CHILDREN AND THEIR SOCIAL RELATIONSHIPS WITH PET DOGS:
EXAMINING LINKS WITH HUMAN BEST FRIENDSHIP QUALITY AND
LONELINESS

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SUMMARY

This study aimed to examine the quality of the child’s relationship with the pet dog and whether it was associated with the quality of friendship with the child’s human best friend or with the amount of loneliness the child felt. This study also examined whether the dog’s temperament was associated with either of the two outcome variables. The sample consisted of 99 children ages 9-11 years from Northeast Ohio. The children filled out self-report measures and the parent filled out a questionnaire regarding the dog’s temperament. No significant correlations were found between the child’s closeness to the dog and loneliness. Children who reported more feelings of admiration and affection toward their dog also reported more positive friendship qualities and children who reported more nurturing and companionship feelings toward their dog reported more positive and less negative friendship qualities. The dog’s temperament was also not found to be related to the child’s quality of friendship or their feelings of loneliness.
Children and their social relations with pet dogs: Examining links with human best friendship quality and loneliness

Pets have become a huge part of our society. According to the American Pet Products Association, about 62% of all households had a pet in 2012. While that number included all different kinds of pets, dogs are seen most often with 47% of all American households owning at least one dog (“Pets by the numbers”, 2013). It is mostly widely accepted that owning a pet can have certain health benefits, yet the world of psychology is just starting to truly delve into the possible social and clinical benefits. In this study, I will specifically focus on some of the potential social benefits dogs may have for children. I intend to find out whether how close the child feels to their dog is related to their quality of friendship with their best friend and with the loneliness the child feels. I also intend to explore whether the dog’s temperament is related to how close the child feels to the dog.

History of Human-Canine Interaction

Historically, animals have played a significant role in humans’ lives across many cultures. They have been essential to human well-being and even survival in many cases. The relationship between human and animal has been honored in many spiritual traditions (Serpell, 2006). Still today, Asian cultures and American Indians learn and draw symbolic meaning from animals (Walsh, 2009), and animals are now an integral of many people’s lives.
The domestication of animals was a process based on a mutual need for shelter, food, and protection. There is archaeological evidence that over 14,000 years ago, ancient wolves lived among humans (Serpell, 2008). These early dogs, or domesticated wolves, were valued for their intelligence, loyalty, and sharp senses. They were utilized as guides, protectors, and useful allies in obtaining food. Dogs also played significant roles in agricultural communities by herding. At that time, animals were still treated as inferior to their owners, but they were beginning to be valued as companions (Walsh, 2009). During the early Roman and Greek empires, dogs were kept as herders, guardians, and hunters, but were warmly treated as loyal pets (Coren, 2002). Ancient burial sites in Greece and Rome, along with many other places worldwide, reveal the close relationship that humans shared with animals. Animals have been found buried right alongside children and other vital members of the family. Animals’ importance can also be seen in religions such as Islam and Judaism because they placed importance on the proper treatment of animals. It can be seen with the annual “Blessing of the Animals” ritual in Christianity (Dresser, 2000).

While the historical evidence demonstrating the importance of human-animal interaction is abundant, animals are also still important companion animals in today’s society. Recently, animals have become increasingly more substantial in Americans’ lives. As of 2007, the APPMA National Pet Owners Survey found that over 63% of overall households, and over 75% of households with children, have at least one pet
Dogs are the most common pets, and 95% of pet owners see their pet as a friend, while 87% see their pet as a member of the family (Wells & Perrine, 2001). It should also be noted that while the term “pet” has widely been used to describe an animal kept for pleasure, veterinarians and other professionals now prefer the term “companion animal” to signify a mutual relationship and psychological bond between the animal and person (Walsh, 2009). For the present study, the term “pet dog” will be used because the social benefits of companion animals are still being discovered.

**Potential Benefits of Pet Ownership**

Even though pets have become very prevalent in today’s society, the potential psychological benefits are just now starting to be examined. One of the strongest areas of research examines the physiological benefits of pet ownership. Allen, Blascovich, and Mendes (2002) found that pet ownership correlated with lower blood pressure and cholesterol. They also found that the presence of a pet was more effective than that of a spouse or human friend in alleviating the cardiovascular effects of stress. Animals have also been shown to be beneficial in coping with chronic conditions and illnesses. In one study, hospitalized children recovered better when exposed to companion animals (Kaminsky, Pallino, & Wish, 2002).

But physiological benefits are not the only way that companion animals can help humans. Pets can benefit humans’ mental health. Some studies have shown that pets are beneficial for individuals with mental health disorders such as schizophrenia, depression, anxiety, and ADHD (Barker & Dawson, 1998; Beck, 2005). These studies suggested that
pets help to stop individuals with mental problems from focusing on their own negative features. They can become more involved with their environment with a companion animal at their side. McCulloch (1981) surveyed 31 middle-aged people who had a diagnosis of a chronic disease and a depressive reaction to the disease. Twenty of the participants reported that the pet helped their morale, and 26 believed their pet was an important companion during their illness.

There is also evidence that pets may influence peoples’ attitudes. Mugford and M’Conisky (1975) tested the effects of a pet bird on the social attitudes of the elderly. They recruited 30 participants who lived alone and did not own any pets. They were interviewed for self-concept and attitude toward others upon recruitment. Then the participants in the experimental group received either a small bird or a plant, and the control group received only the interviewer’s attention. They were then interviewed again five months later. Only the participants who received a small bird demonstrated significant improvement in self-concept and attitudes toward others. The bird owners grew attached to their new pet and it became an easy topic for them to discuss in social situations, so the investigators suggested that pets can have positive influences on the elderly since the activities associated with owning a pet promote socialization.

**Children and Pets**

While recently there has been some research in the area of social benefits from pets, it has not nearly been studied enough, especially in children (Griffin, McCune, Maholmes, & Hurley, 2011). However, a few studies have just begun to examine
children and their pets. Some of the current research suggests that owning a pet can have certain social benefits for children. More specifically, the child could see his or her relationship with a pet as a friendship (Triebenbacher 1998), and therefore derive social benefits from it. The present study will examine some potential benefits pet dogs may offer to children in the later middle childhood stage. In particular, it will look at whether children who are “closer” to and see their dog as a friend exhibit less loneliness and whether they have increased friendship quality with their best friend.

Pets may also lend emotional and social support to children. Guerney (1991) found that children perceive their pets as helpful and use them as social support. Pets have also been credited with helping reduce children’s stress (Covert, Whiren, Keith, & Aiken, 1985) and with helping them to regulate their emotions (Bryant & Donnellan, 2007). Some research suggests that children may seek emotional support from their pet. Bryant examined a sample of 7- and 10-year-olds and found that pet owners were as likely to talk to their pet as to their sibling about sad, happy, and secret experiences (As cited in Melson 2003). Seventy-five percent of a sample of 10- to 14-year-olds said that they turned to their pet when they were upset (Covert et al., 1985). And indicating that children may receive different benefits, depending on their closeness with the pet, Melson and Schwartz found that parents rated children who turned to their pet for social support as less anxious and withdrawn in comparison to children who had pets but did not use them for social support (As cited in Melson 2003).

It is also suggested that pets can act as a source of comfort for people. McConnell and colleagues (2011) conducted a study examining whether pets could prevent social
sting and isolation. They used a sample of 97 undergraduates at Miami University. Half of them went through a rejection exercise in which they spent five minutes writing about a time when they felt excluded or rejected, while the other half wrote about waking up the day before. Next they either wrote about their favorite pet, their favorite friend, or they drew a map of campus, according to the condition assigned. Upon examining their data, they found that those who were asked to write about either their pet or their best friend did not suffer from the social rejection exercise, meaning that pets were found to be just as effective as a best friend in staving off negativity (McConnell et al., 2011).

A limitation in the literature is that many studies usually examine all pets rather than breaking them up by type, such as cats, dogs, fish, etc. I believe that certain pets may offer more benefits to children. For example, findings show that dogs have sharp sensory perception and complex feelings and thinking. Biological anthropologists have found that dogs are able to read and interpret subtle human behavior and cues quite well (Katz, 2003). Also, dogs could be more important in social support because they seek social interaction, are loyal and nonjudgmental, and they respond to people’s emotions (Walsh, 2009). Therefore, this study will specifically examine children who own a dog rather than any other pet, since the goal is to examine the potential social support pets may offer. I also believe that certain qualities the dog may possess will make it more likely the child sees the dog as a close friend. Specifically, I hypothesize that children who have dogs that are more attached and attention-seeking will be closer to their dog.

**Pets and Friendship**
Friendship is a very crucial part of preadolescents’ lives. This is a time when children start to find need of a same-sex “chum” or close friend and then learn to care about what matters to that person. Typically preadolescents choose friends of the same gender who complement their social needs. It is during this time that children realize and fulfill their need for interpersonal sensitivity and mutuality in friendship (Sullivan 1953). Friendship is a dyadic relationship between two individuals. There are three agreed upon aspects of adolescent friendships. First is reciprocities, which are the mutual benefits that the adolescents receive. Next is liking, meaning that the two adolescents would rather spend time with each other than with other adolescents. And finally affection and having fun are the last component (Bukowski, Newcomb, & Hartup, 1996). Inadequate friendships can result in feelings of isolation and loneliness (Davis & Juhasz, 1995).

Friendship with a human being may not be the only type of friendship a child can have though. Triebenbacher (1998) found that children describe their pets as friends. A study in 2011 found that owners whose dogs fulfilled social needs related to belongingness, self-esteem, meaningful existence, and control experienced better outcomes than owners whose dogs did not fulfill these social needs (McConnell et al., 2011). Furthermore, this study examined two competing hypotheses regarding pet ownership: compensatory and continuity. The compensatory hypothesis states the owner will rely less on the pet when they have better social support from people, and vice versa, while the continuity hypothesis states that there will be continuity in relationships, meaning that the owner will have good social support from both friends and family and from their pet. McConnell and colleagues found that pets were beneficial regardless of a
person’s level of human social needs fulfillment, and that there was a positive correlation between reported social needs fulfillment from pets and from people in their lives. Both of these findings support the continuity rather than the compensatory theory.

McConnell and colleagues (2011) found evidence to support the continuity hypothesis in adults, but it has not been tested in children. In the present study, I intend to examine this hypothesis in children ages 9-11 years. Based on the findings of McConnell and colleagues (2011), I predict that similar results can be found in children, meaning that children who feel closer to their dog will also have a better friendship quality with his or her best human friend.

**Pet Dogs and Loneliness**

The other aspect this study will examine is the common and universal human phenomenon of loneliness. Although many different definitions exist, Parkhurst and Hopmeyer (1999) identify three common elements. These include: a negative affect, viewing oneself as alone, and deficits in closeness and connection with others. Loneliness has been associated with a variety of social and emotional maladjustment in childhood, including depression, social anxiety, low self-esteem, social withdrawal, low quality friendships, and peer rejection (Asher & Paquette, 2003; Ernst & Cacaioppo, 1999; Rotenberg & Hymel, 1999). Sullivan (1953) suggested that friendship is used to prevent loneliness in childhood, and Parker and Asher (1993) support this claim in their study by finding that children without best friends were lonelier than children with best friends.
Since children have been shown to utilize their pet for social support and see them as a friend (Covert et al., 1985; McConnell et al., 2011; Triebenbacher, 1998) I believe that pets can be instrumental in staving off loneliness, just like a best friend. Therefore, I hypothesize that a close relationship with the pet dog will help mitigate children’s loneliness.

**Dog’s Temperament**

According to Merriam Webster Online, temperament is defined as “the usual attitude, mood, or behavior of a person or animal.” Dogs, just like humans, have these natural predispositions. Questionnaires filled out by the owners have been used in the literature in order to assess the dog’s temperament and behavior. These questionnaires are based on the fundamental assumptions that the person who lives with the dog knows the most about it and that by asking appropriate questions, it is possible to get reliable and quantifiable data (Hsu & Serpell, 2003). Hsu and Serpell (2003) developed a questionnaire to assess the dog’s temperament that identified 11 different factors using factor analysis. These 11 factors included: stranger-directed aggression, owner-directed aggression, stranger-directed fear, nonsocial fear, dog-directed fear or aggression, separation-related behavior, attachment or attention-seeking behaviors, trainability, chasing, excitability, and pain sensitivity (Hsu & Serpell, 2003).

I believe that the dog’s temperament will be related to how close the child feels toward the dog. Specifically, using one of Hsu and Serpell’s (2003) identified factors of temperament, I believe that the more attached and attention-seeking the dog is, the closer
the child will feel toward the dog. If I find evidence that the dog’s temperament is related to how close the child feels to the dog, then I will test a mediation model to explain loneliness and friendship quality in terms of attachment. I hypothesize that the dog’s attached and attention-seeking qualities will lead to how close the child feels to the dog, and that closeness will then lead to the child having a higher quality friendship with his or her best friend and to the child feeling less lonely.

Hypotheses

In summary, this study will examine four potential hypotheses with regard to 9-11 year old children and their pet dogs. First, I hypothesize that the closer the relationship between the child and his or her dog is (the more the child sees the dog as a friend), the better the quality of friendship the child will report with his or her best friend. Second, I hypothesize that a close relationship with the pet dog will help mitigate children’s loneliness. Third, I predict that higher levels of attachment and attention-seeking qualities in the dog will be related to the child feeling closer with the dog. If I find evidence to support my third hypothesis regarding the dog’s temperament, I have a mediation hypothesis. The mediation hypothesis proposes that the dog’s attached and attention-seeking qualities will lead to how close the child feels to the dog, and that closeness will then lead to the child having a better friendship quality with their human best friend and to the child feeling less lonely.
Method

Participants

This study recruited 99 children and their parents from the northeast Ohio region. The children had to be between the ages of 9-11 years old and also had to own a dog. Multiple methods were utilized to recruit children for the study; flyers were sent home with students in fourth or fifth grade at local schools, announcements were run in newspapers, and flyers were hung up at local libraries. In all, there was an almost equal gender breakdown with girls (51.5%) and boys (48.5%). The sample’s ethnic breakdown was: Caucasian (90.9%), American Indian (2%), Hispanic (2%), African American (1%), and other (4%).

Procedure

All the data were collected by trained researchers at the children’s homes. The children completed questionnaires regarding their feelings toward their pet dog, loneliness, and friendship quality with their best human friend. The child’s parent completed the questionnaire regarding the dog’s temperament.

Measures

**Children’s Feelings About Their Dogs.** Children’s feelings toward their favorite dog were assessed using two different questionnaires since this is a relatively new area of study. The first questionnaire was the 23-item Lexington Attachment to Pets Scale, as seen in Appendix A, which assessed how close the children felt to the dog
(Johnson, Garrity, & Stallones, 1992). Even though the scale is labeled a measure of attachment, I agree with Collis and McNicholas (1998) that relationships with pets do not meet the criteria for attachment identified by Bowlby and Ainsworth, even though they are affectional bonds. The survey is titled “My Pet Dog.” Children were asked to rate the items of a scale of 1-4, where 1 = strongly disagree, 2 = somewhat disagree, 3 = somewhat agree, and 4 = strongly agree. Some sample items include: my dog means more to me than any of my friends, I love my dog because he/she is more loyal to me than most of the people in my life, my dog knows when I am feeling bad, and my dog makes me feel happy. Cronbach’s Alpha = .82.

The second questionnaire used was Bryant and Donnellson’s (2007) Pet Provision of Support measure, as seen in Appendix B, to assess the social provisions of the child-dog relationship. This is a 12-item scale; the first six items assess self-enhancing admiration with affection (Alpha = .85). Some sample items include: how much does your pet dog make you feel good about yourself?, how much does your pet dog make you feel proud of yourself?, how much does your pet dog seem to have a strong feeling of affection for you? The final six items assess nurturing companionship (Alpha = .78). Some sample items include: how much free time do you spend with your dog?, how much do you protect and look out for your pet?, how much do you help your pet dog do things it can’t do? This survey is titled, “My Pet Inventory.” Each question was answered on a scale of 1-5, where 1 = little or none, 2 = somewhat, 3 = very much, 4 = extremely much, and 5 = the most.
All three scales that were used to measure the child’s closeness to their pet dog (general attachment, admiration and affection toward dog, and nurturing and companionship toward dog) were all strongly positively correlated with each other, as can be seen by the values in Table 1.

**Children’s Best Friendship Quality.** The children were asked to nominate a same-sex best friend because Berndt and McCandles (2009) suggested that, for elementary age children, the best way to identify friendships is by child nominations. The children were then asked to use the Friendship Quality Questionnaire (Parker & Asher, 1993) to rate the quality of this friendship. This 38-item measure, which can be seen in Appendix C, has been shown to have excellent psychometric properties (Parker & Asher, 1993) and was scored for overall friendship quality. The children were asked to respond on a scale of 0-4, where 0 = not at all true, 1 = a little true, 2 = somewhat true, 3 = pretty true, and 4 = really true. Some sample items include: my friend tells me I’m good at things, if other kids were talking behind my back, my friend would always stick up for me, I can think of a lot of secrets my friend and I have told each other, and my friend and I always get over our arguments really quickly.

There were six different subscales within this measure. They included: companionship and recreation (Alpha = .65), validation and caring (Alpha = .91), help and guidance (Alpha = .88), intimate disclosure (Alpha = .87), conflict resolution (Alpha = .78), and conflict and betrayal (Alpha = .71). For the purpose of this study, the five positive friendship qualities were grouped together to form the positive qualities variable (Alpha = .87) while the one negative quality, conflict and betrayal, was analyzed
separately. As can be seen in Table 1, the positive qualities were negatively correlated with conflict and betrayal, \( r(98) = -0.34, p = 0.001 \).

**Children’s Loneliness.** To assess how lonely the children felt, they were asked to complete a shortened version of Asher, Hymel, and Renshaw’s (1984) Loneliness and Dissatisfaction Scale, found in Appendix D. This scale was developed by selecting 5 items that primarily tap loneliness rather than peer acceptance (Kerns, Klepac, & Cole, 1996), which were administered with 5 filler items from the original scale. This shortened scale has good internal consistency (Kerns, Klepac, & Cole, 1996). This questionnaire is titled “About Me” and contains 10 items. Sample items include: I have nobody to talk to, I’m lonely, I feel left out of things, and I don’t have any friends. Children responded on a scale of 1-5, where 1 = not at all true, 2 = hardly ever true, 3 = true sometimes, 4 = true most of the time, and 5 = always true. Cronbach’s Alpha = .71.

**Dog’s Attachment and Attention-Seeking tendencies.** The dog’s temperament was assessed using the Canine Behavioral Assessment and Research Questionnaire, or the C-BARQ (Hsu & Serpell, 2003), which can be found in Appendix E. The parent of the child filled out this questionnaire regarding the dog. If there were multiple dogs in the household, the child was asked to choose their favorite dog before the data were collected and the parent was instructed to fill out the questionnaire accordingly. There are seven different subscales on this measure which include: training and obedience, aggression, fear and anxiety, separation-related behavior, excitability, attachment and attention-seeking, and miscellaneous. This study used the attachment and attention-seeking subscale because this is the factor of the dog’s temperament that I thought would
be most influential in how close the child feels toward the dog. This subscale includes items 68, 69, 70, and 71, and the average score was found by dividing by 4. The items include: displays strong attachment for one particular member of the household, tends to follow you (or other members of the household) about the house from room to room, tends to sit close to or in contact with you or with other members of the household when you are sitting down, and tends to nudge, muzzle, or paw you (or others) for attention when you are sitting down (Hsu & Serpell, 2003; Duffy & Serpell, 2012). Cronbach’s Alpha = .69
Results

Preliminary Analyses

I began by running t-tests to see if gender would have a significant effect on any of my measured variables. I found that girls (M = 3.52, SD = .30) were significantly higher than boys (M = 3.36, SD = .32) in the Lexington Attachment to Pets Questionnaire, \( t(97) = -2.94, p < .004 \). Girls (M = 3.01, SD = .79) were also significantly higher than boys (M = 2.62, SD = .73) in positive friendship qualities, \( t(97) = -2.56, p < .01 \). Therefore, I chose to control for gender in the analyses to make sure that gender did not affect any of the results.

Primary Analyses

The first three hypotheses, regarding the child’s relationship with their pet dog and their quality of friendship, feelings of loneliness, and the dog’s temperament, were tested by conducting correlations. I also conducted partial correlations to control for the child’s gender.

Quality of Friendship with Human Best Friend. The first hypothesis, that a closer relationship between the child and his or her pet dog will be associated with higher friendship quality with his or her best human friend, was only partially supported. The correlations between the child’s closeness to their pet dog (using the Lexington Attachment to Pets Questionnaire) and the child’s reported positive and negative qualities of friendship were not significant. But when I examined the positive qualities of friendship individually, I found that children who reported higher levels of general closeness with their dog also reported higher levels of validation and caring and intimate