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WOMEN'S HEALTH OUTCOMES WITH SOCIAL SUPPORT FROM FAMILY, FRIENDS AND COMPANION DOGS

By

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ABSTRACT

WOMEN'S HEALTH OUTCOMES WITH SOCIAL SUPPORT FROM FAMILY, FRIENDS AND COMPANION DOGS

By

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This descriptive correlational study was done to determine if there is a correlation between human-companion animal bonds, perceived social support from friends, perceived social support from family, perceived social support from companion dogs, and health outcomes. The scope of this study was be limited to women dog owners. A convenience sample of voluntary self selected female dog owners patronizing 4 beauty salons was surveyed. Surveys were also distributed at the Small Animal Clinic at Michigan State University.

A significant correlation was found between perceived social support from family and perceived social support from friends, between perceived social support from friends and perceived social support from companion dogs, and between perceived social support from companion dogs and human-companion animal bonds. Perceived social support from companion dogs did not correlate with social support from family. Women's health outcomes did not correlate with any of the variables studied. Implications for including family pets in any family assessment are discussed.

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In appreciation of my thesis committee, Linda Spence, chair, Lana Kaiser, Linda Beth Tiedje, and Jackie Wright who believed in this project from the start and gave me the encouragement and guidence necessary to get it accomplished. Special thanks to Dr. Sally Walshaw who took the time to discuss ideas with me and graciously opened up her private library to me for research. Additionally, a salute to companion dogs everywhere, "He is your friend, your partner, your defender, your dog. You are his life, his love, his leader. He will be yours, faithful and true, to the last beat of his heart. You owe it to him to be worthy of such devotion" -- Author Unknown.

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INTRODUCTION

The role of perceived social support has been implicated in positive health care outcomes in recent research (Callaghan & Morrissey, 1993; Courtens, Stevens, Crebolder, Philipsen & 1996; McCauley, 1995; Weinert & Tilden 1990; Yates, 1995). The purpose of this study is to determine whether or not the presence of the human companion animal bond is related to perceived social support provided by friend and family social networks, perceived social support from companion dogs and to health outcomes. Perceived social support may be more important than actual social support (Wethington & Kessler, 1986). Thus social support provided by pets may have similar positive health care benefits for human pet owners.

Pet ownership in the United States is increasing. Over 50% of U.S. households currently have pets (Allen, 1996; Cain, 1991; Haggerty-Davis & McCreary Juhasz, 1995; Jorgenson, 1997). Americans own over 500 million pet creatures, consisting of dogs, cats, birds, horses, small mammals, reptiles and fish. Americans spend $19 billion on animal feed, care and supplies (Beck & Katcher, 1996).

As is true with social support, it has only been with in the last twenty or so years that research has focused on the relationship between companion animals and health. At least 80% of pet owners state that they receive more companionship from their animals than from either friends or family members. These people also view their pets as family members (Cain, 1983; Sussman, 1985). Allen (1996) asserts that when compared to just the presence or ownership of a pet, relationships with pets in which there is a bond are associated with favorable health outcomes. With American households having more pets than ever, health care professionals must learn to incorporate the existence of pets into their assessment and care of families.

Social support outcomes are affected by gender. Women tend to rely on social

support, attend more self help groups, and have larger social networks than men (Johnson, 1996; Nichols, 1995; Seckel & Birney, 1996). The scope of this study will is limited to women and dogs. This descriptive correlational study examines the correlation between human-companion animal bonds, perceived social support from friends, perceived social support from family, perceived social support from companion dogs, and health outcomes. In this paper the human-companion animal bond will be defined and considered within King's conceptual framework for nursing.

Research questions: Is there a correlation between the human-companion animal bond and perceived social support from (a) family, (b) friends, and (c) companion dogs? Is there a correlation between the human-companion animal bond and health outcomes? Is there a correlation between health outcomes and the perceived social support from (a) family, (b) friends, and (c) companion dogs?

CONCEPTUAL DEFINITIONS

Social support has been defined as the existence of social bonds, social networks, meaningful social contact and the availability of confidants. (Ducharme et al. 1994). Some studies imply that the value of social support lies in the individual's perception of it's existence. People derive the benefits of social support if they believe that it is available to them, whether or not they utilize it (Wethington & Kessler, 1986). For the purposes of this paper, social support will be conceptualized as perceived emotional support, which is one type of social support. Emotional support has been defined as the provision of affection, love, and empathy (Yates, 1995). Perceived emotional social support will be divided into that provided by (a) family, (b) friends and, (c) companion dogs.

Health has been defined in many ways. For the purposes of this paper it will be delineated by the presence of illness, injury or surgeries, recalled sick days and overall health ratings by individuals. Healthier individuals will experience less instances of sick days, injuries, surgeries and illnesses than other individuals. Health is the functional

ability to carry out daily life in the absence of illness or injury. Psychological indices of illness such as depression will not be addressed in this study.

"The human-companion animal bond may be defined as an affiliation or attachment between a human being and an animal" (Baun, Oetting, & Bergstrom, 1991, p.19). This bond can be forged between a human and a variety of animals including, but not limited to: dogs, horses, cats, birds, rodents and reptiles. This definition, while a beginning, does not address the nature of the attachment between the human and the animal. A more detailed definition describes the bond between humans and animals as a therapeutic bond which yields physiologic, psychological, and social benefits as well as providing special services in the case of working animals (Francis, 1991). While this definition describes the benefits of the human-companion animal bond, it does not recognize the interactive components of the relationship. Most of the literature delineates the benefit of the human-companion animal bond but does not describe the concept adequately. Cain (1991) merely states, "the relationship between people and pets is known as the human-companion animal bond" (p.60).

However, these definitions do not completely describe the nature of the bond between people and their pets. The term therapeutic bond comes closest, but does not include the benefits that the pet receives. The flow of rewards to both the person and the pet are an integral part of the human-companion animal bond. For the purposes of this paper the author defines the "human-companion animal bond" as a synergistic interaction in which both human and pet give and receive physiologic, psychological, and social benefits. The benefits that the pet receives include food, shelter, health care, and exercise. The benefits that the human receives include orientation, responsibility, positive body image, increased self esteem, and decreased stress. Mutual benefits include affection, communication, growth and development, interaction, socialization, and role identity. A synergistic relationship is one in which the outcome is enhanced or increased as a result of

the interaction. By their association, both the human and the pet reap rewards that are unobtainable without the presence of each other and a bond between them. For the purposes of this paper the dog is the animal that will be considered as the companion animal.

CONCEPTUAL FRAMEWORK

The human-companion animal bond can be explored within King's conceptual framework for nursing. "Over the years, King has provided explanation, clarification, and expansion of concepts for what is now referred to as the systems framework for nursing" (Fitzpatrick & Whall, 1996, p.226). Based on general systems theory, King's framework has three dynamic interaction systems: (a)personal systems, (b)interpersonal systems, and (c)social systems (McQuiston & Webb, 1995). These systems are open and interactive and yet each system contains concepts which have been defined and placed in a specific system. There is some overlap between concepts and systems because they are interrelated which is a general assumption in systems theory. Because the system boundaries are permeable, there is exchange between all of the systems and each one exerts some influence on the others. Therefore, concepts may be relevant to one or more systems and can be somewhat interchangeable. While concepts have been grouped by system, King (as cited in Fitzpatrick & Whall, 1996) describes concepts as having meaning and as such, concepts can be used across systems. The major elements of the human-companion animal bond take place in the interpersonal system. (Figure 1)

King (1981) identifies the personal system as composed of individuals and then describes concepts which pertain to the individual. Individuals are social beings who are rational and sentient. People share common characteristics which include the ability to perceive, think, feel, choose between alternative courses of action, set goals, select the means to achieve goals, and to make decisions. The process of human interactions are an individual's reactions to other people, events, and objects in terms of their own

perceptions, expectations, and needs. The behaviors of humans are exchanges which take place in space and time and may range from simple to complex interactions. King (1981) lists the concepts of perception, self, growth and development, body image, time, and space under the personal system domain.

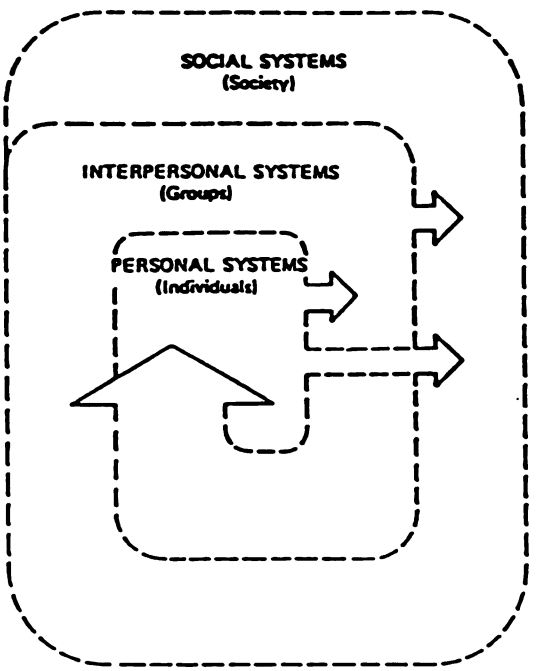

Figure 1. A conceptual framework for nursing: dynamic interacting systems. Source: King, (1981, p.11).

Interpersonal systems are formed when ever two or more personal systems interact. Interpersonal systems are dyads, triads and groups of individuals. "Several concepts are identified and described that are essential to understanding two or more persons interacting in concrete situations. These concepts are interaction, communication, transaction, role, and stress" (King, 1981, p. 59). It is within the interpersonal system that the interaction of the human-companion animal bond occurs. It is formed by the interacting dyad of the personal system belonging to the human and the personal system of the dog.

King (1981) defines the social system "as an organized boundary system of social roles, behaviors, and practices developed to maintain values and the mechanisms to regulate the practices and rules" (p.115). Social systems provide the structure for social interactions which define social relationships, establish rules of behavior and acceptable modes of action. Beliefs, attitudes, values, and customs are learned and defined by social systems such as family, school, and church. The key concepts of social systems as identified by King are organization, power, authority, status, and decision making. Attitudes and beliefs about companion animals are influenced by social systems. Until recently, many considered it foolish to mourn the loss of a pet. As pets have been more widely accepted as companions, support groups for grieving pet owners have been established. Primary health care providers constitute a large social system in the lives of people. In order to provide optimal health care to families the APN should recognize the importance of the human-companion animal bond and acknowledge the role of the companion animal within the family.

In conceptualizing the human-companion animal bond within King's systems framework, the pet is an individual system and the human is an individual system. The interaction of these two systems, form an interpersonal system dyad which is the basis for the human-companion animal bond. (Figure 2) Concepts included in human's personal system are: perception, orientation (time), responsibility, stress (reduction), self, and body image.

King (1981) describes the concept of perception as an individual's representation of reality. Perception occurs through both sensory and cognitive processes. Each individual's perception is formed by things such as past experience, self image, inheritance, education, culture and socioeconomic class. Perception gives meaning to one's experience, helps define individual reality, and influences one's behavior and is a basis for developing a concept of self. Perception is necessary to appreciate the presence

of a companion animal and to establish a bond with it. There are many reasons for not wanting pets. People that do not wish to share their lives with pets may find them messy, expensive or too time consuming. One must also perceive a human-companion animal bond as desirable or there will be no impetus to establish one.

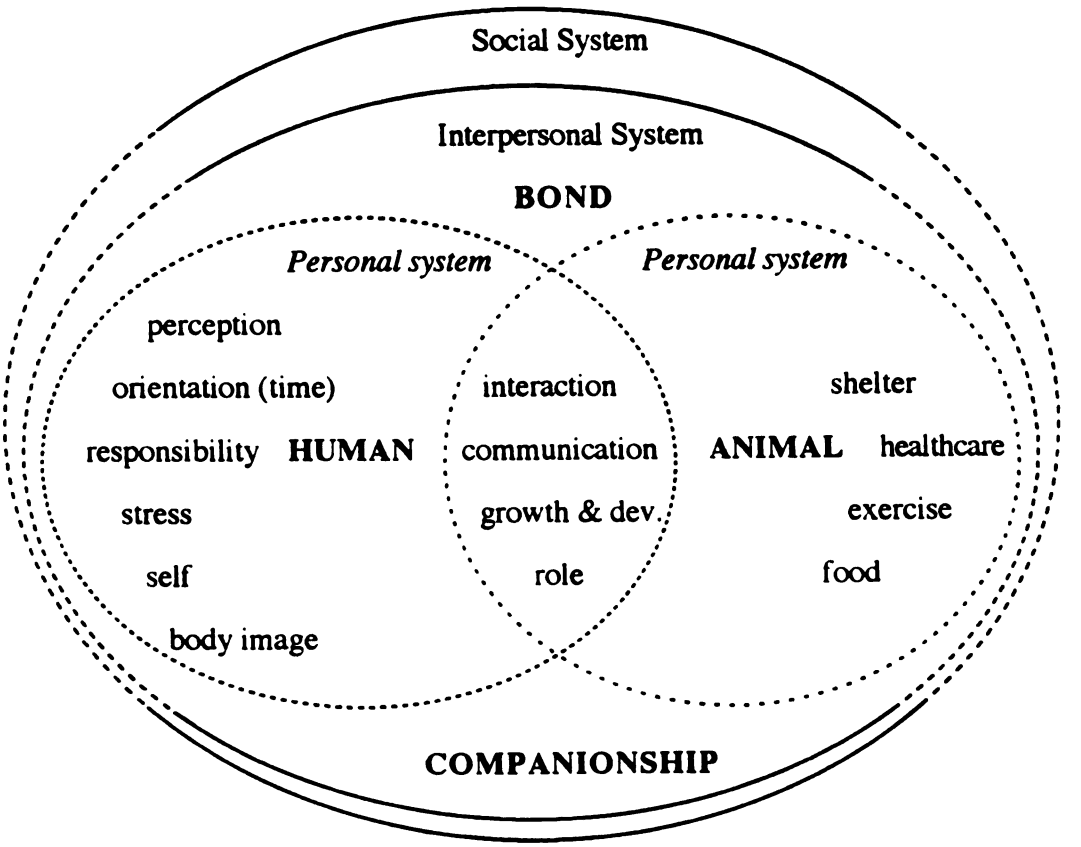

Figure 2. The human-companion animal bond adapted within King's conceptual framework for nursing within three interactive systems.

Self is a very abstract, subjective concept that is perceived in relation to other people and objects in the environment. Self is what an individual thinks of themselves and includes all that a person believes themselves to be, past, present and future (King, 1981). King believes that awareness of self is necessary to becoming a sensitive human being who is capable of forming relationships. In a human-companion animal bond, the pet provides positive feedback, which allows the human to increase self esteem. The pet

accomplishes this by a variety of means. Dogs almost always give their humans warm, greetings consisting of much tail wagging and licking. They are always available to talk to and do not criticize. They are non judgmental of human behaviors and forgive minor transgressions readily. They boost self esteem when they solicit attention, and enjoy the time spent with their humans. They enhance self perception when they reflect their humans' moods. When their human is happy they are bouncy and joyous. When their human is sad they hover and lay quietly with them (Cain, 1991; Catanzaro, 1988; Francis, 1991). This quality of loyalty is instrumental in the formation of the human-companion animal bond.

Body image is a personal and subjective concept. According to King (1981), body image is acquired through growth and development and is constantly changing as an individual's experience and perception change. King states, "It is a universal principle that individual's identify self in relation to their body appearance and others' reactions to them" (p.32). King also says, "Touch, tactile stimulation, is important for the development of a healthy body image" (p.72). Dogs provide ample opportunity for the exchange of touch. They constantly solicit touch or petting by maintaining a close proximity to their owners or often times by initiating the touch first through nuzzling, licking or leaning on their humans. This conveys a positive response to the human and helps build a positive body image and contributes to increased self esteem for both the human and the pet (Cain, 1991; Kidd & Feldman, 1981). One study found that petting a dog with whom a companion bond has been established resulted in lower blood pressures (Baun, Bergstrom, Langston, & Thoma, 1983).

Time is a universal concept that is relational, unidirectional, measurable and subjective. Time is defined in terms of the observer and gives order to the world (King, 1981). People that experience a disruption in their ability to accurately measure time are some what disoriented and may become further confused if steps are not taken to reorient

them. King suggests that nurses may help patients become time orientated through the use of clocks and calendars in the environment. A pet may function as a daily clock, demanding to be fed on time, to be walked, and to be toileted regularly. Providing basic care for a pet requires that life have a rhythm, and gives structure to the days and nights. This may be particularly useful for more isolated individuals.

Responsibility is cultivated by assuming a role of authority, power and decision making for the welfare of a pet. Successfully meeting the needs of a pet requires responsible behavior. When the basic needs of a pet, such as shelter, health care, exercise and food have been provided, a successful human-companion animal bond may be more easily formed. By meeting these pet needs and being responsible, the human can take pride in their accomplishments. This increases self image, boosting self esteem.

While this author concedes that animals experience stress and probably have decreased stress by virtue of the human-companion animal bond, stress as a concept has been placed in the domain of the personal system of the human, as this is a point of interest and rationale for the examination of the topic of human-companion animal bonds. Stress is a concept which manifests itself physiologically, psychologically, and socially. "People respond to life events based on their unique perceptions and their interpretation of the events" (King, 1981, p.98). The negative consequences of stress on health have been well documented. Many studies indicate that the perceived presence of social support aids in the reduction of stress (Callaghan & Morrissey, 1993; Cohen & Hoberman, 1983; Jacobson, 1986; Procidano & Heller, 1983; Wethington & Kessler, 1986). If pets are perceived as providing social support to their owners via the existence of a human-companion animal bond, then it can be argued that pets play a role in reducing stress. The presence of a bond with an animal may be a key factor in understanding the ways in which companion animals may actually influence health, both mental and physical. Researchers have begun to investigate the influence of companion animals on human health, using

methods which consider them as a type of social support (Allen, 1996; Garrity, Stallones, Marx & Johnson, 1989; Robb & Stegman, 1983; Rosenkoetter, 1991).

Concepts from King's systems framework which are the most relevant to the interpersonal dyad of the human-companion animal bond are (1) interaction, (2) communication, (3) growth and development, and (4) role. When these elements are present, there is the formation of a human-companion animal bond. This interpersonal dyad is formed by the interrelationship of the pet personal system and the human personal system.

Interactions are defined as, "The acts of two or more persons in mutual presence" (King, 1981, p.85). In the case of the human-companion animal bond interactions will take place between a person and a dog. Interactions are reciprocal in that each person reacts to the other. King further states, "there is a mutuality, an interdependence in the situation in which both achieve goals" (p. 84). Both the pet and the human interact to achieve the needs identified in their personal systems. The ownership of pets may also contribute to increased interactions with others. Proper care of a pet requires regular visits to the Veterinarian. Training a pet may require classes with other pet owners. Many activities revolve around pets such as obedience or conformation shows. Often times when walking a pet there is increased interactions with others because they are drawn to animals or may be out walking their own animals (Messent, 1983).

Communication is a means of exchanging information. Communication may be both verbal and nonverbal (King, 1981). Communication between humans and pets consists of both. Once properly trained, dogs respond to both verbal and nonverbal commands. Dogs are routinely trained to sit, stay, heel, and fetch and come on both verbal and nonverbal commands. The tone of voice used by the human can convey meanings such as happiness or anger. Dogs whine, grunt and bark. These vocal responses, when assessed in the context they are delivered, have various meanings. An

excited dog barks happily or a dog may bark out a warning at the approach of a stranger. Nonverbal communication is also an important means of information exchange between people and pets. Almost everyone has been taught that a wagging tail indicates a happy dog, Laid back ears and a show of teeth may indicate an animal is fearful or aggressive. Touch is also used as a form of communication. Petting conveys affection to the pet, while submitting to petting communicates affection and trust to the human. A pet that stays in close proximity to it's owner indicates commitment and affection to the human.

Growth and development is the process by which people develop and refine their concept of self through genetic endowment, meaningful and satisfying relationships and an environment conducive to helping individuals move toward maturity. Growth and development is a process that allows people to utilize their potential and achieve self actualization (King, 1981). When a human assumes the responsibility for providing a nurturing and safe environment for a pets' growth and development throughout its lifecycle, the human may also experiences growth and development (Katcher & Beck, 1987; Kidd & Feldman, 1981).

Role is a set of behaviors that are expected when occupying a defined position within a social system. Role is a relationship with one or more individuals (King, 1981). A role can only exist in relation to another role. Because a role is the occupation of a social construct, they are learned behaviors. According to King, "Socialization is a process whereby a person learns values, expected behaviors, rewards, and sanctions so that he can occupy a role in an organization"(p.94). This requires collaboration, understanding and communication to accomplish. As the human-companion animal bond evolves, both human and pet develop roles. The human nurtures, trains, feeds, provides exercise and shelter for the dog. The dog requires feeding and exercise in a timely fashion, acts as a social lubricant, provides affection and finds a role within the family which can take many forms. It may be a playmate or confidant, a hunting companion, a

show dog or a house pet. The mutual development of these roles then forms the structure of the human-companion animal bond, which may be considered a social system.

REVIEW OF LITERATURE

Social Support

The concept of social support is as old as humankind. People have always depended on one another for survival, as well as companionship. Whether hunting, harvesting the crops, raising the barn, having a baby, or going to a party, most people depend to some degree on others, for not only accomplishing tasks, but also deriving enjoyment or fulfillment in life. For women, these relationships are especially important. Gilligan (1982) suggests that women tend to see the world in terms of relationships. Inherently, women evaluate and define themselves in terms of their relationships with others. When problem solving all other points of view are considered. If relationships are important for women's development under normal circumstances, when women are stressed by illness or life transitions, these relationships become even more essential (Friedman, 1993; Harrison, Neufeld, & Kushner, 1995; Nichlols, 1995; Seckel, & Birney, 1996). Thus, when providing health care to women, providers must consider the availability and utilization patterns of social support used by their clients both under usual circumstances as well as during stressful periods.

In the 1970's several studies implied that social support could have a beneficial effect on decreasing the effects of stress and preventing mental disorders (Ducharme, Stevens & Rowat, 1994). The concept of "social support" has been used in its current form since that time. Weinert & Tilden (1990) note, "cumulative findings strongly indicate that social support can aid in recovery from hospitalization, surgery and illness; reduce pregnancy complications for women under stress; protect against psychological distress in adverse situations; and mediate some of the stress of maturational processes" (p. 212). While there is growing evidence that social support provides a positive effect on

health, there have been problems conceptualizing, defining and operationalizing it.

Social support has been defined as the existence of social bonds, social networks, meaningful social contact and the availability of confidants. (Ducharme et al. 1994). Calaghan & Morrissey (1993) suggest that social support may be expressed structurally or functionally. Social support is expressed structurally as bonds of family, marital status, and size of support networks and functionally by the offering emotional, physical or informational support. Yates (1995) breaks social support into three dimensions which are emotional, informational and instrumental support. Emotional support provides affection, liking, love and/or empathy. Informational support is advice on problem solving, suggestions about what to do, or where to go to get needed information. Instrumental support refers to goods and services such as money, help with cooking, cleaning or transportation.

Because the concept of social support is complex and multifactorial, attempts to quantify it have often been difficult. For example, some studies have identified the presence of social support by asking whether or not the client is married. Without additional information about the marital relationship this is a large assumption. Partners in some marriages may not provide emotional or social support to their spouses and may in fact be a source of stress. With out agreement on what is being measured and which aspect of social support is involved, it is difficult to compare results from various studies. The correlation of positive health outcomes with the existence of positive social support provides strong motivation to continue studying the phenomenon of social support (Cohen & Hoberman, 1983; Friedman, 1993; Harrison, Neufeld, & Kushner, 1995). Callaghan & Morrissey (1993) note that between 1984 and 1991 4,247 papers were published on the subject of social support in medical and social science journals indicating a large interest in the topic.

Norbeck (1982) puts forth these theoretical assumptions:

> (1) People need supportive relationships with others throughout the life span to manage the role demands of day to day living, as well as to cope with life transitions and stressors that may emerge; (2) Social support is given and received in the context of a network of relationships; (3) The relationships in the network have relative stability over time, especially those that comprise the inner circle or primary ties for the individual; (4) Supportive relationships are basically healthy, not pathological, in nature; (5) The type and amount of support needed is individually determined, based on individual differences and on characteristics of the situation; (6) The type and amount of support that is available also is determined by characteristics of the individual and of the situation. (p. 23-24)

Some studies imply that the value of social support lies in the individuals perception of its existence. People derive the benefits of social support if they believe that it is available to them, whether or not they utilize it. (Callaghan & Morrissey, 1993; Cohen & Hoberman, 1983; Jacobson, 1986; Procidano & Heller, 1983; Wethington & Kessler, 1986). Wethington & Kessler (1986) surveyed 1,269 adults asking about recent stressful life events, perceived social support, received social support and a psychological distress scale. They found that perceived support had a larger influence on psychological distress than did received support when stressful life events occurred. Additionally, the correlation between perceived and received support ranged from 0.02 to 0.20 and therefore had very little influence on one another. Cohen & Hoberman (1983) administered a number of instruments to college students. They included a life events scale, physical and depressive symptoms checklists, and social support surveys. One of their findings was that as perceived social support increased, depressive symptomatology decreased. Jacobson (1986) points out that perception of social support plays another role. If the support is perceived to be harmful or problematic it can cause a significant

negative effect on well being.

Two major theories of social support have emerged since the 1970's. The first proposes that social support acts as a buffer which protects people from stressful events in their lives (Cohen & Hoberman, 1983). Increased stress has been linked to mental and physical illnesses. According to the buffer theory of social support while everyone experiences stress, those with strong social support networks don't suffer the ill effects of the stress as much as those without social support. The second theory of social support is the attachment theory. It postulates that the secure attachments formed in childhood form the basis for developing socially supportive relationships in adulthood (Bowlby, 1971).

Many studies on social support have focused on female populations. Others, which included both men and women, found significant differences in the benefit of social support based on gender. In a study of rural elderly men and women between the ages of 64 and 98, Johnson (1996) found that married women and women between the ages of 64 to 74 had larger social support networks, more support and enjoyed better health than the other study participants while widowers over 75 with the least social support had the poorest health. Nichols (1995) had a similar finding with regard to gender in a study of adolescents, social support and coping. In her study females reported greater use of social support and psychological coping than did males. In a study of social support of women undergoing breast biopsies, Seckel & Birney (1996) found that women with decreased social support strength reported higher stress related to their breast biopsies.

Gilligan (1982) observes,

> For boys and men, separation and individuation are critically tied to gender identity since separation from the mother is essential for the development of masculinity. For girls and women, issues of femininity or feminine identity do not depend on the achievement of separation from the mother or on the progress of individuation. Since masculinity is defined through separation while femininity is defined through

> attachment, male gender identity is threatened by intimacy while female gender identity is threatened by separation. (p.8)

This theory may serve to explain why women may have larger support networks than men. It may also explain why women appear to benefit more from the bonds of social support. For men the use of social support networks, particularly outside the bonds of family is not as socially acceptable as it is for a woman. Throughout their lives most women have strong ties to both family and friendship networks that provide social support. Women are also more likely to avail themselves of structured types of social support from such areas as self help groups, health care providers and community resources.

While social support is complex and multifaceted, studies indicate that it is an important element to assess when providing health care and services to women. Harrison, Neufeld & Kushner (1995) examined women's social support in the context of life transitions. Transitions studied were returning to work after an absence of 3 years, childbirth and retirement. Seventeen women ranging in age from 24-65 years, identified support as someone to talk to, listen and explore ideas with. Listeners were considered as supportive if they were reliable and available when needed. Additionally, they had to allow the informant to make her own choices. Another finding was that women wanted support that was volunteered as opposed to support that had to be requested. Of interest is the fact that only one new mother identified help with child care or household tasks in their definition of social support. Some women viewed requests for help as an admission of inadequacy or dependence. This perception of burden on others is identified as a barrier to providing social support to women. This perception is increased if the woman needing social support feels unable to reciprocate in any way. In order to negotiate these life transitions these women had to change their perceptions and ask for the support in anticipation of stress, rather than waiting until it had reached crisis proportions. In other

words, the existence of social support is not enough. Women must be taught that it is acceptable to avail themselves, indeed even ask for support when necessary.

In order to provide comprehensive health care to women providers should assess the social support available to clients, as well as how these supports are utilized by the clients. Women should be encouraged to make full use of these supports. If social support is unavailable or absent the client should be directed to other sources of emotional support such as support groups, community agencies, or to another client with similar concerns. Ensuring that clients have access to sources of social support prior to a crisis increases the probability that they will be used when needed. Social support is an integral part of a women's life experience and should be included and assessed whenever health care is provided to women. Because of reciprocity issues and the need for non judgmental support, a dog may be the ideal source of social support for many women.

Human-Companion Animal Bond

The human-companion animal relationship is as old as domesticated animals. Based on archeological evidence, the first animal species to become domesticated was Canis lupus (the wolf), around 12,000 to 14,000 years ago (Coren, 1994; Serpell, 1996). Most scientists agree that the domesticated dog descended from the wolf. Research is showing that animal companionship not only improves the quality of life for many people, it can even create positive health outcomes for certain populations (Jorgenson, 1997). The literature can be divided into two types, studies based on pet ownership and studies in which animals have been used therapeutically.

Studies based on animals used therapeutically:

The first published reports on the use of animals in therapeutic settings is usually attributed to Dr. Levinson, a child psychiatrist who used his dog Jingles in treating children. He thought that Jingles helped children to be more at ease and facilitate communication by displaying unconditional acceptance (Levinson, 1965). Since then

animals have been used in a variety of settings including nursing homes, rehabilitation centers, mental institutions and jails. They have gained acceptance as service animals to the blind, wheel chair bound and the hearing impaired. As animals were used in therapeutic settings, anecdotal evidence emerged to support the idea that associations with animals were beneficial. About 20 years ago the topic was recognized as worthy of study. Three veterinarians and a physician founded the Delta Foundation which was established to study the interactions between people and animals. They coined the term "human animal bond" to describe a relationship that was more than simply maintaining an animal. This organization has grown into the Delta Society which has helped form many programs to develop and use the knowledge generated from the study of the human companion animal bond. The Delta Society has funded research on this topic as well. Membership in 1991 was about 2,600. Membership consisted of approximately a third veterinarians and human health care professionals, a third in academia and a third in veterinary technicians, volunteers and pet owners (Strimple, 1991).

Studies based on pet ownership:

One of the earliest quantitative research studies Friedmann, Katcher, Lynch & Thomas (1980) explored the relationship between animals and health. They found a positive relationship between pet ownership and one year survival after discharge from a coronary care unit after a heart attack or severe angina pectoris. Twenty eight percent of the non-pet owners died while only 6% of the pet owners died. Pet ownership was more highly correlated to survival than was marital status or family contacts The finding of decreased mortality with pet ownership prompted many other studies to try and define the variables that would account for positive health outcomes. Another study had subjects reading and petting a dog they had not met before and their own dog. Both systolic and diastolic blood pressures were reduced when petting a dog. There was a larger drop in blood pressure if the dog was one with which there was a bond rather than a dog they did

not know (Baun, Bergstrom, Langston & Thoma, 1984), suggesting that the presence of a relationship with the dog has additional beneficial effects.

The presence of a bond with an animal may be a key factor in understanding the ways in which companion animals influence both mental and physical health. Researchers have begun to investigate the influence of companion animals using methods which consider companion animals as a type of social support (Allen, 1996; Garrity, Stallones, Marx & Johnson, 1989; Robb & Stegman, 1983; Rosenkoetter, 1991). Allen, Blascovich, Tomaka, & Kelsey (1991) compared women's autonomic responses to stress in the presence of a self selected friend, in the presence of their own pet dogs, and with only the researcher. Women under stress exhibited significantly less autonomic reactivity, measured by heart rate, skin conductance response and blood pressure, in the presence of their pet dogs as compared with their friends or the researcher alone. Allen (1996) postulates that the presence of the pet dog provided a non evaluative type of social support that buffers physiological responses to acute stress. Findings from a national probability sample of elderly persons age 65 and older found that pet attachment and depression were significantly and inversely related (Garrity et al., 1989). They also found that retrospective measures of physical health, measured by doctor visits and hospitalization, were not influenced by pet ownership, but strong attachment to the pet was associated with enhanced physical health when human support was unavailable. Among respondents who were grieving and lacked a confidant, both pet ownership and pet attachment were associated with less depression. Siegel (1991) prospectively studied the utilization of physician services by elderly persons aged 65 and older. Pet owners reported fewer doctor contacts over a one year period than non pet owners. In this study pets also appeared to help buffer the effects of stress. The number of pre-baseline stressful life events was associated with increased doctor visits for non pet owners but not for pet owners.

Many people believe that having animals in their lives is beneficial and studies support this belief. As more studies are done, the definition of the relationship between pets and people is being further refined. It is clear that many people feel attached to their pets. Many feel that the quality and strength of attachment in the human-companion animal bond is an important predictor in obtaining the health benefits associated with pet ownership. Evidence of the strength of the human-companion animal bond exists in the literature. Cain (1983) found that eighty seven percent of pet owners perceived their pet to be a member of their family. Ten percent said they did not and three percent said both yes and no. Thirty six percent said that they thought of their pet as a person. Eighty one percent considered their pets "tuned in" to the feelings of the family members. Lockwood (1983) asked undergraduates to describe people in pictures. They were asked to interpret relationships and activities. They were either given pictures with just people or an identical set of pictures which included animals in non-interactive roles. The people in pictures with animals were perceived to be friendlier, happier, bolder and less tense. Ory & Goldberg (1983) found no relationship in elderly women between pet ownership and life satisfaction. There was actually a higher percentage of persons with household pets found to be unhappy. Eight percent of pet owners reported being unhappy compared to five and a half percent of non-owners. Once the subjects were separated based on reporting feeling attachment to their pets the results changed. They did find a significant relationship between pet ownership and happiness. While statistically significant, it should be noted that 45.2% of attached owners report being very happy compared to 43.2% of non owners and 31.4% of unattached pet owners. This finding points out a very important consideration of pet ownership. The simple owning of a pet may not indicate that the pet is providing any form of support. Owning pets may be considered a burden or stressful to some people.

Another benefit of pet ownership is increased communication with others. Indeed,

pet ownership may actually facilitate the development of friendships. One study looked at the socializing effects of service dogs for people with disabilities that required them to be in a wheelchair. Subjects reported that they received a significant increase in social greetings, both from adults and children while out on routine trips with their service dogs, as compared to trips with out the animals. They also reported an increase in the number of outings that they took after having the dog (Hart, Hart, & Bergin, 1987). Messent (1983) looked at social contacts made by pet owners walking with and without their dogs. Subjects were asked to walk through a park and some of the surrounding streets. He found that the dogs acted as a "social lubricant", by increasing the number of contacts between the subjects and strangers. The contact rate at the park was high compared to that on the surrounding streets, but only when the dog was present. Messent (1983) concludes that the study suggested friendships soon develop with others using the same area and that other dog owners are especially likely to become friends because on average the conversations with this group lasted longer than for those without dogs. He also found that the walks with dogs lasted longer. This may have some additional health benefit to people in the form of increased exercise.

Owning and caring for a pet requires a person to fill the role of owner and nurturer to a dependent animal. The sense of responsibility most owners feel for the care and welfare of their pets allows people to gain the pleasure of nurturing. A happy companion animal gives feedback by loving their owner unconditionally. This also helps build self esteem (Kidd & Feldman, 1981). Companion animals are not concerned with appearance, abilities, age or economic status. They can be a constant, non-judgmental source of support. They may also become a source of caring, affection, humor and comfort (Rosenkoetter, 1991). Siegel (1993) states,

> Positive responses are initially elicited from tactile contact or the good feelings that are generated when a pet shows enthusiasm for seeing its owner. The continued

pairing of the pet with good feelings then leads the owner to view the animal as a source of comfort (p.163)

Summary

There is growing evidence that companion animals can enhance human existence (Jorgenson, 1997). They do this by providing companionship, social support, and interactions which help orient their owners to time, self, others, and increasing self esteem. They can facilitate the reduction of stress and loneliness as well.

Clearly, there are many people that can benefit from associations with companion animals. In order for the APN to properly assess a family, they must understand when the pet is perceived as an integral part of the family system. It is especially important not to discount the relationship or the human companion animal bond when the pet may constitute the only family an individual has and to consider that concern for a pet may override concern for self. Unless the role of the companion animal is considered in assessments and strategies for wellness, clients may be non compliant with some aspects of their care. Sick individuals may delay seeking care or refuse care because they are concerned about who will care for their pets in their absence. Elders may resist assisted living arrangements if it means abandoning a pet. Children may pine for pets that they cannot visit with during hospitalizations. Health care workers often recommend that people with compromised immune systems give up their pets. Many AIDS patients have faced the prospect of having to give up their pets. Acknowledging the importance of the human-animal companion bond, many people have banded together to enable AIDS patients to keep their animals. One such organization is Pets are wonderful support or "PAWS" (Gorczyca, 1990). Veterinarians have come up with guidelines to reduce the risk of zoonotic illnesses for immunocompromised patients (Gill & Stone, 1992). As pet ownership continues to increase, health care workers must remain cognizant of these issues.

Critique of literature

One of the most obvious limitations of this literature is the paucity of studies. This is a topic that is only now coming into favor. While the topic has popular appeal, the number of studies are relatively limited. Until recently, most of the studies have been observational rather than empirical. As with any new field of study, ideas are being developed independently with little communication between scientific disciplines. Some are interested in therapy animals or visiting animal programs. Others are interested in companion animals.

Many of the concepts inherent in human-animal studies are subjective and difficult to measure and this has limited the number of empirical studies. Even the concept of human social support has been plagued with this problem. Until concepts such as bonding, pets, support and companionship can be defined and measured this will remain a confounding problem. Another limitation of the research is that it is generalizable only to the population of people who enjoy the company of animals. If positive benefits of pet ownership are to be utilized, we must be able to determine what segments of the population this is acceptable for. Most researchers involved in these studies are working from the premise that human companion bonds are desirable and therefore are less likely to look for or identify the negative aspects of companion animal ownership.

Other difficulties encountered in human-companion animal research occur because many different disciplines are attempting to quantify and measure it. This topic is of interest to human medicine, veterinarian medicine, nursing, physical therapy, social work, psychology, pet owners and animal behaviorists to mention but a few. Each discipline is somewhat segregated by politics, competing theories and jargon. It is essential that information be made available to all interested parties in a form that is readily understandable to all. Collaboration and communication must be achieved in order to enhance the efforts of all.

METHODOLOGY

This study determines if there is a correlation between human-companion animal bonds, perceived social support from friends, perceived social support from family, perceived social support from companion dogs, and health outcomes.

Sample

The convenience sample consisted of 47 voluntary self selected women dog owners, whose dogs live with them. They were over 18 years of age and were able to read English. These women were recruited at 4 beauty salons. These salons were located in Ann Arbor, and E. Lansing. Stylists at each establishment asked clients if they owned a dog and were interested in participating. Another site for distributing questionnaires was the Small Animal Clinic at Michigan State University. The receptionist asked female clients if they owned a dog and were interested in participating. An explanatory letter to subjects containing a brief description of the study and contact numbers was provided. (Appendix A)

Procedures

Packets with questionnaires were distributed and collected by the beautician in the salons and returned by mail from the Small Animal Clinic. Those willing to fill out the survey returned them in the packet envelop to ensure confidentiality. Participants were asked to fill out four surveys. The first questionnaire was the Pet Attitude Inventory. (Appendix B) The remaining tools measure perceived social support from family (Appendix C), perceived social support from friends (Appendix D), and the fourth survey measures perceived social support from dogs. (Appendix E) It took 15-20 minutes to complete the surveys.

Instruments

The first tool is the Pet Attitude Inventory (Wilson, Netting & New, 1987). This is a two track instrument designed for pet owners and non-pet owners. It was designed to

measure pet ownership attitudes and attachment levels. For this study, only the Pet Attitude Inventory for pet owners was used. It contains seven common demographic and self-rated health questions and 44 pet attitude questions. Additional questions added to the survey asked participants to recall the number of days of work missed due to illness, the number of doctor visits for illness, and whether they have experienced a serious physical illness, injury or surgery within the last year. A question on income level was also added. According to the authors, the Pet Attitude Inventory has significant content validity as determined by experts in public health, veterinary medicine, psychology, social work, and aging. It has not been tested for reliability. This study used a total of 55 of the questions from the pet owner survey. Demographic data was collected for a description of the sample.

The rest of the instruments are designed for the measurement of perceived social support (Procidano & Heller, 1983). These tools measure perceived social support from both family (PSS-Fa) and friends (PSS-Fr). Each section has 20 items which are scored based on yes, no or don't know answers. For the purposes of this study these items were administered as a 5 point likert scale. Additionally, a third section was added to measure the perceived social support provided by companion dogs (PSS-D). (Appendix E) This was an adapted version from the perceived social support from friends scale. In the construction of the perceived social support scales for friends and family, Procidano & Heller (1983) report internal consistencies with a Cronbach's alpha of .88 and .90 respectively. A pretest indicated a high test-retest reliability (r=.83).

Operationalization of variables

The variables in this study are health outcomes, dog ownership, human-animal companion bond, and perceived social support from friends, family and dogs.

Health outcomes was measured by the self health rating, number of sick days recalled during the last year, number of doctor visits for illness and number of serious physical illnesses, injuries or surgeries reported from questions # 7-10 of the pet attitude survey.

Human-companion animal bond was measured by the response to questions about attachment to the dog, time the dog spends indoors, whether time spent with the dog and touching the dog is enjoyable, whether the dog helps the subject to feel better when physically ill, or sad, whether the subject talks to their dog, noting whether or not the dog responds when talked to, and whether or not the dog provides companionship from the pet attitude inventory, # 27, 28, 31-34, 39, 42 and 49.

Perceived social support from friends was the score from the PSS-Fr instrument.

Perceived social support from family was the score from the PSS-Fa instrument.

Perceived social support from dogs was the score from the PSS-D instrument.

Data analysis

A correlational analysis was done on the variables of health outcome, PSS-Fr, PSS-Fa, PSS-D, and human-companion animal bond. Descriptive statistics were used to examine the demographic data.

Human Subjects

The subjects in this study participated voluntarily as indicated by filling out and returning the questionnaires. Cover letters explaining the project and providing contact phone numbers were provided at the individual sites for potential volunteers to read. (Appendix A) Confidentiality was provided by having no identifying information put on the collected materials as well as providing an unmarked envelop to return the questionnaires in. Results are reported as a group. Results of the study are available to participants upon request. There are no known benefits or risks associated with filling out these surveys. The proposal was submitted to and approved by the Michigan State

University committee on Research Involving Human Subjects. (IRB#98-176, Appendix F)

RESULTS

Demographics

Of the 125 surveys left at 5 sites, 47 were completed and returned. One site in E. Lansing did not distribute any of the questionnaires at all. This was a 38% response rate. Respondents came from the Michigan State Small Animal Clinic in E. Lansing (N=28), Salon #1 in Ann Arbor (N=12), Salon #2 in E. Lansing (N=3), and Salon #3 in E. Lansing (N=4). (Table 1) Average yearly income ranged from under $10,000 to over $200,000 with 26% of those surveyed falling into the $26,000-$50,000 category (N=12) and 32% in the $51,000-$75,000 category (N=15). Twenty-eight percent of respondents were never married (N=13) and 55% were married (N=26). Eighteen percent were divorced, separated or widowed (N=8). The highest level of education completed ranged from high school to postgraduate with 34% (N=16) in the postgraduate category. Twenty one percent (N=10) were college graduates, 30% (N=14) had 1-3 years of college and 15% (N=7) had completed high school. No respondents reported an educational level of less than high school graduate although it was a choice on the survey. Ages ranged from 24 years to 79 years, with a mean age of 43 years. Health outcome scores ranged from 1 to 51 with a mean of 10.

In answer to the first research question, is there a correlation between the human-companion animal bond (BOND) and perceived social support from family (SSFA), perceived social support from friends (SSFR) and perceived social support from companion dogs (SSDO) the results are mixed. There was a significant correlation between the human-companion animal bond and perceived social support from dogs ($r=.57$, $p=.00$). (Table 2) The human-companion animal bond did not correlate significantly with any of the other variables in this study.

Table 1: Demographics

Site	Frequency	Percent
MSU Small Animal Clinic	28	60
Salon #1, Ann Arbor	12	26
Salon #2, E. Lansing	3	6
Salon #3, E. Lansing	4	8

Average yearly household income	Frequency	Percent
Under $10,000	3	6
$10,000-25,000	4	9
$26,000-$50,000	12	26
$51,000-$75,000	15	32
$76,000-$100,000	7	15
$101,000-$150,000	3	6
$176,000-$200,000	1	2
Greater than $200,000	2	4

Marital Status	Frequency	Percent
Never Married	13	28
Married	26	55
Divorced/Separated	4	9
Widowed	4	9

Highest level of Education completed	Frequency	Percent
High School	7	15
College 1-3 years	14	30
College Graduate	10	21
Postgraduate	16	34

	Mean	Minimum	Maximum
Age in years	43	24	79

	Mean	Minimum	Maximum
Health outcomes	10	1	51

Table 2: Correlations

	HEAOUT	BOND	SSFA	SSFR	SSDO
HEAOUT	1.00 (46)				
BOND	.22 (44)	1.00 (45)			
SSFA	-.04 (45)	.17 (44)	1.00 (46)		
SSFR	-.16 (46)	.16 (45)	.32* (46)	1.00 (47)	
SSDO	.20 (46)	.57* (45)	.28 (46)	.29* (47)	1.00 (47)

* $p \leq .05$

The second question asks, is there a correlation between the human-companion animal bond and health outcomes (HEAOUT)? The correlation was not significant (r=.19, p=.18). The third question, is there a correlation between health outcomes and the perceived social support from family, friends and companion dogs also turned out to be not significant. Interestingly, health outcomes did not correlate significantly with any other variable in the study.

The correlations among the three social support scales also revealed interesting results. The well established perceived social support from family and friends correlated well with each other (r=.32, p=.03). The newly constructed perceived social support from companion dogs correlated with perceived social support from friends (r=.29, p=.05). Perceived social support from dogs was not significantly correlated with perceived social support from family (r=.28, p=.06).

DISCUSSION

Perceived social support from friends correlated with perceived social support from companion dogs. This suggests the possibility that the perceived social support provided by friends and companion dogs may be similar in nature. The fact that perceived social support from dogs correlated significantly with perceived social support from friends and approached significance with perceived social support from family may indicate that with some revisions this scale could be used to assess for social support from dogs, much in the same way human social support is evaluated.

The correlation with perceived social support from dogs and the human-companion animal bond suggests that a relationship exists between the two variables. This relationship deserves further exploration. It suggests that the presence of a human-companion animal bond may be necessary to perceive social support from companion dogs. It is also possible that it does not. Perhaps using the perceived social support from dogs scale may be useful in determining if a human-companion animal bond exists.

The correlation between perceived social support from friends and perceived social support from family suggests that there is a relationship between these two types of support. Perceived social support from companion dogs correlated with perceived social support from friends and approached significance with perceived social support from families ($r=.28$, $p=.06$). It is possible that with some adjustment of the perceived social support from companion dogs scale that it will correlate more strongly with the perceived social support from family scale. It is also possible that the lack of a significant correlation between perceived social support from dogs and perceived social support from family suggests that the support provided by dogs is different than that provided by family.

The lack of significance in the correlation between health outcomes and social support may be a result of not determining the presence of stress in the lives of the respondents. According to the buffer theory of social support, the presence of social

support is only beneficial during times of high stress and of no significance when there are no stressors present (Cohen & Hoberman, 1983). There may also be other variables which have not been considered and which may confound the variables considered in this study.

Limitations

The respondents in this study were very homogeneous. They were well educated and all of the respondents were white. The sample was also very small. A larger sample with more diversity may yield different results. A control group of female non pet owners may also shed some light on some of these correlations. Gathering data in a non-university town may also help increase the diversity of the sample. Further statistical analysis of the created perceived social support from dogs scale may help strengthen its usefulness and identify items that are more appropriate for use. In analyzing responses it was clear that some of the questions regarding dogs were difficult to interpret. Question number 12 of the social support from friends survey is, "My friends are good at helping me solve problems". Only 4 respondents (9%) answered "don't know" and 40 (85%) "agreed" or "strongly agreed". Question number 12 of the perceived social support from dogs is, "My dog helps me to solve problems". Twenty of the respondents (43%) replied "don't know" and 14 (30%) "agreed" or "strongly agreed" on this item. Perhaps a question about attachment would work better.

Implications for future research

As human-companion animal bond research has progressed, increasing attention is being focused on the human social support paradigm. Because a significant correlation was found between the human-companion animal bond and the perceived social support from dogs, the perceived social support from companion dogs scale may well provide an adequate measuring tool for predicting the presence of a human-companion animal bond for future research or to help develop a separate scale for it. The relationship between

perceived social support from companion dogs and the human-companion bond warrants further study to determine if there is causality. Must a human-companion animal bond exist in order to perceive social support from companion dogs? The lack of a significant correlation between the perceived social support from family and companion dogs indicates that some refinement of the perceived social support from dogs scale is needed. If this can be accomplished, research can more easily follow the path of human social support studies to see if social support from companion dogs can confer the same type of health benefits as reported in the literature on human social support. Future research in this area will depend on empirical measurement of human-companion animal bond. A valid measure of the human-companion animal bond would also be useful in other studies involving the interaction of companion animals and humans. The development of a survey tool depends on the consistency and validity over time and in multiple studies.

As pointed out earlier the lack of a correlation between health outcomes and social support may be a result of a lack of measurement of stress in the lives of the respondents. According to the buffering theory of social support, the presence or absence of social support is unimportant unless stress is experienced. Future research should address this by measuring respondents for stress. A larger sample from a more diverse population is also necessary to strengthen results.

Future research should also evaluate whether or not social support from dogs has an impact on men's health. Other direct benefits of dog ownership such as its impact on depression, physical fitness, and loneliness should also continue to be studied. It would also be of interest to see if social support from other species of pets can be measured in the same manner as that of dogs. Another area to investigate would be to determine if social support from dogs conveys any benefits to respondents who lack human social support. A tool that can measure social support from dogs would make this possible.

Implications for the APN

Recognizing the significance of a family pet when assessing a family is an important part of understanding the family as a whole. With over 50% of households owning a pet (Allen, 1996; Cain, 1991; Haggerty-Davis & McCreary Juhasz, 1995; Jorgenson, 1997) and at least 80% considering these pets family members (Cain, 1983; Sussman, 1985) it is apparent that any time an assessment of support or family is necessary the presence of pets and their importance to the family should also be assessed. Relationships between the human and the pet can be used to encourage specific behaviors. Some one embarking upon an exercise program may enjoy walking more if they take the dog along. Stroking dogs has been shown to lower blood pressure levels. Perhaps something as simple as telling a patient to pet their dog to relax can help to lower blood pressures.

Lonely, depressed or isolated individuals may benefit from the company of a companion animal. In this survey 84% (N=38) reported meeting people within the last month because of their dog. The number of contacts reported ranged from 2 to greater than 50.

For many, the rigors of pet ownership such as the expense, the training requirements, and maintenance needs may present substantial obstacles to pet ownership. Supporting the human-companion animal bond may necessitate finding additional resources with in the community for patients. Additional precautions may be necessary for clients with diseases that cause immuno-supression. Since the onset of the AIDS crisis, guidelines have been developed to allow those with suppressed immune systems to continue to enjoy the benefits of pet ownership. Pet walking services are available in many communities or a neighbor can be utilized to do this chore. Some communities have reduced fees for veterinary services at shelters or scholarship type funds for families with low incomes to help cover the cost of veterinary care. Some veterinarians will make

house calls. The APN should be familiar with these resources in their communities in order to make appropriate referrals. Recognizing and supporting the human-companion animal bond is akin to providing the same type of services for other family members.

A good working knowledge of the human-companion animal bond may allow the APN to tailor interventions for health outcome goals to specific families. The APN should be familiar with community resources to help support the human-companion animal bond. In the case of the immuno-supressed patient, the APN should be aware of current guidelines for the maintenance of pets to ensure the safety of the patient. Understanding the importance of the human-companion animal bond will help the APN to support the relationship rather than recommend that the client get rid of a pet who has become a family member. It is a more realistic goal to ensure that the pet is parasite free and clean than to expect the surrender of a pet. Before recommending that a client acquire a pet, the APN should research the animal and the client to ensure a good fit or refer the client to someone more knowledgeable such as a veterinarian or the local animal shelter.

Before discussing the acquisition of a pet, the APN must consider a number of factors. A knowledge of different species as well as different breeds of animals is important, as well as an understanding of the expense and maintenance required for upkeep. Indeed, not everyone wants or likes animals. This raises the question of how to assess clients to determine if a companion animal may be appropriate. Studies have shown that adults attitudes are highly correlated with previous exposure to pet animals during childhood (Kidd & Kidd, 1980; Serpell, 1981). In this study 44 of the 47 respondents had pets during childhood. It also appears that people prefer as adults the same type of pets that they had in childhood (Serpell, 1981). Therefore, assessing the past pattern of pet ownership may yield important information about the possible benefits of owning a pet for certain clients. Paul & Serpell, (1993) gave a questionnaire to college students and asked them to indicate any pets they had in childhood and to quantify the

importance of the relationship they had with their pets. Those that reported having more important pets in childhood also described their parents attitudes to pets as being more positive. This suggests that while a pet may be an appropriate intervention for a child or adolescent client, it may not work if the parents are not positively inclined. The implication of this for the APN reiterates the need to assess the whole family for attitudes towards companion animals before suggesting the acquisition of a pet. Other considerations are things such as age of family members, allergies, environment, patient lifestyle and resources. There may be young children in the home that could be endangered by an animal or they may not be old enough to treat an animal with gentleness and there by endanger the animal. If any family members have allergies to an animal, it may be harmful to their health to bring an animal into the home. Certain pets such as dogs require frequent walks and interaction with their owners. A person considering getting a dog must be prepared to return home regularly for letting the animal outside. They need to be aware that boarding a dog can be expensive. Pets are not welcome in many places and therefore may limit travel. Caring for a pet can become very expensive. They require veterinary care, medications, food, supplies and training. Before bringing a pet home, families should be aware of these expenses.

Implications for nursing education

Nursing schools, at both the undergraduate and graduate levels must teach about the importance of the human-companion animal bond. Over time the definition of family has changed. Families may now be two same sexed partners, or close friends living together whose biological family lives too far away for day to day support. More people are living alone and there are more single parent families. We must expand our view of families to include all of these possibilities and teach nursing students to include pets in this constellation. By including pets in the definition of family, it is also inherent that they must be included in the assessment of any family.

Nurses are taught to tailor interventions to individuals. They need to understand the role of the family pet so that the human-companion animal relationship can be incorporated into specific interventions such as being oriented to time, the need for exercises or for biofeedback to reduce stress or blood pressure. An elderly client that has difficulty remembering to take blood pressure medication could be instructed to take their pill when they feed the dog. Clients may be more willing to walk if they understand the importance of exercising the dog. If a hypertensive individual enjoys petting their dog, they may find that it is easier to become relaxed if instructed to pet the dog when they are stressed. Petting the dog may be useful for centering using bio-feedback techniques that help reduce blood pressure.

The trend of increasing home care makes it imperative that nurses be taught about zoonotic illnesses. A section on these should be added to pathophysiology classes. A better understanding of the fact that the pet is a family member and the knowledge of how to reduce the risk of zoonotic illnesses is necessary to prepare realistic therapeutic interventions and goals. Nurses need to have a passing knowledge of immunizations for pets and what is needed in time and financial commitments for acquiring, training and maintaining a pet. They should be taught the current accepted guidelines for keeping pets in the homes of clients that are immuno-supressed. Lectures on trauma and child safety should include the dangers and consequences of animal bites. When discussing child proofing a home for a new child, safety around pets should be included. Young children should never be left alone with the family dog for example. In some instances it may be necessary to remove an animal from the home as when a clients allergies and asthma are aggravated or a specific animal is not tolerating a new family member. Nurses should be taught that there may be community resources for pets available in their communities. Many are unaware that there are organizations which provide funds for veterinary care for low income people. Reduced cost spaying and neutering may be available at local

shelters. There are organizations which assist in the placement of pets into new homes. Nurses should be instructed to develop collaborative relationships with veterinarians as well as other health care professionals.

Conclusion

It is hoped that this study has delineated the importance of the human-animal companion bond. Further it is hoped that a contribution has been made toward empirically defining the human-companion animal bond. Animals have played a role in the development of human civilization. It is time for the scientific community to recognize the contribution of pets to our well being and to develop scientific theories to describe these relationships. Only then can the actual risks and benefits of the human-companion animal bond be determined.

Appendix A

APPENDIX A

Letter to Subjects

Attention Women Dog Owners,

Do your family, friends and pets influence your health? Studies have shown that having friends and family available for support is helpful for healthy coping with everyday life as well as during stressful times. Other studies are starting to show that pets can also have a positive influence on our health. I am a graduate student in the College of Nursing at Michigan State University. I am conducting a study for my thesis on the effects of owning a dog and the effects of having human social support on women's health. The results of this study may help health care workers to develop strategies in care giving that assess and use a larger arsenal of support for women.

Your voluntary agreement to participate is indicated by completing and returning these questionnaires in the envelope that has been provided. The questionnaires will take 15-20 minutes to complete. Please do not write your name on the questionnaires. All personal information provided by you will be treated confidentially. If you desire, I would also be happy to share the results of the study with you.

If you have any further questions about this study, please feel free to call me at (734) 663-4571 or Linda Spence, PhD, RN., my advisor at (517) 353-8684.

Thank you for your consideration.
Bela J. Selzer, RN

Appendix B

APPENDIX B

Pet Attitude Inventory

Directions: Circle the appropriate response.

1. What is your marital status?
    1. Never married
    2. Married
    3. Divorced/Separated
    4. Widowed

2. On your last birthday, how old were you?
    Write in, _____

3. What is your race?
    1. Black
    2. White
    3. Hispanic
    4. Native American
    5. Asian
    6. Other, specify _____

4. What is the highest level that you completed in school?
    1. Middle School
    2. High School
    3. College, 1-3 years
    4. College graduate
    5. Postgraduate

5. In what kind of housing do you live?
    1. Single family
    2. Apartment
    3. Trailer
    4. Townhouse/Condo
    5. Institutional (e.g. nursing home)
    6. Other

6. What is your household average yearly income?
    1. Under $10,000
    2. $10,000-$25,000
    3. $26,000-$50,000
    4. $51,000-$75,000
    5. $76,000-$100,000
    6. $101,000-$150,000
    7. $151,000-$200,000
    8. Greater than $200,000

7. How would you rate your health over the past year?
    1. Excellent
    2. Good
    3. Fair
    4. Poor

8. How many days have you been sick in the last year? (Include colds, infections hospitalizations, etc)
    _____(Number of days)

9. How many times in the last year did you see a Doctor because of illness?
    _____(Number of times)

10. Have you had a serious physical illness, injury or surgery in the past 12 months? (Circle all that apply)
    1. Serious physical illness
    2. Injury
    3. Surgery
    4. None

Pet Survey

11. Did you grow up with pets?
    1. Yes
    2. No

12. When did you first have responsibility for the care of a pet? (If answer is NEVER go to question #16)
    1. Never
    2. Childhood (1-12 years)
    3. Adolescence (13-18 years)
    4. Young Adult (19-30 years)
    5. Middle Adult (31-61)
    6. Older Adult (62 and older)

13. What kind of pet was it?
    1. Bird
    2. Cat
    3. Dog
    4. Other_____

14. How attached were you to this pet?
    1. Very attached
    2. Attached
    3. Not very attached

15. What happened to this pet?
    1. Died
    2. Gave it away (Reason)
       _____
    3. Ran away (disappeared)
    4. Other _____

16. At what stage of your life did you have pets? (Circle all that apply)
    1. Childhood (1-12 years)
    2. Adolescence (13-18 years)
    3. Young Adult (19-30 years)
    4. Middle Adult (31-61)
    5. Older Adult (62 and older)

17. How many animals do you have now?
    1. _____Number of birds
    2. _____Number of cats
    3. _____Number of dogs
    4. _____Number of other animals

If you have more than one dog now, which one are you the most attached to? (If you cannot pick a favorite, choose the dog that you have had the LONGEST.)

18. What is the name of this dog?
    _____

19. Why did you give it this name?
    1. Don't know why
    2. First name that came to mind
    3. It looked like it's name (e.g. Spot because it had spots)
    4. Named it after a friend or relative
    5. To explain a characteristic (e.g. Trouble since he was always in trouble)
    6. Was already named when I got it
    7. Other _____

20. Have you ever had another pet with this name?
    1. Yes
    2. No

21. Is this dog male or female?
    1. Male
    2. Female

22. Is this dog spayed or neutered (fixed)? (If YES, go to question #24)
    1. Yes
    2. No

23. If NO, what is the primary reason?
    1. Want puppies
    2. Don't like the idea
    3. Makes them fat
    4. Makes them lazy
    5. Too expensive
    6. Too much trouble
    7. Other _____

24. How long have you had this dog?
    1. Less than one year
    2. 1-5 years
    3. 6-10 years
    4. More than 10 years

25. How old is your dog now?
    1. Less than one year
    2. 1-5 years
    3. 6-10 years
    4. More than 10 years

26. How did you get this dog?
    1. Adopted from a shelter
    2. Born to a dog I already own
    3. Bought the dog
    4. Gift
    5. Stray (just showed up)
    6. Other _____

27. People have different attachments to their dogs. How attached are you to your dog?
    1. Very attached
    2. Attached
    3. Not very attached
    4. Not attached

28. How often does your dog stay inside your house or apartment?
    1. Always stays inside
    2. Frequently stays inside
    3. Seldom stays inside
    4. Never allowed inside

29. Who usually takes the most care of this pet?
    1. Yourself
    2. Other household member

30. How much time (on an average daily basis) do you spend doing something with or for your dog, such as grooming, petting, walking, or feeding it?
    1. One hour or less
    2. More than one hour

31. Is the time spent in these activities...
    1. Enjoyable?
    2. Somewhat enjoyable?
    3. Not enjoyable?

32. Does touching your dog...
    1. Make you feel better?
    2. Make no difference in how how you feel?
    3. Make you feel worse?

33. When you physically feel bad, does your dog...
    1. Make you feel better?
    2. Make no difference in how how you feel?
    3. Make you feel worse?

34. When you are feeling sad, does your dog...
    1. Make you feel better?
    2. Make no difference in how how you feel?
    3. Make you feel worse?

35. If you were to take a trip, would you most likely...
    1. Board the dog?
    2. Find someone to care for the dog in their home?
    3. Have someone come into your home to care for the dog?
    4. Take the dog with you?
    5. Other _____

36. Do you worry about your dog's future if something were to happen to happen to you?
    1. Yes
    2. No

37. If you were hospitalized, who would take care of your dog?
    1. Family
    2. Friend or neighbors
    3. Kennel
    4. No one
    5. Other _____

38. If you could find someone who would care for your dog in a loving manner, would you give it up?
    1. Yes
    2. No
    3. Don't know

39. Do you talk to your dog other than giving it instructions such as sit, come, etc?? (If NO, go to question #44)
    1. No
    2. Yes

40. If YES, when do you talk to your dog? (Circle all that apply)
    1. When I am upset
    2. When I am happy
    3. When there is no one else to talk to.
    4. Other _____

41. How often do you talk to your dog?
    1. A lot
    2. A little

42. Does your dog respond when you talk to it?
    1. Yes
    2. No

43. Do you confide in your dog? (If NO, go to question #46)
    1. No
    2. Yes

44. If YES, do you confide in your dog more easily than a person? (If No, go to question #46)
    1. No
    2. Yes

45. If YES, why?
    1. Does not judge me
    2. Does no talk back to me
    3. Loves me regardless of what I say
    4. No one else to talk to
    5. Other _____

46. Have you interacted with people because of your dog? (e.g. do you talk to your neighbors when out walking the dog?) (If NO, go to question #48)
    1. Yes
    2. No

47. If YES, how many different people have you spoken to in a month's time because of the dog?
    _____(Number of people)

48. Do you talk with other people about your dog?
    1. Yes
    2. No

49. How much companionship does your dog give you?
    1. A lot
    2. A little
    3. None

50. If your dog died, would you get another one?
    1. Yes
    2. No
    3. Maybe

51. Is owning your dog a burden? (If NEVER, go to question #53)
    1. Never
    2. Sometimes
    3. Always

52. If SOMETIMES or ALWAYS, why?
    1. Costs too much
    2. It is a nuisance
    3. Hard to get away from home
    4. Tears things up
    5. Other _____

53. What is your reason(s) for having a dog? (Circle all that apply)
    1. I enjoy (love) animals
    2. I want a pet for protection
    3. I want some companionship
    4. I want something to take care of.
    5. I want something to keep me busy
    6. I was given this dog
    7. Other _____

54. Of all of the responses circled in question #53, which is the MOST important reason? (Enter the number from the answer in #53)
    _____

This is the end of the Pet Attitude Inventory. Please continue and fill out the Family, Friends and Dog support questionnaires on the next few pages.

Appendix C

APPENDIX C

Perceived Social Support from Family Survey

Directions: The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with family. For each statement there are five possible answers: Strongly agree, agree, don't know, disagree and strongly disagree. Please check the answer that you choose for each item.

	strongly agree	agree	don't know	strongly disagree	disagree
1. My family gives me the moral support I need.					
2. I get good ideas about how to do things or make things from my family.					
3. Most other people are closer to their family than I am.					
4. When I confide in members of my family who are closest to me, I get the idea that it makes them uncomfortable.					
5. My family enjoys hearing about what I think.					
6. Members of my family share many of my interests.					
7. Certain members of my family come to me when they have problems or need advice.					
8. I rely on my family for emotional support.					
9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.					
10. My family and I are very open about what we think about things.					
11. My family is sensitive to my personal needs.					
12. Members of my family come to me for emotional support.					
13. Members of my family are good at helping me solve problems.					
14. I have a deep sharing relationship with a number of members of my family					
15. Members of my family get good ideas about how to do things or make things from me.					
16. When I confide in members of my family, it makes me uncomfortable.					
17. Members of my family seek me out for companionship.					
18. I think that my family feels that I'm good at helping them solve problems.					
19. I don't have a relationship with members of my family that is as close as other people's relationships with family members.					
20. I wish my family were much different.					

Appendix D

APPENDIX D

Perceived Social Support from Friends Survey

Directions: The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with friends. For each statement there are five possible answers: Strongly agree, agree, don't know, disagree and strongly disagree. Please check the answer that you choose for each item.

	strongly agree	agree	don't know	strongly disagree	disagree
1. My friends give me the moral support I need.					
2. Most other people are closer to their friends than I am.					
3. My friends enjoy hearing about what I think.					
4. Certain friends come to me when they have problems or need advice.					
5. I rely on my friends for emotional support.					
6. If I felt that one or more of my friends were upset with me, I'd just keep it to myself.					
7. I feel that I'm on the fringe in my circle of friends.					
8. There is a friend I could go to if I were just feeling down, without feeling funny about it later.					
9. My friends and I are very open about what we think about things.					
10. My friends are sensitive to my personal needs.					
11. My friends come to me for emotional support.					
12. My friends are good at helping me solve problems.					
13. I have a deep sharing relationship with a number of friends.					
14. My friends get good ideas about how to do things or make things from me.					
15. When I confide in friends, it makes me feel uncomfortable.					
16. My friends seek me out for companionship.					
17. I think that my friends feel that I'm good at helping them solve problems.					
18. I don't have a relationship with a friend that is as intimate as other people's relationships with friends.					
19. I've recently gotten a good idea about how to do something from a friend.					
20. I wish my friends were much different.					

Appendix E

APPENDIX E

Perceived Social Support from Dogs Survey

Directions: The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with dogs. For each statement there are five possible answers: Strongly agree, agree, don't know, disagree and strongly disagree. Please check the answer that you choose for each item.

	strongly agree	agree	don't know	disagree	strongly disagree
1. My dog gives me moral support.					
2. Most other people are closer to their dog than I am.					
3. My dog enjoys it when I talk to him/her.					
4. My dog expects me to care for him/her, and needs my assistance.					
5. I rely on my dog for emotional support.					
6. It would not bother me if my dog were upset with me.					
7. I am not important to my dog.					
8. I can spend time with my dog when I am feeling down, with out feeling funny about it later.					
9. I can be very open about what I think and feel with my dog.					
10. My dog is sensitive to my feelings.					
11. My dog comes to me for emotional support (love, affection).					
12. My dog helps me to solve problems.					
13. I have a sharing relationship with my dog.					
14. My dog learns how to behave from me.					
15. When I confide in my dog, it makes me uncomfortable.					
16. My dog seeks me out for companionship.					
17. I think that my dog appreciates the life that I give him/her.					
18. My relationship with my dog is not as close as other people's relationships with their dogs.					
19. I have recently learned something from my dog.					
20. I wish my dog was much different.					

Appendix F

APPENDIX F

UCRIHS Approval

MICHIGAN STATE
UNIVERSITY

March 25, 1998

TO: Linda Spence
A230 Life Sciences

RE: IRB#: 98-176
TITLE: WOMEN'S HEALTH OUTCOMES WITH SOCIAL SUPPORT FROM FAMILY, FRIENDS AND COMPANION DOGS
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: 03/19/98

The University Committee on Research Involving Human Subjects'(UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

RENEWAL: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

PROBLEMS/ CHANGES: Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171.

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Bela J. Selzer

OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES

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