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## Pet Loss and Representations of Death, Attachment, Depression, and Euthanasia

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**ABSTRACT** Studies that have examined pet loss hypothesize that attachment, representations of death, and the belief in an afterlife for animals may influence owners' bereavement and depressive outcomes. The following instruments were administered to 159 Italian participants recruited through snowball sampling: the Lexington Attachment to Pets Scale (LAPS), the Pet Bereavement Questionnaire (PBQ), the Testoni Death Representation Scale (TDRS), and Beck's Depression Inventory II (BDI-II). Questions concerning pet euthanasia-related issues and the relationship between owners and veterinarians were also submitted to the participants. A path model was conducted, showing that the representation of death and the attachment to a pet had a direct effect on pet grief, which in turn had a direct effect on depression. The results show a positive correlation between the LAPS and PBQ factors, particularly with the PBQ factor Grief. The LAPS factors positively correlated with the TDRS representation of Death as a Passage and negatively correlated with the TDRS representation of Death as Annihilation. The LAPS People Substituting factor positively correlated with the total score and the Cognitive-Affective factor of the BDI-II. The PBQ factors positively correlated with the BDI-II, whereas only the TDRS Death as Annihilation factor positively correlated with the BDI-II. Belief in a transcendent dimension was associated with higher scores on the PBQ Guilt factor and the TDRS factors of Death as a Passage and Death as Change, whereas these beliefs were associated with lower scores on the TDRS factor Death as Annihilation.

The results indicated that the sensitivity of the veterinarian and a veterinarian who helps owners make conscious and informed decisions for their pet and choose the right time to perform euthanasia are important variables in the management of pet loss. However, these factors are not sufficient and psychological support should be improved to help owners better cope with grief.

**Keywords:** afterlife, depression, euthanasia, grief, pet bereavement, pet loss, representations of death

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In the past two decades, there has been increased interest in the issues of pet loss and grief in the field of human–animal interactions. Previous studies have recognized the importance of pet bereavement, and some research indicates that this experience may cause depression (Davis, 2011; Planchon & Templer, 1996; Planchon, Templer, Stokes, & Keller, 2002). Despite their importance, however, factors that may negatively influence grief outcomes, such as ontological representations of death, belief in an afterlife, and the practice of euthanasia, have not been sufficiently studied.

Studies on grief following the death of a beloved person show that religious and spiritual beliefs significantly help people deal with death and bereavement (Becker et al., 2007; Hays & Hendrix, 2008; Wortmann & Park, 2008). In particular, these beliefs are valuable for coping with life stress (Park, 2005), health problems (Pearce et al., 2002), end-of-life or palliative care (Kallenberg, 2000; Sinclair, 2006) and continuing bonds (Benore & Park, 2004). According to Terror Management Theory (TMT), the main factor that characterizes any religion with regard to the management of mortality salience is that the religion acts as a buffer against the awareness of death (Greenberg et al., 1992). However, few studies have examined the influence of representations of death, transcendence and relationships with animals.

In Western culture, the essential difference between humans and animals is supported by the metaphysical definition of the presence/absence of a soul, which is assumed to be the immutable essence that guarantees an afterlife. This basic categorization determines the fundamental distinction of status among different beings (Fidler, 2004) and influences the rudimentary social categorization processes that discriminate between superior and inferior beings, with the former having a soul and the latter lacking essential and immortal principles (humans versus animals). However, some cultural and social representations humanize animals. This humanization grants animals an afterlife and assumes that they deserve to be respected, similar to human beings (Asquith, 1986; Giffney & Hird, 2008; Spencer, 1952). From a psychological perspective, this tendency is determined by social and effectance motivations (Epley, Waytz, & Cacioppo, 2007). For example, people who lack a connection with other humans attempt to compensate for this shortage through intense and significant relationships with animals (Albert & Bulcroft, 1988; Epley et al., 2007).

As indicated by Fidler (2004), there is a tendency to believe that both humans and animals will experience an afterlife. Therefore, animal immortality has become a new form of representation in Western culture that has resulted in animals being considered increasingly similar to humans and worthy of our moral thinking (Midgley, 1994; Serpell, 1996). This issue is likely to be of particular interest to people who live closely with pets and develop a strong bond with them. Research on pet grief is particularly significant because an increasing number of households worldwide have pets, which usually die before their owners do.

In Italy, there are approximately 60.5 million pets (Euromonitor International, <http://www.euromonitor.com/pet-care>), and 92% of people living with a companion animal believe that they could not do without them because these animals are an integral part of their family and a source of wellbeing (ASSALCO, 2015). Therefore, the number of studies investigating the relationship between attachment and pet grief has increased significantly. Studies show that the strength of the attachment bond to a pet is a significant predictor of the severity of grief (Field, Orsini, Gavish, & Packman, 2009; Gerwolls & Labott, 1994; Gosse & Barnes, 1994). Furthermore, this experience of death is a risk factor for depression (Stallones, 1994; Planchon et al., 2002), particularly for women and people living alone, regardless of whether the loss occurs suddenly or as a result of euthanasia (Davis, 2011).

The majority of pet owners maintain ongoing and meaningful ties with their pets after the pet's death (Camark & Packman, 2011), and the belief in an afterlife for a pet has been reported as a potentially helpful factor in coping with pet loss (Davis et al., 2003). Recently, it has been recognized that pets can be viewed as attachment figures whose loss elicits a significant grief response (Zilcha-Mano et al., 2011) that is similar to the response elicited by the death of a human attachment figure (Archer & Winchester 1994; Gerwolls & Labott, 1994; Field et al., 2009). However, grief that derives from this experience is the prototypical example of "disenfranchised grief" (Doka, 2008) because it is not yet culturally and socially recognized as a significant loss (Doka, 1985). Grief due to the loss of a pet is an underestimated issue due to the cultural image of animals as inferior beings that should not be loved in the same way as humans. Therefore, bereavement due to the loss of a pet is widely considered nonsense.

The societal difficulty in accepting the loss of a pet as a legitimate source of grief indicates that society is still unable to confer meaning on the death of animals, particularly from a moral point of view. In particular, the practice of euthanasia, which may be influenced by ontological representations of death, requires the definition of meanings and values (Davis et al., 2003). Anthropomorphism confers human characteristics on animals. Therefore, many people may have problems with euthanasia because this kind of death may cause moral difficulties. As a result, it is particularly important for euthanasia to be performed sensitively and skillfully because it can complicate and exacerbate the negative feelings associated with grief (Lagoni et al., 1994).

In our research, we aimed to consider the relationship between ontological representations of death (death as a passage to an afterlife vs. annihilation) and the attachment of the owner to the pet to analyze how these variables are linked to grief and depression. Furthermore, we aimed to consider the relationship between euthanasia-related issues and grief.

### *Aims and Hypothesis*

This study examined pet bereavement to better understand the relationship between ontological representations of death and attachment. The aim was to describe this relationship using a structural model in which the representation of death as annihilation (the negation of any afterlife) and the attachment of the owner to the pet were the independent variables. Grief was the moderator variable, and depression was the dependent variable. Due to their possible correlation with grief, we also examined the management of euthanasia and the relationship between the pet owner and the veterinarian.

## **Methods**

### *Participants and Procedure*

This study involved 159 adult participants (111 females and 48 males) in Northern Italy who were selected using snowball sampling. The inclusion criteria were as follows: having experienced the death of a pet, being at least 18 years old, and understanding the Italian language. The participants completed a self-administered paper survey. We purposely avoided advertising our research through veterinary clinics, pet stores, and animal welfare associations in an attempt to recruit different types of pet owners. We initially solicited respondents through word of mouth and an association located in Milan. A brief e-mail describing the aim of our research was sent to the mailing list of the association. People willing to participate were asked to contact us directly at our e-mail address. The paper questionnaires were delivered and returned both by hand and by post. In the latter cases, we provided a self-addressed, stamped envelope. All questionnaires were returned. Subsequently, the participants were asked to recruit

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other potential participants. In many cases, the participants voluntarily recruited other participants without having to be asked. In total, 160 questionnaires were distributed and one questionnaire was lost. The response rate for completing the instrument was 100%.

The sample consisted mostly of women (69.8%). The mean age of the participants was 45 years ( $SD = 14.7$ ), with ages ranging from 18 to 79. The majority of the respondents were well-educated, with 39.6% reporting a university degree, 49.7% a high-school degree, 7.5% a middle school education, 2.5% an elementary school education, and 0.6% uneducated. Most of the participants were employed (72%). Regarding their marital status, 52% of the participants were married or cohabitating, 34% were single, 9% were separated/divorced, and 5% were widowed. In addition, 46% of the respondents had children. Regarding their housing conditions, 49% of the participants lived with at least one other adult but no children, 28% lived alone, 22% lived with adults and children, and 1% lived only with children. With respect to an afterlife, 59% declared a belief in God, and 66% believed in an afterlife. Of these respondents, 13% believed an afterlife was only for humans, and 53% felt it was for both people and animals. The respondents had experienced the death of dogs (69%) and cats (25%), with other animal types constituting a small minority (6%) that included horses, fish, birds, and ferrets. For the majority of the respondents, the pet's death occurred two years before the interview (65%).

The mean age of the pet at death was 11 years. The average length of ownership was 10 years ( $SD = 5.2$ ) and the pet's age at death (years) was 10.7 ( $SD = 5.5$ ). Regarding the circumstances of death, 50% of the respondents declared that the death was unexpected and that they opted for euthanasia. In the participants' opinion, veterinarians gave clear and complete information on the pet's health condition (63%), involved the owners in the end-of-life decisions for their pet (59%), and gave them sufficient time to consider the decision (58%). Euthanasia was mainly performed at a veterinary clinic (81%) when the owner was present (77%). Most of the participants (83%) felt supported by others, and 33% used pet funeral services. In the owners' opinion, euthanasia was performed at the right time (86%), and the veterinarian was sensitive toward the owner and the pet during euthanasia (71%) and provided proper information on the procedure (92%). Only 25% of the participants felt guilty. Tables 1 and 2 describe the main characteristics of the participants and their pets.

The study was approved by the Ethics Committee of the Psychology School at the University of Padova.

## Questionnaire

This was introduced by an information sheet that included a general description of the questionnaire and a consent form ensuring anonymity and privacy. There were two parts to the questionnaire. The first involved the traits of the participants and included the owner's attachment to the pet, bereavement, representation of death, and depression. The instruments used to measure these were:

*Lexington Attachment to Pets Scale (LAPS) (Johnson, Garrity, & Stallones, 1995):* This is a 23-item scale measuring pet attachment. Respondents answer questions on a 0–3 Likert-type scale for each of the following factors: “General Attachment” (items: 10, 11, 12, 13, 15, 17, 18, 19, 21, 22, 23), “People Substituting” (items: 1, 2, 4, 5, 6, 7, 9), and “Animal Rights/Animal Welfare,” which assesses the pet's status within the household (items: 8, 14, 16, 20). The LAPS has high internal consistency (Cronbach's  $\alpha = 0.928$ ), a meaningful

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**Table 1.** Characteristics of the participants ( $n = 159$ ).

Variable	n	%
<i>Gender</i>		
Male	48	30.2
Female	111	69.8
<i>Age (years)</i>		
18–79		
<i>Education</i>		
Low	17	10.7
Medium–High	142	89.3
<i>Occupation</i>		
Unemployed	44	27.7
Employed	114	71.7
Missing value	1	0.6
<i>Marital Status</i>		
Married/cohabitating	82	51.6
Other	77	48.4
<i>Presence of Children</i>		
No	86	54.1
Yes	73	45.9
<i>Housing Condition</i>		
Alone	44	27.7
With other adults	79	49.7
With adult and children	35	22.0
Missing value	1	0.6
<i>Belief in God</i>		
No	64	40.3
Yes	94	59.1
Missing value	1	0.6
<i>Afterlife Opinion</i>		
No	50	31.4
Yes, only for people	21	13.2
Yes, even for animals	84	52.8
Missing value	4	2.5

**Table 2.** Characteristics of the pets ( $n = 159$ ).

Variable	n	%
<i>Animal Species</i>		
Dog	109	68.6
Cat	39	24.5
Other	11	6.9
<i>Time Since Pet's Death</i>		
Up to two years	55	34.6
More than two years	104	65.4
<i>Pet's Euthanasia</i>		
No	80	50.3
Yes	79	49.7
No	23	14.5
Yes	94	59.1
Not addressed by veterinarian	32	20.1
Missing value	10	6.3
<i>Sufficient Time for Decision Making by the Veterinarian</i>		
No	11	6.9
Yes	92	57.9
Not addressed by veterinarian	32	20.1
Missing value	24	15.1
<i>Use of Funeral Services for Pets or Other Rites</i>		
No	104	65.4
Yes	53	33.3
Missing value	2	1.3
<i>Timing Euthanasia (n = 79)</i>		
Too soon	5	6.3
Right time	68	86.1
Too late	4	5.1
Missing value	2	2.5
<i>Veterinarian Sensitivity During Euthanasia (n = 79)</i>		
No	4	5.1
Yes	56	70.9
Missing value	1	1.3

factor structure, and good construct validity, and has been used in a variety of settings (Templer & Arikawa, 2011).

*Pet Bereavement Questionnaire (PBQ)* (Hunt & Padilla, 2006): This is a 16-item scale measuring pet bereavement. Respondents answer questions on a 4-point Likert scale for the single construct of pet bereavement based on the following three distinct factors: “Grief” (items: 2, 3, 5, 7, 10, 12, 15), “Anger” (items: 1, 4, 11, 13, 14), and “Guilt” (items 6, 8, 9, 16). The PBQ has been proven to have good internal reliability (Cronbach’s  $\alpha = 0.87$ ), good factor structure, and good construct validity.

*The Testoni Death Representation Scale (TDRS)* (Testoni, Ancona, & Ronconi, 2015): This is a 6-item self-report measure that assesses the attitudes of individuals toward the ontological representation of death as a passage to an afterlife or as annihilation. It has good internal

consistency (Cronbach's  $\alpha = 0.86$ ). In our research, we used a 10-item, 7-point Likert-scale version of the TDRS that measures the ontological representation of death according to three factors: "Death as Annihilation (becoming absolute nothing)" (items: 2, 8, 10), "Death as a Passage," meaning death as transformation into another form of existence in which the memory of the present life will be kept (items: 1, 4, 6), and "Death as Change" to a new form of existence without keeping the memories of the present life (items: 3, 5, 7, 9). This 10-item version is currently in the process of validation. In our sample, this version of the TDRS had good internal consistency, with Cronbach's alphas ranging between 0.87 and 0.92 (Table 3).

*Beck's Depression Inventory-II (BDI-II) (Italian Version)* (Beck et al., 1996; Ghisi, Flebus, Montano, Sanavio, & Sica, 2006): This is a 21-item scale measuring depression. Respondents answer questions on a 4-point scale. The BDI-II includes the "Cognitive-Affective" subscale (items: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14), which measures emotional-cognitive manifestations of depression such as pessimism, guilt, loss of interest, and self-criticism, and the "Somatic" subscale (items 15, 16, 17, 18, 19, 20, 21), which measures somatic manifestations of depression. The BDI-II has excellent psychometric properties in both clinical and community samples. It has good internal consistency, with Cronbach's alphas ranging between 0.80 and 0.87, and good test-retest reliability (0.76).

The second part of the questionnaire was specific to the animals' death. Participants were asked to consider the following issues: decision-making and euthanasia-related issues, their relationship with the veterinarian (complete information on the pet's health condition, involvement in decisions, sufficient time to consider euthanasia, the veterinarian's sensitivity toward the owner and the pet), and funeral rites.

### Data Analysis

The analyses were conducted in two steps. In the first step, the internal reliability of each questionnaire was verified by calculating the Cronbach's alpha coefficient and averaging the means of the LAPS, PBQ, TDRS, and BDI-II scores. Correlations between all dimensions, between the constructs and the characteristics of the participants, and between the constructs and the characteristics of the pets were evaluated using Pearson's correlation coefficient.

In the second step, a path analysis was used to test whether the PBQ mediated the relationship between the LAPS and the BDI-II or between the TDRS and BDI-II, using the LISREL Version 8.8 statistical package (Jöreskog & Sörbom, 2004). According to current guidelines (Schermelleh-Engel et al., 2003), a model shows good fit to the data when the chi-square is not significant, the root mean square error of approximation (RMSEA) is below 0.05, and the non-normed fit index (NNFI) and comparative fit index (CFI) are above 0.97.

### Results

All instruments had high internal reliability, with Cronbach's alpha coefficients between 0.70 and 0.93 (Table 3), except for the LAPS Animal Rights/Welfare factor (0.65) and the PBQ Anger (0.53) factor, which had low coefficients. Table 3 shows the correlations between the instruments. All LAPS scales were positively correlated with the PBQ factors, particularly with Grief ( $r = 0.70, p < 0.001$  with People Substituting;  $r = 0.67, p < 0.001$  with Animal Rights/Welfare; and  $r = 0.65, p < 0.001$  with General Attachment), Guilt ( $r = 0.27, p < 0.01$  with People Substituting;  $r = 0.26, p < 0.01$  with Animal Rights/Welfare; and  $r = 0.19, p < 0.05$  with General Attachment), and Anger ( $r = 0.26, p < 0.01$  with People Substituting;  $r = 0.21, p < 0.01$  with

**Table 3.** Descriptive statistics and reliability Cronbach's alpha coefficients for the constructs (in diagonal in bold); correlations among the constructs; correlation between constructs and participants' and pets' characteristics ( $n = 159$ ).

Variables	Range	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
<i>Lexington Attachment to Pets Scale (LAPS)</i>															
1. General attachment	0-33	24.99	7.32	<b>0.93</b>											
2. People substituting	0-21	11.57	5.16	0.76***	<b>0.82</b>										
3. Animal rights/welfare	0-12	7.79	2.86	0.76***	0.87***	<b>0.65</b>									
<i>Pet Bereavement Questionnaire (PBQ)</i>															
4. Grief	0-21	10.74	5.49	0.65***	0.70**	0.67**	<b>0.90</b>								
5. Anger	0-15	2.03	2.40	0.18*	0.26**	0.21**	0.40***	<b>0.53</b>							
6. Guilt	0-12	3.54	3.14	0.19*	0.27**	0.26**	0.34**	0.40***	<b>0.70</b>						
<i>Testoni Death Representation Scale (TDRS)</i>															
7. Death as passage	-3 to +3	0.24	1.95	0.25**	0.19*	0.20*	0.06	-0.02	0.14	<b>0.90</b>					
8. Death as change	-3 to +3	-0.25	1.61	-0.01	0.02	0.06	-0.14	-0.05	0.10	0.40***	<b>0.87</b>				
9. Death as annihilation	-3 to +3	-1.17	1.87	-0.16*	-0.08	-0.17*	0.00	0.10	-0.04	-0.73***	-0.30***	<b>0.92</b>			
<i>Beck Depression Inventory-II (BDI-II)</i>															
10. Cognitive affective score	0-42	4.37	4.57	0.09	0.17*	0.14	0.29***	0.19*	0.25**	-0.15	-0.06	0.21**	<b>0.83</b>		
11. Somatic symptom score	0-21	3.85	3.30	0.11	0.12	0.10	0.24**	0.09	0.07	-0.12	-0.06	0.09	0.69***	<b>0.79</b>	
12. Total score	0-63	8.22	7.23	0.11	0.16*	0.13	0.29***	0.16*	0.19*	-0.15	-0.06	0.17*	0.94***	0.89***	<b>0.88</b>
<i>Participants' Characteristics</i>															
13. Gender (0 = Male, 1 = Female)				0.17*	0.22*	0.16*	0.30***	0.17*	0.11	0.16	0.06	-0.10	0.28***	0.23**	0.28***
14. Age (years)				0.20*	0.11	0.12	0.29***	-0.11	-0.15	-0.07	-0.14	0.07	0.13	0.19*	0.17*
15. Belief in God (0 = No, 1 = Yes)				0.04	0.11	0.13	0.12	-0.01	0.16*	0.34***	0.21**	-0.26**	0.01	-0.06	-0.02
16. Afterlife opinion (0 = Other, 1 = Even for animals)				0.46***	0.35***	0.42***	0.24**	0.01	0.08	0.67***	0.28***	-0.58***	-0.12	-0.13	-0.14
<i>Pets' Characteristics</i>															
17. Unexpected pet's death (0 = No, 1 = Yes)				-0.14	-0.14	-0.17*	-0.03	0.24**	0.16*	-0.07	-0.06	-0.03	-0.03	0.02	-0.01
18. Pet's euthanasia (0 = No, 1 = Yes)				0.35***	0.31***	0.28**	0.25**	-0.08	-0.08	0.11	0.02	-0.04	0.02	0.03	0.03
19. Positive relationship with veterinarian (0 = No, 1 = Yes)				0.11	0.08	0.12	0.04	-0.28**	-0.32**	-0.13	-0.04	0.11	0.14	0.20*	0.18
Variables				1	2	3	4	5	6	7	8	9	10	11	12

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .



Animal Rights/Welfare; and  $r = 0.18, p < 0.05$  with General Attachment). The TDRS Death as a Passage factor was positively correlated with the LAPS factors ( $r = 0.25, p < 0.01$  with General Attachment;  $r = 0.20, p < 0.05$  with Animal Rights/Welfare; and  $r = 0.19, p < 0.05$  with People Substituting). In contrast, the TDRS Death as Annihilation factor was negatively correlated with the LAPS factors ( $r = -0.17, p < 0.05$  with Animal Rights/Welfare and  $r = -0.16$  with General Attachment). The LAPS People Substituting factor was positively correlated with the BDI-II total score ( $r = 0.16, p < 0.05$ ) and with the Cognitive-Affective factor ( $r = 0.17, p < 0.05$ ).

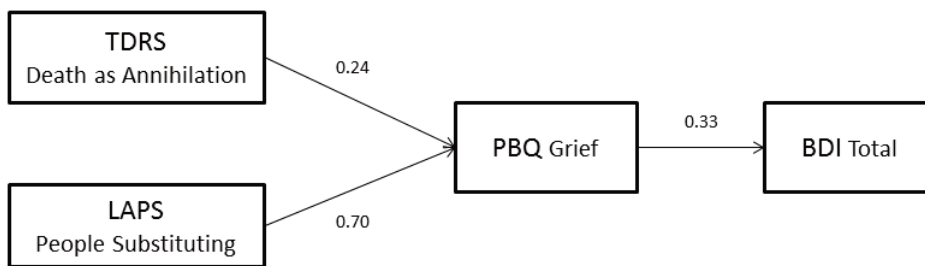
All PBQ factors were positively correlated with the BDI-II total score ( $r = 0.29, p < 0.001$  with Grief;  $r = 0.19, p < 0.05$  with Guilt; and  $r = 0.16, p < 0.05$  with Anger) and with the Cognitive-Affective factor ( $r = 0.29, p < 0.001$  with Grief;  $r = 0.25, p < 0.01$  with Guilt; and  $r = 0.19, p < 0.05$  with Anger), whereas only Grief was positively correlated with the Somatic factor ( $r = 0.24, p < 0.01$ ). Only the TDRS Death as Annihilation factor was positively correlated with the BDI-II total score ( $r = 0.17, p < 0.05$ ) and with the Cognitive-Affective factor ( $r = 0.21, p < 0.01$ ).

Table 3 also shows the correlations between the instruments and the participants' characteristics. Gender was significantly associated with all measures except the TDRS. Female gender was associated with higher scores on all the LAPS factors ( $r = 0.22, p < 0.05$  with People Substituting;  $r = 0.17, p < 0.05$  with General Attachment; and  $r = 0.16, p < 0.05$  with Animal Rights/Welfare), the PBQ factors of Grief ( $r = 0.30, p < 0.001$ ) and Anger ( $r = 0.17, p < 0.05$ ), the BDI-II total score ( $r = 0.28, p < 0.001$ ), and both the Cognitive-Affective ( $r = 0.28, p < 0.001$ ) and Somatic ( $r = 0.23, p < 0.01$ ) BDI-II factors. Age was positively correlated with the LAPS General Attachment factor ( $r = 0.20, p < 0.05$ ), the PBQ Grief factor ( $r = 0.29, p < 0.001$ ), the BDI-II total score ( $r = 0.17, p < 0.05$ ), and the BDI-II Somatic factor ( $r = 0.19, p < 0.05$ ).

With respect to the representations of a transcendent dimension, belief in God was associated with higher scores on the PBQ Guilt factor ( $r = 0.16, p < 0.05$ ) and on the TDRS factors of Death as a Passage ( $r = 0.34, p < 0.001$ ) and Death as Change ( $r = 0.21, p < 0.01$ ), whereas it was associated with lower scores on the TDRS factor Death as Annihilation ( $r = -0.26, p < 0.01$ ). Furthermore, belief in an afterlife for people and animals was associated with higher scores on all the LAPS factors ( $r = 0.46, p < 0.001$  with General Attachment;  $r = 0.42, p < 0.001$  with Animal Rights/Welfare, and  $r = 0.35, p < 0.001$  with People Substituting), the PBQ Grief factor ( $r = 0.24, p < 0.01$ ), and the TDRS factors of Death as Passage ( $r = 0.67, p < 0.001$ ) and Death as Change ( $r = 0.28, p < 0.001$ ), whereas it was associated with lower scores on the TDRS factor Death as Annihilation ( $r = -0.58, p < 0.001$ ).

The unexpected death of a pet was associated with higher scores on the Anger ( $r = 0.24, p < 0.01$ ) and Guilt ( $r = 0.16, p < 0.05$ ) factors of the PBQ. The pet's euthanasia was associated with higher scores on all LAPS factors ( $r = 0.35, p < 0.001$  with General Attachment;  $r = 0.31, p < 0.001$  with People Substituting; and  $r = 0.28, p < 0.01$  with Animal Rights/Welfare) and the PBQ Grief factor ( $r = 0.25, p < 0.01$ ). A positive relationship with the veterinarian was negatively associated with the Guilt ( $r = -0.32, p < 0.01$ ) and Anger ( $r = -0.28, p < 0.01$ ) factors of the PBQ, whereas it was positively associated with the Somatic factor of the BDI-II ( $r = 0.20, p < 0.05$ ).

In the second phase of the analysis (the path analysis), we considered all the variables that were significant in the analysis conducted in the first step: the LAPS People Substituting factor and the TDRS Death as Annihilation factors as predictors of the BDI-II total score, with the



**Figure 1.** Parameter estimates of the tested model. The numbers refer to the standardized coefficients.

PBQ factor of Grief as a mediator. The initial model was saturated, with all direct and indirect effects as predictors of the dependent variable. In the final model, only the significant parameters were included (Figure 1). For the final model, the fit indices showed good model fit to the data:  $\chi^2 = 0.68$ ,  $df = 2$ ,  $p = 0.710$ ,  $RMSEA = 0.00$ ,  $CFI = 1.00$ ,  $NNFI = 1.04$ . The final model supports the total mediation effects of the PBQ Grief factor. There were no direct effects of either the LAPS People Substituting factor or the TDRS Death as Annihilation factor; however, there were indirect effects through the PBQ Grief factor.

Therefore, the results confirm our hypothesis that representations of death and pet attachment may cause depression in response to the grief experienced after the death of a pet. In fact, the representation of Death as Annihilation and the People Substituting factor of attachment have a strong influence on grief following the loss of a pet, which has an impact on depression.

## Discussion

Terror Management Theory (TMT) suggests that religion is a buffer against the awareness of death (Greenberg et al., 1992). The need to avoid the salience of mortality is pervasive and takes multiple forms. One specific effect of this need is the occultation of corporality and animism (Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000). People go to great lengths to deny and distance themselves from their own animal nature or “creatureliness” (Goldenberg et al., 2001) because it reminds them of their own mortality. This fundamental attitude may result in people distancing themselves from animals. On the contrary, some cultures are notorious for their anthropomorphic religions and worldviews (Spencer, 1952; Asquith, 1986), which include the perspective that the animal dimension participates in the same transcendental and universal consciousness as the human dimension.

This perspective does not maintain the belief that animals are merely biological material (objectification) and has been supported by Queer animal theory and ecological perspectives, which promote the cultural awarding of dignity to animals (see Giffney & Hird, 2008). The central assumption of these perspectives is that animals deserve to be respected in the same way as human beings. Anthropomorphism may be considered a particular expression of this idea because it involves recognizing humanlike characteristics, particularly the emotional states perceived to be uniquely human (Leyens et al., 2003), in animals and nonhuman agents. Thus, we can affirm that there are two specific forms of religious buffers against the salience of mortality that is involved in relationships with animals: on one hand, the negation of any similarity between humans and animals; on the other hand, the humanization of animals that grants them human characteristics and an afterlife.

# Uncorrected Proof

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This point of view belongs to one of the interaction forms described by Fiske (2004) in his Relational Models Theory 2.0 (RMT-2.0). The first two configurations of the four elementary forms of relationships are useful in studies on grief (Davis 2011) and the representation of death in relation to pet loss: “Communal Sharing” (CS), in which people treat others as equals, and “Authority Ranking” [AR], which is characterized by asymmetric positions and defined by a linear hierarchy. As Fiske (2004) indicates, CS is an “imagined community” that implies anthropomorphism because people may be motivated by their understanding of what they have in common with beings that are not only or not necessarily human, such as deceased persons, ancestors, spirits, gods, domestic animals, or other social beings. However, even though this symbolic space permeates everyday life through comics and cartoons, Western thought belittles these feelings as infantile attitudes and specifically suggests that animals should be considered mere instruments for humans. On this basis, the AR perspective derives and produces an ideological discrimination between humans and animals that denies any kind of communality and erects barriers to separate, different hierarchical levels of beings.

However, as Fiske (2004) emphasizes, CS and AR may intersect, and it is possible to recognize further differentiations in the area of CS. Blouin (2013) specifically defines the difference between the Humanistic Orientation (HO) and the Protectionist Orientation (PO). The HO is primarily characterized by an intense emotional attachment, and relationships with animals respect “anthropocentric values” and orientations toward nature that reflect human goals. On the contrary, the PO, which is typified by the strongest bond with pets, is closer to an ecological perspective, which involves a high level of concern about animals’ conditions and respect for their natural needs.

The opposite of the PO is the Dominionistic Orientation (DO), which may be inscribed in the area of the AR. The hypothesis of our study was that the absence of a representation of an afterlife might affect pet owners’ grief. With regard to the psychological effects that result from the representation of an animal afterlife (humanization), this research produced interesting results concerning possible depressive outcomes among pet owners in response to pet loss. Despite the low internal reliability of the LAPS factor, which reduces the consistency of the general results, it is possible to confirm the hypothesized model and show that some factors significantly affect owners’ grief, which in turn mediates the effect of these factors on depression.

These dimensions are the ontological representation of Death as Annihilation and considering the pet a substitute attachment figure, which are risk factors for extreme grief responses. In our survey, the representation of Death as Annihilation produced both psychosomatic and cognitive depressive aspects, whereas the correlational analysis and the previous literature suggest that the representation of Death as a Passage results in the opposite effects (Ronconi, Testoni, & Zamperini, 2009; Zamperini, Paoloni, & Testoni, 2015).

To the extent that the substitutive attachment function anthropomorphizes animals (Cromer & Barlow, 2013), the representation of death as absolute annihilation may cause severe grief similar to the loss of a beloved person. Likewise, the correlation analysis produced results that are in line with the literature; specifically, people whose pets are substitute attachment figures may be at risk for extreme grief responses upon the death of their companion animal (Zilcha-Mano et al., 2011). From this perspective, the belief in an afterlife for animals intervenes as a facilitator in the elaboration of pet bereavement (similar to human bereavement) because, as discussed in the literature (Mikulincer & Shaver, 2010), it is linked to attachment strategies that are useful in the management of separation-related thoughts evoked by death experiences.

Our results support the literature that suggests that attitudes toward animal immortality are becoming increasingly significant (Davis, 2011; Fidler, 2004; Lee & Surething, 2013). In fact, we found that more than half of the participants believed in an afterlife for animals. Belief in an afterlife for both humans and animals may be a sign of communal sharing relationships. Similar to the phenomenon of grief caused by the death of a beloved person, this factor may help to promote resilience in coping with loss. It is also confirmed that women are more predisposed to suffering from extreme grief and depression than men are (Gosse & Barnes, 1994; McCutcheon & Fleming, 2001; Planchon & Templer, 1996; Wrobel & Dye, 2003). In contrast to the literature, however, we found a direct rather than inverse correlation with age. Our results did not confirm the findings of McCutcheon and Fleming (2001) and Planchon and Templer (1996), who indicated that older owners are more susceptible to intense grief.

It is possible, however, to emphasize further aspects that typify representations of death and the relationship between attachment and grief. In particular, with regard to the representation of death and the belief in an afterlife, we observed that the more time passes, the more a pet's death is represented as absolute annihilation. Nevertheless, being religious and believing in God facilitates the representation of death as a passage or a change, but it is also associated with feelings of guilt. This discomfort may be interpreted as the effect of the need for significance for animals' death and their afterlife in Western traditional religions. Furthermore, belief in an afterlife for both people and animals was related to a stronger attachment to the pet and a greater grief response to its death, whereas believing in an afterlife for people only was associated with lower attachment and grief.

This particular articulation of discomfort in response to pet loss highlights the presence of a complex scenario that requires further research to explain how attachment and ontological representations of death are intertwined and how they intervene to help a person cope with loss. It is important to investigate these issues, particularly in relation to the increasing tendency to anthropomorphize the human–animal bond and to include animals in the representation of ethics in the management of the boundaries between life and death. Similar to the human dying process, which has lost any natural reference, these boundaries are increasingly controlled by veterinary medical procedures. From this perspective, the issue of euthanasia and its performance should be considered more carefully. In fact, in line with the literature, we found that euthanasia is associated with greater attachment (McCutcheon & Fleming, 2001) and greater grief (Pitcairn & Pitcairn-Hubble, 1982; Quackenbush & Glickman, 1983).

The unexpected death of a pet produced greater anger and guilt, whereas the euthanasia of the pet was associated with greater attachment and grief. Receiving detailed information on the pet's health conditions from the veterinarian reduced both anger and guilt, but it did not prevent the somatization effect of depression. If animals are considered increasingly similar to humans and worthy of our moral thinking (Midgley, 1994; Serpell, 1996), we can expect a growing need to seriously consider the importance of euthanasia-related issues, particularly when strong bonds have formed. Owners who are significantly attached to their pets are likely to pay particular attention to the health condition of the animal and choose euthanasia to reduce the pet's suffering and pain. However, both the anticipatory and post-death grief associated with this choice should be examined further. As is indicated in the literature (Lagoni et al., 1994; Davis et al., 2003), despite a lack of information on the pet's health and euthanasia, which may increase the owner's feelings of anger and guilt, our results suggest that when this information is not managed at the symbolic level, it may be repressed and unconsciously produce depressive outcomes. Therefore, mental health practitioners can provide a valued

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link between veterinarians and pet owners (Lagoni, 2011) by offering psychological support for the symbolic elaboration of the mourning process linked to euthanasia.

Among the limitations of the research, the low internal reliabilities of the LAPS Animal Rights/Welfare factor and the PBQ Anger factor indicates that the use of these dimensions should be viewed with caution and that the interpretations of their relationships should be considered fundamentally speculative. In addition, their low reliability may negatively impact the general results of the model. Certainly some interpretive possibilities allow us to suggest that further research should be conducted to investigate the social constructs of animals among veterinarians and whether these may latently conflict with the constructs of the owners. Indeed, we hypothesize that veterinarians may unconsciously communicate to owners an authority-ranking relationship with animals that involves the objectification of animals as mere biological material. This approach may facilitate negative outcomes if the same social construct of animals is not shared by the pet owner.

Finally, our research suggests that although belief in an afterlife is associated with greater attachment and, therefore, greater grief, this belief does not correlate with depressive outcomes and acts as a humanization factor for the relationship with the pet and its death. Therefore, future studies should determine the reliability of the Italian version of these instruments. The utilization of euthanasia as an independent variable limited the investigation of this factor. Future studies should analyze this dimension using a specific questionnaire.

Furthermore, in future extensions of this research, it will be necessary to balance the number of males and females. In fact, recent studies (Blazina & Kogan, 2016) show that males cope with grief, and particularly with pet grief, differently than females do because their conviction that they should fulfill the requirements of mature masculinity limits their management of the loss. Overall, the generalizability of the results is limited because the average participant in this study was middle-aged, female, married, and educated.

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### Conflicts of Interest

The authors declare that there are no conflicts of interest.

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