

**THE EFFECT OF PETS ON SPOUSAL BEREAVEMENT
OVER A TWO-YEAR PERIOD**

by
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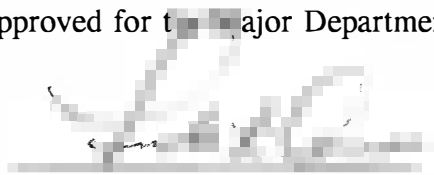


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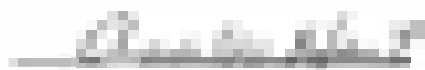
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ABSTRACT

The purpose of this thesis was to examine the effect of pet ownership on bereavement outcomes over a 2-year period. One hundred ninety-two individuals, age 50 to 93 years old, were divided into categories and type of pet ownership and were interviewed six times during 2 years of bereavement. Questionnaires were completed that measured bereavement outcomes (perceived stress, perceived coping, depression, and loneliness). Respondent-generated responses to pet helpfulness also were measured.

Findings indicate that pet ownership does not seem to affect bereavement outcomes over time. Loneliness was the response given most frequently in all pet categories to the question: "What has been the single greatest problem for you related to the death of your spouse?" When compared to mixed species' owners, dog owners had significantly higher stress levels at Time 1. Compared to cat owners, dog owners were significantly more depressed than cat owners at Time 5. Dog owners had decreased depression levels over time. Cat owners had higher perceived coping ability over the last 6 months of bereavement. A majority of pet owners reported that their pets helped them through the bereavement process because of the companionship they provided and, in some cases, a greater sense of protection.

The findings of this study suggest that the role of pet ownership in

bereavement is complex. Extensive research that examines pet ownership over the life course is needed to understand this phenomenon.

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CHAPTER I

INTRODUCTION

The objective of this thesis was to provide health care professionals with a better understanding of the role that pets play in the bereavement process and to learn about the potential for using pets in bereavement interventions for older adults. The specific problem investigated was to determine if pet ownership over 2 years of bereavement acts as a coping resource to noninstitutionalized older grieving spouses. If the human-animal bond is beneficial to grieving spouses, then pet ownership may positively influence well-being outcomes and decrease feelings of loneliness and depression. Application of such a finding would be the use of pets in specific therapeutic situations in order to help older bereaved spouses.

There are several potential benefits of the human-animal bond as an intervention to grieving spouses such as reducing stress, providing companionship, promoting feelings of well-being, and decreasing feelings of loneliness and depression. The goal is to assist older bereaved adults to return to a high level of functioning and satisfaction with their daily lives. This goal is consistent with the assumption (a) that interventions can uphold the belief that life is a process of growth and continual development and (b) that eventual adaptation can take place even during difficult times following the loss of a spouse. Pet-facilitated therapy in

appropriate situations could be a useful tool for future counseling. Prior to developing extensive interventions, however, one needs to know more about the benefits and limitations of pets in the long-term coping process of older bereaved spouses.

Research on the therapeutic benefits of pet ownership is in its infancy, but conjugal bereavement has been the focus of extensive research because it is stressful, disruptive, and occurs in most everyone's lives. Stroebe, Stroebe, and Hansson (1993) considered conjugal bereavement to be "one of the most widely experienced life events" (p. 10). Spousal bereavement research has focused much attention on the negative stress outcomes of the grieving spouse. Spousal bereavement has received considerable study internationally, as well as by researchers from numerous disciplines, including anthropology, epidemiology, sociology, psychology, gerontology, and other health care professions. Consequently, there are numerous studies about the impact and effects of losing a spouse such as morbidity, mortality, physician utilization, drug consumption, and social changes. The following is a sampling of the range of research that has been examined across disciplines.

Bereavement Research

Death of a spouse presents serious risks to the physical and psychological health and well-being of the survivor (Glick, Weiss, & Parkes, 1974; Parkes, 1972). Several studies have revealed higher morbidity and mortality among widows and widowers when compared to others their age and sex (Helsing, Zsklo,

& Comstock, 1981; Maddison & Viola, 1968). Other studies have reported an increase in physician utilization and drug consumption among bereaved persons (Parkes, 1964; Siegel, 1990). The need for research on spousal bereavement is evidenced by the detrimental and widespread effects of bereavement on the surviving spouse. Different disciplines approach bereavement research from their own perspective. The following studies are examples of different approaches to comprehending the bereavement process.

A classic example of the epidemiologist's approach to bereavement research was a large scale survey conducted by Kraus and Lilienfeld (1959). Researchers conducted a cross-sectional analysis of mortality among the bereaved by examining demographic data from the Office of Vital Statistics in 1956. They found significant differences in mortality risk between the widowed and nonwidowed. Much of this increased risk has been attributed to the stress, anxiety, and loneliness often experienced by surviving spouses—especially during the first 2 years following the death of a spouse (Akiyama, Holtzman, & Britz, 1986).

Research indicates a strong relationship between stress and coronary artery disease. A longitudinal study by Parkes, Benjamin, and Fitzgerald (1969) reported that mortality was significantly increased in widowers with circulatory disorders during the first 6 months of bereavement.

A sociologist's approach in understanding spousal bereavement may be to examine the impact of widowhood on access to social roles and in constructing new identities. Glick et al. (1974) found that after the first year of bereavement

most widows had established a very different friendship network than their friendship network from married years. This research revealed the broad impact that bereavement can have on a person's life.

Psychologists attempt to explain the potentially adaptive functions of grief for the social group. For example, psychology research often focuses on understanding the individual variations in adults' reactions to bereavement. Parkes and Weiss (1983) studied 68 average widows and widowers and found that favorable outcomes from bereavement was a function of marital happiness. Sixty-one percent of the study's participants who self-reported their marriage as conflict-free had successful recovery from bereavement.

Gerontologists have examined spousal bereavement from the perspective of cumulative life losses and challenges. They examined the coping strategies that people use throughout their lives. Gerontologists are interested in the biopsychosocial complications of conjugal grief. The conjugal grief experience is particularly stressful because the surviving spouses are required to deal with concurrent disruptions in their primary support networks, social status, and finances. Positive adjustment to bereavement also has been found to be associated with financial security (Jacobs, Hanson, Berkman, Kasl, & Ostfeld, 1989).

The bereavement experience is typically stressful and disruptive and is one of the most widely experienced life events. According to census data, greater than 50% of females age 65 years and older and 12% of males the same age have become widowed (U.S. Bureau of the Census, 1984). Therefore, learning how to

manage the stress produced by the loss of a spouse, especially among older adults, is a critical concern for health professionals.

The need to develop preventive postbereavement programs that reduce the negative effects of bereavement is widely recognized. One coping resource that has received limited attention is the role that pet ownership has on grieving spouses. Lund, Johnson, Baraki, and Dimond (1984) found a slight negative impact of pet ownership on self-reported coping levels of older bereaved spouses during the early periods of bereavement. They suggested that pets cannot be considered as substitutes for human support during the first 2 months of grieving. Even though this study used the same data set that Lund and his colleagues used, it makes a unique contribution to the knowledge about pet ownership in bereavement in two aspects:

1. This study examined bereavement over 24 months as opposed to 12 months.
2. Pet ownership status was expanded to five categories.

The five categories are (a) consistent pet owners—respondents who owned pets throughout the entire 2-year study; (b) consistent nonpet owners—respondents who never owned a pet throughout the 2-year study; (c) new pet owners—respondents who acquired a pet after the study began; (d) no longer pet owners—respondents who owned a pet at the onset of the study and who, subsequently, no longer owned a pet; and (e) sporadic pet owners—respondents who owned pets at various times during the 2-year study.

CHAPTER II

LITERATURE REVIEW

This chapter discusses the current literature relevant to this study, including the nature of the human-animal bond, historical background, pet-facilitated therapy, and pet ownership among the elderly. The plausibility of pet ownership in bereavement as an application of the social support stress-buffering model is discussed, along with the most current research findings on the role of pets among the bereaved. The chapter concludes with a summary and a description of the research questions.

The Human-Animal Bond

Human beings have always felt a special kinship with animals. A mutually beneficial relationship has existed throughout time and is critical to the health of all species. In prehistoric times, animals were depicted in drawings as elements necessary for humankind's well-being and survival. Many civilizations have been and continue to be shaped by economic dependence on animals. The health of all living beings depends upon understanding and respecting the bond between species. Dr. Leo Bustad (1980), of the Washington State University College of Veterinary Medicine, explained:

Plants and animals in our environment are like parts of our body. If we eliminate them, we destroy part of ourselves. People must remain in contact with and relate to the environment throughout their lifetime to remain healthy. A strong people-animal-plant bond is critical to a healthy community. (p. 4)

Historical Background

The therapeutic benefits of animals to humans was first described at the York Retreat in 1792. At a time when the insane were treated inhumanely, Quaker William Tuke established the York Retreat based on “Christianity and common sense.” Animals roamed the grounds and were provided for patients to learn self-control by caring for dependent creatures. In 1867, at Bielefeld, Germany, a healing center for the disadvantaged included farm animals, birds, dogs, cats, and wild game as an integral part of the therapy. In the United States, in Pawling, New York, the Army/Air Force established a convalescent hospital for wounded World War II Air Force personnel. As part of their rehabilitation plan, patients were encouraged to work with cattle, horses, frogs, and other farm animals (Cusack & Smith, 1984).

After World War II, child psychologist Boris Levinson (1969a) unexpectedly stumbled upon the great advantages of companion animals in therapy. Levinson had his dog, Jingles, at the office and a client arrived an hour early for an appointment. The client’s willingness to interact with the dog eventually proved to be a key factor in his rehabilitation. In former sessions, the child had always remained nonverbal. The child’s response to the dog prompted the doctor to realize the potential benefit of using a dog as a bridge between therapist and child.

Levinson started pursuing a career using companion animals in therapy. He is responsible for establishing boundaries and principles for the systematic study of the effectiveness of companion animals (Netting, Wilson, & New, 1987).

Among the first to evaluate systematically pet-facilitated therapy were Corson and Corson (1979). In a psychiatric hospital, several psychotic patients were introduced to dogs, and the results were favorable. Many uncommunicative and bedridden patients were transformed and eventually discharged. In order to record their progress and quantify patient responses, Corson and Corson administered a simple questionnaire and videotaped the patient-pet-staff interactions. The results were encouraging; many withdrawn and uncommunicative patients were interacting with the pets. The explanation for the patients' improved status was that the dogs provided unconditional support and friendship to those who had lost social skills and desires. The dogs needed care, feeding, and grooming from the patients. As the patients' responsibility for the pets increased, so did their ability to care for themselves.

In the last 15 years, interest in the human-animal bond has exploded worldwide. Exploring the diverse relationships that develop between people and animals is the focus of many academicians. Universities and veterinary schools have established programs and courses devoted to studying the human-animal bond. The scientific community is accumulating evidence, suggesting that pets may improve the psychological, social, and physical health of people of all ages.

Pet-Facilitated Therapy

Presently, therapists use the service of animals to assist with abused children, battered women, prison inmates, the elderly, and those suffering from physical and mental disabilities. The presence of a hamster, rabbit, or cat in a therapist's office provides comfort to patients and allows a safe place for healing to begin. For example, a troubled child who refuses to speak or interact with humans will confide in an animal. Animals are routinely taken to hospital care centers and prisons. Nursing homes often have resident dogs or cats roaming the halls offering pleasure to the limited lives of the institutionalized.

According to Brickel (1986), pet-facilitated therapy refers to combining animals with client-directed, therapeutic activities. A variety of settings and animals has been employed with many populations with divergent success. Pet therapies that bring animals together with people for their pleasure is called animal-assisted visitations. In order to improve strength, coordination, and endurance, pet therapies in physical rehabilitation programs motivate patients to perform tasks such as walking, grooming, or feeding. Throughout the country equestrian programs are designed to challenge the mentally and physically disabled to improve muscular coordination, motor skills, and self-esteem. Animal-assisted therapy, also known as pet-facilitated psychotherapy, occurs when a licensed professional introduces a pet into a clinical setting to augment the therapeutic curriculum. The animal often acts as a link between the therapist and client because of its ability to build trust.

Past studies conducted specifically to determine the value of animals fall into four categories: (a) community/in-residence pets, (b) animal-assisted visitation programs in institutions, (c) pets in-residence as mascots in geriatric facilities, and (d) therapist-animal-assisted activities (Cusack & Smith, 1984).

The relationship between owners and their pets is complex. Professionals from a wide variety of disciplines have focused their attention on the potential social, psychological, and physical benefits attributed to the bond between the elderly and animals. There are mixed findings in the research literature on the effects of the human-animal bond. However, much of the research about pet ownership supports the use of pets in many facilities. Subsequently, pets are being introduced into many nursing home settings.

The idea that pets are good for people has been known for a long time. The belief has existed as fable, but the anecdotal evidence is accumulating. The field of companion animal research has been growing and, consequently, so has the need for more systematic empirical studies.

Pet Ownership

It seems intuitive that loving an animal and having that animal love someone back is good for people. However, what really happens when human beings and animals come together? Can animals actually lead to improved physical health and emotional well-being? Studies of the human-animal relationship found that pets provide warmth, affection, stimulation, and a sense of purpose for their owners and that they enhanced their owner's self-concept (Bustad, 1980;

Friedmann, Katcher, Lynch, & Thomas, 1980). This section summarizes what scientific investigations have discovered.

Studies have shown that blood pressure will drop in the presence of an animal (Katcher, Friedmann, Beck, & Lynch 1981). The data suggest that patients recover from surgery, illness, or injury more quickly because of animal interaction (Friedmann, Katcher, & Meislich 1983). The elderly who have pets in their lives are more likely to maintain their social skills and health. Pet owners also may live longer.

Serious inquiry into the role of pet ownership began 15 years ago when Friedmann et al. (1980) found that postcoronary survival improved significantly if the patient was a pet owner. The study followed 92 subjects with coronary heart disease. They found that 1 year after discharge from the hospital, one third of the nonpet owners died. Remarkably, only 3 out of 52 pet owners died. This relationship persisted even when controlling for differences in age, sex, or health status between pet owners and nonpet owners. Dog ownership and the physical activity needed to walk a dog was not a factor in survival because owners of other pets had a higher survival rate than nonpet owners. Beck and Katcher (1984), however, found no difference on the prevalence of coronary heart disease among pet owners, former owners, and those never owning a pet.

In a follow-up study, Friedmann et al. (1983) conducted a survey of 100 hospitalized pet owners to determine the effects of pet ownership on hospitalization. They concluded that the welfare of the animal was of concern to

the patient during hospitalization and that the pets were a motivating force for a speedy recovery for the owner.

A study investigating the physiological consequences of communication patterns found blood pressure increased while the subjects talked to other people but dropped when they communicated with animals (Katcher et al., 1981). Blood pressure was even lowered by looking at tropical fish. The largest reductions in blood pressure were found in those subjects whose blood pressure was normally elevated. Four years later, this finding was confirmed by Riddick (1985) who found that viewing an aquarium produced significant reductions in diastolic blood pressure. A sample of noninstitutionalized older adults was placed in a group receiving a fish tank, or in a group receiving weekly visits from people, or a no-intervention control group. Findings showed increases in leisure satisfaction and relaxation states as a result of aquarium watching when compared to the other groups.

Several studies report a positive relationship between pet ownership and human well-being (Akiyama et al., 1986; Friedmann et al., 1980; Kidd & Feldman, 1981). Other scientific studies report no positive effects of owning a pet on the well-being of humans (Lago, Connell, & Knight, 1985; Lawton, Moss, & Moles, 1984). Recent studies have found that the level of attachment between pet and owner is related to well-being rather than pet ownership status alone (Connell & Lago, 1984; Garrity, Stallones, Marx, & Johnson, 1989; Ory & Goldberg, 1983). Consequently, multidimensional instruments that measure the attachment of

owners to their pets have been developed (Lago, Delaney, Grill, & Miller, 1989). For more details on pet attachment scales, refer to Friedmann et al. (1983) or Katcher, Friedmann, Goodman, and Goodman (1983), or the more recently developed Pet Relationship Scale (attachment scale) designed by Lago, Kafer, Delaney, and Connell (1988).

Pet Ownership and the Elderly

According to Corson and Corson (1979), pets provide positive nonverbal communication that is comforting and reassuring to the elderly. Other studies indicate that pets provide a sense of safety, security, and protection (Katcher et al., 1981; Lockwood, 1981).

Support for the beneficial merit of pets in community-based settings with the elderly is limited (Brickel & Brickel, 1980-1981; Robb & Stegman, 1983). Goldmeier (1986) reported mixed results, indicating that human companionship may be more important than owning a pet. When human companionship is unavailable, however, pets play an important role.

Although Lawton et al. (1984) and Robb and Stegman (1983) reported no significant differences between pet owners and nonpet owners pertaining to health status, Mugford and M'Comisky (1975) found that pet owners appear to be more stable than nonowners, had more friends, and were more actively involved in their communities. The purpose of the latter study was to determine the effect of pets upon the social attitudes and mental and physical health of their owners. The sample consisted of 30 elderly pensioners who lived alone in rural areas. Two

groups were given a plant and two groups received a parakeet. A control group received neither the plant nor the parakeet. Owning a television was controlled because the researchers hypothesized that a pet may be less important to television owners because of the sense of interaction that a television provides. All the groups were interviewed and monitored by psychologists and social workers for 3 years. The bird owners showed consistent improvement, particularly on items that concerned attitudes toward people and toward the subject's own psychological health. An intimate bond developed between the owner and the bird. This caring relationship became an important focus and displaced the negative concern of their own medical problems. Those who received did not make improvements in their psychosocial environment. The presence or absence of television had no significant effect in the study.

Mugford and M'Comisky's (1975) study is a rare example of longitudinal research on community-based elderly. One major reason why research with community-based elderly is inconclusive in terms of the potential health benefits of pet ownership is because it has been based on cross-sectional designs. The value of pet ownership needs to be examined longitudinally. According to Newman and Newman (1984), it is one's personal history that becomes a variable in determining the pattern of subsequent life events. Therefore, it is necessary to examine an individual's previous relationship with pets over the life course in order to determine potential future relationships.

Studies on the social contributions of companion animals to the elderly have

found that pets provide companionship and facilitate socializing with other people (Levinson, 1969a, 1969b; Mugford, 1979a, 1979b). Unfortunately, pets may be the only source of affection, love, and devotion in the lives of many elderly people, substituting for human companionship when none is present.

Companionship was recognized by pet owners and nonpet owners as the major advantage of having a pet (Vogel, Quigley, & Anderson, 1981). Peretti and Wilson (1975) examined self-perceived criteria of the aged regarding their intimate association with their dogs. Companionship received the greatest number of male (60) and female (62) responses ($N = 128$) regarding the bond between the elderly and their dogs. Seventy-five percent (48) of the males and 67% (43) of the females indicated that their dog was their only true friend. The findings indicated the importance of the perception of companionship, an emotional bond, usefulness, and loyalty on the part of the pet owner.

Some critics are fearful that bonding with an animal may only further distance an already withdrawn patient from human contact; however, no evidence exists to suggest that this is the case. Animals have been shown to promote conversation and a sense of camaraderie among hospitalized patients (Andrysko, 1981; Brickel, 1986). For the elderly, the companionship of an animal is especially helpful. Leo Bustad, veterinarian and pioneer of pet therapy, stated:

Many older people have discovered that animal companions satisfy some of their greatest needs. Pets restore order to their lives; provide a more secure grasp of reality; and link their owners to a community of caring, concern, sacrifice and intense emotional relationships. When older people withdraw from active participation in daily human affairs, the nonhuman environment, in general, and

animals, in particular, can become increasingly important. Animals have a boundless capacity for acceptance, adoration, attention, forgiveness and unconditional love. Although the potential for significant benefits to a great variety of people exists through association with companion animals, the potential seems greatest in the elderly for whom the bond with animal companions is perhaps stronger and more profound than at any other age. (Cusack & Smith, 1984, p. 31)

An older adult's emotional involvement with an animal can be as great or greater than it might have been with another human being (Cottrell, 1974; Peretti & Wilson, 1975). As friends die or move away, many elderly people find themselves alone. Loneliness is often cited as the worst aspect of aging (Cavan, 1949; Peretti & Wilson, 1975; Tobin & Neugarten, 1961). For many lonely older people, pets can fill the void when human interaction is limited (Fogel, 1981; Lorenz, 1954). According to Fox (1974), dogs are the most frequently selected pets of the elderly. Some speculate why the elderly choose animals (especially dogs) as pets. One possibility is that dogs and other pets serve as companions, which fills some emotional needs for the owner, and pets also serve some utilitarian purpose for the owner (Fogel, 1981). Bustad (1980) found that pets provide warmth, affection, stimulation, and a sense of purpose for their owners, and they also improve their owners' self-concept.

Goldmeier (1986) studied the relationship between pets and loneliness among older women. The study used four nonprobability samples of elderly women: (a) living alone with pets, (b) living alone without pets, (c) living with others and pets, and (d) living with others and without pets. Using the Philadelphia Geriatric Center Morale Scale, Goldmeier found that pets did not have

an effect on morale for those persons who lived with others but did have an effect for those living alone. For those living alone, having a pet was significantly associated with higher morale. Goldmeier concluded that pet ownership can make a difference, but the difference must be seen in the context of the people who also are part of the older person's living environment.

**Pet Ownership: An Application
of Social Support—Stress
Buffering Model**

The idea that pets are beneficial for people is especially critical as the importance of social support is established. The loss of a spouse often results in negative psychological and social outcomes (Osterweis, Solomon, & Green, 1984). Those elderly who lack social support may benefit from a pet as part of a social support system. In stressful situations such as bereavement, social support has been shown to have a buffering effect by reducing the perception that a situation is stressful (House, 1981). Even though only a small number of bereaved seek professional assistance, those who do often turn to psychologists, social workers, funeral directors, and clergy for help in dealing with death (Caserta & Lund, 1992). Other informal support resources can be found in family, neighbors, friends, and community (Dimond, Lund, & Caserta, 1987; Gass, 1989). Social support from others has been found to be helpful but only at a moderate level (Dimond et al., 1987). The presence of a nonevaluative other has been found to be necessary for social support in order to be functional in acutely stressful performance situations (Kamarck, Manuck, & Jennings, 1990). Allen, Blascovich,

Tomaka, and Kelsey (1986) concluded that pets may function to reduce stress and its health effects by providing nonevaluative companionship. Persons who are single or divorced have a higher prevalence of a wide variety of diseases, including coronary artery disease and behavioral illnesses such as alcoholism, suicide, and mental illness (Kitagawa & Hauser, 1973; Moriyama, Krueger, & Stamler, 1971). Increases in mortality and morbidity may be because of the emotional and behavioral effects of the loss of companionship, including depression and loneliness (Lynch, 1977).

Social support has been shown to impact the course of depression and to act as a buffer against depression (Mueller, 1980). Older adults, in particular, are at heightened risk for a variety of physical and emotional problems (Berkman et al., 1986; Murrell, Himmelfarb, & Wright, 1983). Reasons for additional health problems are attributed to changes in health status common in aging and from changes in social situations such as the deaths of friends and relatives.

Kastenbaum (1969) referred to an accumulation of losses in life as “bereavement overload.” Because older adults have a higher probability of bereavement overload than younger adults, the bereavement process is likely to be significantly different for each age cohort. Researchers theorize that individuals with strong social support systems are less inclined to suffer from the deleterious effects of life stress than persons with weak social support networks (Krause, 1987). In a related study, Krause (1986) urged future research to examine how specific types of support buffer the effects of specific types of life stress.

Henderson, Bryne, and Duncan-Jones (1981) argued that the need for social support varies widely across individuals; thus, stress-buffering models of social support must include an assessment of whether individuals perceive that their need for support has been satisfied. Theoretically, the buffering properties of social support work by measurably reducing physiological responses to stressful situations (House, 1981). Some studies have shown that social support decreases the effects of stress on well-being, whereas other studies have failed to find significant effects.

Social support, particularly qualitative aspects, has played a significant but modest role in bereavement outcomes during the first 2 years after the death of a spouse (Dimond et al., 1987). How does social support decrease the negative effects of stress? Kaplan (1975) argued that feelings of self-worth and self-regard are essential for the maintenance of psychological well-being. Life stresses such as bereavement affect well-being by eroding feelings of self-worth (Pearlin, Menaghan, Lieberman, & Mullan, 1981). Others have theorized that social support operates by strengthening internal locus of control beliefs (Krause, 1987). Even though stress tends to chip away at feelings of control, the supportive role of others intervenes to increase feelings of control (Caplan, 1981).

The self-esteem of older adults is reinforced when a supportive network provides reassurance of worth, caring, love, and trust (House, 1981). Positive emotional feelings are said to enhance an individual's capacity to adapt to stress (Allen et al., 1986). Pet owners describe the relationship with their pets as giving and receiving of devotion (Bolin, 1987), as providing a reason for living and

caring, and as providing the bereaved with a sense of safety and a source of interaction and companionship (Akiyama et al., 1986; Mugford & M'Comisky, 1975). Others describe their pet relationship in terms of decreased feelings of loneliness and depression (Levinson, 1978). Wilson and Netting (1987) found that people may perceive pets as part of their formal or informal support systems. Each of these studies could suggest that aspects of the stress-buffering model could be applied to the role of pet ownership and bereavement.

The Role of Pets in Bereavement

Several studies have suggested that pets may provide a supportive role that buffers people from stress and illness (Allen, 1985; Katcher & Beck, 1983). Gage and Anderson (1985) found that among pet owners experiencing high levels of stress interaction with pets was recognized as valuable for stress management. The data suggest that pets are often a part of older adults' social support system. Therefore, owning a pet could potentially buffer bereavement outcomes. The empirical evidence to date, however, has been mixed.

Lund et al. (1984) examined the effect of pets on alleviating the depression and loneliness among older adults during 1 year of spousal bereavement. These researchers concluded that in the first 2 months pets cannot be assumed to ease the loneliness associated with loss of a spouse. In fact, caring for pets may add to the strain of grieving. Arrangements should be considered for the pet's care while many legal and formal rituals are taking place. Even though this study did not uncover any beneficial effects of pet ownership on bereavement, the findings were

limited. Only the first year of bereavement was examined. The study did not focus on the emergence of any effects that may have occurred later in the bereavement process.

In a related study, Akiyama et al. (1986) investigated the impact of pet ownership on the health status of recently widowed, urban, middle-class women. They reported significant differences between pet owners and nonowners regarding symptom experiences. Nonowners reported more symptoms, especially those symptoms with psychogenic components. Subjects who did not own pets reported significantly higher medication use. The researchers suggested that attention be given to the role of pets as a means of lowering postbereavement morbidity.

Siegel (1990) explored the use of physician services in times of stress among the elderly. After controlling for demographic and health characteristics, the pet owners reported fewer doctor contacts over a 1-year period than nonpet owners. In particular, dog ownership acted as a buffer from the impact of stressful life events on physician utilization. Siegel suggested that there is a qualitatively different relationship between dog owners and owners of other pets. Dog owners reported spending more time talking with their dogs and being with them outdoors. These companionship factors might be one reason for the improved health outcomes.

Bolin (1987) studied the effects of companion animals during conjugal bereavement. This study consisted of 89 newly widowed Anglo American women who were contacted by mail 2 to 3 months after the deaths of their spouses. The

subjects in one group were bonded dog owners, according to their own assessment, whereas a comparison group did not own any type of pet. The widows were administered the Grief Experience Inventory (Sanders, Mauger, & Strong, 1979), the Personal Resource Questionnaire that measured levels of perceived social support (Brandt, 1984; Weinert, 1984), and the Pet Attachment Scale (Friedmann et al., 1983; Katcher et al., 1983).

The findings revealed significant differences in health when an analysis of the Grief Experience Inventory despair subscale was analyzed. Nonpet owners with a high despair score tended to rate their health good before the death and reported a deterioration in their health after losing their spouse. These widows perceived the death to be very stressful, and their husbands were more likely to have died accidentally or in unexpected places.

For bonded dog owners, the place of death and its stressfulness were not reported to be important. These widows also reported no subsequent decline in health after the death of their spouse. Bolin (1987) suggested that the pet effect alleviated the sense of despair that is common with grief. Of interest is that for pet owners the closeness felt to their spouses, not the length of time married, resulted in more feelings of anger. Therefore, Bolin suggested that the pet may not be an adequate replacement for the loss of a spouse if the relationship with the husband is perceived to be very close. Bolin recommended that families leave pets with the widows and not automatically assume the pet to be burdensome. This finding is somewhat inconsistent with what Lund et al. (1984) suggested.

Summary and Research Questions

The effect of pet ownership on bereavement is complex and not well understood. The present research project expanded the understanding of this relationship by examining the effects that pet ownership has on bereavement outcomes over a 2-year period. Other studies have not followed the subjects' grief reactions for this length of time. Also, according to Wilson and Netting (1987), the literature lacks data on the life course development of an older person's history with pets (ownership, experience, attitudes, and attachments) that may influence pet ownership, pet attachment, and potential well-being in later life.

Few community-based studies have been found of the role of pet ownership at the time of conjugal bereavement. Data available among noninstitutionalized populations have produced inconsistent findings. Akiyama et al. (1986) found a positive association between pet ownership and well-being. The Bolin (1987) study demonstrated a deterioration in the health of nonpet owners after the loss of a spouse, whereas pet owners reported no deterioration if their health was good. Pet ownership did not have any positive effects, however, on psychological functioning during bereavement, according to a study conducted by Lund et al. (1984). No studies were found that examine pet effects on conjugal bereavement for greater than 1 year.

The overall objective of this study was to investigate the relationship between pet ownership and adaptation during bereavement among noninstitutionalized older spouses over a 2-year period. The following research

questions were addressed:

1. Are there differences between categories of pet ownership and bereavement outcomes (stress, coping, depression, and loneliness) over a 2-year period?
2. Are there differences in bereavement outcomes among pet owners according to the type of pet owned (i.e., dog, cat, or bird)?
3. How do bereaved spouses describe the helpfulness of their pets in dealing with the loss?

CHAPTER III

METHODS

Introduction

This study utilized a data set based on the responses of 192 recently bereaved persons 50+ years old. This data set was obtained from the University of Utah Gerontology Center, and permission for its use was granted by the director, Dr. Dale Lund. The data were part of a longitudinal study of bereavement among the elderly that was completed in 1983 in the Salt Lake City area. This initial bereavement study was funded by a grant from the National Institute on Aging (#1 ROI AG 02193). The data were subjected to a secondary analysis that examined the role that pet ownership plays in bereavement-related outcomes over 2 years.

Sample Recruitment

All participants were residents of Salt Lake County and were identified through obituary listings in local newspapers. They were contacted within 3 weeks of the death of their spouse. All possible bereaved subjects were randomly assigned to a home interview group ($N = 104$) or a mailed questionnaire group ($N = 88$) in order to test for an interviewer effect. The groups were combined into one sample when no major interviewer effect was observed (Caserta, Lund, &

Dimond, 1985). Sixty-one percent of all bereaved spouses contacted during the initial data collection period refused to participate in the study. The reasons for refusing to participate were that they were too busy, too upset, in poor health, or a family member advised against participation. A 1-year follow-up telephone random sample of refusers ($N = 111$) indicated that their self-reported health was slightly lower than those who participated in the study. Those who did not participate did not differ, however, in age, gender, socioeconomic status, perceived coping, perceived stress, or rate of remarriage (Caserta & Lund, 1992).

This thesis compared bereaved respondents who were placed into five categories of pet ownership. The five categories are (a) consistent pet owners ($n = 40$), (b) consistent nonpet owners ($n = 111$), (c) new pet owners ($n = 13$), (d) no longer pet owners ($n = 22$), and (e) sporadic pet owners ($n = 6$).

Procedure

All 192 respondents were asked to complete questionnaires or were interviewed at six intervals during the first 2 years of bereavement: (a) 3 to 4 weeks (Time 1), (b) 2 months (Time 2), (c) 6 months (Time 3), (d) 1 year (Time 4), (e) 18 months (Time 5), and (f) 2 years (Time 6). With the exception of demographic variables, all six questionnaires were identical and took approximately 90 minutes to complete. One hundred eight respondents (56%) completed all six questionnaires, and 32 participants (16%) completed five of the six questionnaires. Twenty-eight (15%) discontinued or dropped out of the study because of illness, lack of interest, moved away, or too busy. Four males and 5 females died during

the 2nd year of the study.

Measures

Each respondent was identified if they owned a pet by the question: “Do you have any pets?” (presently), and “If yes, how many and what kinds?” This question was asked at each data point in order to identify if the respondent’s pet ownership status had changed. Respondents also were asked to describe the helpfulness of their pets through an open-ended question. The question, however, was only asked at 18 months (Time 5) and 2 years after the death (Time 6).

The bereavement outcomes examined in this study were perceived stressfulness after death, perceived coping ability, depression, and loneliness. Depression was measured by the Self-Rating Depression Scale (Zung, 1965), which consists of 20 statements, each relating to a common characteristic of depression. For each statement, the respondents were asked to indicate if it applied to them (a) a little of the time, (b) some of the time, (c) a good part of the time, or (d) most of the time. The range of raw scores is from 20 (low) to 80 (high), with 40 to 47 indicating minimal to mild depression and 48 to 55 indicating moderate to marked depression. A score of 56 or above indicates severe depression. This scale was selected because of its reliability and validity with aging populations (Kitchell, Barnes, Verth, Okimoto, & Raskind, 1982). The measure has good internal consistency, as suggested by Cronbach’s alpha equal to .79 (Jegede, 1976). Depression is a commonly used outcome measure in bereavement research and, therefore, is appropriate for measuring one aspect of adaptation.

Perceived coping ability and stressfulness of the death were measured using single-item indicators. Respondents were asked: “How stressful has the death of your spouse been for you?” (1 = not at all stressful, 7 = very stressful) The coping question asked: “How well do you feel that you have coped with this situation?” (1 = not at all, 7 = very well) After the Time 1 data collection point, the wording of stress and coping items changed to include a time reference; thus, their assessment described their feelings since the previous questionnaire. Even though single-item measures have limitations, many investigators have found them to be useful and predictive in social research. Previous reports utilizing the stress and coping indicators demonstrated construct and content validity (Caserta & Lund, 1992; Johnson, Lund, & Dimond, 1986).

Loneliness was measured by responses to an open-ended question, asked at each time period, which read: “What has been the single greatest problem for you related to the death of your spouse?” This question was content-analyzed. Each time a respondent indicated loneliness as a problem, it was recorded. Loneliness was included because it has been found to be one of the most common and difficult outcomes on conjugal bereavement (Lund, 1989).

Data Analysis

Descriptive data included reporting means, standard deviations, and percentages of demographic, pet ownership, and outcome variables. In order to identify any potential relationship that could exist between categories of pet ownership and background and demographic variables, one-way analysis of

variance (ANOVA) and chi-squares were performed where appropriate. This analysis identified any factors that would need to be controlled for in subsequent analyses.

In order to address the research questions that examined the relationship between categories of pet ownership and perceived stress, perceived coping, and depression, ANOVAs with repeated measures were employed. In these procedures, pet ownership status was the between-group factor, and change over time was treated as the within-subject factor. Because of unequal cell sizes, tests for violations of assumptions of homogeneity of variance were conducted, and appropriate adjustments in the analyses were made.

For all categories of pet owners, the question of the helpfulness of pets was content analyzed to look for themes in the data. In particular, responses related to why pets are or are not considered helpful by their owners were examined and noted.

Similarly, the percentages of bereaved in each of the categories of pet ownership who stated loneliness as their single greatest problem at each data point were calculated and graphed. Even though no statistical tests were employed for this variable because of the nature of its measurement, loneliness was examined for trends in the data over time.

Consistent pet owners was the only group used to determine types of pet ownership. Dog owners, cat owners, and multiple pet owners were distinguished from this category. Because of the small size of this subsample, ANOVA with

repeated measures could not be employed; rather one-way ANOVAs were conducted. Also Wilcoxon tests were performed to detect differences in means over time.

The percentages of bereaved in each of the types of pet categories who stated loneliness as their single greatest problem at each data point were calculated, even though no statistical tests were employed.

CHAPTER IV

RESULTS

In order to be better able to interpret the findings of this study, a brief demographic description of this sample is provided in Table 1. As Table 1 demonstrates, most respondents were consistent nonpet owners (57.8%), and the sample was predominantly female (74%)—with a mean age equal to 67.6 years ($SD = 8.2$). One hundred forty-nine (77.6%) graduated from high school, and 21 (10.9%) graduated from college. The respondents had been married an average of 39.7 years ($SD = 13.6$). The least amount of time married was 6 months, whereas the most years married was 73 years.

In order to rule out any confounding effects between pet ownership and demographic factors, one-way ANOVAs were performed on age, socioeconomic status, employment, marriage, and education. According to the data in Table 2, the pet category means for employment and age were significantly different at the $p < .05$ level. The Tukey pairwise test revealed that the true nature of the differences for age lies between consistent pet owners and consistent nonpet owners. The consistent pet owners' mean age (64.2) was significantly lower than the mean age of consistent nonowners (69.0). The Tukey pairwise test revealed that the differences for employment are between no longer pet owners and never

Table 1

Sample Characteristics ($N = 192$)

Characteristic	<u>N</u>	Percent
<u>Pet ownership categories</u>		
Consistent pet owners	40	20.8
Consistent nonpet owners	111	57.8
New owners	13	6.8
No longer pet owners	22	11.5
Sporadic pet owners	6	3.1
<u>Sex</u>		
Male	50	26.0
Female	142	74.0
<u>Age*</u>		
50 to 64	71	37.0
65 to 79	104	54.0
80 or older	17	9.0
<u>Education</u>		
Nonhigh school graduate	43	22.4
High school graduate	60	31.3
Some college	68	35.4
College graduate	10	5.2
Additional graduate work	11	5.7
<u>Years married^b</u>		
6 months to 30 years	38	20.0
31 years to 40 years	49	25.0
41 years to 50 years	61	32.0
51 years and longer	44	23.0

*Range = 50 to 93, $M = 67.6$, $SD = 8.2$.

^bRange = 6 months to 73 years, $M = 39.7$, $SD = 13.6$.

Table 2

Baseline Mean Scores for Socioeconomic Status, Education, Employment Age, and Years Married According to Pet Ownership Categories

Pet ownership categories	Means				
	Socioeconomic status	Education	Employment status	Age	Years married
Consistent owners	3.1	2.5	1.6	64.2	37.0
Consistent nonowners	3.2	2.4	1.3	69.0	40.4
New owners	3.9	2.5	1.5	69.0	36.0
No longer owners	3.5	2.3	1.7	66.2	41.0
Sporadic owners	3.3	2.2	1.2	70.2	50.0
F ratio	.86	.24	3.03*	2.90*	1.66

* $p < .05$.

pet owners. The consistent nonpet owners were less likely to be employed, whereas no longer owners were more likely to work at least part time. No other significant difference was found between the pet ownership categories for any of the remaining background variables.

Because of the results of the ANOVAs for age and employment, it was important to determine if these variables were related to the outcomes in this study. Therefore, Pearson product-moment correlations were generated between age and employment status and stress, coping, and depression at each time point (see Table 3). Two significant correlations were found at Time 4 in which age was related to

Table 3

Correlations of Age and Employment With Stress, Coping, and Depression Over Six Time Points

	Age	Employment
<u>Stress</u>		
Time 1	.00	-.08
Time 2	-.04	-.05
Time 3	-.02	-.02
Time 4	-.16*	.02
Time 5	-.13	-.02
Time 6	-.08	-.00
<u>Coping</u>		
Time 1	.06	-.11
Time 2	.05	-.01
Time 3	-.06	.01
Time 4	.19*	-.00
Time 5	.16	.09
Time 6	.11	.04
<u>Depression</u>		
Time 1	-.05	-.00
Time 2	-.11	-.02
Time 3	.04	.01
Time 4	.00	-.01
Time 5	-.04	.08
Time 6	.06	-.12

* $p < .05$.

stress ($p < .05$) and coping ($p < .05$). These were the only two correlations that attained statistical significance. Because their magnitudes were not substantial, they were more likely random occurrences. Given this instance, as well as no other significant associations were found between the outcomes and age and employment status, it was deemed unnecessary to control for these variables in subsequent multivariate analyses.

Patterns of Pet Ownership and Bereavement Outcomes

ANOVA with repeated measures were employed in order to address the first research question of this study. Separate analyses were conducted for stress, coping, and depression. Means and standard deviations over the six time points are presented in Tables 4, 5, and 6, respectively. It should be noted, however, that it was necessary to drop the sporadic pet owners from these analyses, given the extremely small cell size for this group ($n = 6$).

The results of the repeated measures analyses revealed no statistically significant group (pet ownership category), change over time, or group-by-time interaction effects because of pet ownership for stress, coping, or depression. Over the course of 2 years, patterns of pet ownership did not appear to have an impact on bereavement outcomes when categorized as they were in this study. Each group demonstrated similarly moderate stress levels, moderate to high coping ability, and generally minimal depression throughout the 2 years independent of what category the bereaved were in. Even though evidence was found that there

Table 4

Stress Levels Over Two Years of Bereavement Broken Down According to Categories of Pet Ownership

	3 to 4 weeks		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Consistent owners	5.2	1.6	5.0	1.7	5.2	1.6	5.3	1.5	5.2	1.4	4.8	1.6
Consistent nonowners	5.3	1.7	5.0	1.9	5.0	1.7	5.0	1.8	4.9	1.8	4.7	1.9
New owners	5.9	1.1	5.9	1.2	5.3	1.8	5.3	1.5	5.4	1.2	5.3	1.7
No longer owners	6.2	1.1	6.3	1.3	6.1	1.0	6.1	1.3	5.8	1.3	5.9	1.1
Total sample	5.4	1.6	5.2	1.8	5.2	1.7	5.2	1.7	5.1	1.6	4.9	1.8

Pet category status: $F = 1.81$ ns. Change over time: $F = 1.65$ ns. Pet category by time: $F = .37$ ns.

Note. Sporadic pet owners were not included in this analysis because of small group size.

Table 5

Coping Levels Over Two Years of Bereavement Broken Down According to Categories of Pet Ownership

	3 to 4 weeks		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Consistent owners	5.5	1.1	5.9	1.0	5.9	1.3	5.7	1.1	5.7	1.3	5.7	1.2
Consistent nonowners	6.0	1.1	6.0	1.1	5.8	1.1	6.0	1.0	5.8	1.1	5.8	1.3
New owners	5.5	1.3	5.9	1.2	5.9	1.4	6.1	1.5	5.5	1.1	5.8	1.0
No longer owners	5.3	1.3	5.3	1.8	5.8	1.5	5.4	1.5	6.1	1.4	5.6	1.6
Total sample	5.8	1.2	5.9	1.2	5.8	1.2	5.9	1.1	5.8	1.2	5.8	1.3

Pet category status: $F = .59$ ns. Change over time: $F = .73$ ns. Pet category by time: $F = 1.49$ ns.

Note. Sporadic pet owners were not included in this analysis because of small group size.

Table 6

Depression Levels Over Two Years of Bereavement Broken Down According to Categories of Pet Ownership

	3 to 4 weeks		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Consistent owners	38.6	8.9	40.0	9.3	37.1	07.4	36.1	8.0	37.3	08.4	37.3	08.2
Consistent nonowners	38.7	9.6	36.6	8.9	36.7	10.5	36.3	9.1	36.0	08.0	37.8	08.9
New owners	40.8	8.0	40.3	9.6	37.2	11.0	37.7	9.2	35.4	10.3	35.3	13.2
No longer owners	44.8	7.8	44.8	7.6	42.9	07.6	43.1	5.9	41.3	06.2	41.4	09.1
Total sample	39.5	9.2	38.4	9.1	37.5	09.7	37.1	8.8	36.8	08.2	37.8	09.2

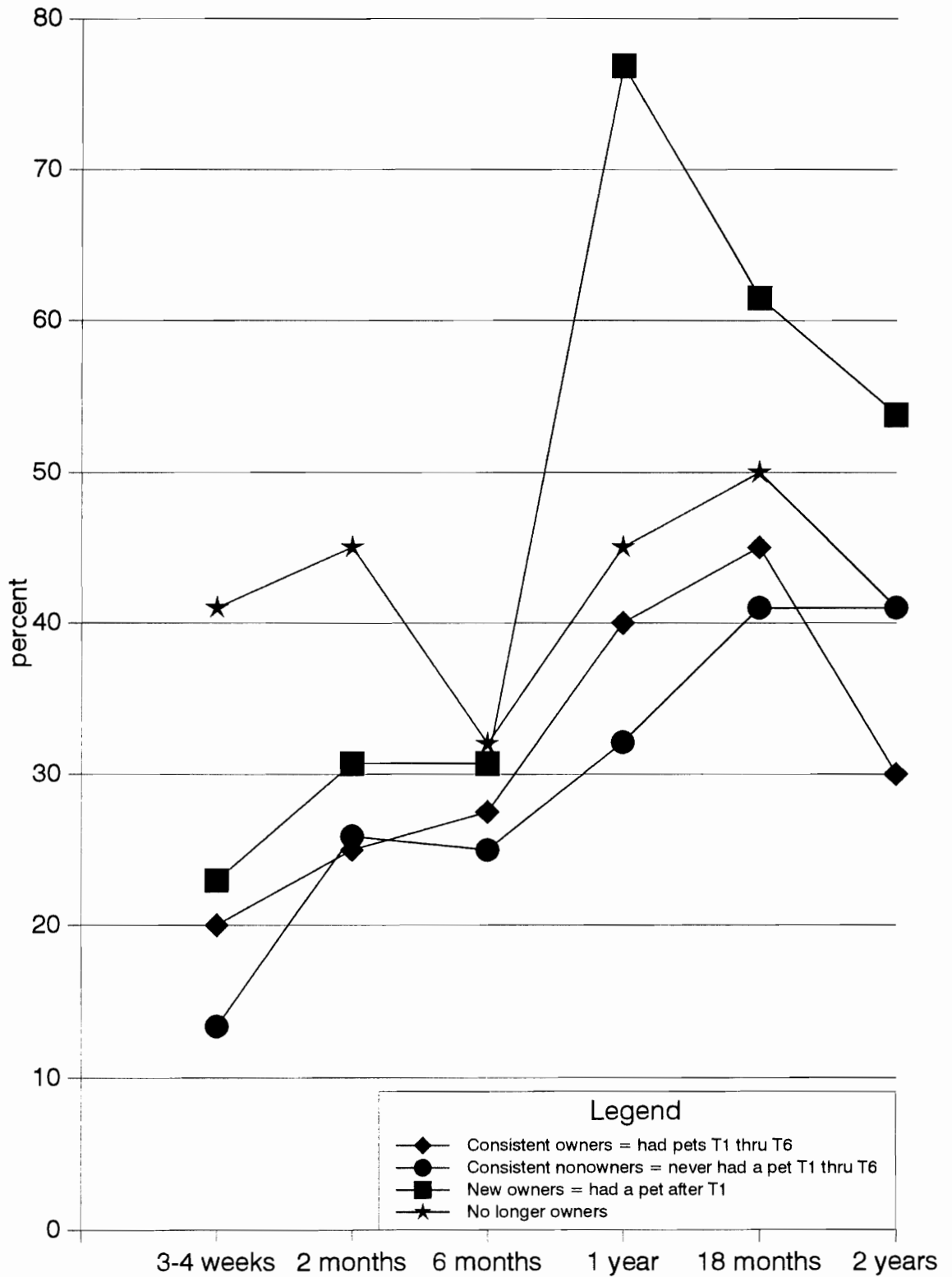
Pet category status: $F = 1.51$ ns. Change over time: $F = 2.10$ ns. Pet category by time: $F = .92$ ns.

Note. Sporadic pet owners were not included in this analysis because of small group size.

was some overall change over time, particularly with respect to stress and depression, the change was not significant enough to be detected by the analyses. This finding, however, is more likely a feature of the natural course of bereavement.

Responses to the open-ended question, “What has been the single greatest problem for you related to the death of your spouse?” were content analyzed for each pet category. Loneliness was the most often-cited response. Throughout the study, loneliness was mentioned by a minimum of 14% of the respondents (at Time 1) to a maximum of 77% (at Time 4). The lowest percentage of respondents from within a specific pet ownership category who reported loneliness as a problem was at Time 1 in which 15 of the 111 consistent nonpet owners (13.5%) reported. Ten of 13 new pet owners comprised the highest percentage of loneliness reported by this group. A graph of the percentages within each pet category, who mentioned loneliness at each time period, is presented in the Figure.

The smallest differences were found at Time 3 in which the percentages ranged from 25% to 32%. Eighteen of 40 consistent pet owners (45%) cited loneliness as their response at Time 5. New pet owners had consistently higher percentages of loneliness through the last year of the study. When loneliness responses were averaged across all time points for all groups, consistent pet owners (31%) and consistent nonpet owners (30%) reported the lowest average percentages. The average for new owners (46.3%) and no longer owners (42.3%) over time were higher than responses from the other two groups. All groups



Percentage of Loneliness Reported for Categories of Pet Ownership Across Six Time Points

showed gradual reductions in loneliness by the 2-year endpoint of the study in which 40% still reported loneliness as a problem.

Other less often-cited responses to this question included financial difficulties, acceptance of spouse's death, decision making, and legal matters. These responses, however, were distributed fairly evenly among each of the pet ownership categories.

Types of Pets

The second question examined the differences in type of pet ownership such as dog and cat for the outcome variables perceived stress, perceived coping, depression, and loneliness. In order to keep the analysis more straightforward, only those who were consistent owners throughout the study period were selected; otherwise the analysis would have been overly complicated by the sporadic nature of the other categories. It is acknowledged that this was a limitation of the study, but the relationship between type of pet owned and bereavement outcomes would be easier to delineate if the consistency of pet ownership was controlled. Because the majority owned a dog, a cat, or a mix of pets, the analyses were broken down into these categories. Dog owners ($n = 22$) represented 55% of the pet owners, with cat owners ($n = 8$) and mixed pet owners ($n = 8$) each accounting for 20% of the consistent pet ownership subsample. Bird owners ($n = 2$) made up the remaining 5% of the sample. The small size of the subsample precluded repeated measures analysis. As an alternative, one-way ANOVAs were conducted at each time point to detect among group differences in mean stress, coping, and

depression levels. When significant between-group effects were detected, Tukey tests were employed to uncover pairwise differences. Wilcoxon tests were performed within each group to determine if the means had changed over time. The results of the analyses are presented in Tables 7, 8, and 9.

At Time 1, dog owners had significantly higher stress levels (5.6) than mixed owners (4.0). Dog owners significantly decreased their levels of stress over time particularly after the first 6 months of bereavement. By 2 years' postbereavement, dog owners' stress levels (4.6) were significantly lower than at 6 months (5.7).

No significant differences were found in coping between the different groups of pet owners. Cat owners, however, showed an increase in perceived coping ability over the first 6 months of bereavement, as indicated by the results of the Wilcoxon pairwise test between Time 1 and Time 3. No changes in coping were observed for dog owners or for those who owned dogs and cats together.

The only between-group effect for depression was detected at 18 months in which dog owners reported significantly higher depression scores than cat owners. Even though dog owners appeared to have consistently higher depression scores at each time point, a significant increase was noted between 1 year and 18 months of bereavement. On the other hand, depression levels declined significantly for cat owners between 3 to 4 weeks and 18 months of bereavement. It should be noted again, however, that the mean depression scores were minimal to mild throughout the study.

Table 7

Differences in Stress Levels Over Two Years Between Dog, Cat, or Mixed Species' Owners

	3 to 4 weeks*		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Dog owners	5.6 ^a	1.2	5.5	1.5	5.7 ^b	1.3	5.1	1.4	5.2	1.4	4.6 ^b	1.3
Cat owners	5.7	1.6	5.4	1.6	5.1	2.1	5.8	1.5	5.6	1.4	5.3	1.7
Mixed owners	4.0 ^a	1.9	5.0	1.8	4.5	1.6	5.0	1.7	5.1	0.9	4.2	1.8

* $F = 3.68, p < .05$.

^{a, b}Pairs significantly different, $p < .05$.

Table 8

Differences in Coping Levels Over Two Years Between Dog, Cat, or Mixed Species' Owners

	3 to 4 weeks*		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Dog owners	5.3	1.6	5.2	1.7	5.5	1.6	5.4	1.3	4.9	1.7	5.4	1.2
Cat owners	5.7 ^a	1.2	6.0	0.9	6.4 ^a	0.9	5.9	0.8	5.8	1.3	6.3	0.8
Mixed owners	5.3	1.6	4.7	0.8	5.3	1.9	5.7	1.3	5.2	1.3	5.8	1.3

Note. No significant between-group differences.

^aPairs significantly different, $p < .05$.

Table 9

Differences in Depression Levels Over Two Years Between Dog, Cat, or Mixed Species' Owners

	3 to 4 weeks*		2 months		6 months		1 year		18 months		2 years	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Dog owners	41.9	8.7	42.0	08.2	38.8	7.3	38.6 ^b	8.2	43.2 ^{a,b}	9.5	38.8	8.9
Cat owners	42.7 ^c	9.7	40.8	11.8	34.8 ^a	5.3	32.5	4.0	33.1 ^{a,c}	4.0	33.9	5.8
Mixed owners	38.4	8.6	34.5	09.1	33.8	8.9	35.7	9.6	35.4	7.3	38.8	6.4

F = 4.93, p < .05.

^{a,b,c}Pairs significantly different, p < .05.

Regarding differences in type of pet ownership and loneliness, 33% of the dog owners ($n = 22$) mentioned loneliness when averaged across 2 years of bereavement. Loneliness was mentioned by 46% of the cat owners ($n = 8$) and 25% of the mixed pet owners when averaged across all six time points. For dog, cat, and mixed owners alike, loneliness was mentioned the most frequently at 18 months of bereavement. Loneliness was reported at Time 5 by 55% of dog owners, 75% of cat owners, and 50% of mixed owners.

How Helpful Are Pets?

The final research question examined the responses of bereaved pet owners regarding the helpfulness of their pets. As mentioned earlier, this question was asked only at 18 months and 2 years of bereavement. However, the responses of anyone who owned a pet at these time points were recorded. Sixty-three responses from consistent and intermittent pet owners were recorded. Eighteen pet owners did not respond to the question. In response to this question, the majority of all pet owners responded favorably. Negative replies were reported by 7 owners. This question was only asked at Time 5 and Time 6, and the responses may have been mentioned by the same person more than once.

Table 10 summarizes the three most common types of responses and lists some examples. Of the negative responses, 2 owners reported that the pet belonged to their spouse. One displeased owner reported that the pet was not wanted; it was given as a Christmas present. More than one half of the favorable responses indicated that pets were helpful because of the companionship they

Table 10

Sample Responses of Bereaved Pet Owners to the Question: "Have Your Pets Been Helpful to You?"

Companionship (mentioned 24 times)

She helps me, my older dog is company.
Oh yes, I cannot live without them, they are company.
She is company.
A very good companion.
He's a lot of company.
A very dear friend and companion.
Yes, good companionship.
A great companion.
Keeps me company.

Protection (mentioned 12 times)

I don't want to live without a dog, I feel safe.
She is a protector.
Yes, protection.
Very much, I feel safe.
I don't feel afraid.

Pet interaction—talk, hug (mentioned 11 times)

I talk to my dog and hug my dog.
Yes, I talk to her.
Yes, I talk to him and call him my buddy.
I talk to him, he understands when I feel bad.
He seems to know how I feel.

Negative responses (mentioned 6 times)

No, dog grieved for master and died 6 months after him.
No!
No, they were my husband's, they are a nuisance.
No, just a nuisance in a way, it was a Christmas gift.

provided, protection, something to talk to and care for, and empathy and understanding.

CHAPTER V

DISCUSSION

Research examining the therapeutic benefits of pet ownership is limited, and research focusing on the effects of pet ownership on spousal bereavement is even more scant. This study was an attempt to address this lack of knowledge.

A sample of 192 bereaved adults 50+ years old was grouped according to pet ownership into consistent owners and nonowners, new owners, no longer owners, and sporadic owners. They were interviewed six times during the 2-year duration of the study. Instruments that measured perceived stress, perceived coping, depression, and loneliness were completed. Owners also were asked to describe the helpfulness of their pets. The groups were compared on bereavement outcomes using statistical analyses that included ANOVAs, Pearson product-moment correlations, multivariate analysis of variances (MANOVAs), and Wilcoxon paired tests.

Discussion of Results

The objective of this thesis was to determine if bereaved spouses would benefit from pet ownership over 2 years and if these benefits were dependent on categories of pet ownership. According to the findings of this study, pet ownership does not appear to affect bereavement outcomes over time. This finding

is inconsistent with the Lund et al. (1984) study. These researchers concluded that in early bereavement pet ownership had a slight negative effect on the mean coping levels of respondents. The Lund et al. study, however, only measured 1 year of bereavement. Once the multivariate analysis encompassed a 2-year time span, however, the effect of pet ownership was no longer evident.

Recall that Akiyama et al. (1986) found that pet ownership had a positive effect on the health status of recently bereaved widows, suggesting that pets play a role in lowering postbereavement morbidity. Similarly, Bolin (1987) found that the pet effect seems to alleviate the sense of despair that is common with grief and, therefore, should be left in the home of the grieving spouse. However, neither study examined these effects over 2 years. Therefore, it is still unclear as to the long-term benefits of pet ownership, although these studies reported some positive effects early in the process. Consequently, one reason for the inconsistency between the findings of this study and the others could be methodological differences.

Three other explanations exist as to why no effects were detected in this study because of pet ownership. First, there may have been a loss of statistical power given the relatively small cell sizes of some pet categories. Moreover, attrition or missing data further reduced the sample in some analyses, thus rendering the detection of even moderate effects more difficult.

Another explanation could be that almost all the bereaved in this sample reported an available confidant with whom they could express their thoughts and

feelings (Dimond et al., 1987). Consequently, the impact of pet ownership on the outcomes studied may have been minimized further. As discussed in Chapter II, the stress of bereavement can be moderated by a social support system. A pet may only be helpful to bereaved spouses if human social support is minimal or unavailable. This finding was confirmed by Garrity et al. (1989) who found that pet ownership and pet attachment was associated with less depression in bereaved elderly who lack a confidant. Goldmeier (1986) also concluded that pets were helpful to the elderly only when human companionship was unavailable.

Finally, and perhaps more importantly, no data were available on the degree of attachment between the owner and the pet. The degree of attachment may be a more critical factor impacting bereavement outcomes than pet ownership itself. At the very least, attachment may moderate the relationship between pet ownership and bereavement outcomes. The relationship may not be detected without accounting for such moderating influences.

Conversely, Beck and Katcher (1984) found no differences among pet owners, former pet owners, and those never owning a pet on the prevalence of coronary heart disease. Even though Beck and Katcher did not examine a bereaved population, similarities exist between their study and the present study. Both studies examined the pet effects based on differences between pet categories on well-being. Beck and Katcher found that Type A personalities were associated with an increased risk of heart disease, and this increase was not dependent on pet ownership categories.

Loneliness was mentioned as a problem by respondents in all pet categories. New pet owners reported the highest percentage of loneliness across all pet categories and time points. This finding indicates that seeking companionship of a new pet is an attempt to fill the void of loneliness. This finding also was somewhat consistent with a study by Goldmeier (1986) who found pet ownership to be a significant factor in alleviating loneliness among older women who lived alone.

In the present study, nonpet owners were less lonely at Time 1 than consistent pet owners, which may indicate personality differences between the groups. Pet owners may have a greater need for companionship whether human or animal than nonpet owners. Nonpet owners may be more resilient than pet owners or they may have other ways to alleviate loneliness. Those owning pets may feel a greater sense of helplessness and may be more insecure and fearful. This would explain why pet owners cite protection and companionship as two of the primary reasons for owning a pet. Another plausible explanation may be that if the pet was bonded to both spouses that the pet could serve as a constant reminder of the deceased.

In order to examine potential differences between type of pet owned, consistent dog, cat, and mixed species' owners were compared. One-way ANOVAs revealed that dog owners at Time 1 had significantly higher stress levels than mixed species owners. One explanation for this finding may be that the responsibilities of dog ownership are more demanding than caring for multiple

pets, particularly if those pets are birds or cats. Dogs require more walking, grooming, and feeding than cats or birds. Another explanation may be that the comfort dogs, cats, birds, and fish provide is distinctive. Perhaps multiple pet owners may derive cumulative stress-reducing benefits from the nurturing they receive from all pets. Consistent pet ownership over 2 years may suggest an attachment to a pet(s). Attachment to pets and forming a relationship with these pets over time may be a way to buffer a grieving spouse. For multiple pet owners, each relationship may satisfy different needs for the surviving spouse. Similarly, the need to care for many animals in times of crisis may be beneficial because it enables an individual to think of other things. Finally, pet owners cite protection as one reason for having a pet, that is, physical as well as emotional safety. Multiple pet ownership may psychologically protect spouses from the fear of losing more loved ones.

Furthermore, cat owners were significantly less depressed than dog owners at 18 months of bereavement. It is unclear why differences exist between types of pet ownership and depression at this point in the bereavement process. Nothing was found in the literature that would support these findings, and any attempts to explain these phenomena would be speculation. Because between-group differences in depression were found only at this data point, it might be explained as a random occurrence.

The within-group effects of type of pet ownership over time were compared to determine if changes were occurring for dog owners versus cat owners versus

mixed owners. The results of these tests cannot be applied to other populations given the small cell sizes and nonparametric nature of the tests. Dog owners reported high stress levels at Time 3 but improved significantly by the 2-year conclusion of the study. Nothing significant was found in the stress levels of cat owners or mixed species' owners over time. Cat owners made significant improvements in coping over time. No literature was found to support or deny these findings. It could be speculated that the differences may be because cats are less demanding and more independent than dog owners.

Even though dog owners temporarily increased in depression from 1 year to 18 months of bereavement, the depression levels of cat owners decreased significantly by that point. The findings pertaining to cat owners could suggest a buffering effect of pet ownership that is consistent with the work of Siegel (1990). On the other hand, mean depression levels were minimal to mild in this sample. This finding may be one reason for the absence of more effects.

Dog owners initially reported higher stress levels, but these levels reduced significantly by the 2nd year of bereavement. This finding is somewhat consistent with Siegel's (1990) study. Siegel explored pet ownership and physician utilization in the elderly. Siegel found that dog owners, in particular, were buffered from the impact of stressful life events on physician utilization. A qualitative difference was found in the relationship of dog owners than in owners of other pets not replicated in this study. The Lago et al. (1985) survey of the elderly reported greater pet involvement if the pet was a dog rather than a cat.

Even though the multivariate analyses did not reveal significant relationships between pet ownership and bereavement-related stress, coping, and depression, some evidence was found that owning a pet was perceived as helpful among some bereaved spouses. Fifty percent of bereaved pet owners mentioned that their pet provided them with companionship. Other frequently cited responses included protection and safety, affection, and something to talk to and care for. Siegel (1990) reported that companionship also was a benefit in three fourths of the respondents. This finding has been replicated in studies on the social contributions of companion animals and the elderly. Pets were reported as providing companionship and facilitating socialization with others (Levinson, 1969a, 1969b; Mugford, 1979a, 1979b; Vogel et al., 1981). Many of these studies have speculated that, for some, pets can alleviate problems associated with loneliness and could facilitate social interaction. Similarly, bereaved pet owners in this study indicated that loneliness and the need for companionship were, in part, being met by their pets.

Limitations of the Study

A major limitation of this study was that it was not designed specifically for bereaved spouses who own pets. Several important questions regarding the nature of the relationship between bereaved owners and their pets were not asked and could not be deduced from the data. For example, the data set could not delineate bonded pet owners from nonbonded pet owners. Recent studies have found that the attachment between pet and owner is related to well-being rather than pet

ownership status alone (Lago et al., 1985; Lawton et al., 1984). As discussed earlier, the results of this study would have been clarified if a pet attachment scale had been included in the original analysis.

There was no way to determine from this data set who owned the pet—the deceased spouse or the survivor. This finding is a potentially important control variable that may have accounted for why pets did not significantly impact outcomes. Some of the open-ended responses indicated that pets belonging to the depressed may have been a source of difficulty.

Another limitation is that the helpfulness of the pet was determined late in the bereavement process. It is not clear if the pets were always helpful to the bereaved or if their value was recognized later in bereavement.

Finally, the small number of respondents in several of the pet categories was problematic. In addition to the reduction of statistical power, nonparametric tests were used in analysis by comparing changes over time among dog, cat, and mixed pet owners. This limits the generalizability of these findings, and they must be interpreted cautiously.

Recommendations for Future Research

The limitation discussed above illustrates the need to examine the bond between people and their pets. It remains unclear if pets have a therapeutic effect in stressful situations and only if human companionship is unavailable.

Examining the pet ownership effect on bereaved spouses longitudinally was a strength in this study, but it could not represent a complete life-course

perspective. Wilson and Netting (1987) encouraged future research to explore prior history with pets and previous attitudes toward pet attachments. The ability of an older adult to form a companion bond and to benefit from the attachment, especially during bereavement, may depend on previous associations with pets. These previous associations include pet history and attitudes formed from positive or negative experiences with pets at a younger age.

Exploring this aspect of pet ownership from a life-course perspective would require extensive longitudinal or retrospective studies of elderly pet owners. If this was done, it could explain why the results of past studies, as well as the present one, have been inconclusive. The examination of pet ownership over a lifetime would explain why pets are therapeutic in certain situations and which populations benefit most from owning a pet.

Conclusion

Conjugal bereavement typically is stressful and disrupts the life of the surviving spouse. The need to find preventive interventions aimed at reducing the disruptive effects is crucial. Pet ownership has been studied as a preventive measure for grieving spouses.

Even though some previous research has uncovered benefits associated with pet ownership, this study was unable to support those findings. Prescribing pets for bereaved spouses is not recommended for every individual. Finances, living arrangements, housing situations, social support, and previous pet history are factors that could influence whether a grieving spouse will perceive a pet as

therapeutic. More research, therefore, is needed that examines the situational and individual differences that occur over a lifetime that would make pet ownership a viable intervention.

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