

**Pets vs Humans: Who provides more meaningful social support to stressed pet owners?**Kaxrine Xiyu Cai<sup>1</sup>, Hsien-Jin Teoh<sup>2\*</sup><sup>1</sup>Australian College of Applied Professions, and Macquarie University Australia<sup>2</sup>The Prince Charles Hospital, Kallangur Satellite Hospital, The University of Queensland\*Corresponding author: Hsien-Jin Teoh, [h.teoh@uq.edu.au](mailto:h.teoh@uq.edu.au)**ABSTRACT**

**Background:** Mental health issues are prevalent in Australia. Social support has been observed as a protective factor against the effects of negative mental health among the general population. There are a substantial number of pet owners in Australia, and indications that emotional support is provided by pets. Whilst many pet owners report that their pets are a source of emotional support, clinicians question how important are pets, when compared to human companions, in affecting pet owner's mental health.

**Objectives:** This study examined the relationship between social support from humans and pets, and pet owner's mental health.

**Methods:** 112 pet owners completed measures related to mental health symptoms and perceived social support from families, friends, and significant others and emotional support from pets. Data was collected using three validated self-report scales, to assess mental health, perceived social support from humans, and perceived emotional comfort from pets. These were administered via an anonymous online survey over a period of 3 months to an Australian adult sample sourced via social media and veterinary practices. The collected data were analysed via a Pearson correlational analysis using SPSS (Version 27).

**Results:** Whilst the study observed a significant relationship between human social support and pet owner's mental health ( $r = 0.21$ ,  $P < 0.05$ ), social support from pets was not observed to be related with pet owner's general mental health ( $r = 0.02$ ,  $P > 0.05$ ).

**Conclusion:** When patients with mental health problems have pets, health care professionals need to encourage the patients to also source human social support, and not to rely on their pets to be the main source of social support.

**Keywords:** Mental health, Pets, Social support

## 1. Introduction

When it comes to managing mental health issues, it is not uncommon to hear patients talking about their pets providing them with emotional support [1]. There has been an increase in mental health issues amongst Australians, rising from 4.8-8.6 million between 2017 to 2022 [2, 3]. As 69% of Australian households have a pet, there has been a rise in research into emotional support provided by pets and their impact on human mental health [4-6].

Mental health has been conceptualised, and measured, as involving symptoms of depression, anxiety and stress [7]. Social support may be provided in various ways that include offering comfort and positive feedback, assistance, advice and information [8-11]. Social support from families, friends, and significant others have generally been associated with lower levels of depression, anxiety, and stress symptoms [12-14]. Research on the impact that pets have in their pet owner's mental health vary. Some pet owners report that they turn to their pets for unconditional, and nonjudgmental support during times of stress to alleviate loneliness and depression [1, 15]. Conversely, other studies have observed that pet ownership has been associated with a lower level of quality

of life and a higher level of loneliness, anxiety, depression, and stress outcomes compared to non-pet owners [16, 17].

As many people have pets, and many people report that their pets provide support to alleviate the effects of mental health problems. Given the differing opinions about the impact of pets on owner's mental health, an investigation that compares the impact that pets and human companions have on pet owner's mental health is required, given that some patients would cite pets as their source of social support. Therefore, this study examined the relationships between social support from humans and pets, and the pet owner's mental health.

## 2. Methods

### 2.1 Study Area

This study was conducted using an anonymous online survey on an Australian sample, recruited via tertiary websites, and flyers with QR Codes distributed at veterinary clinics. The sample recruitment lasted 3 months.

### 2.2 Study Design

To answer the research questions a cross-sectional online survey was conducted on pet owners which included questions on perceived social support from families,

friends, and significant others, emotional support from pets and mental health.

### 2.3 Sample Size and Sampling

Following this, respondents to the survey were recruited via advertisements placed on social media sites and dog parks and responses to the online survey were collected using Qualtrics [18]. The study received a total of 170 responses, however following missing data analyses, 112 responses were retained for analyses. The sample size was sufficient for the data analyses as G\*Power estimated a minimal sample size of 77 for multiple regression analysis with 3 predictors, a medium effect size of 0.15, and a power level of 0.80 [19].

### 2.4 Data Collection

The study utilized a comprehensive set of measures, including demographic questionnaires and three validated self-report scales, to assess key variables such as mental health, perceived social support from humans, and perceived emotional comfort from pets.

The questionnaires contained several demographic questions (i.e., age, gender, living arrangement, marital status, type of pets, and number of pets) and three self-

report scales for mental health, social support for humans and social support for pets.

**Mental Health:** The Depression Anxiety and Stress Scale (DASS-21) [20] is a 21-item scale that measures depression, anxiety, stress symptoms and overall mental health (i.e., general psychological distress) symptoms. Responses were rated on a 4-point Likert-type scale ranging from did not apply to me at all (0) to applied to me very much (3). Higher scores are indicative of greater symptomatology. The scale's internal reliability for the sub-scales ranged from 0.79-0.89 [21]. Within this sample, the internal reliability ranged from 0.88-0.92.

**Social Support from Humans:** The Multidimensional Scale of Perceived Social Support [22] was used to measure the perceived social support from families, friends, and significant others. The 12-item measure was rated on a 7-point Likert-type scale ranging from "very strongly disagree (1)" to "very strongly agree (7)". Higher scores indicated higher perceived social support. The total scale internal reliability was 0.85 [22]. Within this study's sample, the internal reliability was 0.91.

**Social Support from Pets:** The Comfort from Companion Animals Scale [23] was used to measure the level of emotional

comfort owners perceived from their pets. This scale has been used to assess emotional support from human-animal interactions [23-25]. The 13-item measure is rated on a 4-point Likert-type scale from “1 (strongly disagree) to 4 (strongly agree)”. Higher scores indicate a greater perceived comfort from pets. Examples of questions related to emotional comfort include perceptions that the respondent’s pet “provides companionship”, “is a source of constancy in my life”, “makes me feel safe”, “gives me something to love” and “get comfort from touching my pet”. The scale’s internal reliability was 0.85 [23]. Within this sample, the internal reliability was 0.92.

## 2.5 Data Analysis

To answer the research questions, a series of bivariate Pearson Correlation coefficients were calculated to ascertain the relationship between social support from pets and pet owners, and pet owner mental health using [26] IBM SPSS Statistics (Version 27).

## 3. Results

### Preliminary and Descriptive Analyses

The sample comprised a total of 112 English-speaking adult pet owners ( $n = 77$ , 68.8%

female;  $n = 31$ , 27.7% male). The majority of were between 18-39 years old ( $n = 106$ , 94.7%). Most participants were either single (33.9%), married (27.7%), or in a domestic partnership (25.9%). Amongst pet owners, dogs (72.3%) were the most frequently owned pets, followed by cats (43.8%), fish (8%), birds (8.9%), small mammals (10.7%), and reptiles (6.3%). Pre-analysis, data were cleaned to control for effects of parametric and test specific assumptions. Tests of normality, multi-collinearity and homoscedasticity of residues indicated positive skewed distributions for mental health (i.e., general psychological distress, depression, anxiety, and stress subscale), a normal distribution for negative life events, a slightly negatively skewed distribution for perceived social support from humans, and a negatively skewed distribution for emotional support from pets (Table 1). The data with skewed distributions were kept for analysis, as the current sample size was robust to handle the violations of the normal distribution assumption [27, 28]. There were no multivariate outliers or multicollinearity concerns.

Table 1: Descriptive Statistics for the Study Variables

| Characteristics                      | Mean | SD   | Skewness / Kurtosis |
|--------------------------------------|------|------|---------------------|
| DASS: General psychological distress | 1.85 | 0.57 | 3.97/-0.02          |
| DASS: Depression subscale            | 1.76 | 0.64 | 3.93/0.39           |
| DASS: Anxiety subscale               | 1.67 | 0.62 | 5.14/2.32           |
| DASS: Stress subscale                | 2.11 | 0.62 | 2.69/-0.79          |
| Perceived social support from humans | 5.47 | 1.03 | -2.92/1.05          |
| Emotional support from pets          | 3.55 | 0.44 | -3.60/-0.60         |

## Main Analyses

Correlational analyses between perceived social support from humans, and mental health (i.e., general psychological distress, depression, anxiety, and stress subscale) showed weak to moderate associations ( $r = -0.21 - 0.52$ ) (Table 2). Thus, perceived social support from humans was negatively correlated with general psychological distress, depression, anxiety, and stress symptoms. This suggests that the more participants perceived social support from families, friends, and significant others, and to experience lower levels of psychological

distress including depression, anxiety, and stress symptoms.

Correlations between emotional support from pets and perceived social support from humans showed a positive association ( $r = 0.21$ , 95% CI: 0.02 to 0.39) suggesting that when participants perceived a higher level of emotional support from their pets, they were more likely to perceive a higher level of social support from families, friends, and significant others. There were no associations between emotional support from pets and mental health [i.e., general psychological distress] ( $r = 0.02$ , 95% CI: -0.017 to 0.21).

Table 2: Pearson's Correlations Coefficient for Study Variables

| Characteristics                                  | 1                           | 2                           | 3                           | 4                           | 5                       | 6 |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|---|
| 1. DASS: General psychological distress          | 1                           |                             |                             |                             |                         |   |
| 2. DASS: Depression subscale (95% CI)            | 0.92**<br>(0.85 to 0.99)    | 1                           |                             |                             |                         |   |
| 3. DASS: Anxiety subscale (95% CI)               | 0.92**<br>(0.85 to 0.99)    | 0.78**<br>(0.67 to 0.90)    | 1                           |                             |                         |   |
| 4. DASS: Stress subscale (95% CI)                | 0.92**<br>(0.85 to 0.99)    | 0.76**<br>(0.64 to 0.88)    | 0.77**<br>(0.65 to 0.89)    | 1                           |                         |   |
| 5. Perceived social support from humans (95% CI) | -0.43**<br>(-0.60 to -0.26) | -0.45**<br>(-0.62 to -0.28) | -0.34**<br>(-0.52 to -0.16) | -0.38**<br>(-0.56 to -0.21) | 1                       |   |
| 6. Emotional support from pets (95% CI)          | 0.02<br>(-0.17 to 0.21)     | -0.01<br>(-0.20 to -0.18)   | 0.07<br>(-0.12 to -0.26)    | -0.01<br>(-0.12 to -0.18)   | 0.21*<br>(0.02 to 0.39) | 1 |

\* $P < 0.05$ . \*\* $P < 0.01$ . 1 = DASS general psychological distress; 2 = DASS depression subscale; 3 = DASS anxiety subscale; 4 = DASS stress subscale; 5 = perceived social support from humans; 6 = emotional support from pets.

#### 4. Discussion

This study sought to understand the relationship between social support from pets and humans, and the pet owner's mental health. Whilst social support from humans was observed to be related to pet owner's mental health, social support from pets was not related.

The results indicating that pets social support was not related to pet owner's mental health are contrary to previous research suggesting that emotional support from pets may benefit pet owners' mental health [15, 29]. The results provided evidence indicating that higher levels of perceived social support from humans was associated with lower level of pet owner's mental health symptoms, which is a similar observation to a wide variety of studies [12, 13]. This discrepancy between perceived social support from humans and emotional support from pets on mental health outcomes may be due to the limited capacity of pets to provide diverse forms of social support. Specifically, pet companions may only provide emotional support to their owners, while human companions (i.e., families, friends, and significant others) have the capacity to provide emotional, esteem, informational, or instrumental support [12, 15]. In a qualitative study examining the

impacts of the four types of social support (i.e., emotional, esteem, informational, and infrastructural support) on people living with mental health illnesses, it was found that a diverse range of social support was crucial [30]. Thus, it is plausible that emotional support from pets on their own may not suffice to foster feelings of self-worth and belongingness that can significantly improve mental health.

The study also observed a positive association between perceived social support from humans and emotional support from pets. Thus, when pet owners feel more emotionally supported by their pets, they also feel more supported by their families, friends, and significant others. This is consistent with previous research, which has suggested that pets may complement social support from human companions [31, 32]. Pets can enhance social support from humans by acting as catalysts to increase social interactions within one's neighbourhood. These interactions facilitated by the presence of pets may translate into diverse forms of social support from humans [33]. It is plausible that pets provide emotional support that fosters a sense of comfort for pet owners when engaging with human companions, and

these interactions may, in turn, result in diverse forms of social support.

When investigating the questions of this study, there are several strengths within this study. Firstly, the sample is of an adequate size to carry out the required analyses. In addition to this, the mental health scores of the pet owners were elevated thus allowing for the inclusion of pet owners who are feeling stressed, and would enable testing of the research questions. The sample is also predominantly made up of dog and cat owners, which align with general trend of pet ownership amongst Australians [34]. Finally, the questionnaires used in this study have adequate reliability for collection of data within the areas of interest. The main limitation of this study is its cross-sectional design that suggests that the mechanisms through which social support is related to mental health, is an association rather than causal. Longitudinal studies would be required to explore the causal relationship. Although the study did not find a significant relationship between emotional support from pets and mental health, it is important to continue to understand the mechanism through which pets reportedly provide emotional support. Perhaps, this may be viewed from the perspective of mixed

method studies on companionship, or the mere presence of pets [35, 36]. A longitudinal qualitative and quantitative studies found that human-animal interactions have mental health benefits [37]. Whilst the quantitative data indicated that 10-minute interactions with pets resulted in reduced anxiety, depression, and loneliness, the qualitative data identified perceived human-animal interactions as contributing to behaviour motivation, comfort, distractions from symptoms, and creating a calming effect. Delving into these mechanisms may require qualitative studies that would capture the rich, subjective aspects of human-animal relationships.

The findings of this study may have implications in a clinical setting, particularly for pet owners seeking help with their mental health issues. Health professionals, when working with such individuals, may consider assessing the nature of their social support network. If pet owners perceive their pet as their sole or primary source of support, health professionals may collaborate with them to identify ways to strengthen their connections with other people, including family members, friends, or significant others. Thus, not relying on their pets as sole sources of social support. This could be achieved by increasing

social interactions in the company of their pets. For example, health professionals may encourage pet owners to plan activities involving both their human companions and their pets, such as going for walks or having picnics together. Pets may provide a sense of comfort for their owners and serve as a catalyst for connecting with human companions. Nevertheless, it is important to note that for people dealing with severe depression or those who have negative interactions with members of their social support network, more specialised interventions may be needed.

## 5. Conclusion

In summary, the study adds to the previous body of knowledge about social support theory in the context of pet owners and the role of pets as a source of social support. It emphasises that emotional support from pets may not have as much on impact on pet owners' mental health, as compared with human companions. These findings provide health professionals and researchers working to improve the mental health of pet owners

with additional consideration for how social support is provided.

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## Author contributions

KXC: Conceptualization, data curation, formal analysis, methodology, writing original draft, writing review and editing. HJT: Conceptualization, supervision, writing original draft, writing review and editing.

## Declaration

## Ethics approval and consent to participate

The study received ethical approval from the Australian College of Applied Professions Human Research Ethics Committee (approval number: 834190623).

## Competing interests

The authors declare no competing interests.

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