

DISSERTATION

PET DEATH AS DISENFRANCHISED LOSS: EXAMINING POSTTRAUMATIC GROWTH
AND ATTACHMENT IN COLLEGE STUDENTS

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ABSTRACT

PET DEATH AS DISENFRANCHISED LOSS: EXAMINING POSTTRAUMATIC GROWTH AND ATTACHMENT IN COLLEGE STUDENTS

People in Western societies who have experienced the death of close loved ones can feel as though the impact of their grief is ignored and sometimes not taken seriously. Individuals who have experienced losses even less recognized than human death, such as pet death, can feel completely invalidated and unsupported in their loss. This phenomenon is referred to as disenfranchised grief. Within a pet bereaved sample, this study sought to examine the impacts of social support, severity of grief, and strength of attachment on posttraumatic growth. The study attempted to replicate findings from Spain, O'Dwyer, and Moston (2019) that found that grief symptom severity moderated a negative relationship between loss of social support and posttraumatic growth. This study also explored the impact of insecure attachment on social support and grief severity within a pet bereaved sample. Finally, this study observed possible influences of differences within pet bereaved individuals related to type of pet and whether the pet was euthanized. College students in introductory psychology courses at a largest western United States university completed a survey that assessed extent of social support, grief symptom severity, strength of attachment to pet, insecure attachment, and posttraumatic growth. Results indicated that while grief symptoms and strength of attachment to pet were not moderators for social support and posttraumatic, social support and grief symptoms contributed to increases in posttraumatic growth. Insecure attachment was also found to detract from social support. The findings of this study can inform the clinical treatment of pet bereaved persons and inform future research of pet bereavement as well as disenfranchised loss overall.

TABLE OF CONTENTS

ABSTRACT.....ii

INTRODUCTION.....3

 SOCIAL SUPPORT IN CONTEXT OF GRIEF.....2

 DISENFRANCHISED GRIEF GENERAL.....5

 PET DEATH GENERAL.....11

 PET DEATH AS DISENFRANCHISED LOSS.....16

 RATIONALE FOR CURRENT STUDY.....20

 THE CURRENT STUDY.....24

METHODS.....26

 PARTICIPANTS.....26

 MEASURES.....27

 PROCEDURES.....31

 ANALYSIS PLAN.....32

RESULTS.....35

DISCUSSION.....40

REFERENCES.....51

APPENDICES.....62

INTRODUCTION

Grief, comprised of complex internal reactions, is a normal and healthy process following a loss (Stroebe, Hansson, Stroebe & Schut, 2001). The bereaved – people who have experienced specifically a death loss – can experience a wide range of emotional, mental, and physical symptoms for at least a year following a death (American Psychiatric Association, 2013). Sadness, anger, anxiety, loneliness, helplessness, numbness, shock, and relief are all common emotions the bereaved can experience at any point during their grief process (Walsh-Burke, 2006). Walsh-Burke (2006) further describes possible physiological grief symptoms including stomach pain, sleep disturbance, loss of appetite, restlessness, lack of energy, and tightness in the chest or throat. Cognitive impacts may include difficulty concentrating, confusion, and auditory and visual hallucinations. Some other broad expected reactions to the death of a loved one include intense yearning for the deceased person, intense sorrow and emotional pain, and preoccupation with the circumstances of the death (American Psychiatric Association, 2013). This wide array of possible symptoms can make the grief experience difficult and unpredictable. Bonanno (2001, 24) describes grief as a complex state of multiple emotions: “(a) Whereas emotions happen quickly and are over quickly, grief can go on for months and years; (b) whereas an emotion tends to be responsive to an immediate situation, grief is expressive of a persisting awareness of a disruption in one’s life; and (c) whereas emotions ordinarily are unconsidered responses to an event, grief typically involves, if anything, hyperawareness.” To deal with this uniquely difficult emotional experience, the bereaved can draw on a wide array of coping strategies such as religious engagement, exercise, artistic expression, psychotherapy, and reliance on social support (Stroebe & Schut, 2001). Of these

coping strategies, social support appears to be one of the most effective at preventing undue psychological distress.

Social Support in Context of Grief

Within the context of psychological research, “social support” has primarily been defined as information from others that one is loved, cared for, esteemed and valued, and that they are part of a network of mutual obligations (Cobb, 1976). Multiple studies have established the importance of social support in mitigating the negative emotional impact of experiencing stressful events (Cohen & Wills, 1985; Fu et al., 2017). Cohen and Willis (1985) performed a systematic review of studies that explored the relationship between social support and well-being, seeking to determine whether the predicted relationship between them was due to an overall beneficial effect of social support or to social support serving as a buffer from negative effects of stressful events. Evidence was found for both models. Support for the buffering model was found when studies used measures that specifically examined the construct of “perceived available functional social support.” Many studies have indicated that when individuals perceive that they have ample social connections that will be responsive to needs that arise following a negative event, that perception buffers adverse impacts of stressful events such as physical and emotional traumas, loss experiences, or natural disasters (Cohen & Hoberman, 1983; Lin, Dean, & Ensel, 2013; Paykel, Emms, Fletcher, & Rassaby, 1980). Fu et al. (2017) performed a nine year longitudinal study on over 15,000 middle-aged Japanese adults with the aim of establishing causation between social support and alleviation of psychological distress. They found that all three levels of measured social support – inner circle of well-established friendships, intermediary circle with neighborly connections, and outer circle of general community

involvement – had significant negative relationships with psychological distress, with the inner circle having the strongest relationship with distress reduction.

The literature offers robust support for social support as a protective factor against many different mental health diagnoses. Xueting Zhou, Hong Zhu, Bin Zhang, and Taisheng Cai (2013) found that social support and anxiety symptomology were negatively correlated in college students. Watkins and Hill (2018) not only replicated this finding, but they also found that psychological stress was a mediator between social support and anxiety and depression symptomology, further supporting Cohen and Willis claim that social support acts as a stress buffer. Another study found that social support has a significant relationship with post-traumatic stress symptoms (Haj-Yahia, Sokar, Hassan-Abbas, & Malka, 2019). Specifically, Haj-Yahia et al. found that social support mediates the relationship between witnessing family violence and posttraumatic stress symptoms. Because witnessing family violence decreases availability of social support, that lack of social support in turn has a negative relationship with post-traumatic stress symptoms. In a qualitative study, a common theme indicated by women recovering from eating disorders was that a sense of connection to others has a large, positive influence on their recovery (Linville, Brown, Sturm, & McDougal, 2012). Dunne, Perich, and Meade (2019) found that among a sample of individuals diagnosed with bipolar disorder, those who reported recently seeing family and at least one friend indicated higher recovery scores; conversely, recent mania symptoms were correlated with less family contact.

Social support appears to be an exceptionally important protective factor for those grieving the death of a loved one. Stroebe, Stroebe, Abakoumkin and Schut (1996) performed a longitudinal study on a sample of widowed men and women to examine the relationship between social support and depression symptoms. They found that social support had a negative

relationship with depression symptoms, and that social loneliness acted as a mediator between social support and depression symptoms. When Dyregrov (2006) surveyed parents whose children had died by SIDS, suicide, or accidents, they operationalized absence of social support through a social isolation measure. Dryegrov found that of the predictors considered, social isolation was the strongest predictor of psychological distress. In studying a large sample of individuals suffering various kinds of bereavement, Vanderwerker and Prigerson (2004) not only found that social support protected against major depressive disorder and posttraumatic stress disorder (PTSD), but that it also protected against complicated grief, a pathological grief experience indicated by acute, severely impairing symptoms occurring more than a year after the loss. Social support after a death may also impact the extent to which a bereaved individual feels that they need to establish new connections. Carr (2004) reported that widows had equally low desire to remarry at all reported levels of social support, but widowers had strong desire to remarry when they had low social support. Widowers with high levels of social support, however, reported desire to remarry at about the same level as widows.

The bereaved may receive social support for up to two years following the passing of a loved one, with frequency of support steadily decreasing over the course of the first year (Dyregrov, 2005). Friends and family may extend support in many forms such as conversation about the loss, social stimulation, helping with the funeral, providing food, and assisting with childcare (Dyregrov, 2005). Unfortunately, many bereaved individuals do not receive the quality or quantity of social support that they desire (Aoun et al., 2015). People in western cultures can tend to be death phobic, feeling decidedly uncomfortable talking about death and supporting bereaved loved ones. For some individuals, absence of social support following a loss can be attributed not just to their society's discomfort with death generally, but also because of cultural

attitudes towards specific kinds of loss. The death of someone other than an immediate family member, like an aunt, cousin, grandmother, or friend, frequently receives only passing condolences, regardless of the depth of relationship with that person (Doka, 2002). In recent years, grief researchers have begun to more seriously explore the concept of losses that are not sanctioned by society and the consequent emotional struggle, referred to widely as disenfranchised grief.

Disenfranchised Grief General

Disenfranchised grief is the emotional experience of a loss that is not openly acknowledged, socially validated, or publicly mourned (Doka, 2008). When an individual's grief is disenfranchised, several intra and interpersonal levels in their life are restricted by empathic failure, or the failure to understand the meaning and experience of another (Neimeyer & Jordan, 2002). Neimeyer and Jordan go on to specify four levels of empathic failure that contribute to a disenfranchised grief experience: a) self with self, b) self with family, c) self with larger community, and d) self with transcendent reality. At the self-level, a person may deny or disown some aspect of their grief experience. Imagine a young woman whose cat died months ago; she believes she should not still miss the cat. She denies herself the opportunity to miss the animal or experience any related emotions to missing the animal, thereby contributing to her experience of grief disenfranchisement. Empathic failure within a bereaved person's family, the second level of empathic failure, can disenfranchise their grief in many different ways. A common response to grief with the intention of reducing someone's suffering is to downplay the seriousness of a loss with comments like "it's all going to be alright" (Walsh & McGoldrick, 2004). One family member commanding another not to grieve, like a mother telling a daughter not to cry for an

uncle who died of drug overdose, is a more extreme example of family disenfranchisement (Neimeyer & Jordan, 2002).

The definition of disenfranchise is “to deprive of a franchise, of a legal right, or of some privilege or immunity” (Merriam-Webster, 2019). An individual’s grief is disenfranchised by their community, the third level of empathic failure specified by Neimeyer and Jordan (2002), when their society deprives them of the right to grieve. Every society has its own rules for appropriate thoughts, feelings, and spiritual practices in response to loss. These rules manifest as societal expectations that frame each individual’s grief experience. According to Doka, there appear to be multiple factors that could explain why Western society’s rules are based on grieving immediate family members while largely ignoring other losses. One possible factor is the importance that legal recognition lends to immediate family relationships. Individuals with legal responsibility to manage the affairs of a deceased loved one – usually an immediate family member like a spouse, parent, or sibling – are often granted the most paid leave and generally offered the most formal gestures of support from societal institutions. Doka also observes that Western cultures have a strongly held value of rationality and practicality that influences how businesses and institutions operate. For example, concern for the emotional well-being of employees often ranks much lower among a company’s priorities than productivity and profit margin. If losses beyond immediate family relationships were acknowledged by businesses and employees were granted practical support like time off, employers could grow frustrated with employee attendance. Businesses would also potentially have to assess the significance of relationships, and how to recognize them properly, on a case by case basis. A human resources manager might have to consider whether or not a person’s connection to a friend was strong enough to warrant missing work, extending project deadlines, etc. This appraisal of each loss

would be a difficult, time consuming process and potentially a source of conflict among employees (Doka, 2008). Doka notes that these added complications and perceived negative impacts on the financial success of a business directly conflict with the rational, practical values of Western culture. If the government people live under and the businesses they work for collectively recognize only immediate relationships as worthy of serious acknowledgement and support, that idea can seep into the societal consciousness and behavior.

The fourth and final level of empathic failure, self with transcendent reality, occurs when a grieving person who believes in a higher power feels as if their god has abandoned them, or what some of Christian faith may refer to as a “why hast thou forsaken me” experience (Psalm 22:2, New King James Version). The religious bereaved can feel abandoned if they find the loss to be cruel or unfair, causing them to question the love or support of their god (Neimeyer & Jordan, 2002). Such losses can include sudden traumatic deaths, such as a drunk driving accident or loss of a child. Human delegates representing a higher power, like a pastor or imam, can contribute to this level of empathic failure if they invalidate a loss with religious platitudes (Neimeyer & Jordan, 2002). A parishioner may have a disenfranchised grief experience if their religious leader instructs them not to cry because their child is in a “better place” or that they need to “trust [higher power’s] plan”.

Disenfranchised grief may lead to a range of negative outcomes. Individuals are socialized to have at least an approximate understanding of how much grief is acceptable by their society for a given loss. If they perceive that their own attachment is much deeper and that their grief is more profound than the perceived standard, they can feel guilty and ashamed of their emotions (Doka, 2008). They feel that they do not have the right to feel the way they do, preventing them from engaging in healthy grief processing (Kauffman, 2002). In addition to

exacerbating grief symptoms and inhibiting grief processing, disenfranchised grief may also inhibit one of the potential positive outcomes of traumatic experiences. Posttraumatic growth, popularized within psychology by Tedeschi and Calhoun (1998), is a positive change in thinking and relating to the world following the experience of a traumatic event. Posttraumatic growth is experienced as meaningful and contributes to a greater sense of strength and confidence.

Calhoun, Tedeschi, Cann, and Hanks (2010) discussed their model of posttraumatic growth and the five dimensions of posttraumatic growth change within the context of grief experiences. When a close loved one dies, that event challenges the grieving person's assumptive beliefs, a set of beliefs that inform general understanding of how events should occur and what influence the individual can have on those events. That challenge contributes to intrusive and brooding rumination, followed by rumination that is "deliberate and constructive" and leads to "constructive schema changes." Eventually the bereaved accepts the "changed world," and they experience posttraumatic growth. Growth occurs in the five following areas: 1) self-perception; though the bereaved often feel more vulnerable after personally experiencing devastating loss, they can feel stronger and more confident after witnessing their own survival through extremely difficult trauma; 2) relationships; after grieving a loved one, people sometimes report feeling closer to the people in their life and a greater sense of empathy towards those in pain; 3) new possibilities; the bereaved may begin engaging in new activities or roles in their life following the loss, and they may also develop new social relationships; 4) appreciation of life; with a new awareness of their own mortality, bereaved individuals may live with vivid, intentional lives; and 5) existential/spirituality; bereaved persons may experience changes in their perception of their existence, and for religious individuals, in their understanding of connection to transcendent entities. Calhoun et al. (2010) reported that in a sample they accumulated across multiple studies

with 233 bereaved individuals and 571 individuals reporting other traumas, all of whom had experienced posttraumatic growth, the bereaved showed greater growth in the relationships, appreciation of life, and spiritual change dimensions.

Few studies have explored the impact of disenfranchised grief on posttraumatic growth, but there is some evidence to suggest that disenfranchisement could inhibit posttraumatic growth. A review of studies that examined posttraumatic growth among bereaved persons found that not only is social support predictive of posttraumatic growth, but social support accounted for more than one third of the variance (Michael & Cooper, 2013). If social support contributes so significantly to posttraumatic growth, it is possible that those with disenfranchised grief, which is characterized by a distinct absence of social support, could experience less posttraumatic growth. One study found support for this theory within the context of those with severe grief. Spain, O'Dwyer, and Moston (2019) hypothesized that disenfranchised grief, as measured by a Loss of Social Support scale (Barrett & Scott, 1989), would have a negative relationship with posttraumatic growth when grief severity acted as a moderator of the relationship. After surveying 133 individuals who had experienced the death of a pet, a loss often considered to be disenfranchised (Meyers, 2002), Spain et al.'s findings supported their hypothesis: when grief severity was high, the posttraumatic growth of participants with disenfranchised grief was significantly inhibited. What makes the moderating impact of grief severity particularly devastating is that posttraumatic growth research suggests that traumatized individuals with higher amounts of distress are poised to experience the most posttraumatic growth (Calhoun, Tedeschi, & Tedeschi, 2014). It appears that when a person feels invalidated and unsupported in their grief experience, that could prevent them from experiencing beneficial personal growth.

While Doka and Kauffman posed seemingly logical theory regarding the negative impact of disenfranchised grief and Doka's original theory of disenfranchised grief (Doka, 1989) is widely recognized in the grief literature, Thornton and Zanich (2002) observed that little empirical research has been done to support the occurrence of the phenomenon. In their review of disenfranchised grief literature, they found that Thornton, Robinson, and Mlecko (1991); Thornton, Gilleyen and Robertson's 1991 study (as cited in Thornton & Zanich, 2002); and Demko and Thornton's 1995 study (as cited in Thornton & Zanich, 2002) all explored hypothetical reactions to disenfranchised losses instead of researching subjects that actually experienced a theoretically disenfranchised loss. DeFreese (2014) identified studies exploring many different kinds of disenfranchised grief including perinatal loss, organ donation, death of same-sex partner, families of death row inmates, and severe mental illness. All except one (Robak & Weitzman, 1995) of the studies were qualitative interviews or theoretical studies. These studies typically featured sample sizes from 15 to 30 participants and entailed theme analysis of structured interviews. All identified themes of disenfranchisement, including descriptions of social isolation as a result of social stigma and perception of social support as inadequate. Using a grief response measure, Robak & Weitzman studied the grief experience of a sample of college aged adults who had lost a romantic relationship. They found that the students' grief reaction was very similar to death loss grief reactions. Another study from Adrian and Stitt (2017) was able to indirectly indicate negative mental health outcomes caused by grief disenfranchisement for a sample of individuals who had experienced a pet death. While Adrian and Stitt did not study disenfranchisement specifically as an inhibitor to healthy grieving, they found that pet bereaved individuals that were reluctant to engage in the grieving process were more likely to experience worse anxiety, depression, and grief severity. It also seemed that these individuals found it

harder to reach resolution of their grief. These findings suggest that people who feel disenfranchised in their pet related grief could experience similar mental health difficulties and grief process setbacks. With so few studies quantitatively demonstrating the occurrence of disenfranchised grief, let alone how it might influence other outcomes of the grief process such as posttraumatic growth, there appears to be a substantial need for empirical research of disenfranchised grief.

Pet Death General

Doka (2008) specifies five different typologies of disenfranchised grief: 1) the relationship is not recognized; 2) the loss is unacknowledged; 3) the griever is excluded; 4) circumstances of the death; and 5) the way an individual grieves. The current study will be focusing on a loss that falls under the typology “the loss is unacknowledged”: pet death. Pets hold enormous importance in the lives of millions of people. According to the American Veterinary Medical Association, as of 2016, almost 57% of households in the United States had at least one pet (“AVMA releases latest stats on pet ownership and veterinary care,” 2018). The AVMA also reported that 38% of households owned one or more dogs, the highest recorded rate of dog ownership in the U.S., and 25% of households owned one or more cats. Per the AVMA, exotic pet ownership has increased as well, with 13% of households in the U.S owning animals such as fish, ferrets, rabbits, hamsters, guinea pigs, gerbils, turtles, snakes, lizards, poultry, livestock and amphibians. The lifespan of these various exotic animals varies widely, with rodents like hamsters living 2-3 years (“How Long Do Hamsters Live?,” n.d.) contrasted with turtles, which can live for 40 years or more (“How Long Do Pet Turtles Live?,” n.d.). However, the two most commonly owned pets, cats and dogs, live just over a decade in U.S. households, with dogs averaging 11.2 years of life and cats averaging 12 years (“Banfield State of Pet Health

Report,” 2013). Though a decade is nowhere near the half-century expectancy of a turtle, it is still a significant portion of a human owner’s life. The average American lives 79.3 years (World Health Organization, 2016). The average dog or cat companion lives with the average American for nearly 15% of the owner’s lifespan. In 10 or more years of life, a person can experience many important life events, like coming of age, marriage, divorce, having children, moving cities, or loss of close loved ones. Pet companions can represent consistent, stable, unconditionally loving supports through life’s changes (Walsh, 2009).

For many pet owners, their animal provides a unique form of social support within the context of their life. Meyers (2002) observes that people often equate the human-animal relationship with human relationships. One common comparison is pets and children, with the implication that pets are a fill-in for people struggling to procreate. Meyers asserts that human-animal relationships are not surrogates for human-human relationships and that human-animal relationships are not better or worse than human-human relationships; they are unique and independent in their influence. In a study that considered individual differences between dogs regarding their ability to fulfill social needs based on their personalities, McConnell, Brown, Shoda, Stayton, and Martin (2011) found that dog owners experienced improved well-being outcomes from both human support and dog support, but that there was not an interaction between the two. Dog impacts on well-being outcomes were positive regardless of the owners’ level of human social support. Meehan et al. (2017) performed a study with a large sample of 1,161 college student pet owners to explore the level of social support their pets provided and the degree of the owners’ attachment to their pets. They also found that owners viewed their pets as sources of support separate from their human support network, and that the significance of pet support was comparable with family, friends, and significant others.

The emotional significance of the bond that can exist between pet and pet owner has been well established. According to the AMVA (2012), 80% of pet owners reported that their pet provided emotional support and happiness, and 63% of pet owners reported that they consider their pets to be “members of the family.” Many researchers have approached the relationship between human and animal companion through the lens of attachment theory. Attachment theory posits that the bonds children form with their caregivers shape their internal model for relationships across their life (Bowlby, 1979). A child with caregivers who consistently meet their physical and emotional needs will seek comfort from their caregivers, their “secure base,” and in turn feel comfortable independently exploring the world around them, knowing they can return to the secure base whenever they need to. These children are described as securely attached (Bowlby, 1979). Conversely, a child with caregivers that are either inconsistent in or neglectful of their needs will be less likely to seek their caregivers as a secure base, experiencing unregulated anxiety as a result. Ainsworth and Bell (1970) observed three attachment styles through studying the behavior of infants when their caregiver leaves them in a room with a stranger, the *Strange Situation* experiments. Securely attached children treated their caregiver as a source of comfort, a secure base that can help them regulate distress. Anxious-Avoidant children did not see their caregiver as a source of comfort at all, instead withdrawing from them. Anxious-Ambivalent children were inconsistent, at times withdrawing from their caregiver and at other times approaching them as a secure base; they experienced distress during both separation from and contact with the caregiver. Main and Solomon (1986) later established a fourth attachment style, Disorganized attachment, characterized by frightened, erratic behavior in the child. Disorganized attachment appears to be caused by caregivers with extreme unpredictable swings in behavior. Extensive research supports the concept that after infancy,

many relationships in a person's life can become attachment figures, including close friends, romantic partners, siblings, and mentors (Bowlby, 1988; Johnson, 2004; Mikulincer et al., 2003).

Kurdek (2008) examined college students' relationship to their dogs by having students indicate how well their dogs fit Ainsworth's four features of an attachment figure: secure base, safe haven, proximity maintenance, and separation distress (M. D. S. Ainsworth, 2006; Zeifman & Hazan, 2008). They then compared the dog's attachment scores to other human attachment figures in the students' lives. They found that dogs fulfilled proximity maintenance about as well as siblings and fathers, and that for participants with high attachment to their pets – about 22% of the sample – differences from human attachments were minimal. Kurdek (2009) went on to explore to what extent adult dog owners, ages $M=47.95$, sought out their dogs during emotional distress and found that adults approached their dogs during emotional distress before they approached almost every other attachment figure in their lives, including mothers, fathers, brothers, sisters, best friends, and children. Inquiry into the connection between humans and animals is so extensive that Anderson (2006) compiled over 20 different measures developed specifically for the examination of the human-animal bond, and new measures are still being developed. Meehan, Massavelli, and Pachana (2017) developed the Emotional and Supportive Attachment to Companion Animals Scale (ESACA), which is comprised of four subscales: “proximity maintenance and interaction” and “emotional attachment behaviors,” which seem to map onto some of the behavioral components of Ainsworth's (2006) attachment features; “emotional support given and received,” based in social support theory concepts; and “emotional and monetary value,” a less researched operationalization of attachment to and significance of a pet in a person's life.

Though findings regarding the impact of pet ownership have been mixed and at times contradictory (Peacock, Chur-Hansen, & Winefield, 2012), many studies have found that pet ownership has a positive impact on mental health and well-being. Atonacopoulous and Pychyl (2010) studied a sample of adults living alone that either owned a dog or cat or did not own a pet at all. Their results suggested that the mental health benefits of pet ownership are greatest when combined with significant human social support. Participants in their sample with high social support and dog ownership were significantly less lonely than non-pet owners. Some research has posited that pet attachment may help with reducing loneliness. Purewal et al. (2017) performed a systematic review of studies exploring the impact of pet ownership on child and adolescent development, and they found that pet attachment had a positive relationship with the number of individuals comprising their social support. Whether it's because pet ownership contributes to social competence or because pets are a point of relating and connection, it appears that pets improve quantity of human social support, which in turn has numerous aforementioned positive mental health effects. Of the outcomes Purewal et al. studied regarding emotional health, one of the most well-supported was that children who grow up with pets have higher self-esteem than non-pet owner children. Some evidence suggested that attachment to a pet acted as a mediator between pet ownership and self-esteem (Triebenbacher, 1998). Purewal et al. also found that children who grow up with pets often became more socially competent adults than children without pets.

Pet owners often perceive their pets to have significant role in their lives similar to that of a friend or member of their family ("AVMA releases latest stats on pet ownership and veterinary care," 2018; Meehan et al., 2017). Companion animals provide a unique source of social support independent of human relationships, they improve well-being and contribute to the development

and growth of human relationships, and if the pet is adopted in their first year of life, the owner may have the pet for 10 years or more (Atonacopoulous & Pychyl, 2010; McConnell et al, 2011; Meyers, 2002) If a pet has this much importance and longevity in a person's life, it would be expected that when that pet dies, the owner would have a marked grief reaction.

Pet Death as Disenfranchised Loss

Indeed, researchers have uncovered a very real and difficult grief process following the death of a pet. One of the earliest studies that examined pet death grief reactions found that over half of their participants initially responded to the death of their dog or cat with numbness and/or disbelief, followed by preoccupation with thoughts about the pet or how they died, feeling like part of them was gone, and feeling drawn toward reminders of the pet (Archer & Winchester, 1994). Wrobel and Dye (2003) surveyed 174 adults about their grief experience immediately following, 6 months after, and 1 year after the death of the pet. Their findings suggest that over 87.5% of people who have lost a pet initially experience at least one of the following grief symptoms: crying, feeling depressed, sense of loneliness, feeling guilty, a lump in the throat, preoccupation with memories of the pet, anger, pain, a sense of relief, the need to be alone, a sense of failure, and loss of appetite. 35.1% of the sample was still experiencing grief symptoms after six months and 22.4% reported symptoms one year after their pet's death, with a mean grief experience of 10 months across the sample. Tzivian, Friger, and Kushnir (2014) performed content analysis of 29 semi-structured interviews of individuals 2 weeks following the euthanasia of their dogs. Interviewees reported witnessing a wide range of grief symptoms including crying, headaches, sadness, decrease in social activity, and missing performing tasks to take care of the companion. Some studies have contended that the loss of a pet has a psychological impact similar to that of a human loss (Field, Orsini, Gavish, & Packman, 2009;

Gage & Holcomb, 1991). When comparing 146 college students who had experienced a human death loss to 211 college students who had experienced a pet death, though the human death loss students exhibited higher grief severity, the effect size was only mildly larger than the pet death grief severity ($d_s=.28-.30$). Though on average the grief experience following a pet death may not be quite as intense as grief following a human death, these findings suggest that pet grief is often nearly as severe and at times comparable to human death grief.

One of the more consistent findings among pet death literature is that severity of grief symptoms has a strong positive relationship with closeness/level of attachment to the attachment figure that has passed (Barnard-Nguyen, Breit, Anderson, & Nielsen, 2016; Brown, Richards, & Wilson, 1996; Eckerd, Barnett, & Jett-Dias, 2016; Field et al., 2009). Brown et al. found that adolescents who had lost their pet in the last year and were highly attached to their pet had a more intense grief experience than participants with weaker attachments. In an adult sample that had also lost their pet in the past year, Field et al. found that strength of past attachment to the animal predicted more severe grief symptoms. Field et al. also found that attachment anxiety – the fear-motivated desire of regaining proximity to the attachment figure inherent to unhealthy, insecure attachment styles – also had a predictive effect on grief severity distinct from strength of attachment. These findings suggest that both degree of attachment and type of attachment both influence grief severity. One study went beyond generally measuring grief symptoms as one construct when examining how pet attachment was predictive of grief, instead employing a grief measure with subscales of grief/sorrow, anger, and guilt (Barnard-Nguyen et al., 2016; Hunt & Padilla, 2006). They found that strength of attachment to the deceased pet was strongly predictive of both grief/sorrow and anger.

Some research has demonstrated that social support, as with other losses, acts as a protective factor for the pet bereaved. Tzivian, Friger and Kushnir (2015) performed a study regarding quality of life in 213 current and bereaved dog owners and found a significant positive correlation between quality of life and social support. With an adult sample of 429, King and Werner (2012) found that not only did social support have a negative relationship with grief, depression, anxiety, and somatic symptoms, it also had a negative relationship with attachment anxiety. Despite there being significant research support for the existence of grief following pet death; the severity of pet death grief rivaling that of human loss; the influence of notable predictors of pet grief severity like strength of attachment and social support; and a common theoretical acknowledgment of pet death as a disenfranchised loss, little research has examined how much social support pet bereaved individuals actually receive. One study measured the pet attachment, friend and family support, and grief symptoms of an adult sample that had lost their pet in the last year (Nilsson, 2005). The study found a negative relationship between satisfaction with social support and perception of disparity between social support expected and social support received. These findings support the idea that people feel disenfranchised when they are not receiving the social support they hope for, but it does not demonstrate whether pet bereaved individuals receive less social support than human bereaved individuals. Wong, Lau, Liu, Yuen, and Wing-Lok (2017) performed a qualitative study with 31 Hong-Kong pet bereaved persons. They indicated that “many” participants reported that family members or friends did not recognize their loss and instead conveyed judgment about the intensity of their emotion or the degree or time and money investment in an animal. Spain et al. (2019) provided rare evidence for pet death as a disenfranchised loss, with 133 pet bereaved persons reporting a mean of moderate loss of social support following the death of their pet.

Along with grief symptoms, the influence of closeness on grief symptom severity, and the protective influence of social support, another trait that pet bereavement seems to share with human bereavement is the experience of posttraumatic growth. Multiple qualitative studies have found evidence for posttraumatic growth following the death of a pet (Bussolari, Habarth, Phillips, Katz, & Packman, 2018; Packman, Bussolari, Katz, Carmack, & Field, 2017; Wong et al., 2017). Packman et al. randomly selected 308 participants out of a sample of 1,956 that had indicated they had “discovered something of personal value that [came] out of” losing their pet and described the ways that that statement was true for them. The researchers then examined to what extent the responses mapped onto the five factors of posttraumatic growth as measured by the Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996). 58% of the responses mapped onto at least one of the factors of posttraumatic growth. Consistent with Calhoun et al. (2010), Relating to Others and Appreciation for Life were the two most endorsed themes. In contrast with Calhoun et al., Personal Strength was the third most endorsed theme in Packman et al.’s study. They posited that euthanasia, an issue unique to pet loss, may have largely contributed to Personal Strength endorsement as some participants described realizing their own strength after making a difficult decision they did not previously consider themselves capable of. Bussolari et al. (2019) expanded Packman et al. (2017) to non-United States samples and found that 72% of French-Canadian responses mapped onto the PTGI, 50% of Japanese responses mapped onto the PTGI, and 39% of Hong-Kong responses mapped onto the PTGI. These qualitative findings suggest that posttraumatic growth occurs in both Western and non-Western pet bereaved individuals.

Qualitative research seems to provide more questions than answers regarding the influence of disenfranchised grief and social support on posttraumatic growth. In Packman et

al.'s (2017) study, of the 78 that mapped onto the Relating to Others factor, only 3 responded that they "[know that they] can count on people in times of trouble." This finding suggests that though people did not feel supported, they still experienced posttraumatic growth on the Relating to Others dimension. In a qualitative study of 31 Hong-Kong pet bereaved persons, Wong et al. (2017) found that the majority of participants who indicated posttraumatic growth also endorsed feeling supported by close friends, family members, or professionals, indicating that social support may be necessary for the experience of posttraumatic growth. It's possible that posttraumatic growth can still occur for many with disenfranchised grief, but that disenfranchisement might be more of an inhibitor of posttraumatic growth in collectivist societies. More research is needed that explores variables that influence posttraumatic growth for those with disenfranchised grief.

Rationale for the Current Study

Per the knowledge of this researcher, only one study has a) demonstrated quantitatively that the death of a pet is a disenfranchised loss and b) found that disenfranchised grief has a negative relationship with posttraumatic growth when moderated by grief severity. Because of the paucity of quantitative research about disenfranchised grief in general, let alone about pet death specifically, it is important to determine if their findings can be replicated in another sample. Furthermore, it could be informative within the context of disenfranchised grief theory to attempt to replicate their findings with an alternative approach to operationalizing disenfranchisement. Spain et al. (2019) operationalized loss disenfranchisement by measuring how much pet bereaved persons perceived a reduction in social support following the death of their pet. The 133 pet bereaved individuals in Spain et al.'s study had a reported moderate mean score on the Loss of Social Support subscale of the Grief Experience Questionnaire

(GEQ)(Barrett & Scott, 1989). Disenfranchisement as it has been discussed here is indicated by an absence of adequate social support following a loss, not the *decrease* of social support as a result of a loss (Doka, 2002). It is possible that disenfranchisement occurs when social support remains static during a time when a bereaved individual would hope for increased attention and allocation of resources from their support network, but Spain et al.'s findings indicate otherwise. It is also possible that disenfranchisement could be considered as both an absence of and a decrease in social support following a loss. Replicating Spain et al.'s analysis in which posttraumatic growth was regressed on disenfranchised grief with grief severity as a moderator, with disenfranchised grief measured by social support satisfaction, could inform the application of disenfranchised grief theory. Because loss of social support had a negative relationship with posttraumatic growth in Spain et al.'s study, social support satisfaction would theoretically have a positive relationship with posttraumatic growth.

Spain et al. (2019) suggested that future research around pet bereaved persons might examine the role of attachment within the relationship between disenfranchised grief and posttraumatic growth. There appear to be many fascinating possible impacts within this context of both strength of attachment to the pet and attachment style within the human-animal bond. Within pet bereaved samples, evidence suggests that the strength of attachment has a strong positive relationship with grief symptom severity (Barnard-Nguyen et al., 2016; Brown et al., 1996; Eckerd et al., 2016; Field et al., 2009). Examining both strength of attachment and grief severity as simultaneous moderators of disenfranchised grief and posttraumatic growth could indicate to what extent their contribution to the variance overlaps. With strength of attachment acting as such a strong predictor of grief severity, it is possible that they have little unique

variance, or that attachment is actually a stronger moderator than grief severity. The current study will investigate these possibilities as an expansion of Spain et al.'s work.

Multiple studies suggest that attachment style has a meaningful influence on experience of social support. Researchers examining the impact of quality of attachment – the extent of secure attachment – on perception of social support among a sample of 293 Iranian college students found that attachment quality has a direct positive effect on perception of social support (Shahyad, Ali Besharat, Asadi, Shir Alipour, & Miri, 2011). Priel and Shamai (1995) found that among a sample of 328 college students, 59% reported secure attachment scores, 31% reported anxious-avoidant, and 10% reported as anxious-ambivalent. The anxious-avoidant and anxious-ambivalent attached individuals perceived significantly less social support in their environment than securely attached individuals, and they also reported feeling less satisfied with their social support. Another study had 55 women participants view images depicting both negative and positive social scenes and then report on the pleasantness, impact on arousal, and their control of their emotional reaction to each image (Vrtička, Sander, & Vuilleumier, 2012). Participants also responded to an attachment style measure. Avoidantly attached individuals viewed positive social scenes as significantly less pleasant than securely attached individuals. Ambivalently attached individuals viewing negative social images reported both higher arousal and lower capacity for emotional control than securely attached individuals. These results begin to elucidate the mechanisms by which insecurely attached individuals perceive less social support and are less socially satisfied. If pleasant moments with family and friends felt dulled, or if stressful social scenarios consistently had higher emotional valence and felt riskier, that might not only impact how an individual feels within their relationships, but could also cause them to behave in ways that cause disconnection from social supports.

Field, Orsini, Gavish, and Packman (2009) surveyed a sample of 71 adult participants who had experienced the death of a pet dog or cat in the past year. Among many variables considered, they measured strength of attachment to the pet, adult attachment style, grief symptom severity, and perceived social support. Both insecure attachment styles were negatively correlated with perceived social support. Anxious-ambivalent attachment had a positive relationship with grief symptoms and, congruent with other research, strength of attachment to the pet also had a positive relationship with grief symptoms. These results suggest that, among individuals grieving the loss of a companion animal, insecure attachment can contribute to feeling more disenfranchised in the loss experience. Field et al. also observed that strength of attachment and attachment style had unique, independent impacts on grief symptoms, supporting the need to measure both separately when studying the influence of attachment on the grief experience of the pet bereaved.

Though it does not appear that any research has explored the influence of attachment on posttraumatic growth for individuals grieving the death of a pet, there is significant evidence suggesting that attachment influences posttraumatic growth for victims of other forms of trauma. In a sample of 124 suicide-loss survivors, another loss theorized to be disenfranchised because of the judgments in Western society towards suicide (Doka, 2002), participants with secure attachment achieved significantly higher posttraumatic growth than insecurely attached participants (Lev-Ari & Levi-Belz, 2019). They also included a measure that assessed the extent to which participants perceived themselves as burdens and their perceived belongingness in their relationships. Both perceived burdensomeness and “thwarted” belongingness mediated and moderated the relationship between attachment style and posttraumatic growth. High perceived burdensomeness appeared to be particularly predictive of reduced posttraumatic growth, as

insecure individuals high in perceived burdensomeness had the lowest likelihood of achieving posttraumatic growth. Among adult survivors of sexual abuse, Kelson, Hagedorn, and Lambie (2019) implemented a structural equation model and found that attachment style partially mediated the relationship between trauma symptoms and posttraumatic growth, with securely attached individuals experiencing more posttraumatic growth than individuals with high ambivalent or avoidant scores. With these studies establishing both the existence of a relationship between attachment and posttraumatic growth as well as identifying some of the mechanisms of insecure attachment that prevent posttraumatic growth, it seems important to explore these variables among pet bereaved individuals as well.

The Current Study

The current study seeks to examine the following hypothesis from data collected with a college student sample from a western university in the United States in the spring and fall semesters of 2016.

- i. Hypothesis 1: There is a positive relationship between social support satisfaction and posttraumatic growth when grief symptom severity is present as a moderating variable.

The next group of hypotheses will be tested with data to be collected with a college student sample collected in the fall of 2019 at a western university in the United States.

- ii. Hypothesis 2: When assessed as competitive moderators between social support satisfaction and posttraumatic growth, strength of attachment to the pet and grief symptom severity will have a non-significant difference in their contribution to the variance.

- iii. Hypothesis 3: Insecure attachment styles – ambivalent attachment and avoidant attachment – will have a negative relationship with social support satisfaction.
- iv. Hypothesis 4: Insecure attachment styles will have a negative relationship with posttraumatic growth.

Finally, the current study will also consider some exploratory research questions regarding variables that are unique to the loss of a pet.

1. Do pet owners that euthanized their pet experience more posttraumatic growth than pet owners whose pet died of natural causes?
2. Do individuals who experienced the death of exotic pets experience more disenfranchised grief than individuals who lose more common pets like cats and dogs?
3. Do individuals with exotic pets form similar strength of attachment to their pets as owners of cats or dogs?

METHODS

Participants

The data collection occurred at a large university in the western United States, and students from introductory psychology classes were recruited. In the spring and fall semesters of 2016, 283 and 508 college students respectively participated in the survey for a total of 791 participants. Of the 791 participants, 45 students indicated that they had not experienced a loss in the last 12 months and were removed from the sample. 248 of the remaining 746 reported that they had experienced a human death loss in the last 12 months, and 68 indicated that their pet had died in the last 12 months. 7 of these 68 participants were removed due to missing data or random responding, leaving 61 participants from the 2016 dataset. The average age was 19.07 years. Participants identified as 43(70.5%) women, 17(27.9%) men, and 1(1.6%) genderfluid. 45(73.8%) identified as first years in college, 10(16.4%) as sophomores, 4(6.6%) as juniors, and 2(3.3%) as seniors. Additionally, 3(4.9%) identified as Asian, 46 (75.4%) as Caucasian/White, 1(1.6%) as Hawaiian/Pacific Islander, 2(3.3%) as Latino or Hispanic, and 2(3.3%) as Other. 54(88.5%) identified as heterosexual, 2(3.3%) as gay/lesbian, 3(4.9%) as bisexual, and 2(3.3%) as pansexual.

In spring 2020, 233 participants from introductory psychology classes were recruited that had experienced the death of a pet in the 12 months prior. 18 participants were removed due to missing data or random responding, leaving 215 participants. The average age was 19.48 years. Participants identified as 135(62.8%) women, 78(36.3%) men, 1(0.5%) non-binary, and 1(0.5%) genderfluid. 123(57.2%) identified as first years in college, 64(29.8%) as sophomores, 17(7.9%) as juniors, 7(3.3%) as seniors, and 4(1.9%) as 5th year or more. Additionally, 12(6.6%) identified as African American/Black, 4(1.8%) as American Indian/Native American, 16(7.4%) as Asian,

134(62.3%) as Caucasian/White, 3(1.3%) as Hawaiian/Pacific Islander, 41(19.1%) as Latino or Hispanic, 3(1.3%) as Middle Eastern, and 1(0.9%) as Other. 187(87.0%) identified as heterosexual, 5(2.3%) as gay/lesbian, 18(8.4%) as bisexual, 4(1.4%) as pansexual, 1(0.5%) as demisexual, and 1(0.5%) as other.

Measures: Secondary Data

Demographic Data. Participants will be asked to indicate their age, gender, year in school, and race/ethnic identity.

Loss Events Scale. On the Loss Events scale (Cooley, Toray & Roscoe, 2010), respondents selected losses they have experienced in their lifetime from a list of 29 different losses including loss due to death of a loved one. There was also a space labeled “other” for participants to type in losses they have experienced not listed among the 29 items. The scale defines loss broadly, including items like breakup with a romantic partner and failure to achieve a dream/life aspiration. At the end of the scale, participants chose which loss proved most significant for them and responded to following measures based on that loss in particular.

Reactions to Loss Scale. The Reactions to Loss Scale (RTL; Cooley, Toray & Roscoe, 2010; see Appendix E) measures reactions to both death-related losses and non-death losses. Participants respond to 70 items that may describe their responses to their most significant loss in the last 12 months, rating each item on a 1-6 Likert scale ranging from Never to Always. The scale is divided into three subscales. The Avoidance Scale (20 items), with scores ranging from 20 to 120, assesses distancing and avoidance tactics. The Loss of Control Scale (29 items), with scores ranging from 29 to 174, examines to what extent an individual feels they have lost control of their life and their emotions. The Positive Reappraisal scale (21 items), with scores ranging

from 21 to 126, is the only measure of personal growth as a response to grief besides the Personal Growth subscale in the HGRC. In their most recent pair of studies, Cooley, Toray and Roscoe (2014) assessed college students that reported a recent loss. All three subscales had very strong internal consistency, with Cronbach alpha coefficients for Positive Reappraisal at 0.89, Avoidance at 0.89, and Loss of Control at 0.93. Exploratory factor analysis revealed eigenvalue=15.0 for Loss of Control, eigenvalue=5.28 for Positive Appraisal and eigenvalue=2.79 for Avoidance. To test for concurrent validity, Cooley, Toray and Roscoe used hierarchical regression to compare each subscale to a comparable measure. The RTL subscales had sound concurrent validity when compared to the Beck Depression Inventory (BDI; Beck, Steer & Carbin, 1988), the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970), the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), and the Satisfaction with Life Scale (Diener et al., 1985). The RTL has primarily been applied to college student populations, further enforcing its relevance within the current study.

Social Support Questionnaire 6. The Social Support Questionnaire 6 (SSQ6; Sarason et al., 1987; see Appendix F), a shortened version of the Social Support Questionnaire (Sarason et al., 1983), has six items that ask participants about people in their lives that provide help and support. Each item has participants list people that they can count on for a particular form of support (e.g. “Who accepts you totally, including your best and worst points?”), and then asks how satisfied they are with their support in that area. Participants rank their satisfaction on a 1-6 Likert-type scale, ranging from very dissatisfied to very satisfied. Each item is scored based on number of supports listed and satisfaction rating, leading to two scores at the end of the measure: SSQ Number Score and SSQ Satisfaction Score. Exploratory factor analysis found a range of

0.76-0.82 across factors. The SSQ6 has strong internal consistency with a 0.91 coefficient alpha for Number and a 0.90 coefficient alpha for Satisfaction. It also had strong convergent validity with the original 27 item SSQ.

Post-Traumatic Growth Inventory. Students' posttraumatic growth will be measured with the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996; see Appendix D). The PTGI is made up 21 total items with five subscales: Relating to Others, New Possibilities, Personal Strength, Spiritual Change and Appreciation of Life. Each item is an example of a change that participants respond to on a six-point Likert-type scale with scores ranging from 1 to 5 corresponding to *I did not experience this change as a result of my crisis* to *I experienced this change to a very great degree as a result of my crisis*. The phrasing of this scale will be adapted to be more accurately applied to this study, changing "my crisis" to something like "losing a loved one." Higher scores indicate greater growth from their trauma (Tedeschi & Calhoun, 1996). The same study reported an internal consistency Cronbach alpha of 0.9 from the PTGI scores and a test-retest reliability of 0.71 for PTGI scores. Comparing the PTGI to the NEO Personality Inventory and the Life Orientation Test to assess concurrent and discriminant validity, they found that optimism, religiosity, and the major dimensions of personality excluding neuroticism positively correlated with PTGI scores. The PTGI has been validated on groups with exposure to various types of adversity and extreme stress. These validation studies have been composed of college students (Calhoun, Cann, Tedeschi, & McMillan, 2000), adolescents (Ickovics et al., 2006; Milam, Ritt-Olson, & Unger, 2004), holocaust child survivors (Lev-Wiesel & Amir, 2003), adults with a history of cardiovascular disease (Sheikh & Marotta, 2005), and adults recovering from a diagnosis of cancer (Ho, Chan, & Ho, 2004). The PTGI scores had a Cronbach alpha of 0.96 within the context of this sample.

Measures: Primary Data

Measures that were implemented for spring 2020 data collection included Demographic Data, Reactions to Loss Scale, the Posttraumatic Growth Inventory, and the following:

Multidimensional Scale of Perceived Social Support (MSPSS). The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988; see Appendix C) is a 12 item scale that measures 3 sources of perceived social support, with 4 items per source: family, friends, and significant others. It is rated on a 7-point Likert scale (1 = absolutely disagree to 7 = absolutely agree). The items within each dimension of support were developed based on social support, assessing perception of instrumental and emotional support (e.g. “My *family* really helps me”). The MSPSS has good internal reliability and validity (total scale $\alpha=0.88$, significant other subscale $\alpha=0.91$, family subscale $\alpha=0.87$, friends subscale $\alpha=0.85$).

Lexington Attachment to Pets Scale (LAPS). The Lexington Attachment to Pets Scale (LAPS; Johnson, Garrity, & Stallones, 1992; see Appendix A) is a 23 item measure that assesses strength pet owners’ emotional attachment to their pets. The measure was developed with dog and cat owners, and the measure can be used with pet owners of other animals as well, as items are not cat or dog specific. Participants responded to each item on a 5-item Likert scale (1=strongly agree to 5=strongly disagree; 3=I don’t know). The scale features items such as “I would do almost anything to take care of my pet” and 2 reverse coded items, such as “I think my pet is just a pet.” The LAPS has good internal reliability ($\alpha=0.93$). Convergent reliability was established with strong correlations to subjective ratings made by interviewers assessing strength of attachment.

The Experiences in Close Relationships Scale – Short Form (ECR-S). The Experiences in Close Relationships Scale – Short Form (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007; see Appendix B) – Short Form is a 12 item short form of the Experiences in Close Relationships scale (ECR; Brennan, Clark, & Shaver, 1998), a measure of overall attachment style. Wei et al. developed the ECR-S across 6 studies, reducing the original ECR item total from 36, 18 per subscale (Anxiety and Avoidance), to 12, with 6 per subscale. The Anxiety subscale includes items such as “I need a lot of reassurance that I am loved by my partner” and the Avoidance subscale includes items like “I want to get close to my partner, but I keep pulling back.” High Anxiety scores indicate an Anxious-Ambivalent attachment style, high Avoidance scores indicate an Anxious-Avoidant attachment style, and low scores in both indicate likely Secure attachment style. The internal reliability of each subscale was good, with alphas ranging from 0.78-0.86 and 0.78-0.88 for Anxiety and Avoidance respectively. Over a 1-month period, test-retest reliability was $r=.80$ for the Anxiety subscale and $r=.83$ for the Avoidance subscale. Construct validating for the ECR-S was demonstrated by significant positive relationships with measures of depression, anxiety, interpersonal distress, and loneliness.

Procedures

Over the course of the fall and spring semesters of 2016, students were surveyed online through Qualtrics®. Study procedures were approved by the university’s institutional review board. Participants were informed at the start of the survey that they would be answering questions regarding grief and loss. They were warned that they could potentially experience psychological and/or emotional distress as a result of reading and responding to some of the items in the survey. They were informed that they would incur no penalties if they chose to discontinue the survey and that they would still receive credit for their course. Participants were

provided with contact information for the university counseling center. Students were informed that clicking the arrow to begin the survey would represent their consenting to participate in the study. Participants were given an hour to complete the survey, which included Loss Event Descriptor questions, Demographic Data questions, the Reactions to Loss Scale (RTL), the Social Support Questionnaire 6 (SSQ-6), the Posttraumatic Growth Inventory (PTGI), and other measures intended for collection of exploratory data. In order to prevent confusion regarding pet death, it was explicitly stated that “death loss” refers to the death of a human person. At the end of the survey, participants had the option to respond to the following qualitative inquiry, “In your own words, please describe how you feel your life has changed as a result of the loss you experienced.”

Spring 2020 data collection took place with the same procedures as the 2016 data with the following minor differences. Participants were only be given half an hour to complete the survey. Measures included Demographic Data questions, pet death descriptor questions, the Reactions to Loss Scale (RTL), The Emotional and Supportive Attachment to Companion Animals Scale (ESACA) the Experiences in Close Relationships - Short Form (ECR-S), and the Multidimensional Scale of Perceived Social Support (MSPSS).

Analysis Plan

Analysis for the first hypothesis was performed with secondary data collected during the spring and fall of 2016 from an introductory psychology course subject pool ($N=61$). Analyses for hypotheses 1-3 and research questions 1-3 was performed with data collected from an introductory psychology course subject pool fall 2019. Due to experimenter error, 20 items were missing from the Reactions to Loss Scale (RTL) within both datasets. To identify whether the included items from the RTL still effectively measured grief symptoms, a confirmatory factor

analysis (CFA) was performed. The RTL is composed of three subscales: Positive Reappraisal, Avoidance, and Loss of Control. For the purposes of this study, only Avoidance and Loss of Control will be used, representing a measure of grief symptoms experience. Thus, the CFA only included items from the Avoidance and Loss of Control subscales. 4 of the 20 Avoidance items were missing, and 10 of the 29 Loss of Control items were missing, leaving 35 of the original 49 items to include in the CFA. The CFA was run in Mplus 7.0 (Muthén & Muthén, 1998-2012).

Within the 2016 dataset, there was not enough power to perform a CFA on the RTL items. Because the same items were missing from both datasets, and because acceptable model fit had been established with the included items with a higher *N* in the 2019 dataset, the experimenter moved forward with analysis for the first hypothesis with the 2016 dataset. Typically, total scores on the RTL would be used for analysis, but to account for the impact the missing items would have on total scores, mean scores were used for the RTL instead. Total scores were calculated for all of the other variables that were used in the regression analyses. Regression analyses were performed with IBM SPSS Statistics 27.0.

To test hypothesis i, posttraumatic growth was regressed on social support satisfaction with grief symptom severity acting as a moderator in an attempt to replicate findings from Spain et al. (2019)

To test hypothesis ii, posttraumatic growth was regressed on perceived social support with grief symptom severity and strength of attachment acting as competing moderators.

To test hypothesis iii, perceived social support was regressed on attachment style.

To test hypothesis iv, posttraumatic growth was regressed on attachment style.

To test research question 1, a t test was performed on posttraumatic growth between participants whose pet died by euthanization and participants whose pet died by other causes.

To test research question 2, a t test was performed on perceived social support between participants who lost an exotic pet and participants who lost a common pet.

To test research question 3, a t test was performed on strength of attachment between participants who lost an exotic pet and participants who lost a common pet.

RESULTS

Univariate Statistics

Survey responses where answers were missing to more than half of the items on any given measure were removed from the data set. Within the 2016 dataset, one outlier was found on the grief symptoms measure that fell more than 3 standard deviations below the mean. This response was still included, as the participants responses across the survey appeared non-random and within reasonable limits, and it is feasible that an individual's grief response could be that low. Within the 2019 dataset, two outliers were found on the social support measure that fell more than 3 standard deviations below the mean. Upon examination of these participants' responses to the social support measure within the survey, they both appeared to have responded to all items randomly by selecting the same value for each item. These two outliers were removed prior to analyses (Tabachnick, Fidell & Ullman, 2007). Assumptions of normality were satisfied for the regression model dependent variables, posttraumatic growth and social support, from the 2019 dataset. Skewness and kurtosis values were within normal limits for each. For posttraumatic growth, skewness=0.24 and kurtosis= -0.98, and for social support, skewness= -1.20 and kurtosis=1.47. Assumptions of normality were also satisfied for the regression dependent variable, posttraumatic growth, from the 2016 dataset, with skewness=0.37 and kurtosis= -0.41. Pearson correlations between all variables within each regression model were not collinear ($r_s < .79$), indicating that linear regression was appropriate. Visual inspection of the residuals from the regression models verified that homoscedasticity was maintained. Bootstrapping was used to stabilize parameter estimates for the linear regression (Davison & Hinkley, 1997). 1000 bootstraps were used in these analyses.

Assumptions of normality for t tests were satisfied. Skewness and kurtosis values were within normal limits. See the table below for skewness and kurtosis values.

Table 1: Skewness and Kurtosis for T Test Groups

	Skewness	Kurtosis
Euthanized Posttraumatic Growth	.25	-.88
Natural Causes Posttraumatic Growth	.28	-1.11
Exotic Pet Social Support	-.69	.75
Exotic Pet Attachment	-.07	-.98
Cat/Dog Social Support	-1.15	.98
Cat/Dog Attachment	-.65	-.58

Confirmatory Factor Analysis

Due to experimenter error that excluded 14 of the relevant items from the Reactions to Loss Scale, confirmatory factor analysis was performed with the remaining 35 items that were included in the survey to assess for model fit. CFA results indicated that fit was acceptable for the available items of the Reactions to Loss Scale ($RMSEA=.08$, $SRMR=.08$), with all factor loadings found to be positive and significant. Hu and Bentler (1999, p.1) suggested cutoff values of “close to .06” for RMSEA and “close to .08” for SRMR. The reported values for the RTL CFA meet these fit criteria.

Linear Regression

Through linear regression, severity of grief symptoms was examined as a moderator between social support and posttraumatic growth. The predictors explained a significant amount of variance ($F(2, 58)=5.34, SE=.93, p<.01$), with an $R^2=.16$. Grief symptoms had a significant, positive relationship with posttraumatic growth, with medium effect size ($\beta=.39, SE=.29, p<.01$). Social support had a non-significant negative relationship with posttraumatic growth, with small effect size ($\beta=-.19, SE=-.16, p=.06$). In the second step of the regression analysis, the interaction term between social support and grief symptoms was entered, yielding a non-significant change in posttraumatic growth variance ($F(1, 57)=0.51, SE=.93, p=.48$), with an $R^2=.01$. Thus, grief symptoms did not act as a moderator between social support and posttraumatic growth ($\beta=-.05, SE=.16, p=.68$).

Through linear regression, strength of pet attachment and severity of grief symptoms were examined as competing moderators between social support and posttraumatic growth. The predictors explained a significant amount of variance ($F(3, 208)=31.33, SE=.84, p<.01$), with an $R^2=.31$. Both social support ($\beta=.16, SE=.06, p=.01$) and grief symptoms ($\beta=.53, SE=.06, p<.01$) had significant, positive relationships with posttraumatic growth, with small and large effect sizes respectively. Strength of pet attachment had a positive non-significant relationship of small effect size with posttraumatic growth ($\beta=.08, SE=.06, p=.17$). In the second step of the regression analysis, the interaction term between social support and grief symptoms was entered, yielding a non-significant change in posttraumatic growth variance ($F(1, 207)=0.00, SE=.84, p=.99$), with an $R^2=.00$. Grief symptoms did not act as a moderator between social support and posttraumatic growth ($\beta=.00, SE=.06, p=.99$). In the third step of the regression analysis, the interaction term between social support and strength of pet attachment was entered, also yielding a non-significant change in posttraumatic growth variance ($F(1, 206)=0.01, SE=.84, p=.94$), with

an $R^2=.00$. Strength of pet attachment did not act as a moderator between social support and posttraumatic growth ($\beta=.01$, $SE=.06$, $p=.94$).

Linear regression was used to test social support's relationship with insecure attachment. A linear regression analysis conducted to determine the relationship between social support and insecure attachment was significant ($F(1, 211)=22.61$, $SE=.90$, $p<.01$), with an $R^2=.10$. Insecure attachment had a negative relationship of medium effect size ($\beta=-.31$, $SE=.06$, $p<.01$) with social support.

Linear regression was used to test posttraumatic growth's relationship with insecure attachment. A linear regression analysis conducted to determine the relationship between posttraumatic growth and insecure attachment was non-significant ($F(1, 213)=0.00$, $SE=1.00$, $p=.95$), with an $R^2=.00$. Insecure attachment had a negative non-significant relationship of small effect size ($\beta=-.01$, $SE=.07$, $p=.95$) with posttraumatic growth.

T Tests

To explore whether pet owners that euthanized their pets experienced more posttraumatic growth than pet owners whose pets died of natural causes, a T test was performed. The 114 participants who euthanized their pets ($M = 45.29$, $SD = 23.31$) compared to the 55 participants whose pets died of natural causes ($M = 51.85$, $SD = 23.93$) did not report significantly different posttraumatic growth ($t(167)=0.89$, $p=.37$, $d=0.15$). There was a small effect size, such that those whose pets died of natural causes reported higher post-traumatic growth than those who euthanized their pets.

To explore whether pet owners who experienced the death of an exotic pet experienced less social support than pet owners who experienced the death of a dog or cat, a T test was performed. The 56 participants who had an exotic pet ($M = 67.77$, $SD = 9.81$) compared to the

156 participants who had a cat or dog ($M = 65.62$, $SD = 15.35$) did not report significantly different social support ($t(210)=0.99$, $p=.32$, $d=0.17$). There was a small effect size, such that those with an exotic pet had higher social support than participants with a dog or cat.

To explore whether pet owners who experienced the death of an exotic pet had stronger attachment to their pet than pet owners who experienced the death of a dog or cat, a T test was performed. The 56 participants who had an exotic pet ($M = 40.59$, $SD = 15.34$) compared to the 156 participants who had a cat or dog ($M = 47.25$, $SD = 18.12$) reported significantly different strength of attachment to their pet ($t(210)=-2.45$, $p=.02$, $d=0.41$). Cat/dog owners reported a significantly stronger attachment to their pet, with medium effect size.

DISCUSSION

The current study explored the relationship between perceived social support and posttraumatic growth in individuals that experienced the death of a pet in the last year. Grief symptom severity and strength of attachment to the deceased pet were examined as possible moderators within this relationship. The impact of attachment style upon different facets of the grief experience, specifically social support and posttraumatic growth, for these individuals was also investigated. Finally, the study considered a few exploratory questions regarding differences in cause of pet death and type of pet. Data was collected from college aged students recruited from Introductory Psychology classes at a large university in the western United States. Results from this study may contribute to disenfranchised grief literature, and they may inform clinicians in their treatment of pet bereaved individuals.

To test Hypothesis 1, the relationship between social support and posttraumatic growth was explored. The possibility of grief symptom severity increasing the strength of the relationship between social support and posttraumatic growth was also tested. Social support had a non-significant negative relationship with posttraumatic growth, and grief symptoms did not influence the strength of the relationship between social support and posttraumatic growth, supporting the null hypothesis. Grief symptoms had a positive relationship with posttraumatic growth. Indeed, the results of this study provide quantitative evidence suggesting that the death of a pet causes posttraumatic growth in pet bereaved individuals, confirming the findings of multiple qualitative studies (Bussolari, Habarth, Phillips, Katz, & Packman, 2018; Packman, Bussolari, Katz, Carmack, & Field, 2017; Wong et al., 2017). To firmly establish pet grief symptoms as a contributor to posttraumatic growth, researchers should continue seeking quantitative evidence for this relationship among other demographics. Researchers can also now

explore with pet bereaved samples the impact of factors that have been found to influence posttraumatic growth within the context of other traumas. For example, Barr (2012) found that engagement in continuing bonds contributed to increase in posttraumatic growth. To engage in a continuing bond with a deceased loved one means to stay connected with them through means like reflecting on memories of them and talking to them (Attig, 1996). Some research has begun considering the impact of continuing bonds on pet bereavement, such as one recent study that examined the outcomes of self-compassion within a pet bereaved sample (Bussolari, Habarth, Philips, Katz, & Packman, 2021), finding that self-compassion was related to higher levels of engagement in continuing bonds. Bussolari et al. posited that individuals that use self-compassion techniques may be more disposed to trying approaches like continuing bonds because of an overall greater willingness to take risks for the sake of self-soothing. If that is true, it stands to reason that self-compassion would also contribute to posttraumatic growth. Future studies could explore if both continuing bonds and self-compassion contribute to posttraumatic growth for those grieving a pet, and they could also consider whether self-compassion moderates continuing bonds and posttraumatic growth.

The non-significant negative relationship found between social support and posttraumatic growth conflicts with the results of the study that this hypothesis sought to replicate, Spain, O'Dwyer, and Moston (2019). Several factors could be contributing to the differing findings. This study elected to operationalize disenfranchisement by examining the presence of social support, theorizing that when social support was lower, posttraumatic growth would be inhibited. Spain et al instead measured the *loss* of social support that pet bereaved individuals experienced. It is possible that the specific experience of losing close social connections has a negative impact on posttraumatic growth while presence of social support does not influence posttraumatic

growth. Spain et al.'s sample also had a notably higher mean age than the current study, with mean ages of $M=37.27$ and $M=19.07$ respectively. Perhaps age or stage of life acts as a mediator between social support and posttraumatic growth. It is also possible that the relationship is better demonstrated across a greater period of time, as Spain et al.'s sample had experienced pet death up to 5 years prior, whereas the sample in this study experienced pet death within the last 12 months. However, the results of Hypothesis 2, which was examined with much greater power ($N=215$) in a similarly aged college student sample ($M=19.48$) that also lost their pet in the last 12 months, found a positive relationship between social support and posttraumatic growth. It appears that small sample size may have limited the results of Hypothesis 1.

Hypothesis 2 was examined with a nearly identical model to Hypothesis 1, with the addition of strength of pet attachment as a second, competing moderator. Social support and grief symptoms each contributed to increases in posttraumatic growth, with small and large impacts respectively. Strength of pet attachment had a non-significant positive relationship with posttraumatic growth. Neither strength of pet attachment or grief symptoms affected the strength of the relationship between social support and posttraumatic growth, supporting the null hypothesis.

Posttraumatic growth as an outcome for pet bereaved individuals was further supported in this analysis, with a large effect size indicating a strong relationship between grief symptoms and posttraumatic growth within this sample. This study has contributed robust evidence to the literature suggesting that pet death is a traumatic experience that can lead to personal growth. Furthermore, analysis for Hypothesis 2 replicated the finding from Spain, O'Dwyer, and Moston (2019) that social support has a positive relationship with posttraumatic growth – or in the case of Spain et al, loss of social support has a negative impact on posttraumatic growth – in pet

bereaved individuals. This finding suggests that disenfranchisement does indeed limit the extent to which pet bereaved persons experience posttraumatic growth after suffering the trauma of pet death, confirming an assertion from Packman, Bussolari, Katz, Carmack, and Field's (2017) qualitative study. Habarth et al. (2017) found that posttraumatic growth was in some cases associated with lower mental health complaints, indicating that through its inhibition of posttraumatic growth, disenfranchisement may lead to poorer overall mental health. Habarth et al. also examined disenfranchisement. They operationalized disenfranchisement as "social constraint" (Lepore & Ituarte, 1999), the extent to which pet bereaved felt avoided or dismissed when they tried to discuss their loss. They found that social constraints were also associated with negative mental health outcomes. Agencies or clinicians seeking support for the creation of intervention programs and group therapy for pet bereaved persons could point to this body of literature to demonstrate the importance of social support for the pet bereaved.

Hypothesis 2's novel assertion was that strength of attachment would not only act as a moderator between social support and posttraumatic growth, its contribution to the variance would not be significantly different from grief symptoms as a competing moderator. However, just as in Hypothesis 1 analyses, grief symptom severity did not act as a moderator. Strength of attachment also did not act as a moderator, and it did not even have a significant relationship with posttraumatic growth. It appears that while strength of attachment may contribute to grief symptoms severity to some extent (though that specific relationship was not analyzed in the current study), the relationship between them within this sample was not strong enough for strength of attachment to have its own unique causal influence on posttraumatic growth. It is possible that within the context of this college aged sample, too many extraneous variables were similar for strength of attachment to play a significant role. For many participants, the deceased

animal was likely their childhood pet, a similarly traumatic experience for any student as they transition into a new young adult phase of life. Future research could explore the influence of strength of attachment on posttraumatic growth in a sample with more varied ages and demographics wherein the pet plays a different role within participants lives. Further exploration could also be dedicated to identifying differences between loss of social support and overall amount of social support in their contribution to grief and posttraumatic growth. In contrasting this study with Spain et al., it appears grief symptoms act as a moderator between posttraumatic growth and the specific experience of loss of social support, but that they do not act as a moderator between overall amount of social support and posttraumatic growth.

Hypothesis 3 asserted that insecure attachment styles would have a negative relationship with social support. Results rejected the null hypothesis as insecure attachment predicted a negative impact on social support satisfaction. These findings are in congruence with research examining the relationship between attachment style and social support in college students (Shahyad, Ali Besharat, Asadi, Shir Alipour, & Miri, 2011; Priel & Shamai, 1995) as well as one study that explored that relationship within a pet bereaved sample (Field, Orsini, Gavish, & Packman, 2009). This finding could encourage clinicians treating pet bereaved individuals to consider their clients' attachment style and amount of social support. If the client appears to be struggling to grieve in part due to absence of trusted persons caring for them in regard to their loss, interventions such as Interpersonal Process Therapy (Teyber & Teyber, 2010) that help the client learn to convey their needs and trust others could be effective. Group therapy interventions for pet bereaved persons could provide psychoeducation regarding attachment style, how it impacts their capacity to seek social support, and how it might exacerbate their negative reactions when their close loved ones do not support them in the ways they had hoped.

Little research has explored the impact of insecure attachment style on posttraumatic growth. To test hypothesis 4, analyses were performed to test the relationship between posttraumatic growth and insecure attachment style, and results indicated that insecure attachment did not have a meaningful impact on posttraumatic growth. The results indicated that though insecure attachment style influences social support, and social support influences posttraumatic growth, these relationships seemed to be independent of one another. While studies have found attachment features within human-pet relationships (Kurdek, 2008; Kurdek, 2009), it is possible that is that attachment style has a bigger influence on posttraumatic growth when the trauma has an interpersonal element. A study that found that attachment style was a partial mediator between trauma symptoms and posttraumatic growth was performed within a sample of adult sexual abuse survivors (Kelson, Hagedorn, & Lambie, 2019). Individuals with insecure attachment are more impacted by violations of trust than those with secure attachment (Fitzpatrick & Lafontaine, 2017), and sexual abuse is a particularly egregious trust violation. Other studies have suggested that insecure attachment is less important to posttraumatic growth than secure attachment. Schmidt et al. (2012) found that within a sample of cancer survivors, secure attachment features were significantly correlated with posttraumatic growth while insecure attachment features were unrelated to posttraumatic growth. Another study indicated that suicide loss survivors with secure attachment had greater posttraumatic growth than any other attachment style (Levi-Belz & Lev-Ari, 2018). Due to the frequent comorbidity of childhood trauma and likelihood of traumatized youth developing insecure attachment (Huang et al., 2012; Bowlby, 1988), research regarding interventions that promote posttraumatic growth in insecurely attached adult survivors of trauma could have an enormous impact on trauma treatment efficacy.

The first research question considered whether choosing to euthanize a pet uniquely contributes to posttraumatic growth. A t test was performed to answer the first research question, indicating that no, pet death seemed to have a similar impact on posttraumatic growth whether or not the animal was euthanized. Within this sample that was likely experiencing the death of a family pet, it is possible that the decision to euthanize was more often made by a parent or guardian, and thus the participants of this study were less likely to have “grown” from making the difficult choice to euthanize. Future studies could explore this question within a sample that was the primary owner and primary medical decision maker for the pet. Some studies have considered specific clinical interventions for individuals that euthanized their pet. Bussolari et al. (2021) explored the impact of self-compassion behaviors and thought patterns on mental and functional outcomes within a sample that euthanized their animal, finding that self-compassion techniques contributed to improved outcomes. These findings should encourage further research regarding the effectiveness and viability of self-compassion clinical interventions with this population.

The second and third research questions examined differences between dog and cat owners and owners of exotic pets. For the second research question, t test results indicated that social support did not meaningfully differ between owners of cats and dogs and owners of exotic pets. These results suggest that within pet owners, there was not any significant difference in how disenfranchised they were in their grief experience. More pointed research could be beneficial, examining how supported pet owners felt specifically about their loss experience in the 8 weeks following the death of the pet. The t test for the final research question indicated that exotic pet owners form significantly less attachment to their pets than cat and dog owners. The exotic pet group in this study included participants that experienced the death of the following

animals: fish, snakes, hamsters, ferrets, rats, guinea pigs, one turtle, and 17 other unidentified pets. Fish, snakes, and turtles are not mammals, and they do not interact with humans with overtly affectionate mannerisms like dogs or cats, e.g. running to the door with excitement, seeking touch. The subject of reptile emotion and whether reptiles “love” their owners is controversial, and there is sparse literature within the subject of overall reptile sentience. A few studies have contended that reptiles experience pleasure (Lambert, Carder, & D’Cruze, 2019). Nonetheless, though reptiles and turtles can be with their owners for decades, the nature of these relationships is less affectionate, likely limiting the possibility of felt emotional attunement from homeowners, consequently inhibiting strength of attachment. Ferrets and rodents are mammals, and they do seem to bond with their owners (Fisher, 2006; Ducommun, 2011). Comparatively lower attachment to these mammals could be attributed to short lifespan, reduced interaction due to caging and absence of activities like walks, or strength of emotional responsiveness from the animal.

Some limitations of the current study should be taken into account when considering the results. Across both datasets, participants were college undergraduates that heavily skewed young, White, and female. Consequently, these findings cannot be generalized to many subgroups within the population. Furthermore, experimenter error and limited sample size impacted the results of the first hypothesis. Regarding social support and quantification of the concept of disenfranchisement, though the current study measured social support within the context of a pet bereaved sample, it did not specifically measure how supported individuals felt regarding their grief experience. Future researchers might consider The Social Constraints Measure (SCM; Lepore & Ituarte, 1999).

The findings of the current study provide ample opportunity for future research. Researchers could further explore the concept of disenfranchised pet grief with longitudinal research within the first few months following the death of a pet. Gathering multiple data points within that timeframe could allow deduction of how social support for pet bereaved individuals changes after the initial shock of the loss and to what extent pet owners' social support needs shift as time passes. Continued examination of grief symptom severity as a moderator between social support and posttraumatic growth is also merited. The results of this study contradicted Spain, O'Dwyer, and Moston's (2019) finding that high grief symptom severity exacerbates the extent to which loss of social support inhibits posttraumatic growth, but this study was completed with a relatively homogenous sample. It could be important to learn more about how grief symptom severity influences the impact of social support on posttraumatic growth in a more diverse sample. This study also found that grief symptoms in the pet bereaved strongly contributed to posttraumatic growth. Prior qualitative studies (Packman, Bussolari, Katz, Carmack, & Field, 2017; Calhoun, Tedeschi, Cann, & Hanks, 2010) suggested that certain dimensions of posttraumatic growth were particularly prominent in the pet bereaved, including Relating to Others and Appreciation for Life. Now that a quantitative relationship between the grief symptoms of the pet bereaved and posttraumatic growth has been established, researchers can investigate whether the same strength of relationship emerges in other samples, and they can also explore the unique posttraumatic features of pet bereaved persons.

Many fascinating inquiries could be pursued by future researchers regarding the impact of attachment on traumatic experiences. The results of Hypothesis 4 beg the question, does attachment style impact posttraumatic growth within the context of some traumas and not others? Do the traumas have to be of an interpersonal nature for attachment style to be relevant? To

explore these possibilities, researchers could compare the influence of attachment style on the posttraumatic growth of a pet bereaved sample, a natural disaster sample, a domestic violence survivors sample, and a parental abuse survivors sample. Also, while the current study considered how attachment style influenced social support and posttraumatic growth, it did not consider how attachment style impacted grief symptoms. Some prior studies have found evidence of a significant positive relationship between strength of attachment and grief symptoms for the bereaved (Barnard-Nguyen et al., 2016; Field et al., 2009), but it is unclear to what extent attachment style plays a role in the experiencing of grieving a pet. Lastly, future studies could expand upon the exploratory research of the current study. Level of social support, and thus extent of disenfranchisement, did not meaningfully differ between the common and exotic pet groups, but the exotic pet group was of a fairly limited sample size. Researchers could recruit exotic pet owners from specialized pet stores and websites to examine the extent of their perceived social support when prior exotic pets have died. They could also recruit from veterinary clinics to study differences between the euthanization pet death experience and other pet death experiences.

This study contributed to the current literature on pet bereavement by providing further evidence supporting the importance of social support and severity of grief symptoms in their impact on posttraumatic growth. It also provided evidence to the notion that disenfranchisement has a negative impact upon the possible positive outcomes of trauma experiences. Along with these additions to the pet bereavement research, this study also has relevant clinical implications. Therapists are encouraged to be aware that they may be one of few, if not the only, person in their client's life that takes the death of their pet seriously. By simply validating their client's grief reaction and normalizing it, therapists can provide a pivotal corrective emotional

experience. Moreover, clinicians treating pet bereaved clients are encouraged to explore to what extent their clients feel supported by loved ones in their grief process. If their social support regarding their pet death is unsatisfactory, a clinician could help them process the impacts of cultural attitudes and attachment style on their received social support. Lastly, the ways in which the pet bereaved feel able to make meaning and grow personally from the trauma of a pet death deserve significant clinical attention. Clinicians could both provide much needed support and facilitate the posttraumatic growth process through dialogue and meaning making activities. Therapists attempting to foster posttraumatic growth would also be encouraged to take their client's attachment style into consideration in navigating that process. This study expanded upon current pet bereavement literature and provided clinical recommendations for treating people who have suffered the death of a beloved animal.

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APPENDIX A: THE LEXINGTON ATTACHMENT TO PETS SCALE

Lexington Attachment to Pets Scale

	Strongly agree	Somewhat agree	I don't know	Somewhat disagree	Strongly disagree
a. My pet means more to me than any of my friends					
b. Quite often I confide in my pet.					
c. I believe that pets should have the same rights and privileges as family members					
d. I believe my pet is my best friend					
e. Quite often, my feelings toward people are affected by the way they react to my pet.					
f. I love my pet because he/she is more loyal to me than most of the people in my life.					
g. I enjoy showing other people pictures of my pet.					
h. I think my pet is just a pet.*					
i. I love my pet because it never judges me.					
j. My pet knows when I am feeling bad.					
k. I often talk to other people about my pet.					
l. My pet understands me.					

m. I believe that loving my pet helps me stay healthy.					
n. Pets deserve as much respect as humans do.					
o. My pet and I have a very close relationship.					
p. I would do almost anything to take care of my pet.					
q. I play with my pet often.					
r. I consider my pet to be a great companion.					
s. My pet makes me happy.					
t. I feel that my pet is part of my family.					
u. I am not very attached to my pet.*					
v. Owning a pet adds to my happiness.					
w. I consider my pet to be a friend.					

0=strongly disagree
1=somewhat disagree
2=somewhat agree
3=strongly agree
I don't know

Items with "I don't know response" were coded as blank.

*Reverse code the two items marked with an asterisk

APPENDIX B: THE EXPERIENCES IN CLOSE RELATIONSHIPS – SHORT FORM

Experiences in Close Relationship Scale-Short Form (ECR-S)

Instruction: The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

- 1. It helps to turn to my romantic partner in times of need.**
2. I need a lot of reassurance that I am loved by my partner.
3. I want to get close to my partner, but I keep pulling back.
4. I find that my partner(s) don't want to get as close as I would like.
- 5. I turn to my partner for many things, including comfort and reassurance.**
6. My desire to be very close sometimes scares people away.
7. I try to avoid getting too close to my partner.
- 8. I do not often worry about being abandoned.**
- 9. I usually discuss my problems and concerns with my partner.**
10. I get frustrated if romantic partners are not available when I need them.
11. I am nervous when partners get too close to me.
12. I worry that romantic partners won't care about me as much as I care about them.

Scoring Information:

Anxiety = 2, 4, 6, 8 (reverse), 10, 12

Avoidance = 1 (reverse), 3, 5 (reverse), 7, 9 (reverse), 11

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, 88, 187-204.

APPENDIX C: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the “1” if you **Very Strongly Disagree** Circle the “2” if you **Strongly Disagree** Circle the “3” if you **Mildly Disagree**

Circle the “4” if you are **Neutral** Circle the “5” if you **Mildly Agree** Circle the “6” if you **Strongly Agree**

Circle the “7” if you **Very Strongly Agree**

1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7	SO
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	SO
3.	My family really tries to help me.	1	2	3	4	5	6	7	Fam
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7	Fam
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7	SO
6.	My friends really try to help me.	1	2	3	4	5	6	7	Fri
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7	Fri
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7	Fam
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	Fri
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7	SO
11.	My family is willing to help me make	1	2	3	4	5	6	7	Fam

. decisions.

12 I can talk about my problems with my 1 2 3 4 5 6 7 Fri
. friends.

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

APPENDIX D: POSTTRAUMATIC GROWTH INVENTORY

post-traumatic growth *inventory*

Listed below are 21 areas that are sometimes reported to have changed after traumatic events. Please mark the appropriate box beside each description indicating how much you feel you have experienced change in the area described. The 0 to 5 scale is as follows:

- 0 = I did not experience this change as a result of my crisis
- 1 = I experienced this change to a very small degree
- 2 = a small degree

	<i>possible areas of growth and change</i>	0	1	2	3	4	5
<i>a.</i>	my priorities about what is important in life						
<i>b.</i>	an appreciation for the value of my own life						
<i>c.</i>	I developed new interests						
<i>d.</i>	a feeling of self-reliance						
<i>e.</i>	a better understanding of spiritual matters						
<i>f.</i>	knowing that I can count on people in times of trouble						
<i>g.</i>	I established a new path for my life						
<i>h.</i>	a sense of closeness with others						
<i>i.</i>	a willingness to express my emotions						
<i>j.</i>	knowing I can handle difficulties						
<i>k.</i>	I'm able to do better things with my life						
<i>l.</i>	being able to accept the way things work out						
<i>m.</i>	appreciating each day						
<i>n.</i>	new opportunities are available which wouldn't have been otherwise						
<i>o.</i>	having compassion for others						
<i>p.</i>	putting effort into my relationships						

<i>q.</i>	I'm more likely to try to change things which need changing							
<i>r.</i>	I have a stronger religious faith							
<i>s.</i>	I discovered that I am stronger than I thought I was							
<i>t.</i>	I learned a great deal about how wonderful people are							
<i>u.</i>	I accept needing others							

3 = a moderate degree

4 = a great degree

5 = a very great degree as a result of my crisis

Tedeschi RG & Calhoun LG *The posttraumatic growth inventory: measuring the positive legacy of trauma* Journal of Traumatic Stress 1996; 9: 455-471

**APPENDIX E: REACTIONS TO LOSS SCALE
(Reactions To Loss Scale)**

Following this most significant event or loss, I reacted in the following ways:

	Never 1	Rarely 2	Sometimes 3	Often 4	Very Often 5	Always 6
80. Cried about the loss	1	2	3	4	5	6
81. Talked to a professor about the loss	1	2	3	4	5	6
82. Listened to music to cope with the loss	1	2	3	4	5	6
83. I felt my emotions were out of control after the loss	1	2	3	4	5	6
84. Kept thoughts and feelings about the loss to myself	1	2	3	4	5	6
85. I found myself feeling positive about my life before the loss.	1	2	3	4	5	6
86. I tried to forget the whole thing	1	2	3	4	5	6
87. Overate because of the loss	1	2	3	4	5	6
88. I became a more tolerant person following the loss	1	2	3	4	5	6
89. Had trouble eating because of the loss	1	2	3	4	5	6
90. Took prescription medication because of the loss	1	2	3	4	5	6
91. Engaged in increased physical activity after the loss	1	2	3	4	5	6
92. Talked to a counselor about the loss	1	2	3	4	5	6
93. I worried more about ordinary things	1	2	3	4	5	6
94. Thought about suicide because of the loss	1	2	3	4	5	6
95. Wrote in a journal about the loss	1	2	3	4	5	6

96. Engaged in religious, spiritual, or personally meaningful activities to make sense of the loss	1	2	3	4	5	6
97. Used alcohol or drugs to cope with the loss	1	2	3	4	5	6
98. I tried hard not to think about the loss	1	2	3	4	5	6
99. I am better able to empathize with others after the loss	1	2	3	4	5	6
100. Missed classes because of the loss	1	2	3	4	5	6
	Never 1	Rarely 2	Sometimes 3	Often 4	Very Often 5	Always 6
101. Engaged in more distracting activities such as watching T.V. because of the loss	1	2	3	4	5	6
102. Change in amount of sexual activity following the loss	1	2	3	4	5	6
103. I found myself feeling more self-confident	1	2	3	4	5	6
104. I made a promise to myself that things would be different next time	1	2	3	4	5	6
105. Withdrew from friends and family because of the loss	1	2	3	4	5	6
106. Slept more or less because of the loss	1	2	3	4	5	6
107. Engaged in decreased physical activity after the loss	1	2	3	4	5	6
108. I was able to control my feelings about the loss so that they did not interfere with my life	1	2	3	4	5	6
109. I started to see some positives in my life after the loss	1	2	3	4	5	6
110. I had a hard time trusting others after this loss	1	2	3	4	5	6
111. I felt hopeless about anything improving in my life	1	2	3	4	5	6
112. I began to feel stronger because of dealing with the loss	1	2	3	4	5	6
113. I rediscovered what is important in life	1	2	3	4	5	6
114. I had a very difficult time overcoming my feelings of guilt about the loss	1	2	3	4	5	6
115. I felt a lot of anger and resentment after the loss	1	2	3	4	5	6

116. I continued to be optimistic about my future even after the loss	1	2	3	4	5	6
117. This loss has made me question my future; it looks bleak	1	2	3	4	5	6
118. I refused to believe this had happened	1	2	3	4	5	6
119. I felt hopeless about anything improving in my life	1	2	3	4	5	6
120. This loss has caused me to question my beliefs	1	2	3	4	5	6
	Never 1	Rarely 2	Sometimes 3	Often 4	Very Often 5	Always 6
121. My relationships with others have been strengthened through dealing with this loss	1	2	3	4	5	6
122. Blamed self for the loss	1	2	3	4	5	6
123. Talking about the loss only made me feel worse about it	1	2	3	4	5	6
124. Talking about the loss helped me feel better	1	2	3	4	5	6
125. Had trouble concentrating on my studies because of the loss	1	2	3	4	5	6
126. I tried hard not to think about the loss	1	2	3	4	5	6
127. Blamed others for the loss	1	2	3	4	5	6
128. Felt lack of control because of the loss	1	2	3	4	5	6
129. I experienced deeper love for some people in my life	1	2	3	4	5	6
130. I could not stop thinking about the loss	1	2	3	4	5	6
131. Felt this loss would have a big effect on my future	1	2	3	4	5	6
132. I tried to understand my reaction to this loss	1	2	3	4	5	6
133. I thought about how things would be if this had not happened	1	2	3	4	5	6
134. I wished this was all over and behind me	1	2	3	4	5	6
135. I found my life to be even more interesting following the loss	1	2	3	4	5	6
136. I tried to go on as if nothing had happened	1	2	3	4	5	6

137. Accept the loss since nothing can be done	1	2	3	4	5	6
138. Changed or grew as a person in a good way	1	2	3	4	5	6
139. Found new faith	1	2	3	4	5	6
140. Criticized or lectured myself	1	2	3	4	5	6
141. I found myself meeting the challenges created by the loss	1	2	3	4	5	6
142. I hoped for a miracle	1	2	3	4	5	6
143. I wished I could change how I was feeling	1	2	3	4	5	6
	Never 1	Rarely 2	Sometimes 3	Often 4	Very Often 5	Always 6
144. Felt guilt about the loss	1	2	3	4	5	6
145. The loss caused me to think about other losses in my life	1	2	3	4	5	6
146. I tried to keep my feelings from interfering too much with what I had to do	1	2	3	4	5	6
147. I found I could still laugh even after the loss	1	2	3	4	5	6
148. I wished that this had never happened	1	2	3	4	5	6
149. Re-lived the loss	1	2	3	4	5	6
150. Engaged in more care-taking behaviors of others after the loss	1	2	3	4	5	6
151. I felt more inadequate than ever after the loss	1	2	3	4	5	6
152. I was inspired to do something creative	1	2	3	4	5	6
153. Increased desire to help others in need after the loss	1	2	3	4	5	6
154. Engaged in behaviors to "make-up" for my role in the loss	1	2	3	4	5	6

APPENDIX F: SOCIAL SUPPORT QUESTIONNAIRE 6

1. Whom can you really count on to be dependable when you need help?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

2. Whom can you really count on to help you feel more relaxed when you are under pressure or tense? No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

3. Who accepts you totally, including both your worst and your best points?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

4. Whom can you really count on to care about you, regardless of what is happening to you?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

5. Whom can you really count on to help you feel better when you are feeling generally down-in-the dumps?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

6. Whom can you count on to console you when you are very upset?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How Satisfied? 6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied