusions.

Discussion

In this study the research hypotheses were disproved. With regards to loneliness, the researchers suggested that pet owners would feel less lonely than non-pet owners because pets provide social support and companionship. Findings suggest that the opposite was true for caregivers. In this instance, non-pet owners experienced lower levels of loneliness than pet owners. This finding may be due to the many caregivers experience loneliness, and may seek pet support to combat these feelings. However, many may find that pet support is not a substitute for human relationships. Therefore the findings suggest in order decrease feelings of loneliness, caregivers should seek additional human relationships as well as support from their pets.
No relationship was found between pet ownership and levels of depression. Both pet owners and non-pet owners experienced similar depression levels. This is counter to the research hypothesis which suggested that pets may provide their owners with positive interactions that may ward off feelings of depression. This finding may be due to the fact that depression is a very common feeling among caregivers, and that pet ownership may not be enough to decrease depressive symptoms.

Anxiety was the third variable measured. The research hypothesis was that pet owners would experience less anxiety than non-pet owners. Results indicate no significant difference between the two groups. This may suggest that a caregiver may have symptoms of anxiety regardless of whether or not they own a pet.

Stress was another variable measured in this study. Findings suggest that there was no significant difference in stress levels among pet owners and non-pet owners. This was also counter to the research hypothesis which supported the idea that owning pets may actually increase stress levels due to an increase in caregiver responsibilities. The fact that there was no difference between pet owners and non-pet owners and their stress
levels would suggest that pets may not play a role in increasing the stress of caregivers.

This research study also investigated whether or not higher levels of pet attachment helped combat loneliness, depression, anxiety and stress among pet owners. The research hypothesis suggested that pet owners who were more attached to their pet would experience less loneliness, depression, anxiety, and stress. The findings indicate that the level of pet attachment had no effect on the four variables explored.

Pet attachment and levels of caregiver loneliness were non-significant in this study. Caregivers who are highly attached to a pet may find that they have substituted their human relationships with pet relationships. Many caregivers note that as they continue to care for a loved one, they lose social contacts with friends. A pet can provide some of those social needs when a friendship has ceased, however, it would be difficult to expect a pet to provide a caregiver with everything a human friend once provided.

Similarly, there was no significant result between pet attachment and depression. This may be due to the fact that that caregivers are depressed over many things
that a relationship with a pet can not overcome. Not only do caregivers struggle with the illness of a loved one, many struggle with finances, and loss of relationships with other people. Having a pet may comfort a caregiver at a time when they are feeling especially upset, but a pet can not help a caregiver accept a loved ones diagnosis, or help provide the family with income.

With regards to anxiety, this study did not find a significant difference in anxiety levels among caregivers who were more attached to their pets. This finding may suggest that anxiety is a normal experience that a caregiver experiences, and that anxious feelings will arise regardless of whether one is attached to their pet.

The last variable studied was stress. Again, no significant results were found between pet attachment and stress. This may due to the fact that caregivers, on a daily basis, may go through stressful situations when caring for a loved one. A pet may not be able to help prevent a stressful situation, and once a stressful situation arises, pets may not have the capability to help a caregiver de-stress.

Although most of the quantitative findings in this study were non-significant, interesting themes emerged in
the qualitative portion. Pet owners were very vocal about the benefits they receive from owning a pet. Companionship and acting as a “mood booster” were the two most noted themes. This indicates that caregivers who own pets recognize the role that pets play support system and moods. With regards to companionship one caregiver noted, “they are always glad to see me and they always keep me company.” Many caregivers reported that their pets had ways of cheering them up. One cat owning caregiver reported, “my cat always cheers me up and puts a smile on my face when I am not feeling good.”

In addition to companionship and acting as a “mood booster” other positive themes were that pets had a calming effect on mood, and that pets provide love and affection. One caregiver stated “they [pets] all give me a peaceful feeling and I enjoy watching them”. With regard to love and affection one caregiver said it best, “my dog is always attentive, always happy to see me, always wants to go with me, and always wants to be right next to me. I could not live without a dog!”

These two positive aspects of pet ownership show that caregivers recognize the important role that their pet plays in their lives. Interestingly, pet owners noted
the effect their pet played on their mood. This is parallel to the idea that many pet owners have that pets have some sort of instinct that allows them to detect the mood of their owner. Pets "just seem to know" when a person needs extra love and support, and many pet owners may seek out their pet when feeling down.

These findings show that caregivers are also happy and grateful to have a companion that provides them with unconditional love. There are not many places where a person can find unconditional love, and caregivers in this study recognized that their pets provided them with a very important emotional need.

Pet owners also noted some negative aspects of pet ownership, despite the fact that most of the qualitative findings were positive. The two negatives themes noted by caregivers were physical and emotional costs, as well as difficulty surrounding travel. The most noted physical costs were veterinarian bills and physical care that pets require. The most mentioned emotional costs were related to the short life span and death of pets. Pet owners also reported difficulties surrounding travel because it is often hard to make arrangements for pet care, and many caregivers are hesitant to leave their pets behind.
While most of the results of the qualitative portion of this study were positive, caregivers did note that there were "downsides" to pet ownership. Travel is an obvious hardship when owning a pet. Many caregivers noted that they had to make special arrangements for someone to care for the animal, and this requires a lot of work. More interesting was the fact that many caregivers noted that travel was made difficult because they did not want to leave their pet behind. This shows that regardless of the difficulties regarding travel, most caregivers recognize that the benefits of pet ownership are higher than the costs.

Caregivers also reported emotional costs when owning a pet. Not only did caregivers note that it upset them to leave a pet while traveling, but also that it is difficult to deal with pet death. Many caregivers reported that their pets "were part of the family", and when a pet passes away, it can be a very difficult experience. Becoming attached to a pet may be very difficult for some caregivers due to the losses they have suffered in other domains of their life.
Overall qualitative results were very positive. The pet owners in this study were firm in their belief that their pets positively affected their mental health.

Limitations

Potential limitations of this study include the limited number of participants that were surveyed, as well as the convenience sampling method that was utilized. Additionally, the participants all reside in the same geographic area. Due to these factors, the current study could reliably produce results that are generalizable to the rest of the caregiver population.

Another possible limitation of the current study was that the participants may have been influenced by the interview questions asked, which were based on self-reports. The participants may have been inclined to provide answers that they thought the interviewer wanted to hear, which could have affected the outcomes of this study.

Recommendations for Social Work Practice, Policy and Research

Based on the literature, pets can play an important role in the lives of caregivers and other populations. It
is important for social workers to recognize that pet ownership may be very important in the lives of clients, and that pet ownership may be used in their interventions and treatment plans.

With regards to social work policy there are many settings where pet ownership is disregarded despite evidence that pets may play a positive role in mental and physical health. Two such settings are nursing homes and homeless shelters.

Most nursing homes or assisted living homes do not allow the patient to bring their pets with them. Being placed in a facility can be a very depressing event, and not being able to bring pets may add to the depressive, angry feelings. Once the importance of pets has been firmly established, there may be a necessity to empower clients or the client’s families to help change the no pet policy in nursing homes.

Homeless shelters are another group of facilities that do not allow animals; however, many homeless individuals have pets to keep them company. It is unfortunate that homeless people with animals must choose to both live in a homeless shelter and give up their pet, or keep their pet and live on the streets. Research into
the importance of pets is needed in order to look at current policy surrounding homeless shelters, and to see if changes can be made to such policies.

There is a body of research that suggests that pet attachment is more beneficial during some stages of life more than others. Research indicates that attachment to pets is highest among never-married, divorced, widowed, and remarried people, and lowest among families with young children or extremely low household incomes (Albert & Bulcroft, 1988). Accordingly, pet owners that have a perceived large amount of stressors and responsibilities, such as young children or “hassles with social interactions, time, or money” (Miller, Staats, & Partlo, 1992, p. 373) may view pets as a burden. Incidentally, caregivers in the present study may not have experienced statistically significant mental health benefits from pet ownership due to the additional tasks, responsibilities, and costs associated with caring for a pet. However, research suggests that care recipients do tend to experience mental and physical health benefits from pet ownership (Dembicki & Anderson, 1996; Garrity, Stallones, Marx, & Johnson, 1989; Sable, 1995), which indicates that
more research is needed to fully examine the potential benefits of pet ownership.

Conclusions

The purpose of this study was to examine whether or not pet owners experienced less loneliness, depression, anxiety and stress as compared to non-pet owners. This study found a significant increase in loneliness among pet owners, however, the remainder of the quantitative data was non-significant. Qualitative data was also examined, and pet owners expressed positive feelings associated with pet ownership.
APPENDIX A

QUESTIONNAIRE
All caregivers answer questions on this page

Instructions: Please circle the answer that most appropriately describes you:

1. Gender
   1. Female
   2. Male

2. Age
   1. 40 or younger
   2. 41-51
   3. 51-60
   4. 61-70
   5. 71-80
   6. 80 or older

3. Education
   1. Less than high school
   2. High school grad
   3. Some college
   4. College grad
   5. Graduate school

4. Income Level:
   1. $20,000 or less
   2. $20,001-$40,000
   3. $40,001-$60,000
   4. $60,001-$80,000
   5. $80,000 or more

5. Ethnicity:
   1. African-American
   2. White
   3. Hispanic
   4. Asian
   5. American Indian
   6. Other

6. Marital Status:
   1. Single
   2. Married
   3. Divorced
   4. Widowed
   5. Separated

7. Relationship to Care Receiver:
   1. Wife
   2. Husband
   3. Child
   4. Grandparent
   5. Parent
   6. Other Family Member
   7. Non-family member

8. How Long Have You Been a Caregiver?
   1. Less than 1 Year
   2. 1-2 Years
   3. 2-4 Years
   4. 4-5 Years
   5. 5+ Years
All caregivers answer questions on this page

Instructions: The following statements describe how people sometimes feel. Please indicate how often you feel this way by writing the number in the space provided.

1. How often do you feel that you are "in tune" with people around you?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

2. How often do you feel that you lack companionship?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

3. How often do you feel that there is no one you can turn to?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

4. How often do you feel alone?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

5. How often do you feel part of a group of friends?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

6. How often do you feel that you have a lot in common with people around you?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

7. How often do you feel that you are no longer close to anyone?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

8. How often do you feel that your interests and ideas are not shared with people around you?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

9. How often do you feel outgoing and friendly?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

10. How often do you feel close to people?
    1 = I never feel this way
        2 = I rarely feel this way
        3 = I sometimes feel this way
            4 = I always feel this way
11. How often do you feel left out?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

12. How often do you feel that your relationships with others are not meaningful?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

13. How often do you feel that no one really knows you well?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

14. How often do you feel isolated from others?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

15. How often do you feel you can find companionship when you want it?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

16. How often do you feel that there are people who really understand you?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

17. How often do you feel shy?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

18. How often do you feel that people are around you but not with you?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

19. How often do you feel that there are people you can talk to?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way

20. How often do you feel that there are people you can turn to?
   1 = I never feel this way
   2 = I rarely feel this way
   3 = I sometimes feel this way
   4 = I always feel this way
All caregivers answer questions on this page

Instructions: The following statements describe how people sometimes feel. Please indicate how often you feel this way by writing the number in the space provided.

1. I found it hard to wind down
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

2. I was aware of dryness in my mouth
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

3. I couldn’t seem to experience any positive feelings at all
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

4. I experienced breathing difficulty (excessively rapid breathing, breathlessness)
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

5. I found it difficult to work up the initiative to do things
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

6. I tended to over-react to situations
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

7. I experienced trembling (eg, in the hands)
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time
8. I felt that I was using a lot of nervous energy
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

9. I was worried about situations in which I might panic and make a fool of myself
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

10. I felt that I had nothing to look forward to
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time

11. I found myself getting agitated
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time

12. I found it difficult to relax
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time

13. I felt down-hearted and blue
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time

14. I was intolerant of anything that kept me from getting on with what I was doing
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time

15. I felt I was close to panic
    0 = Did not apply to me at all
    1 = Applied to me to some degree, or some of the time
    2 = Applied to me to a considerable degree, or a good part of time
    3 = Applied to me very much, or most of the time
16. I was unable to become enthusiastic about anything
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

17. I felt I wasn't worth much as a person
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

18. I felt that I was rather touchy
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

19. I was aware of the action of my heart in the absence of a physical
    activity (sense of heart rate increase, heart missing a beat)
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time

20. I felt scared without any good reason
   0 = Did not apply to me at all
   1 = Applied to me to some degree, or some of the time
   2 = Applied to me to a considerable degree, or a good part of time
   3 = Applied to me very much, or most of the time
Caregivers who own pets please answer the following questions. Caregivers who do not own pets are finished with the survey. Thank you!

Instructions: The following statements describe how people sometimes feel about their pets. Please indicate your level of agreement by writing the number 0, 1, 2, 3, or 4 in the space.

1. My pet means more to me than many of my friends
   - 0 = Don't know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

2. Quite often I confide in my pet
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

3. I believe that pets should have the same rights and privileges as family members
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

4. I believe my pet is my best friend
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

5. Quite often, my feelings toward people are affected by the way they react to my pet.
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

6. I love my pet because he/she is more loyal to me than most of the people in my life.
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

7. I enjoy showing other people pictures of my pet.
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

8. I think my pet is just a pet.
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

9. I love my pet because it never judges me.
   - 0 = Don’t know
   - 1 = Strongly disagree
   - 2 = Somewhat disagree
   - 3 = Somewhat agree
   - 4 = Strongly agree

10. My pet knows when I am feeling bad.
    - 0 = Don’t know
    - 1 = Strongly disagree
    - 2 = Somewhat disagree
    - 3 = Somewhat agree
    - 4 = Strongly agree
11. I often talk to other people about my pet.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

12. My pet understands me.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

13. I believe that loving my pet helps me stay healthy.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

14. Pets deserve as much respect as humans do.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

15. My pet and I have a very close relationship.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

16. I would do almost anything to take care of my pet.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

17. I play with my pet often.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

18. I consider my pet to be a great companion.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

19. My pet makes me happy.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

20. I feel that my pet is part of my family.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

21. I am not very attached to my pet.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

22. Owning a pet adds to my happiness.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree

23. I consider my pet to be a friend.
   0 = Don't know  1 = Strongly disagree  2 = Somewhat disagree
   3 = Somewhat agree  4 = Strongly agree
Caregivers who own pets answer questions on this page

Instructions: Please answer the following five questions about your pet(s).

1. Does your pet(s) do things that make you happy? Please explain.

2. Are there any downfalls to owning a pet(s)? Please explain.

3. Do you believe that your pet(s) affects your moods? Please explain.

4. Do you believe that your pet(s) is a source of support and/or friendship? Please explain.

5. Overall, do you enjoy owning a pet(s)? Why or why not?

Caregivers who own pets- you are now done with the survey. Thank you!
APPENDIX B

INFORMED CONSENT
Informed Consent

The study in which you are being asked to participate in is designed to investigate the potential mental health benefits of owning a pet. This study is being conducted by Eveleen Dimaggio and Nicole Hughes, under the supervision of Assistant Professor Tom Davis. This study has been approved by the Social Work Subcommittee of the Institutional Review Board, California State University, San Bernardino.

In this study you will be asked to respond to several questions regarding your mental health, as well as questions about a pet you may own. The following survey should take 20-30 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. Your name will not be reported with your responses. All data will be reported in group form only. You may receive the group results of this study upon completion on July 1, 2005 at the Pfau Library.

Your participation in this study is totally voluntary. You are free to not any questions, and may withdraw at anytime during this study without penalty. When you have completed the survey you will receive a debriefing statement describing the study in more detail. In order to the validity of this study, we ask you not to discuss this study with and other participants.

All participants will be entered into a raffle for one of three $15 Wal-Mart gift cards. Participation in this study is not a requirement to be entered in the raffle, nor are participants of this study required to enter. The three winners will be chosen at random, and the winning participants will receive their gift cards by mail in June 2005.

If you have any questions or concerns about this study, please feel free to contact Assistant Professor Tom Davis at (909) 880-5000.

By placing a check mark in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, and I freely consent to participate. I also acknowledge that I am at least 18 years of age.

Please place check mark here  □  Today's date: ________________________
Dear Caregiver,

Our names are Eveleen Dimaggio and Nicole Hughes, and we are students at California State University, San Bernardino. We are currently working on obtaining our Master's of Social Work degree, and as a requirement of graduation, are currently conducting a research study. We are writing to ask for your participation in this study.

Current research suggests that pet owners receive many health benefits from owning a pet. This study aims to examine whether owning a pet specifically provides mental health benefits to caregivers. With your assistance we would like to find out more about the role of pets in your life, and investigate any possible benefits you receive from owning a pet(s).

We would appreciate if both pet owners and non-pet owners fill out the enclosed survey. It will take approximately 20-30 minutes to complete this survey. On the top of each page you will find specific instructions to assist you in completing the survey. Once you have fully completed the survey, please mail it back to Inland Caregiver Resource Center in the self addressed stamped envelope we have provided. Please return the survey by March 31, 2005. In order to maintain correct shipping costs, please only mail the stapled portion of this survey packet.

To show our appreciation, all participants will be entered into a drawing to win one of three $15 Wal-Mart gift cards. Whether or not you return the survey does not effect whether you are entered into the drawing. This is our way of thanking those who return the completed survey; as well as thank all caregivers for the hard work they do everyday.

Your participation in this study is completely voluntary, and your answers will be kept confidential. You may withdraw from this study at any time without penalty. If you are interested in obtaining the results of this study, please contact the Pfau Library at California State University, San Bernardino after July 1, 2005.

If you have any questions about the study, feel free to contact our research advisor, Dr. Tom Davis at (909) 880-5000. We thank you so much for your participation in this study.

Sincerely,

Eveleen Dimaggio & Nicole Hughes
APPENDIX C

DEBRIEFING STATEMENT
Debriefing Statement

The study you have just completed was designed to investigate the possible mental health benefits of owning a pet. To quantify the term "mental health," the four variables measured were loneliness, depression, anxiety and stress. Pet owners' level of attachment to their pets was also measured in this study. We are particularly interested in determining if pet owners experience less loneliness, depression, anxiety and stress in comparison to non-pet owners.

Thank you very much for your participation in this study and for not discussing its contents with other participants. If you have any questions about this study, please feel free to contact Assistant Professor Tom Davis at (909) 880-5000. If you feel distressed in any way due to participating in this study, the following mental health service providers may be contacted for further assistance:

Caritas Counseling Center
(909) 370-1293

Winners of the raffle for $15 Wal-Mart gift cards will be contacted in June 2005. Participation in this study is not a requirement in order to be entered into the raffle, nor are participants of this study required to enter. If you would like to obtain a copy of the group results of this study, please contact Professor Davis at (909) 880-5000. Additionally, the group results of this study may be viewed after July 2005 at the California State University, San Bernardino Pfau Library.
APPENDIX D

TABLES
### Table 1.1

**Independent Samples Test**

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>T</td>
</tr>
<tr>
<td>Total Lone Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.855</td>
<td>.180</td>
<td>2.470</td>
</tr>
<tr>
<td>Equal variances not</td>
<td>2.522</td>
<td>.016</td>
<td>41.483</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 1.2

**Independent Samples Test**

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Total Stress Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.385</td>
<td>.538</td>
<td>.837</td>
</tr>
<tr>
<td>Equal variances not</td>
<td>.848</td>
<td>.401</td>
<td>40.768</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1.3

Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Total Anxiety Scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.087</td>
<td>.770</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.307</td>
<td>41.694</td>
</tr>
</tbody>
</table>

Table 1.4

Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Total Dep Scale</td>
<td>.056</td>
<td>.813</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.026</td>
<td>37.285</td>
</tr>
</tbody>
</table>

Equal variances not assumed
Table 1.5

Correlations

<table>
<thead>
<tr>
<th></th>
<th>TOTALPET</th>
<th>Total Dep Scale</th>
<th>Total Anxiety Scale</th>
<th>Total Stress Scale</th>
<th>Total Lone Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTALPET</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>-.020</td>
<td>.116</td>
<td>.203</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.926</td>
<td>.590</td>
<td>.340</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Total Dep Scale</td>
<td>Pearson Correlation</td>
<td>-.020</td>
<td>1</td>
<td>.492(**</td>
<td>.403(**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.926</td>
<td>.</td>
<td>.001</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>24</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Total Anxiety Scale</td>
<td>Pearson Correlation</td>
<td>.116</td>
<td>.492(**</td>
<td>1</td>
<td>.715(**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.590</td>
<td>.001</td>
<td>.</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>24</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Total Stress Scale</td>
<td>Pearson Correlation</td>
<td>.203</td>
<td>.403(**</td>
<td>.715(**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.340</td>
<td>.006</td>
<td>.000</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>24</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Total Lone Scale</td>
<td>Pearson Correlation</td>
<td>.134</td>
<td>.655(**</td>
<td>.367(*)</td>
<td>.328(*)</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.532</td>
<td>.000</td>
<td>.013</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>24</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>
REFERENCES

AARP. (2001). In the middle: A report on multicultural boomers coping with family and aging issues. Executive Summary.


ASSIGNED RESPONSIBILITIES PAGE

This was a two-person project where authors collaborated throughout. However, for each phase of the project, certain authors took primary responsibility. These responsibilities were assigned in the manner listed below.

1. Data Collection:
   Assigned Leader: Nicole Hughes
   Assisted By: Eveleen Dimaggio

2. Data Entry and Analysis:
   Team Effort: Eveleen Dimaggio & Nicole Hughes

3. Writing Report and Presentation of Findings:
   a. Introduction and Literature
      Team Effort: Eveleen Dimaggio & Nicole Hughes
   b. Methods
      Team Effort: Eveleen Dimaggio & Nicole Hughes
   c. Results
      Team Effort: Eveleen Dimaggio & Nicole Hughes
   d. Discussion
      Team Effort: Eveleen Dimaggio & Nicole Hughes