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Differences In Romantic Relationship Satisfaction And Health As A Function Of Pet Preference

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DIFFERENCES IN ROMANTIC RELATIONSHIP SATISFACTION AND HEALTH AS A FUNCTION OF PET PREFERENCE

by

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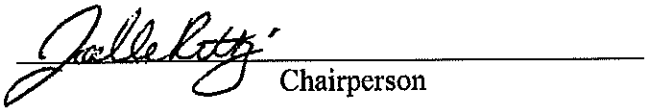
This thesis, submitted by Jenna Trisko in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done, and is hereby approved.



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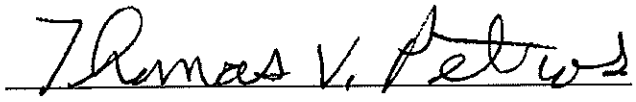

This thesis is being submitted by the appointed advisory committee as having met all of the requirements of the Graduate School at the University of North Dakota and is hereby approved.

Dean of the Graduate School

Date

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Title	Differences in Romantic Relationship Satisfaction and Health as a Function of Pet Preference
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Jenna Trisko
February 20, 2012

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ABSTRACT

Despite some evidence of personality differences between self-identified "cat people" and "dog people," there is a lack of research on how these groups differ in terms of the quality of their human relationships or whether people who own dogs or cats (or both) differ in the health benefits associated with pet ownership. This study was used to examine the relationship between pet preferences, level of satisfaction and type of attachment participants had in their current romantic relationships. This study was also used to explore whether overall health, depression, perceived stress, and physical activity levels differed as a function of pet ownership and type of pet owned. The participants were 546 adults (aged 18 +) who were in exclusive romantic relationships. Participants completed an online survey that assessed their pet preference, relationship satisfaction, masculinity/femininity, attachment style, general physical health, depression symptoms, stress, physical activity, and various demographics. Based on a series of MANCOVAs and Chi Square tests, the results indicated that relationship satisfaction and attachment style did not differ based on type of pet preference or pet ownership. However, in regards to the health measures, pet owners reported poorer overall health and less engagement in exercise than non-pet owners. Further, cat owners were found to report greater perceived stress than non-pet owners. Health measures did not vary based on pet preference group. These findings may be used by animal shelter staff to encourage potential adopters to

make a more informed decision about the type of pet that is right for that adopter's particular needs and situation.

CHAPTER I

INTRODUCTION

Domestic cats and dogs have impacted the lives of humans for centuries, providing constant, unconditional companionship. In fact, in the United States it is estimated that there are 132 million pet dogs and cats (American Veterinary Medical Association, 2010). Further, the American Pet Products Association estimated that Americans spent 47.7 billion dollars on their pets in 2010. Fascination and affection for companion animals are often manifested in people anthropomorphizing their pets as having distinct human personality traits. Cats are often described as independent, curious, feminine, mysterious, and neurotic, whereas dogs are viewed as loyal, masculine, obedient, and direct (Long, 2006). Long indicates that these traits also characterize humans who have a preference for one species of pet or the other and there has been a moderate amount of research on the personality characteristics of self-identified cat and dog people.

Despite some evidence of personality differences between self-identified "cat people" and "dog people," there is a lack of research on how these groups differ in terms of the quality of their human relationships. For example, do "cat people" being more sensitive, feminine, and curious, tend to have more satisfying relationships or more secure attachment compared to "dog people?" The current study examined the association between pet preference and quality of human relationships to determine if

such differences exist. This association could have practical implications for individuals seeking potential relationships. For example, knowing whether an individual is a "dog person" or a "cat person" may provide valuable insight about his or her compatibility as a potential relationship partner.

In addition to unconditional companionship, research suggests that pet ownership may also provide health benefits such as enhanced emotional and social support, cardiovascular improvements, and fewer depressive symptoms (Raina, Walter-Toews, Bonnett, Woodward, & Abernathy, 1999; Wood, Giles-Corti, Bulsara, & Bosch, 2007). However, it is unclear whether people who own dogs or cats (or both) differ in the health benefits associated with pet ownership. The present study explored potential health benefits associated with pet ownership and whether health differences occurred based on the type of pet owned. A better understanding of the health benefits associated not only with general pet ownership but with owning different types of pets could provide greater insight into health promotion among pet owners.

Pet Owner Characteristics and Romantic Relationships

Research on the differences in personality characteristics of pet preferences and of pet owners versus non owners has been inconclusive (Perrine & Osbourne, 1998). One study evaluated a small sample of pet owners and non-owners on the big five personality dimensions (Johnson & Rule, 1991). There were no significant personality differences between pet owners and non-owners and it was concluded that people who own pets may simply be socially perceived as having distinct personalities from their non-owner counterparts. Conversely, other researchers have found that pet owners

reported greater interpersonal trust and were more dependable than non-pet owners (Hyde, Kurdek, & Larson, 1983; Kidd & Feldman, 1981).

Among pet owners, research suggests that there are personality differences associated with pet preference. A recent study by Gosling, Carson, and Potter (2010) utilized the five factor model in an online study to examine the personality of individuals who claim to be "dog people" or "cat people." Self-identified "dog people" were found to be less open and less neurotic but more agreeable, conscientious, and extraverted than self-identified "cat people." Edelson and Lester (1983) also found that extraverted men were more likely to prefer dogs. Likewise, Coren's (2010) study indicated that dog owners were more sociable, engaging, and accepting than cat owners.

Femininity and Masculinity

Aside from the big-five personality dimensions, some researchers have explored the component of masculinity and femininity in relation to self-identified cat and dog people. Femininity and masculinity are defined based on societal gender stereotypes (Stets & Burke, 2001). Society has provided a framework composed of various personality traits that make up each of these gender identities. Femininity is often characterized as emotional, passive, cooperative, and expressive while masculinity is characterized as brave, dominant, active, and competitive (Stets & Burke, 2001).

In support of Nelson's (1992) statement that cats are perceived as feminine and dogs as more masculine, Perrine and Osbourne (1998) found that dog people rated themselves higher on masculinity than did cat people. Further, Kidd and Kidd (1980)

found that men who were more dominant preferred dogs, and Bem (1975) found that highly masculine men were less likely to interact with cats than were their less masculine counterparts. In contrast, Coren (2010) found that less dominant men and women tended to prefer cats.

Relationship Satisfaction

Although, there are limited studies that address the link between pet preference and masculinity/femininity, there is a moderate amount of research that explores masculinity/femininity in association with human relationship indices such as relationship satisfaction (Steiner-Pappalardo & Gurung, 2002). In particular, relationship satisfaction tends to be greater among feminine vs. masculine individuals (Langis, Sabourin, Lussier, & Mathieu, 1994). Moreover, masculinity has been found to be inversely associated with relationship satisfaction (Aube, Norcliffe, Craig, & Koestner, 1995). The current study examined potential masculinity/femininity differences in pet preference to determine whether such differences play a role in the associations between pet preference and romantic relationship satisfaction.

Attachment

According to Feeney and Noller (1990), attachment style is a valuable tool in evaluating romantic relationships in adulthood. There is a strong relationship between attachment style and romantic relationship satisfaction (Madey & Rodgers, 2009), and pet preference has also been associated with attachment styles (Endenburgh, 1995). Attachment theory was first developed by John Bowlby (1958; 1978) to provide a biological explanation of the bond between parent and child. This theory seeks to

explain the emotional strain and detachment of parent/child relationships as well as how the personality and social development of the child may arise as a result of the type of attachment the child forms early in life. The types of attachment behavior are secure, avoidant, and anxious/ambivalent (Ainsworth, Blehar, Waters, & Wall, 1978). Securely attached children are characterized as experiencing discomfort when separated from a parent or guardian and joy when reunited with them. Ambivalent attachment is distinguished by a strong discomfort by the child when a parental figure is absent. Avoidant attachment is characterized by a child who is unemotional when a parent is absent and shows little preference for a parent vs. an unfamiliar adult.

In 1991, Bartholomew and Horowitz proposed a four factor model to explain attachment. The four factors (types) are secure, preoccupied, dismissing, and fearful. This model accounts for the styles of attachment that are formed later in life with individuals other than a parental figure (e.g. friends, romantic partners, colleagues, etc.). According to Bartholomew and Horowitz, securely attached adults feel worthy of others' love and are accommodating and open to others. Preoccupied individuals often feel unworthy of others' love, yet make great attempts to be accepted. Dismissing individuals feel unworthy coupled with a sense of distrust and uneasiness around others. This group is also fearful of rejection. Lastly, fearful adults feel worthy of others' love, but avoid intimacy and vulnerability due to the distrust of others. The current study utilized Bartholomew and Horowitz's four factor model to examine the type of attachment participants have in their romantic relationships and whether those types of attachment differ as a function of pet ownership or pet preference.

Like relationship satisfaction, relationship attachment is also associated with masculinity/femininity. Alonso-Arbiol, Shaver, and Yàrnoz (2002) found that anxious attachment is positively correlated with femininity and negatively correlated with masculinity. Steiner-Pappalardo and Gurung (2002) found that men who rated themselves as more masculine than women were more comfortable and willing to be close with their partners. They also found that commitment and acceptance were positively correlated with masculinity. Closeness, comfort, commitment, and acceptance are fundamental components of secure attachment. Steiner-Pappalardo and Gurung (2002) also found that avoidant attachment was negatively associated with femininity. The current study investigated how pet preference may be associated with attachment styles, and whether masculinity/femininity plays a role in those associations.

Health Benefits of Pet Ownership

Caring for an animal may provide various physical and psychological health benefits to the owner (Duvall Antonacopoulos, & Pychyl, 2008). Regarding physical health advantages, pet ownership is associated with lower cholesterol and triglyceride levels as well as lower blood pressure (Centers for Disease Control and Prevention, 2007). In a study of pet owners who recently acquired a new cat or dog, Serpell (1991) found that owners of both species reported significantly fewer health problems after the first month of pet ownership and that dog owners sustained this health status 10 months later. Cardiovascular benefits of pet ownership have also been demonstrated in the literature (Friedmann, Thomas, & Eddy, 2000). In 1992, Anderson, Reid, and Jennings

found that pet owners had lower cholesterol, systolic blood pressure, and trigyclerides than non-pet owners. In fact, Friedmann and Thomas (1995) found that dog owners who suffered from cardiovascular disease were 8.6 times more likely to be alive twelve months later compared to non-owners.

Better physical health among pet owners may be due to another benefit of pet ownership, namely higher physical activity levels. One longitudinal study found that older adults (age 65 and older) were more physically active if they owned a pet (Raina et al., 1999). Another study found that dog owners walked more frequently than those who owned another type of pet or those who did not own any pets (Thorpe, Kreisle, Glickman, Simonsick, Newman, & Kritchevsky, 2006). Serpell's (1991) study showed similar results of the exercise benefits of owning a dog. Dogs may also give the owner a reason to walk even when the owner lacks the motivation to engage in exercise (Cangelosi, & Sorrell, 2010).

Unlike the clear benefits to physical health and activity level, the association between pet ownership and psychological health has been less straightforward (Duvall Antonocopoulos, & Pychyl, 2008; Raina et al., 1999). For example, among individuals with limited social support, Raina et al. (1999) found that pet owners were less likely to suffer deterioration in their psychological health compared to non-pet owners. Similarly, Garrity, Stallones, Marx and Johnson (1989) found that depression was negatively associated with the strength of owner's pet attachment. Tower and Nokota (2006) found that depression was lowest among single women who lived with a pet, yet single men who owned a pet had the highest level of depression.

Regarding stress, pet owners who interacted with their pets were better able to cope with stress compared to those who did not seek comfort from their pets (Gage & Anderson, 1985). Further, Albert and Bulcroft (1988) indicated that pet owners who lived alone or had a limited social support system and experienced stressful events (e.g. divorce or job loss) were better able to cope with their stress than those who did not have pets and lived alone. Physiological responses to stress have also been shown to decrease in the presence of pets (Allen, Blascovich, Tomaka, & Kelsey, 1991).

Although prior research provides some evidence of pet ownership as a buffer against depression and psychological distress, other studies show no indication of mental health benefits of pet ownership (Tower & Nokota, 2006). In fact, pet ownership can be a significant burden due to added financial expenses, behavioral and health issues of the pet, and disease transmission from animals to humans. These issues can strain the emotional well-being of the pet owner which may contribute to depression, social isolation, and loneliness (Fitzgerald, 1986). The potential disadvantages of pet ownership may explain why there is a discrepancy in the literature on the health benefits of pet ownership.

Current Study

This study was used to examine whether the quality of romantic relationships differs as a function of pet preference. Specifically, the study was used to determine whether pet preference plays a role in relationship satisfaction in terms of whether cat people are more or less satisfied than dog people and whether dog vs. cat people differ in their relationship attachment styles. Beck and Madresh (2008) provided insight into

the similarities of attachment style in both romantic partners and pets. However, the study consisted of mostly female participants and did not specify participants' relationship status nor the length of their relationships. These components are vital to the credibility of the study given that a full attachment bond may not be formed for at least two years into a relationship (Hazan & Zeifman, 1999 as cited in Beck & Madresh, 2008). The current study examined both married and dating individuals and took into account both the length of the romantic relationship and length of pet ownership.

According to Podberscek and Gosling (2000), a common limitation in research on pet owners and non-owners has been that sample sizes have been too small to yield significant results. Additionally, samples have frequently lacked diversity, and were often composed of mostly female participants (e.g. Bagley & Gonsman, 2005; Woodward & Bauer, 2007). Gosling and Bonnenburg (1998) argued that human/animal personality research is also based on small effect sizes which require larger samples to show significance. The current study incorporated a large sample that consisted of participants of varying age cohorts who were involved in a committed romantic relationship (married, cohabitating, or exclusive dating) at the time of testing. By including different age cohorts in the study, it is more likely that individuals will be in diverse stages of their romantic relationships. These variations in relationship length incorporate different levels of satisfaction and attachment (Feeney & Noller, 1990; Hazen & Shaver, 1987).

Hypotheses

Hypothesis 1

Because pet owners tend to have greater interpersonal trust (Hyde et al., 1983), which is positively associated with relationship satisfaction (Anderson, & Emmers-Sommer, 2006), pet owners were expected to have greater romantic relationship satisfaction and be more securely attached than non-owners.

Hypothesis 2

Cat people are thought to be more feminine than dog people (Coren, 2010), and past research showed that individuals who are higher in femininity tend to have more satisfying romantic relationships (Steiner-Pappalardo & Gurung, 2002). In contrast, dog people tend to be more masculine (Perrine, & Osbourne, 1998) and masculinity has been shown to be inversely related to relationship satisfaction (Aube et al., 1995). Accordingly, individuals who prefer cats were expected to have greater relationship satisfaction than those who prefer dogs or neither species. It was also explored whether there were differences in masculinity/femininity between pet preference groups and if so, whether those differences played a role in relationship satisfaction and attachment.

As some research has shown (Duvall Antonacopoulos & Pychyl, 2008; Raina et al., 1999), the health benefits of pet ownership can be multifaceted. What remains unclear is whether dog ownership has stronger health benefits than cat ownership or dual ownership (owning both cats and dogs). The current study sought to explore if physical health (general physical health and physical activity level) and psychological health (depression and perceived stress) differ as a function of pet ownership. It was

also determined whether pet preference contributes to this relationship. Past studies that have examined the health benefits of pet ownership have generally focused on a specific age group, such as older adults (Garrity et al., 1989), college students (Wilson & Netting, 1983), or children (Katcher, & Wilkins, 1993). The current study expanded on past research by focusing on the health benefits of pet ownership across the adult lifespan.

Hypothesis 3

Based on past research showing that dog owners engage in more exercise than those who do not own dogs (Thorpe et al., 2006), dog owners and people who own both dogs and cats were expected to be more physically active than cat owners and non-pet owners. Apart from current pet ownership, it was also determined whether level of physical activity differed as a function of type of pet preference.

Hypothesis 4

Because pet attachment has been linked to better psychological well-being (Barker & Dawson, 1998; Garrity et al., 1989), pet owners were expected to show lower levels of depression and perceived stress than non-owners. It was also determined whether levels of depression and perceived stress differed based on type of pet owned (dog, cat, both dog and cat, or do not own pets) or type of pet preference (dog, cat, both dog and cat, or do not like either species).

Hypothesis 5

Based on previously identified health benefits of pet ownership (Headey, 1999), it was expected that pet owners would have better overall health than non-owners. It

was also determined whether overall health differed as a function of type of pet owned or type of pet preference.

CHAPTER II

METHOD

Participants

The current study involved a convenience sample of 546 adults (*M age* = 30.09). All participants were required to be at least 18 years old and in an exclusive romantic relationship (married, cohabitating, or exclusive dating) to be eligible for the study. Four participants' data were removed due to inconsistencies in responding to the survey questions.

Measures

Pet Preference and Ownership

The pet index questions were created for the purpose of the current study and focus on current pet preference (dog, cat, neither, both, and do not like animals), and the current type of pet owned (cat, dog, neither, both, or other). The pet index can be found in Appendix A.

Demographics

The demographic measures assessed in the current study included participants' age, gender, current relationship status, and length of current romantic relationship (Appendix B).

Femininity/Masculinity

The Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1974) is a 24-item measure that was used to assess participants' level of masculinity and femininity (Appendix C). The scale consisted of two sub-scales: masculine and feminine qualities. Each item is based on two bipolar characteristics and respondents rate themselves based on a 5-point scale within the two extremes (e.g., *Very Passive= 1* through *Very Active = 5).* The personal attributes questionnaire has been shown to have good internal consistency (α = .85 for masculinity and α = .82 for femininity (Spence & Helmreich, 1978). Test-retest reliability measures indicate that for both male and female participants, masculinity tested over a 2.5 month period ranged from r = .58 to .62, while femininity ranged from r = .54 to .67 (Yoder, Rice, Adams, Priest, & Prince, 1982). One item (i.e., "Can make decisions easily/has difficulty making decisions") was reverse coded, and the 8 masculine and 8 feminine items were summed separately to create two separate total scores for each participant.

Relationship Satisfaction

The Relationship Assessment Scale (Hendrick, 1988), is a 7-item scale that was used to measure participants' satisfaction with their current romantic relationship (See Appendix D). Participants responded to each item using a 5-point Likert scale. Responses for two negatively-worded items (i.e., "How often do you wish you hadn't gotten in this relationship?" and "How many problems are there in your relationship?") were reverse coded, and responses for all items were summed to create a total relationship satisfaction score for each participant. Greater relationship satisfaction is

indicated by higher scores. The Relationship Assessment Scale has high internal consistency: $\alpha = .86$ (Hendrick, 1988), with inter-item correlations ranging from $r = .35$ to .80 (Vaughn & Matyastik-Baier, 1999).

Attachment Style

Participants' attachment styles were measured using the self-report Relationship Questionnaire (Bartholomew & Horowitz, 1991). The relationship questionnaire is a single-item measure that incorporates four paragraphs reflecting different attachment styles (secure, fearful, preoccupied, and dismissing). Based on a 7-point Likert scale, participants rated each paragraph in terms of how closely it resembles their current romantic relationship attachment. The test-retest reliability for the original measure is $r = .51$ over an 8-month retest period (Scharfe & Bartholomew, 1994). The modified Relationship Questionnaire can be found in Appendix E. The original Relationship Questionnaire paragraphs have been reworded to indicate participants' own attachment in their current relationship. An example of this modification is provided below.

Paragraph from the original measure:

> "It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me."

Modified Paragraph for Current Study:

> "It is easy for me to be emotionally close to my partner. I am comfortable depending on my partner and having my partner depend on me. I don't worry about being alone or having my partner not accept me."

General Health

A well-established single item measure was used to assess participants' current overall health, with responses ranging from 1 = "*excellent*" through 5 = "*very poor*." Bjorner and Kristensen (1999) have found this measure to be a valid and reliable index for self-rated health. This measure was reverse coded for ease of interpretation, so that higher scores indicate better health. This measure can be found in Appendix F.

Depression

Participants' level of depression over the last week was evaluated by the Center for Epidemiological Studies Depression Scale (See Appendix G; Andresen, Malmgren, Carter, & Patrick, 1994). This scale is composed of 10-items relating to how frequently the participant experienced various depressive symptoms. Participants responded using a 4-point Likert scale, with 1 indicating "rarely (fewer than 1 day)" and 4 indicating "most or all the time (5-7 days)." Responses to two items (i.e., "I felt hopeful about the future" and "I was happy") were reverse coded then responses to all items were summed to create a total depressive symptomology score for each participant. Reliability for this scale was $\alpha = .97$ in a sample of middle aged individuals and $\alpha = 1.00$ in an older adult sample (Irwin, Haydari- Artin, & Oxman, 1999). Further, Herrero and Meneses (2004) indicated that the online version of this scale had an internal reliability of $\alpha = .82$.

Perceived Stress

A modified 7-item perceived stress scale (See Appendix H), based on Cohen, Kamarack, and Mermelstein's (1983) measure, was used to evaluate participants' stress

over the last month. Item responses are based on a 5-point Likert scale ranging from "*never*" to "*very often.*" The item responses are summed to obtain an overall score. This scale has a good internal reliability (α= .84-.86; Cohen et al., 1983).

Physical Activity and Exercise

Physical activity and exercise were examined using a two-item measure. The first question incorporated a 7-item Likert scale that addressed self-reported physical activity level over the last few months. The second item was a self-report of the number of hours and minutes the participant had exercised in the last week (Appendix I).

Procedure

As recommended by Gosling and colleagues (2010), in order to prevent recruitment of only pet owners or animal lovers, reference was not made to animals or pets when recruiting participants for the current study. This procedure ensured a more diverse sample and promoted a greater balance of male and female participation. Potential participants were invited to volunteer for the study via email or Facebook invitation from the principal investigator and by other participants. College student participants were also recruited via SONA system. The invitation to participate along with the informed consent only incorporated a general overview of the study. For example participants read, "You are invited to participate in a study regarding romantic relationships and well-being." (See Appendix J). The study link was posted on Facebook, through email, and on the SONA system to obtain online participation in this study.

Online survey administration was created through Survey Monkey and SONA system. An electronic informed consent form was presented to participants prior to access of the survey (Appendix K). Upon reading of the form, participants were required to check a box indicating their consent to participate before continuing on to the additional content. After completion of the survey participants were supplied with an email address where they could send their contact information to enter a drawing for one of four Amazon gift cards valued at $25.00 each. This procedure ensured anonymity within the study, and allowed participants to provide contact information separate from their responses.

CHAPTER III

RESULTS

Preliminary Analyses

Table 1 provides frequency and descriptive information for all study variables. The average age of participants was $M = 30.09$ years with a range of 18-68 years old. The majority (69%) of participants were women. Most participants (44.80%) were married, 30.90% were in a dating relationship, and 19.90% were cohabitating, while the remaining 4.40% were single. The average length of a romantic relationship was 6.85 years but ranged from 0.08 – 44.33 years.

Most participants preferred dogs (55.50%) while 17.60% preferred cats. Some participants preferred cats and dogs equally (18.50%) and a small number preferred another species (2.00%) of pet over dogs and/or cats or preferred no pets at all (6.40%). Dogs were also the most commonly-owned pet (32.10%) while an additional 20.10% of participants owned cats. A smaller number of participants owned both dogs and cats (11.50%) but approximately a third of participants (33.20%) did not own any pets. The majority of participants rated themselves as both moderately masculine and moderately feminine (*Ms* = 21.05 vs. 24.15, respectively) with a possible range of 0-32 for each scale. As for the categorical relationship attachment style, most (74.30%) participants considered themselves to be securely attached in their relationship. For the continuous measures of attachment style, the majority of participants again rated

themselves as securely attached ($M = 5.66$ on a 7-point scale). Participants also reported being highly satisfied in their relationship ($M = 29.11$ out of a possible 35 points). Participants reported good general health ($M = 4.06$), few depressive symptoms ($M = 16.57$), and low perceived stress ($M = 18.66$). Lastly, participants reported moderate overall physical activity ($M = 4.06$) with an average of 4.12 hours of exercise over the previous week.

Table 1. Descriptive Statistics for All Study Variables.

Variable	*N*	*M(%)*	*SD*	*Range*	*Possible Range*	*α*
Age	543	30.09	9.94	18.00-68.00	18.00+	
Gender:						
Male	169	(31.10%)				
Female	374	(68.90%)				
Relationship Status:						
Single	24	(4.40%)				
Married	243	(44.80%)				
In rel.-Not Cohab.	168	(30.90%)				
Cohabitating	108	(19.90%)				
Length of Relationship (Years)	521	6.85	8.30	.00-44.33		
Pet Preference:						
Dog	303	(55.50%)				
Cat	96	(17.60%)				
Dog and Cat Equally	101	(18.50%)				
Other	11	(2.00%)				
Do Not Like Pets	35	(6.40%)				

Table 1. cont.

Variable	*N*	*M(%)*	*SD*	*Range*	*Possible Range*	*α*
Pet Ownership:						
Dog(s)	175	(32.10%)				
Cat(s)	110	(20.10%)				
Dog(s) and Cat(s)	63	(11.50%)				
Other Species	86	(15.8%)				
Do Not Own Pets	181	(33.20%)				
Masculinity	529	21.05	4.05	0-32	0-32	.69
Femininity	529	24.15	3.95	6-32	0-32	.76
Attachment:						
Primary Style: Secure	372	(74.30%)				
Primary Style: Fearful	59	(11.80%)				
Primary Style: Preoccupied	44	(8.80%)				
Primary Style: Dismissive	26	(5.20%)				
Secure (Continuous)	513	5.66	1.52	1-7	1-7	
Fearful (Continuous)	507	2.42	1.73	1-7	1-7	
Preoccupied (Continuous)	505	2.32	1.70	1-7	1-7	
Dismissive (Continuous)	507	2.71	1.77	1-7	1-7	
Relationship Satisfaction	520	29.11	5.12	8-35	8-35	.90
General Health	524	4.06	0.67	1-5	1-5	
Depression	506	16.57	4.62	10-37	10-40	.78
Perceived Stress	503	18.66	4.63	7-35	7-35	.80
Physical Activity Level	513	4.06	1.53	1-7	1-7	
Total Activity (Hours)	500	4.12	4.58	0-70	0.00+	

Table 2. Bivariate Correlations for All Continuous Variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Age		.77**	.04	-.08	-.03	-.07	.04	.04	-.07	-.01	-.12**	-.13**	-.15**	-.10*
2.Rel. Ln.	.77**		.06	-.09*	-.03	-.03	.03	.04	-.10*	-.00	-.10*	-.12**	-.12**	-.05
3.Secure	.04	.06		-.52**	-45.**	-.36**	-.06	.15**	.55**	.12**	-.36**	-.21**	.04	.01
4.Fearful	-.08	-.09*	-.52**		.36**	.24**	-.09	-.09	-.41**	-.14**	.38**	.23**	-.06	.01
5.Preocc.	-.03	-.03	-.45**	.36**		.12**	-.05	.08	-.36**	-.15**	.38**	.27**	.03	.07
6.Dismis.	-.07	-.03	-.36**	.24**	.12**		.11*	-.20**	-.27**	.06	.15**	.02	.03	-.02
7.Masc.	.04	.03	.06	-.09	-.05	.11*		.03	.00	.31**	-.19**	-.20**	.20**	14**
8.Femin.	.04	.04	.15**	-.09	.08	-.20**	.03		.10*	.04	-.04	.09*	.09	.02
9.Rel.St.	-.07	-.10	.55**	-.41**	-.36	-.27**	.00	.10*		.17**	-39**	-.27**	.12**	.01
10.Health	-.01	-.00	.12*	-.14**	-.15**	.06	.31**	.04	.17**		-.29**	-.24**	.41**	.19**
11.Depre.	-.12**	-.10*	-.36**	.38**	.38**	.15**	-.19**	-.04	-.39**	-.29**		.58**	-.13**	-.07
12.Stress	-.13**	-.12**	-.21**	.23**	-.27**	.02	-.20**	.09*	-.27**	-.24**	.58**		-.06	-.05
13.Active	-.15**	-.12**	.04	-.06	.03	.02	.20**	.09	.12**	.41**	-.13**	-.06		.37**
14.Hrs.	-.10*	-.05	.01	.01	.07	-.02	.14**	.02	.01	.19**	-.07	-.05	.37**	

Note. Rel.Ln.= Relationship Satisfaction, Preocc. = Preoccupied Attachment Style, Dismis.= Dismissive Attachment Style, Mascu.= Masculinity, Femin.= Femininity, Rel. St.= Relationship Satisfaction, Health= Overall Health, Depre.= Depression Score, Active= Overall Physical Activity, Hrs. = Hours of Activity over the past week. * $p < .05$, ** $p < .01$

Bivariate Correlations

Table 2 above presents a bivariate correlation matrix for the main variables in this study. Older participants reported longer relationships (r =.77, p < .01), and less depression (r = -.12, p < .01), perceived stress (r = -.13, p < .01), overall physical activity (r = -.15, p < .01), and less exercise over the previous week (r = -.10, p < .05).

Longer relationships were associated with less fearful attachment (r = -.09, p < .05), relationship satisfaction (r = -.10, p < .05), perceived stress (r = -.12, p < .01), and overall physical activity (r = -.12, p < .01). Secure attachment was associated with greater femininity (r = .15, p < .01), relationship satisfaction (r = .55, p < .01), and overall health (r = .12, p < .01), but less fearful attachment (r = -.52, p < .01), preoccupied attachment (r = -.45, p < .01), dismissive attachment (r = -.36, p < .01), depression (r = -.36, p < .01), and perceived stress (r = -.21, p < .01). In contrast, fearfully attached individuals were more preoccupied attached (r = .36, p < .01), dismissively attached (r = .24, p < .01), depressed (r = .38, p < .01), and stressed (r = .23, p < .01), as well as less satisfied with their relationship (r = -.41, p < .01) and had poorer overall health (r = -.14, p < .01). Preoccupied attachment was positively associated with dismissive attachment (r = .12, p < .01) depression (r = .38, p < .01), and perceived stress (r = .27, p < .01), while this attachment style was negatively related to relationship satisfaction (r = -.36, p < .01) and overall health (r = -.15, p < .01). Lastly, dismissive attachment was positively correlated with masculinity (r = .11, p < .05) and depression (r = .15, p < .01), but negatively associated with femininity (r = -.20, p < .01) and relationship satisfaction (r = -.27, p < .01).

Higher ratings of masculinity were associated with better overall health ($r = .31$, $p < .01$) and overall physical activity ($r = .20$, $p < .01$), as well as more exercise over the previous week ($r = .14$, $p < .01$). Greater masculinity was also associated with less depression ($r = -.19$, $p < .01$) and lower stress ($r = -.20$, $p < .01$). Femininity was associated with greater relationship satisfaction ($r = .10$, $p < .05$), but also greater stress ($r = .09$, $p < .05$).

Relationship satisfaction was associated with better overall health ($r = .17$, $p < .01$) and more physical activity ($r = .12$, $p < .01$), while negatively correlated with depression ($r = -.39$, $p < .01$) and perceived stress ($r = -.27$, $p < .01$). Overall health was associated with greater physical activity ($r = .41$, $p < .01$) and exercise in the previous week ($r = .19$, $p < .01$), less depression ($r = -.29$, $p < .01$) and perceived stress ($r = -.24$, $p < .01$), in turn depression was positively correlated with perceived stress ($r = .58$, $p < .01$). Overall health was negatively associated with overall physical activity ($r = -.13$, $p < .01$). Overall physical activity was positively associated with amount of exercise over the previous week ($r = .37$, $p < .01$).

Group Differences

A series of one-way ANOVAs were computed to examine group differences based on the categorical variables of gender, type of pet ownership, type of pet preference, and pet owners versus non owners on all continuous variables (See Table 3). Not surprisingly, male participants ($M = 21.68$) rated themselves higher on masculinity than female participants did ($M = 20.77$); [$F(1, 516) = 5.86$, $p < .05$]. Likewise, female participants ($M = 24.62$) rated themselves higher on femininity than

male participants did ($M = 23.10$); [$F(1, 524) = 17.346, p = .000$]. Consistent with past research (Stein & Nyamathi, 1998; Zimet, Dahlem, Zimet, & Farley, 1988) women reported more stress ($M = 19.09$) than men ($M = 17.77$); [$F(1, 498) = 8.875, p < .01$]. Lastly, men ($M = 5.08$) exercised longer in the past week than women ($M = 3.67$); [$F(1, 495) = 10.462, p < .01$].

Age significantly differed between type of pet ownership groups (dog, cat, both dog and cat, or neither) [$F(3,538) = 3.038, p < .05$]. Post hoc simple contrasts indicated that cat owners ($M = 32.18$) were older than non-owners ($M = 28.94$) and owners of both cats and dogs ($M = 28.94$) were older than non-owners. Length of relationship also significantly differed between type of pet ownership groups [$F(3, 516) = 3.712, p < .05$]. Post hoc simple contrasts indicated that cats owners ($M = 8.39$) had been in relationships longer than non-owners ($M = 5.64$), and owners of both cats and dogs ($M = 8.70$) had been in relationships longer than non-owners. Type of pet ownership groups also significantly differed in levels of femininity [$F(3, 524) = 3.451, p < .05$]. A simple effects analysis indicated that cat owners ($M = 24.99$) rated themselves as more feminine than did non-owners ($M = 23.64$). Type of pet ownership groups also significantly differed in level of perceived stress [$F(3, 498) = 3.161, p < .05$]. Further analysis indicated that cat owners ($M = 19.86$) scored higher on perceived stress than non-owners ($M = 18.15$). Type of pet ownership groups also significantly differed in level of fearful attachment style [$F(3, 502) = 3.187, p < .05$]. Further, a Tukey HSD analysis found marginal significance ($p = .052$) that owners of both cats and dogs ($M = 1.84$) scored lower on fearful attachment than non-owners ($M = 2.46$). It was also

revealed that dog owners ($M = 2.59$) were more fearfully attached than owners of both dogs and cats ($M = 1.84$). Type of pet ownership groups significantly differed in preoccupied attachment style [$F(3, 500) = 3.266, p < .05$]. A Tukey HSD analysis indicated that dog owners ($M = 2.49$) scored higher on preoccupied attachment than owners of both dogs and cats ($M = 1.79$). Cat owners ($M = 2.56$) were also found to score higher on preoccupied attachment than owners of both cats and dogs.

The one-way ANOVA of pet ownership on age was significant [$F(1,540) = 4.947, p < .05$] indicating that pet owners ($M = 30.88$) were older than non-owners ($M = 28.94$). Further, pet owners had significantly longer relationships ($M = 7.66$) than non-owners ($M = 5.67$) [$F(1, 518) = 7.242, p < .01$]. Pet owners ($M = 24.48$) scored significantly higher on femininity than non-owners ($M = 23.64$) [$F(1, 526) = 5.85, p < .05$]. Ownership groups also significantly differed in overall health [$F(1, 521) = 4.79, p < .05$]. Surprisingly, this finding indicates that non-owners reported better health ($M = 4.14$) than owners ($M = 4.01$). Owners also reported significantly higher stress ($M = 19.02$) than non-owners ($M = 18.13$) [$F(1, 500) = 4.43, p < .05$]. Lastly, owners ($M = 3.94$) engaged in less physical activity than non-owners ($M = 4.25$) [$F(1, 510) = 5.01, p < .05$] .

The ANOVA for pet preference (dog, cat, both, neither) on age was significant [$F(3, 539) = 6.15, p < .001$]. A Tukey post hoc analysis revealed that those who preferred dogs ($M = 28.75$) were younger than those who did not like cats or dogs ($M = 34.91$). Pet preference differences on years in relationship was also significant [$F(3, 517) = 4.65, p = .003$]. A simple effects analysis revealed that those who preferred dogs

($M = 5.75$) were not in their relationships as long as those who did not prefer either dogs or cats ($M = 9.81$). There was also a marginal pet preference group difference on femininity [$F(3, 525) = 2.55$, $p = .055$]. Pet preference on perceived stress was also significant [$F(3, 499) = 2.719$, $p < .05$]. A Tukey HSD analysis indicated that those who preferred dogs ($M = 18.27$) rated themselves as less stressed than those who preferred both dogs and cats equally ($M = 19.75$). No other group differences were significant.

Table 3. One-Way Analysis of Variance for Gender on All Continuous Variables.

Variable	*Men*		*Women*		
	M	*SD*	*M*	*SD*	*F*
Age	29.45	9.55	30.34	10.10	.93
Years in Relationship	6.01	8.08	7.16	8.31	2.11
Masculinity	21.68	4.63	20.77	3.73	5.86*
Femininity	23.10	3.98	24.62	3.86	17.35**
Relationship Satisfaction	29.14	4.79	29.08	5.28	.01
Secure Attachment	5.54	1.54	5.71	1.51	1.33
Fearful Attachment	2.46	1.73	2.40	1.73	.14
Preoccupied Attachment	2.52	1.82	2.23	1.65	3.06
Dismissive	2.89	1.76	2.63	1.76	2.24

Table 3. cont.

Variable	*Men*		*Women*		
	M	*SD*	*M*	*SD*	*F*
Overall Health	4.01	.73	4.08	.63	1.33
Depression	16.40	4.44	16.65	4.72	.32
Perceived Stress	17.77	4.63	19.09	4.59	8.88**
Physical Activity Level	4.16	1.63	4.01	1.47	.99
Hours of Physical Activity	5.08	6.83	3.67	2.95	10.46**

*$p < .05$, **$p < .01$

Main Analyses

To examine Hypothesis 1 that pet owners were expected to have greater romantic relationship satisfaction and be more securely attached than non-owners, a multivariate analysis of covariance (MANCOVA) was computed. This analysis sought to examine differences between pet owners versus non-owners in relationship satisfaction and attachment style with the covariates of length in relationship, femininity and masculinity. The overall MANCOVA indicated that pet owners versus non-owners did not significantly differ in relationship indices [$\lambda = .99$, $F(5, 438) = 0.60$, $p = .70$, *ns*, $\eta_p^2 = .01$]. Contrary to Hypothesis 1, pet owners did not report having more satisfying relationships or more secure attachment than non-owners.

A chi-square analysis was computed to determine if pet owners versus non-owners differed in primary attachment styles. The Pearson chi square was not

significant (χ^2 (3) = .77, p = .86, *ns*). The Chi square results indicated that 75.7% of non-owners and 73.2% of pet owners considered themselves securely attached. Further, 10.4% of non-owners and 12.8% of pet owners were fearfully attached, while 8.4% of non-owners and 9.1% of owners indicated that they had a preoccupied attachment style. Lastly, 5.4% of owners and 5.0% of non-pet owners indicated a dismissive attachment style. Thus, both pet owners and non-owners were similar in attachment style.

Hypothesis 2 stated that individuals who prefer cats were expected to have greater relationship satisfaction than those who prefer dogs or neither species. It was also explored whether differences exist in masculinity/femininity between pet preference groups and if so, whether those differences play a role in relationship satisfaction and attachment. An initial MANOVA was computed to determine whether participants differed in masculinity and femininity based on type of pet preference (dog, cat, or do not like dogs or cats). The overall MANOVA was not significant [λ= .981, F(4, 824) = 1.95, p = .10, *ns*, η_p^2= .01] indicating that participants' type of pet preference was not associated with masculinity and femininity scores. A MANCOVA was conducted to further examine type of pet preference groups (dog, cat, and do not like dogs or cats) on romantic relationship satisfaction and secure attachment style controlling for length of relationship. The overall model was significant [λ = .980, F(4, 766) = 1.91, p < .05, η_p^2= .01]. However, in the follow-up ANCOVAs, type of pet preference was not significant with either secure attachment [F (3, 482) = 0.93, p = .43, *ns*, η_p^2 = .01] or relationship satisfaction [F(3, 482) = 1.60, p = .19, *ns*, η_p^2 = .01]

indicating that pet preference groups did not differ in relationship satisfaction and secure attachment style.

A Pearson chi square was also computed to determine if people with different types of pet preference (dog, cat, and do not like dogs or cats) differed in their primary attachment styles. The Pearson chi square was not significant ($\chi^2 = 2.54$, $p = .86$, *ns*). The majority of self-identified dog people (72.1%), cat people (76.1%), and those who did not prefer dogs or cats (80.5%) were securely attached. In contrast, 12.9% of dog people, 10.2% of cat people, and 12.2% who do not prefer either species were fearfully attached. Further, 8.9% of dog people, 9.1% of cat people, and 4.9% of those who did not prefer either species rated themselves as having a preoccupied attachment style. Lastly, 6.1% of dog people, 4.5% of cat people, and 2.4% of those who did not prefer either species rated themselves as having a dismissive attachment style. Overall, the type of pet preference did not differ in relationship satisfaction or attachment style.

Hypotheses 3-5 refer to health related outcomes. Specifically, Hypothesis 3 stated that dog owners and people who own both dogs and cats were expected to be more physically active than cat owners and non-pet owners. Apart from current pet ownership, it was also determined whether level of physical activity differs as a function of type of pet preference. Hypothesis 4 predicted that pet owners would report lower levels of depression and perceived stress than non-owners. It was also determined whether levels of depression and perceived stress differed based on type of pet owned (dog, cat, both dog and cat, or no pets) or type of pet preference. Lastly, Hypothesis 5 predicted that pet owners would have better overall health than non-

owners. It was also determined whether overall health differed as a function of type of pet owned or type of pet preference.

A series of MANCOVAs with age, masculinity, and femininity as covariates were computed to test Hypotheses 3 through 5 to determine if differences exist between pet owners versus non-owners, type of pet owners, or type of pet preference on health related measures. A MANCOVA was first conducted to examine if differences exist between pet owners versus non-owners in overall health, perceived stress, depression, physical activity level, and hours of physical activity. The overall model reached marginal significance [$\lambda = .975$, $F(5, 442) = 2.23$, $p = .051$, $\eta_p^2 = .03$]. A second MANCOVA was conducted to examine differences in type of pet ownership (dog, cat, both dog and cat, and neither) on the health related measures while controlling for age, masculinity, and femininity. The overall model was significant [$\lambda = .943$, $F(15, 1{,}216) = 1.73$, $p < .05$, $\eta_p^2 = .02$]. Finally, a third MANCOVA was computed to explore differences in type of pet preference (dog, cat, both dog and cat equally, and do not like pets) on the health related measures while controlling for age, and masculinity and femininity. The overall model was not significant [$\lambda = .966$, $F(15, 1{,}218) = 1.02$, *ns*, $\eta_p^2 = .011$].

The follow-up ANCOVAs for the previously described significant MANCOVAS will be described within the context of each of Hypotheses 3-5. To examine Hypothesis 3, the test of between subjects indicated that pet owners were significantly less physically active ($M = 3.99$) than non owners ($M = 4.30$) in overall physical activity [$F(1, 446) = 4.65$, $p < .05$, $\eta_p^2 = .01$]. However, pet owners did not

significantly differ from non-pet owners on hours of physical activity [$F(1, 446) = 2.68$, *ns*]. Regarding type of pet ownership differences in overall physical activity, the follow-up ANCOVA was not significant [$F(3, 444) = 1.39$, *ns*], and hours of physical activity in the previous week was also not significant [$F(3, 444) = 1.58$, *ns*].

To examine Hypothesis 4, the follow-up ANCOVAs indicated that pet owners did not differ from non-owners on depression [$F(1, 446) = 1.15$, *ns*]. However, pet owners reported significantly more stress ($M = 19.02$) than non-owners ($M = 18.13$) [$F(1,446) = 83.60$, $p < .05$, $\eta_p^2 = .009$]. The ANCOVA for type of pet ownership on depression was not significant [$F(3, 444) = 1.64$, *ns*]. However, the ANCOVA was significant for perceived stress [$F(3, 444) = 3.36$, $p < .05$, $\eta_p^2 = .022$]. A Bonferroni pairwise comparison revealed that cat owners reported greater stress ($M = 20.01$) than non-pet owners ($M = 18.14$). No other differences were significant. See Figure 1 for a review of the perceived stress means for each of the pet ownership groups.

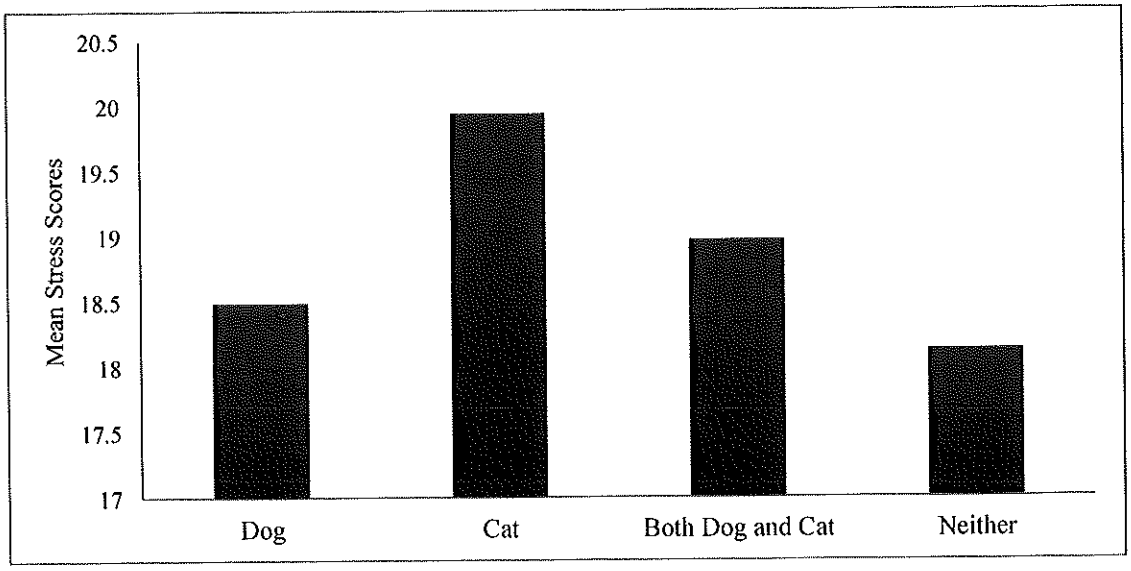

Figure 1. Type of Pet Ownership Means for Perceived Stress.

To examine Hypothesis 5, the follow-up ANCOVA for pet owners versus non-owners on overall health was significant [$F(1, 446)= 2.32$, $p < .05$, $\eta_p^2 = .013$], indicating that pet owners reported poorer overall health than non-owners ($Ms = 4.00$ vs. 4.15, respectively). Type of pet ownership groups did not significantly differ in overall health [$F(3, 444) = 2.10$, *ns*, $\eta_p^2 = .014$].

Overall, non-pet owners were found to be more physically active, report better health, and were less stressed than pet owners. Further, individuals differed on health related measures as a function of type of pet ownership, but only between cat owners and non-pet owners in regards to perceived stress. None of the health related variables differed as a function of pet preference.

CHAPTER IV

DISCUSSION

Past research on differences in types of pet preference and pet ownership have focused primarily on human personality (Gosling & Bonnenburg, 1998; Gosling et al., 2010), but has failed to explore how these differences may impact the romantic relationships or physical and psychological health of pet owners. The overall objective of the present study was to determine whether differences in relationship satisfaction, type of relationship attachment, and health exist as a function of type of pet preference or pet ownership. This objective was addressed by comparing relationship satisfaction and attachment as well as multiple measures of physical and psychological health among pet owners vs. non-pet owners, and between individuals who preferred different types of pets (e.g., dogs vs. cats).

Pet Ownership, Pet Preference, and Relationships

It was predicted that compared to non-pet owners, pet owners would have higher levels of relationship satisfaction and be more securely attached in their romantic relationships. This prediction was based on past research indicating that pet owners have higher levels of interpersonal trust than non-pet owners (Hyde et al., 1983), and that interpersonal trust is positively associated with relationship satisfaction (Anderson & Emmers-Sommer, 2006). However, the current results showed that pet owners and non-

pet owners did not significantly differ in their romantic relationship satisfaction or level of secure attachment. This suggests that pet ownership does not appear to impact how satisfied individuals are in their current relationships or how securely attached they are to their romantic partners. Moreover, the results revealed that pet owners and non owners did not differ in their primary attachment styles, with both groups reporting that secure attachment was the most common primary attachment style.

Regarding pet preference, it was hypothesized that self-identified "cat people" would have greater relationship satisfaction than either "dog people" or those that indicated they preferred no pets. This expectation originated from the finding that cat people are thought to be more feminine than dog people (Coren, 2010) and past research has shown that individuals who are higher in femininity tend to have more satisfying romantic relationships (Steiner-Pappalardo & Gurung, 2002). In contrast, dog people tend to be more masculine (Perrine, & Osbourne, 1998) and masculinity has been shown to be inversely related to relationship satisfaction (Aube et al., 1995). However, the current findings did not support this hypothesis, instead suggesting that type of pet preference was not related to level of relationship satisfaction. Subsequent analyses also showed that secure attachment, relationship satisfaction, and primary attachment style did not differ based on type of pet preference.

A possible explanation for the lack of associations among pet ownership, pet preference, and relationship satisfaction is that interpersonal trust may operate as a mediating variable such that pet owners differ in level of interpersonal trust (Hyde et al., 1983) which in turn predicts their level of relationship satisfaction (Mitchell, 1990)

Unfortunately, interpersonal trust was not assessed in the current study. It is recommended that a measure of interpersonal trust be examined in future studies to identify whether trust operates as a mediating variable between pet ownership and relationship satisfaction. Other potential mediators that may have confounded the results are the big 5 personality characteristics (e.g. extroversion, agreeableness, openness, etc.) which have been found to vary depending on type of pet preference (Gosling et al., 2010). For example, dog people tend to be higher on extraversion, agreeableness, and conscientiousness compared to cat people, whereas cat people tend to be higher in neuroticism and openness (Gosling et al., 2010). Given that cat people tend to be more neurotic, and higher levels of neuroticism are inversely associated with relationship satisfaction (Karney & Bradbury, 1995), it is recommended that the big 5 personality traits be utilized as mediating variables in future studies which may allow researchers to better understand how pet ownership is associated with relationship satisfaction.

Self-disclosure may also be a mediating factor for the association between pet preference and romantic relationship satisfaction. Women often disclose more personal information in relationships than men (Cutler & Dyer, 1965; Miller, Berg, & Archer, 1983) and as a result women tend to directly address relationship problems, whereas men are more likely to avoid confrontations (Burn & Ward, 2005). The ability to communicate effectively with one's partner is associated with greater relationship satisfaction (Noller & Feeney, 2002) and secure attachment (Collins & Read, 1990; Mikulincer & Nachshon, 1991). Men tend to prefer dogs over cats and it has been

found that dog people tend to be less open (Gosling et al., 2010). It is recommended that self-disclosure be examined as a potential mediating variable in future research between pet preference and relationship satisfaction to possibly better understand the differences in relationship satisfaction based on pet preference.

Another explanation for the lack of significant differences in level of relationship satisfaction based on pet preference or pet ownership is that most of the participants in the study were highly satisfied in their relationships. Accordingly, a ceiling effect for relationship satisfaction may have attenuated the results of the study. It is recommended that future studies recruit participants who have varying levels of satisfaction in their relationships to determine whether pet ownership differences are associated with differences in relationship satisfaction once this attenuation issue is no longer a concern.

Past research has shown that pet preference is associated with type of attachment (Bagley & Gonsman, 2005; Kurdek, 2008). However, these prior studies have focused on people's attachment to their pets, whereas the current study expanded this examination to pet preference and human romantic partner attachment. Although the current findings did not reveal differences in primary attachment style as a function of type of pet preference, a possible explanation for this finding could be that being a cat person, although high in openness (Gosling et al., 2010), may also have additional traits that are incompatible with secure attachment such as being independent or neurotic (Gosling et al., 2010; Heavey, Christensen, & Malamuth, 1995). The current findings could also suggest that pet preference by itself does not significantly impact

relationship satisfaction and secure attachment. There are many variables that affect relationship satisfaction and attachment style (Brennan & Shaver, 1995; Rusbult, 1979) and it is speculated that individual differences in pet preference may be such a minute variable in comparison to other factors such as conflict resolution style (Pistole, 1989), interpersonal trust (Simpson, 1990), and level of commitment (Rusbult, Johnson, & Morrow, 1986) that these other factors may overshadow any impact pet preference may have on the dependent variables.

It was also explored whether levels of masculinity and femininity differed based on type of pet preference, and if so, whether those differences played a role in relationship satisfaction and attachment style. The current results showed that levels of masculinity and femininity did not differ based on type of pet preference. This finding is inconsistent with past research showing that levels of femininity and masculinity do differ with type of pet preference (Perrine & Osbourne, 1998). The current result may have occurred because although female participants had higher ratings of femininity than male participants, many of them preferred dogs, which is contrary to past research indicating that women tend to be higher in femininity (Annandale & Hunt, 1990) and are more likely to prefer cats (Perrine & Osbourne, 1998). Thus, among female participants, those who preferred dogs had similar ratings of femininity in comparison to those who preferred cats. In contrast, male participants were higher on masculinity than female participants but also tended to prefer dogs, which is consistent with past research (Perrine & Osbourne, 1998).

Pet Ownership, Pet Preference, and Health

Although type of pet preference and ownership did not significantly differ in regards to relationship satisfaction and attachment, differences in physical and psychological health of pet owners vs. non-owners was also assessed in the current study. An examination of the potential health benefits of pet ownership has been widely explored in past literature (Serpell, 1991). The current study built upon this past research by exploring how types of pet ownership and preference impact the owners' health. It was hypothesized that dog owners and people who own both dogs and cats would be more physically active than cat owners and non-pet owners. It was also explored whether level of physical activity varied based on type of pet preference. Results indicated that pet owners were significantly less physically active overall than non-pet owners. This finding is contrary to previous research showing that pet owners, particularly dog owners were more physically active than non-owners (Anderson, Reid, & Jennings, 1992; Raina et al., 1999).

A potential explanation for this finding is that pet owners in this study may have had busier lives (e.g. raising children, having additional pets, working longer hours, etc.) than non-owners, and as a result did not engage in as much exercise. It is also feasible that pet owners experienced additional burden associated with their pets (e.g. feeding, exercising, cleaning litter boxes of pets, etc.) and consequently had less time to engage in other physical activities (e.g. swimming, biking, yoga, etc.). Another explanation for this finding may be that those who owned pets believed that the energy and maintenance of caring for a pet (e.g. cleaning litter boxes, feeding, playing with

pet, etc.) was all the physical activity they needed, and thus, they did not seek out additional physical activities to the same extent that non-pet owners did.

Interestingly, the present study showed that pet owners did not significantly differ from non-pet owners in hours of physical activity within the previous week. This finding supports the above conclusion that pet owners may have considered their exercise to be associated with their pet caretaking duties (e.g. walking the dog, playing with the cat, changing the litter box, etc.) while non-pet owners were engaging in more common forms of exercise (e.g. swimming, biking, running, etc.). Without knowing when pet owners in this study acquired their pets it is difficult to clearly determine an explanation for why pet owners were less physically active overall while not differing in the amount of exercise they engaged in compared to non-pet owners.

It is possible that pet owners recently acquired their pets and overall have not previously been very active, but now with their new pet, they are engaging in more exercise due to their pet ownership responsibilities (e.g. walking pet, cleaning litter box, playing with pet, etc.). It is recommended that future research identify when owners acquired their pets and what their activity level was prior to pet ownership. Also, a concise definition of what constitutes physical activity should be provided to participants so researchers can more adequately determine how much physical activity participants engage in. By addressing these questions, researchers will gain a better understanding of the differences between pet owners and non-owners in regards to physical activity levels and the factors that contribute to those differences.

The current findings showed no significant differences in physical activity associated with pet preference. It could be that more physically active people prefer dogs because they view dogs as more active than cats, but without specifically asking participants which breeds of dogs or cats they prefer, it cannot be identified why the results were non-significant. In particular, there are many low energy dog breeds (e.g. Bassett Hound) that people may prefer over a high energy breed (e.g. Border Collie). It is possible that breed preferences may yield significant differences in amount and level of exercise, because people often seek out breeds that complement their own level of energy and lifestyle. As a result, it is speculated that because the current study only examined pet preference (i.e. prefer dog, cat, both dog and cat, or do not like pets), this variable may have been too broad to generate significant differences in physical activity.

Indices of psychological health were also examined in the current study and it was predicted that pet owners would have lower levels of depression and perceived stress than non-owners. It was also determined whether levels of depression and perceived stress differed based on type of pet owned or type of pet preference. Contrary to past findings (Allen et al., 1991; Garrity et al., 1989), owners reported greater stress than non-owners. However, the two groups did not differ in levels of depression. A possible explanation is that high stress may have preceded pet ownership in that pet owners may generally be more stressed than non-owners and take on a pet in an attempt to reduce their tensions. Another reason for this finding may be that if pet owners recently acquired their pets, tensions may still be high because bonding and the

formation of a relationship with the pet are still in the early stages of development. Pet owners may also be more stressed by the added responsibilities of caring for a pet (e.g. feeding, walking, changing litter boxes, etc.; Scarlett, Salman, New, & Kass, 1999).

In a subsequent analysis, it was found that cat owners reported more stress than non-owners. A potential explanation for this finding is that stereotypically, cat owners tend to be women (Budge, Spicer, Jones, & St. George, 1997), and past literature indicates that women tend to report more stress than men (Etzion, 1984). Consistent with past research, in the current study women reported significantly more stress than men, and 75% of the cat owners were women. Another reason may be that cats are often thought of as less affectionate and more independent than dogs (Ball, 1971) and therefore the stress that cat owners feel does not subside by the presence of a pet cat. With the absence of affection and interaction from the cat, the owners are less able to seek comfort in that pet, and consequently their stress levels remain heightened. Past research has shown that those who have a strong social network either animal or human can ward off feelings of depression and loneliness (Koropeckyj-Cox, 1998), however the current study found that pet owners and non-owners did not differ in their levels of depression. The results showed that depression and stress did not differ based on participants' types of pet preference. This finding suggests that no matter what types of pets people prefer or even if they preferred no pets, they were no more or less susceptible to depression or stress. Stress only seemed to differ if a pet, particularly a cat, is present in a person's life.

Lastly, it was predicted that pet owners would have better overall health than non-owners. It was also determined whether overall health differed as a function of type of pet owned or type of pet preference. Contrary to expectations, pet owners reported poorer overall health than non-pet owners, with no differences between types of pet ownership or preference in overall health. This finding does support some past research indicating that pet owners may have poorer health than non-pet owners (Parslow, Jorm, Christensen, Rodgers & Jacomb, 2005). However, other studies have found that pet owners have better health than non-owners (Headey, 1999). It is possible that these pet owners had poorer health prior to acquiring a pet.

The current study did not address whether participants lived alone and past research indicates that those who live alone have poorer health due to limited social interactions (Seeman & Crimmins, 2006). It is possible that the majority of pet owners in this study lived alone while the non-pet owners lived with family and/or friends which may diminish their stress and ultimately improve their health. However, the current study also found that overall health did not differ in relation to type of pet ownership. This finding indicates that pet owners generally have poorer health than non-pet owners but when examining types of pet ownership, no particular pet ownership is more likely to influence overall health than another.

Another potential explanation of the health findings is that the United States economy is currently experiencing a recession and as a result Americans are feeling more financially strained which leads to greater stress and poorer health (American Psychological Association, 2012). Further, during this economic crisis, animal shelters

are experiencing an influx of people surrendering their pets due to financial difficulties (Nowicki, 2011) and fewer pet adoptions (Jimenez, 2011). It can be speculated that those who keep their pets may feel more burdened and experience poorer health, more stress, and engage in less exercise than those who do not own pets. This may be especially true of cat owners because cats are often described as much more independent than dogs (Long, 2006) which may cause cat owners to be less emotionally attached to their cats than to dogs. This may account for why people who owned dogs did not differ from non-pet owners in health measures but those who owned cats did.

Overall health was not found to differ based on types of pet preference. This finding is not surprising due to the fact that pet preference is based solely on opinion. Unless a person is regularly interacting with a specific animal it would be difficult to directly link a particular pet preference to any fluctuations that may occur in the health measures incorporated in this study.

Implications

Although pet preference and ownership did not differ based on the relationship indices in this study, the current findings regarding health have some practical implications. One implication of these findings is that they provide a better understanding of the health benefits associated not only with general pet ownership but with owning different types of pets, and could provide greater insight into health promotion among pet owners. Although past research has indicated that pet ownership and pet interaction in general (e.g. petting and playing with pets, such as with pet

therapy) have valuable health benefits (e.g. lower blood pressure, diminished stress, etc.) (Brodie, & Biley, 1999), this was not the case in the current study. Instead, the study suggests that pets may not reduce stress and so if a person is stressed, purchasing a pet may not adequately reduce the problem.

Further, pets may actually contribute to stress, and people should be fully aware prior to acquiring a pet what responsibilities this endeavor may entail. People should also consider whether they are capable of taking on those added responsibilities, and whether the pet will just be more of a burden. This explanation may also support past research where health benefits of pet ownership were not found (Bauman, Russell, Furber, & Dobson, 2001; Stallones, Marx, Garrity, & Johnson, 1990).

Limitations of the Current Study

There are some limitations of the current study. First, this study was composed of a convenience sample of mostly female participants (68.90%). Additionally, participants were recruited via an online social networking site and through a midwestern university psychology department which may not be representative of the general population. Further, information about which state or region the participants resided in was not collected which also could influence the results of this study. It is likely that the majority of participants resided in Minnesota, North Dakota, and Wisconsin because of the location in which the data were collected. These states have a large hunting and farming community, and as a result, participants may view animals in a different way than perhaps in California or Florida where animals are often treated as members of the family and laws on animal welfare are some of the strictest in the

nation (Stray Pet Advocacy, 2003). People who are more accepting of animal farming and hunting often endorsed the view that animals are used for work versus companionship and may be less emotionally and physically influenced by pet preference or pet ownership. This idea suggests that those in Midwestern states are more likely to view dogs and cats as animals used for work purposes and may be less likely to have emotional bonds with an animal to the point where it would significantly impact their relationship satisfaction, attachment style, or health.

A second limitation of the current study is that data about participants' family lives (e.g. any children in the home) and daily stressors were not examined. Daily stress and family life may better explain why cat owners were more stressed than non-owners. It is possible that the cat owners in this study also had several children in the home and were dealing with a multitude of life stressors that resulted in the higher reports of perceived stress in cat owners than in non-owners. Further, questions about participants' closeness to their pets were not asked which may also provide insight into why there were differences between cat owners and non-owners. It is possible that the participants who were cat owners were not highly attached to their cats and so viewed them more as a burden than a companion.

The current study also did not ask participants how long they had owned their pets. This question may have provided a better understanding of participants' levels of closeness to their pets which could have influenced how participants responded on the health measures. For example, if pet owners were very close to their pets they may be less stressed (Allen, 2003) and have better health (Lago, Delaney, Miller, & Grill,

1989) than those who do not own pets due to the fact that companionship with pets or humans has been shown to positively impact health, depression, and stress (Budge, Spicer, Jones, & St. George, 1998; Cassel, 1976).

It would also be valuable to include both relationship partners in future studies. Including both partners would contribute to a better understanding of whether the couple has similar pet preferences, whether partners vary in their relationship satisfaction or attachment style, and if health measures differ between partners. Further, the current study only examined relationship satisfaction and attachment measures. It is possible that significant results may have been found if the study assessed other romantic relationship measures, such as interpersonal trust, communication style, and relationship closeness. It would be intriguing to determine if differences in these measures occurred based on type of pet preference or pet ownership. With the assumption that interpersonal trust, communication style, and relationship closeness may operate as mediating variables between type of pet ownership and pet preference and relationship satisfaction it may be possible to gain a clearer understanding of how relationships vary based on pet ownership and preference by examining these mediators.

Lastly, it is important to note that pet preference and pet ownership groups contained different numbers of participants. Some of these groups such as the "prefer dogs" ($n = 303$) group was much larger than the "do not prefer pets" ($n = 35$) group. To prevent violations of homogeneity of variance/covariance matrices when using MANOVA or MANCOVA, the largest group should not be greater than 1.5 times the

smallest group (Leech, Barrett, & Morgan, 2005). Unfortunately, in the current study this rule has been violated and so a subset of the non-significant results could be due to non-equivalent group sizes. For example, if additional participants who disliked pets were included in the study, and also reported that they were dissatisfied in their relationships possibly contributing to high stress and depression, the means for the pet preference groups could vary enough that significant differences would be found. This example suggests that more equivalent group sizes could provide a more clear differentiation between the groups on the relationship and health related indices.

Overall, this study suggests that owning a pet may be associated with poorer health of the owner (e.g. less exercise, poorer overall health, and more stress) compared to non-owners. However, this study only examined potential differences between types of pet ownership or pet preference in relationship satisfaction and health and thus causal inferences are not possible. It can only be speculated that the poor health in pet owners preceded pet ownership, or that the maintenance and financial responsibilities associated with a pet may be so great that they are negatively affecting the health of the owner. A possible implication of this study is that pets may actually contribute to stress, and people should be fully aware prior to acquiring a pet what responsibilities this endeavor may entail.

It is important to understand what types of animals provide the greatest health impact for owners. Medical professionals can then utilize this information to encourage their patients who do not own pets, and are experiencing poor health, to incorporate specific types of pets into their lives. It is also important to note that pets can create a

great deal of stress and frustration for their owners (e.g. pets are often expensive to care for, take time and energy to clean up after, and must also be entertained, etc.) which may contribute to owners' level of stress and poor overall health. By understanding what types of pets are associated with the most health benefits with the smallest amount of added burden for the owner should be the pets that medical professionals and public healthcare providers are encouraging patients to seek out if the patient's health is diminishing. Every person has unique experiences and circumstances that guide them in the direction of a certain type of pet. In some situations those pets become more work than the owner bargained for, and sometimes a person selects a pet that enhances the owner's life tremendously (e.g. the pet diminishes the owner's stress, encourages the owner to get out and exercise more, and the pet becomes a valuable companion). Future research must delve deeper into these issues in an attempt to identify how pets influence the health and well-being of the owner. This insight may be beneficial for animal shelter workers as well so they may better assist potential adopters in picking out the best pets for their particular needs and lifestyle.

APPENDICES

APPENDIX A

PET INDEX

1) What type of pet do you most prefer? (Check **ONLY ONE**)

_____Dog

_____Cat

_____Both Dog and Cat Equally

_____Neither Cat or Dog

_____I do not like pets

2) What type of pet(s) do you currently own? (Check **ALL** that Apply)

_____ Dog(s)

_____ Cat(s)

_____ Both Dog(s) and Cat(s)

_____ Neither Dog or Cat

_____ Other

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRES

1) What is your current age?

_____ Age

2) What is your gender?

____Male

____Female

3) What is your current relationship status?

____Single/No Current Relationship

____Married

____In an Exclusive Dating Relationship/ Not Cohabitating

____In an Exclusive Dating Relationship/ Cohabitating

4) How long have you been in your current relationship?

_____Months _____Years

APPENDIX C

PERSONAL ATTRIBUTES QUESTIONNAIRE

Directions: The following items below inquire about what type of person you think you are. Each item consists of a pair of characteristics, with numbers 1 through 5 in between. Each pair describes contradictory characteristics, meaning you cannot be both at the same time, such as very artistic and not all artistic. The numbers form a scale between the two extremes. Please circle the number that best fits where you fall on the scale for each item listed.

1)	Not at all Aggressive	-1	2	3	4	5- Very Aggressive
2)	Not at all Independent	-1	2	3	4	5- Very Independent
3)	Not at all Emotional	-1	2	3	4	5- Very Emotional
4)	Very Submissive	-1	2	3	4	5- Very Dominant
5)	Not at all Excitable in a Major Crisis	-1	2	3	4	5- Very Excitable in a Major Crisis
6)	Very Passive	-1	2	3	4	5- Very Active
7)	Not at all able to devote Self completely to others	-1	2	3	4	5- Able to devote self completely to others
8)	Very Rough	-1	2	3	4	5- Very Gentle
9)	Not at all helpful to others	-1	2	3	4	5- Very helpful to others
10)	Not at all Competitive	-1	2	3	4	5- Very Competitive
11)	Very Home Oriented	- 1	2	3	4	5- Very Worldly

12)	Not at all Kind	-1	2	3	4	5- Very Kind
13)	Indifferent to Others' Approval	-1	2	3	4	Highly Needful of 5- Others' Approval
14)	Feelings Not Easily Hurt	-1	2	3	4	Feelings Easily 5- Hurt
15)	Not at all Aware of Others' Feelings	-1	2	3	4	Very Aware of 5- Others' Feelings
16)	Can Make Decisions Easily	-1	2	3	4	Has Difficulty 5- Making Decisions
17)	Give Up Very Easily	-1	2	3	4	Never Give Up 5- Easily
18)	Never Cry	-1	2	3	4	5- Cry Very Easily
19)	Not at all Self-Confident	-1	2	3	4	Very Self- 5- Confident
20)	Feel Very Inferior	-1	2	3	4	5- Feel Very Superior
21)	Not at all Understanding Of Others	-1	2	3	4	Very Understanding 5- of Others
22)	Very Cold in Relation to Others	-1	2	3	4	Very Warm in Relation with 5- Others
23)	Very Little Need for Security	-1	2	3	4	Very Strong Need 5- for Security
24)	Goes to Pieces Under Pressure	-1	2	3	4	Stands Up Well 5- Under Pressure

APPENDIX D

RELATIONSHIP ASSESSMENT SCALE

Directions: Each question below is based on a five-point scale. Please circle the number in each question that best fits your feelings regarding your current romantic relationship.

1) How well does your partner meet your needs?

1	2	3	4	5
Poor		Average		Extremely Well

2) In general, how satisfied are you with your relationship?

1	2	3	4	5
Unsatisfied		Average		Extremely Satisfied

3) How good is your relationship compared to most?

1	2	3	4	5
Poor		Average		Excellent

*4) How often do you wish you hadn't gotten in this relationship?

1	2	3	4	5
Never		Average		Very Often

5) To what extent has your relationship met your original expectations?

1	2	3	4	5
Hardly at All		Average		Completely

6) How much do you love your partner?

1	2	3	4	5
Not Much		Average		Very Much

*7) How many problems are there in your relationship?

1	2	3	4	5
Very Few		Average		Very Many

*Reverse Coded Items

APPENDIX E

RELATIONSHIP QUESTIONNAIRE

Directions: Please read each description and **Check** the letter corresponding to the style that *best* describes you or is *closest* to the way you generally are in your current romantic relationship.

_____ A. It is relatively easy for me to be emotionally close to my partner. I am comfortable depending on my partner and having my partner depend on me.
I don't worry about being alone or having my partner not accept me.

_____ B. I am somewhat uncomfortable being close to my partner. I want an emotionally close relationship, but I find it difficult to trust my partner completely or to depend on him/her. I sometimes worry that I will be hurt if I allow myself to become too close to my partner.

_____ C. I want to be completely emotionally intimate with my partner, but I often find that he/she is reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that my partner doesn't value me as much I value him/her.

_____ D. I am comfortable without having a close emotional relationship with my partner. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my partner or have my partner depend on me.

2) Please rate each of the following relationship styles according to the *extent* to which you think each description corresponds to your current romantic relationship style.

_____ A. It is relatively easy for me to be emotionally close to my partner. I am comfortable depending on my partner and having my partner depend on me.

I don't worry about being alone or having my partner not accept me.

_____ B. I am somewhat uncomfortable being close to my partner. I want an emotionally close relationship, but I find it difficult to trust my partner completely or to depend on him/her. I sometimes worry that I will be hurt if I allow myself to become too close to my partner.

_____ C. I want to be completely emotionally intimate with my partner, but I often find that he/she is reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that my partner doesn't value me as much I value him/her.

_____ D. I am comfortable without having a close emotional relationship with my partner. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my partner or have my partner depend on me.

	Not at All Much Like Me			Somewhat Like Me			Very Like Me
Style A.	1	2	3	4	5	6	7
Style B.	1	2	3	4	5	6	7
Style C.	1	2	3	4	5	6	7
Style D.	1	2	3	4	5	6	7

APPENDIX F

GENERAL HEALTH SCALE

Directions: Please circle the answer that most closely matches your perceptions of your current health.

1) In general how would you rate your overall health?

1	2	3	4	5
Excellent	Good	Fair	Poor	Very Poor

APPENDIX G

CENTER FOR EPIDEMIOLGICAL STIDIES DEPRESSION SCALE

Directions: Please circle the answer that indicates how many days in the LAST WEEK you were troubled by the following items.

(1) Rarely the Time (Less than 1 Day)	**(2)** Some of the Time (1-2 Days)	**(3)** Moderate Amount of Time (3-4 Days)	**(4)** Most or All of (5-7 Days)

In the PAST WEEK....

1)	I was bothered by things that don't usually bother me	1	2	3	4
2)	I had trouble keeping my mind on what I was doing	1	2	3	4
3)	I felt depressed	1	2	3	4
4)	I felt that everything I did was an effort	1	2	3	4
5)	I felt hopeful about the future	1	2	3	4
6)	I felt fearful	1	2	3	4
7)	My sleep was restless	1	2	3	4
8)	I was happy	1	2	3	4
9)	I felt lonely	1	2	3	4
10)	I could not get going	1	2	3	4

*Questions 5 and 8 are reversed coded items

APPENDIX H

PERCEIVED STRESS SCALE

Directions: The following section concerns your feelings and thoughts about various things that have happened in your life during the last month. In each case, please indicate how often you felt or thought a certain way.

Never	Infrequently	Sometimes	Frequently	Very Often
1	2	3	4	5

During the last month....

1) How often have you been upset because of something that happened unexpectedly?

1 2 3 4 5

2) How often have you felt that you were unable to control the important things in your life?

1 2 3 4 5

3) How often have you felt nervous and stressed?

1 2 3 4 5

4) How often have you found that you could not cope with all things that you had to do?

1 2 3 4 5

5) How often have you been angered because of things that happened that were outside of your control?

1 2 3 4 5

6) How often have you found yourself thinking about things that you would have to accomplish?

1 2 3 4 5

7) How often have you felt difficulties were piling up so high that you could not overcome them?

1 2 3 4 5

APPENDIX I

PHYSICAL ACTIVITY AND EXERCISE SCALE

Directions: The following section addresses questions regarding your physical activity.

1) Over the ***past few months***, how would you rate your physical activity?

1= Extremely Inactive
4= Moderately Active
7= Extremely Active

1 2 3 4 5 6 7

2) During the ***last week***, about how much time did you spend exercising?

_____Hours _____Minutes

APPENDIX J

INVITATION TO PARTICIPATE

You are invited to participate in a research study on romantic relationships and general well-being. This study is being conducted by Jenna Trisko, a doctoral student at the University of North Dakota. To be eligible to participate in this study you need to be in an exclusive romantic relationship and at least 18 years of age. Your participation will consist of completing a brief survey that asks about your current romantic relationship along with your general well-being. This survey is available via the link below and should take about 10 minutes to complete. Participation in this study is completely anonymous. At the end of the survey you may enter a drawing for a chance to win one of four $25.00 Amazon gift cards. We would also really appreciate it if you would please forward this email invitation on to friends and family who may also be interested in participating in this research.

If you have any questions please contact Jenna Trisko at Jenna.Trisko@und.edu.

To participate in this study please click here: *Link Inserted Here*.

APPENDIX K

INFORMED CONSENT

You are invited to participate in a research study regarding romantic relationships and well-being. This study seeks to ask individuals about their current exclusive romantic relationships as well as health indicators associated with their well-being. The results of this study will provide a better understanding of the factors associated with quality romantic relationships and how these factors may influence health. Approximately 150 people will participate in this study.

Participation in this research will take about 10-12 minutes and require you to answer a series of questions regarding your current relationship and your overall health. Through participation in this study you may develop a better understanding of how you perceive your health and current relationship.

There are no risks associated with participation in this study. You may choose not to respond to any of the questions and no identifying information will be requested of you throughout the survey. After you complete the survey, you will be provided with an email address where you may send your contact information to be entered into a drawing for one of four $25.00 Amazon gift cards as compensation for your participation. University of North Dakota students will receive course credit for their participation in this study.

The University of North Dakota and this research team are not receiving any monetary compensation from any outside organizations for conducting this research.

This study is completely voluntary and your responses will remain completely anonymous. You may choose not to participate in the study at any point and without penalty. Your decision whether to participate or not in this research will not affect your current or future relations with the University of North Dakota.

This study is being conducted by Jenna Trisko, an experimental psychology graduate student and her advisor Dr. Joelle Ruthig. If you have any questions or concerns about this research please contact Jenna Trisko at Jenna.Trisko@und.edu. If you have any questions regarding your rights as a research participant, please contact the University of North Dakota Institutional Review Board at 701-777-4279.

Please check the box below indicating that you have read the above information and would like to continue on to the survey portion of this study.

☐ I have read the above information and would like to participate in this study

APPENDIX L

DEBRIEFING

We greatly appreciate your participation in this study! If you are interested in entering for a chance to win one of four $25.00 Amazon gift cards please email your name AND email address to the researcher, Jenna Trisko at Jenna.Trisko@und.edu. The contact information you provide for the drawing will not be linked to your survey responses.

Your participation is imperative to the success of this study. The results of this research may provide a better understanding of the factors associated with quality romantic relationships and overall health and well-being. The results of this study may be shared with mental health professionals, marriage and family counselors, and the general public to provide awareness of some of the contributing factors that promote positive social relationships and superior health.

If you have any questions or concerns please contact Jenna Trisko at Jenna.Trisko@und.edu.

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