
Potential benefits of human-animal interaction among nurses pet owners and non-pet owners: A pilot study

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✎ **ABSTRACT.** Lo scopo di questo lavoro è quello di analizzare il rapporto tra benessere psicologico, soddisfazione di vita, strategie di coping e stili di attaccamento ad un animale domestico nel personale infermieristico. 147 infermieri hanno compilato un questionario, 79 dei quali erano proprietari di animali domestici. I risultati di questo studio possono essere utili per comprendere l'impatto che la cura di un animale domestico può avere sulla vita personale e professionale, in particolare sulla percezione della qualità della vita e gestione degli eventi stressanti.

✎ **SUMMARY.** The aim of this work was to analyse the relationship between psychological well-being, life satisfaction, optimism, coping strategies and attachment to a pet in nurses. Data from pet owners were compared with those from non-pet owners working in the same health care facility. A self-reported questionnaire was used. 147 nurses completed the questionnaire, 79 of whom were pet owners. Overall, the results of this study show that the participants perceive a good quality of life, are satisfied with their work and life, and are optimistic about the future. Nurses with and without pets did not differ in perceived quality of life and life satisfaction between pet owners and non-pet owners. However, nurses who did not own a pet tended to use the coping strategy of emotional support more than pet owners. The findings contribute to a better understanding of how nurses who do and do not own a pet assess their quality of life, their satisfaction with life and work, and their coping with stressful events. In addition, the results of this study may be useful in learning first-hand about whether to get, care for, or keep a pet and the impact it may have on personal and professional lives.

Keywords: Health care professional, Pets, Well-being, Attachment

INTRODUCTION

Research on pet owners has shown that these individuals experience a variety of physical, psychological, and social benefits resulting from human-animal interactions (Aydin et al., 2012; Beetz, Uvnäs-Moberg, Julius & Kotrschal, 2012; Polheber & Matchock, 2013; Shiloh, Sorek & Terkel, 2003). At the same time, there are studies that have found either no significant relationship or an inverse relationship (Antonacopoulos & Pychyl, 2010; Wells, 2009; Wisdom, Saedi & Green, 2009). These inconsistent results could be due to a number of methodological differences and potential issues that make comparison difficult. These include sample size, homogeneous samples and vulnerable populations, different variables used to assess the human-animal interaction, and different measures used to assess the same constructs.

Much of the literature focuses on the benefits of human-animal interaction for vulnerable populations, for example, psychiatric patients, hospitalised patients, and the elderly (Berget, Ekeberg & Braastad, 2008; Berget, Ekeberg, Pedersen & Braastad, 2011; Cole, Gawlinski, Steers & Kotlerman, 2007; Colombo, Buono, Smania, Raviola & De Leo, 2006; Friedmann, Thomas, Cook, Tsai & Picot, 2007; Kramer, Friedmann & Bernstein, 2009; Pedersen, Martinsen, Berget & Braastad, 2012; Siegel, 1990, 2011; Villalta-Gil et al., 2009). Selecting samples from subgroups of the population, such as elderly residents of a nursing home, limits the generalizability and comparability of results. However, they provide greater insight into the direct effects of human-animal interaction in specific populations (Buckle, 2015; Friedmann & Gee, 2019; Le Roux, Swart & Swart, 2014). In addition, there are a large number of questionnaires that measure a variety of different variables related to human-animal interaction, as well as a number of different ways to assess them. Anderson (2007) provides a comprehensive collection of different questionnaires that assess a variety of the same and different aspects of human-animal interaction. Some assess attachment, bonding, attitudes, behaviours toward animals, responsibilities toward pets, expectations of pets, and quality of life of pets. This makes it difficult to compare previous literature because different variables have been assessed.

A potential problem with research on pet ownership is that much of the research focuses on pet ownership and does not consider participants' attachment or attitude toward the pet (Chur-Hansen, Peacock & Winefield, 2012). Not all pet owners necessarily have a close bond with their pet. The

relationship can range from a dysfunctional relationship where people neglect or mistreat their pet to a very supportive, caring relationship (Anderson, Lord, Hill & McCune, 2015). Another possible explanation for these conflicting findings is that these benefits are not directly attributable to a specific cause. Benefits may be attributed to the support and comfort a person receives from their pet or therapy animal (Cohen, Gottlieb & Underwood, 2000). Benefits are also attributed to the satisfaction of an innate desire to connect with other living beings (Bjick, 2013; Fine & Beck, 2010). Another explanation could be due to the fact that not all pet owners necessarily have a close relationship with their pet or have a caregiving relationship that implies a decline in quality of life (Anderson et al., 2015). While research on HAIs is increasing, most of the literature focuses on the benefits of animal-assisted interaction (AAI) (Acquadro Maran et al., 2022; Buckle, 2015; Le Roux & Kemp, 2009; Le Roux et al., 2014; Lubbe & Scholtz, 2013; Odendaal, 2000). There is still very little research on pet ownership and attachment in nurses (Black, Winefield & Chur-Hansen, 2011), their relation to life satisfaction and work outcomes (Stallter & Gustin, 2021). Research on veterinary staff, for example, has found that attachment to the pet is associated with lower job satisfaction (Black et al., 2011). However, research conducted with subjects working in the health care sector has shown that "playing with the pet" is one of the most commonly used coping strategies to increase the workplace well-being (Chipas et al., 2012). Research on coping strategies to manage work-related stress points to the benefits of using multiple adaptive strategies that can impact increased perceptions of well-being, thus the caring for pets could be included in these strategies.

Potential benefit for pet ownership

Previous research has found neurological evidence of HAI benefits (Handlin et al., 2011; Miller et al., 2009; Nagasawa, Kikusui, Onaka & Ohta, 2008; Odendaal, 2000; Odendaal & Meintjies, 2003). In these studies, significant increases in pet owners' oxytocin levels were found after interaction with a dog and, in general, interaction with a pet can produce positive changes in other hormones such as cortisol, B-endorphin, prolactin, and dopamine (Handlin et al., 2011). Also, the activity with pets has a positive impact. For example, walking dogs increased physical activity and has been associated with both physical (for example, reductions

in blood pressure, risk of obesity, and so on; Chandler et al., 2017) and mental health (for example, higher life satisfaction and lower anxiety, and depression; Gilmour, 2007). Previous research has found that dog walkers are significantly more likely to achieve recommended activity levels than non-dog walkers and non-dog owners (Brown & Rhodes, 2006; Feng et al., 2014; Ham & Epping, 2006; Thorpe, Simonsick & Brach, 2006). In a sample of older participants, dog owners were 12% more active than non-dog owners (Feng et al., 2014). However, conflicting results were reported by Rijken and Beek (2011), in their investigation pet owners did not differ from non-pet owners in terms of physical health. Moreover, research examining loneliness and attachment to a pet has yielded conflicting results in both control group studies and surveys (Antonacopoulos & Pychy, 2010; Buckle, 2015; Wood, Giles-Corti, Bulsara & Bosch, 2007). In an Australian survey, non-pet owners were two times more likely to report being lonely than pet owners (Wood et al., 2007). In contrast, a Canadian study found no difference in loneliness scores between pet owners and non-pet owners (Antonacopoulos & Pychy, 2010). Loneliness is related with the 'hopelessness' that is the perception of loneliness as a constant state (Taube, Jakobsson, Midlöv & Kristensson., 2016). Aside from the physical and psychological benefits of HAI, pets have been found to be a source of social support (Kikusui, Winslow & Mori, 2006; Risley-Curtiss, 2010). Pets have been found to facilitate social interaction between strangers (Cutt, Giles-Corti, Wood, Knuiman & Burke, 2008; Guéguen & Ciccotti, 2008; Hill, Gaines & Wilson, 2008; Knight & Edwards, 2008; Lee, Shepley & Huang, 2009; Wood et al., 2007). Risley-Curtiss (2010) suggested that pets provide us with social support because of the unconditional love and affection received from them and the needs to care for others.

Pet attachment

Humans are biologically predisposed to seek emotional connections with others who provide emotional and physical support (Bowlby, 1977). These emotional bonds are not limited to human relationships, but are also experienced in human-animal relationships (Beck, 2014). These emotional bonds, also referred to as pet bonds, are characterised by similar qualities to those experienced in human relationships, such as love, affection, support (Field, Orsini, Gavish & Packman, 2009; Noonan, 2008). One possible reason is that

a pet's love is unconditional, loyal, and free of judgement and pretence (McCune et al., 2014). Like children, pets depend on their caregiver to provide them with food, shelter, and mental stimulation. As a result, pet owners tend to assume a similar caregiving role for their pets (Bowlby, 1982; Mikulincer & Shaver, 2007). Pets have been repeatedly found to be considered part of the family (Adrian, Deliramich & Frueh, 2009; Hunt & Padilla, 2006; Kaufman & Kaufman, 2006).

Chur-Hansen, Winefield and Beckwith (2009) found that the relationship between pet attachment and human health benefits (physical and psychological) is bell-shaped rather than linear. According to this hypothesis, pet owners with moderate attachment to their pet would achieve the most health benefits. It is suggested that an overly dependent relationship with a pet may lead to mental health problems. Conflicting results from Smolkovic et al. (Smolkovic, Fajfar & Mlinaric, 2012) and Winefield et al. (Winefield, Black & Le Roux, 2008) shown that adults had a non-significant relationship between attachment to a pet and social support. One possible explanation for these findings is that people who have problems with attachment to other people become more attached to their pets to compensate for the lack of social support (Kurdek, 2009; Smolkovic et al., 2012). Interesting, some studies have found a nonsignificant difference in attachment to pets between the sexes (Herzog, 2007; 2011; Prato-Previde, Fallani & Valsecchi, 2006).

Satisfaction with life and human-animal interaction

Bao and Schreer (2016) found that pet owners scored significantly higher on life satisfaction than non-pet owners. The same study found a non-significant difference in happiness, positive or negative emotions. Results from a large German study showed a positive relationship between attachment to a pet and life satisfaction (Luhmann & Kalitzki, 2016). The researchers suggested that people who lack close human relationships may compensate by having a deep bond with their pet. Moreover, a strong attachment to a pet might lead the person to invest little time in other interpersonal relationships (Luhmann & Kalitzki, 2016). In contrast, a very large Canadian study found that pet ownership was negatively related to life satisfaction (Himsworth & Rock, 2013). Mháistir (2013) collected data from a sample of Irish older adults recruited by a senior citizens' organisation. The

researcher suggested that while the pets may have buffered their owners' well-being, their financial worries negatively impacted their life satisfaction (Mháistir, 2013). Even more, some research suggested that life satisfaction does not differ between pet and non-pet owners (El-Alayli, Lystad, Webb, Hollingsworth & Ciolli, 2006; Ramirez & Hernandez, 2014). For example, in a sample of Mexican adults, a non-significant difference in life satisfaction was found between pet owners and non-pet owners (Ramirez & Hernandez, 2014).

The purpose of this paper was to analyse the relationship between psychological well-being, life satisfaction, optimism, coping strategies, and pet attachment among nurses. Data from pet owners were compared with non-pet owners working in the same health care organization. It is hypothesized that those who have a pet will experience higher well-being and satisfaction scores, less perceived hopelessness and use adaptive coping strategies (Hp_1). Within subjects who have a pet, a comparison will be made between those who engage with the pets' care in the first person, both in terms of satisfaction and attachment and those who do not engage with the pets' care themselves. It is hypothesized that who engage with the pet's care in the first person experienced less life satisfaction and high person substitution attachment (Hp_{2a}) while who don't engage in the first person experienced high life satisfaction and general attachment (Hp_{2b}). About coping strategies, our expectation is to find no difference among who is engaged and who isn't engaged with the pets' care in the first person (Hp_3).

METHOD

Ethical statement and procedure

All ethical guidelines required for conducting research projects with human subjects were followed, including compliance with legal requirements in Italy. This research project was approved by the local ethics committee (prot. N. 14520-14/02/2020) After an initial meeting with the management of a healthcare facility located in North-western Italy, the questionnaire was distributed to 275 healthcare workers there. The cover sheet clearly explained the research objective, the voluntary nature of participation, the anonymity of the data, and the elaboration of the results. Thus, return of the questionnaires signified consent. The data were collected by two research assistants who had been previously trained

by the researchers. Together with the questionnaire, each participant received an information letter and the consent form. It took approximately 20 minutes to complete the questionnaire. The request was to complete the questionnaire within 15 working days and drop it in a special box in the locker room. Respondents participated in the study voluntarily and received no compensation for their participation.

Measures

The Italian short version of the *Psychological General Well Being Index – A* (PGWBI-A) (Testa et al., 2016) was used to assess the perceived quality of life and psychological well-being. The PGWBI-A can be considered one of the first quality of life assessment instruments. To achieve greater acceptability, a short form reduced to six questions (one for each domain) was validated in 2016. The six questions cover the following domain: anxiety, depression, positive well-being, self-control, general health, vitality. An increasing score, ranging from 0 to 30, or higher scores indicate better mental well-being.

The *Brief COPE scale* (Carver, 1997; Conti, 1999) was used to assess the coping strategies. Each strategy corresponds to a couple of questions, proposed in random order; the strategy to which assigned a higher score, from 2 to 8, will be the most frequently adopted. The choice to use this scale lies in the fact that the adoption of strategies adaptive, that is, constructive and functional, or, on the contrary, maladaptive, is considered an indicator of the level of psychological well-being or malaise. The coping strategies proposed by the tool are the following: venting, denial, substance use, behavioural disengagement, active coping, positive reframing, planning, humour, acceptance, emotional support, religion, instrumental support, self-blame.

The *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen & Griffin, 1985) was used to assess the satisfaction for life and for work. The range goes from 10 to 70 (from 5 to 35 for the two items); the degree of satisfaction is directly proportional to the total value obtained.

The *Beck Hopelessness Scale* (BHS; Illiceto & Fino, 2015) was used to assess the level of perceived optimism/pessimism for the future expectations. The scores range from 22 to 44. The score of 22 indicates that the individual is not pessimistic, while 44 corresponds to the highest level of pessimism towards the future.

The *Lexington Attachment to Pet Scale (LAPS)* was used to assess the attachment of owners to their pets. This scale was developed by Johnson, Garrity and Stallones (1992) to assess people's relationship with their pets by asking participants to indicate the extent to which they agree or disagree with statements such as "Quite often I confide in my pet". The scale was composed by three subscales: general attachment (feelings of attachment to own pets), animal rights and welfare (view the pet's role in the house), and people substituting (how central the pet is to their life).

In the last part of the questionnaire socio-demographic data were collected, including information on the pets (type, possible health issue) and their primary care.

Participants

147 nurses fill-out the questionnaire (response rate 53.5%). Most part of them were female (113, 80.1%). On average, participants aged 42.28 years (*range* = 22-64 years, *SD* = 10.98). Most part of them were married (76, 53.9%), 50 (35.5%) were single, 13 (9.1%) were separated or divorced, 2 (1.4%) were widowed. 78 (55.3%) had one or more children (*range* 1-4). They have been working in the health care sector for 18.31 years on average (*range* = 1-41 years, *SD* = 12.70). In a week, they work on average 39.31 hours (*range* = 25-56 hours, *SD* = 3.53).

Statistical analysis

Statistical analyses were performed using the statistical software SPSS, version 28. Descriptive measures (*Means* \pm *SD*) were calculated for all test variables for all groups of participants. *t* test was used to measure the differences between groups. Differences were considered statistically significant if $p < .05$. Correlations were calculated to examine the relationship between different attachment style, perceived quality of life, life and work satisfaction, pessimism/optimism and coping strategies for pet owners.

RESULTS

79 nurses (53.7%) have a pet, which 61 of them take care in first person (77.2%). In 12 cases (15.2%), the pet needed special

care, for example, because it suffered from diseases. The nurse owners of pets aged on average 43.49 years (*SD* = 10.94). Most part of them were married (40, 55.6%), 23 (31.9%) were single, 7 (9.1%) were separated or divorced, 2 (2.8%) were widowed. 45 (62.5%) had one or more children (*range* 1-4). They had on average 19.15 years of working experience (*SD* = 13.02) and working 38.97 hours per week (*SD* = 3.63). Nurse non-owners of pets aged on average 41.01 years (*SD* = 10.96), they had 17.41 years of working experience (*SD* = 12.38) and working 39.68 hours per week (*SD* = 3.42). Most part of them were married (36, 52.2%), 27 (39.1%) were single, 6 (8.6%) were separated or divorced. 33 (47.8%) had one or more children (*range* 1-4) (see Table 1).

About the attachment style, the correlation analysis shown that in pet owner general attachment and welfare and people substituting styles were significantly related with acceptance (respectively, $r = .25$, $p = .035$ and $r = .34$, $p = .003$) and negatively related to religion (respectively, $r = -.23$, $p = .050$ and $r = -.26$, $p = .028$) coping strategies. Animal rights was negatively related with emotional support ($r = -.34$, $p = .004$) coping strategy (see Table 2).

About the attachment style in first person pets' care, the correlation analysis shown that welfare and people substituting style was significantly related with acceptance ($r = .27$, $p = .042$) coping strategy while animal rights were negatively related with emotional support ($r = -.35$, $p = .009$). coping strategy. In not first-person pets' care, general attachment style was negatively related with satisfaction for life ($r = -.53$, $p = .035$). Welfare and people substituting style was significantly related with acceptance ($r = .53$, $p = .037$) and negatively related to instrumental support ($r = -.60$, $p = .014$) coping strategies.

DISCUSSION

The aim of this work was to analyse the relationship between perceived psychological well-being, life satisfaction, optimism, coping strategies and attachment to a pet in nurses. To this end, data from pet owners were compared with those from non-pet owners working in the same healthcare facility. Overall, the results of this study show that participants perceive a good quality of life, are satisfied with their work and life, and are optimistic about the future. It should be noted that the study was conducted before the pandemic, so the results should not be generalised and should be taken with caution.

Table 1 – Perceived quality of life, life and work satisfaction, pessimism/optimism and coping strategies in pet owners and non-owners and attachment style in pet owners (N = 147)

	Pet owner <i>n</i> = 79 <i>M (DS)</i>	Not pet-owner <i>n</i> = 68 <i>M (DS)</i>	<i>t</i>	<i>p</i>
PGWBI-A	9.49 (2.78)	9.06 (2.47)	.972	n.s.
Brief COPE:				
Self-distraction	4.46 (1.44)	4.19 (1.37)	1.136	n.s.
Active coping	6.76 (1.29)	6.42 (1.38)	1.528	n.s.
Denial	3.78 (1.45)	3.61 (1.31)	.727	n.s.
Substance use	2.22 (.61)	2.13 (.48)	.988	n.s.
Emotional support	4.40 (1.38)	4.88 (1.53)	-1.963	.026
Instrumental support	5.22 (1.48)	5.52 (1.30)	-1.272	n.s.
Disengagement	3.11 (1.38)	2.92 (1.09)	.875	n.s.
Venting	5.01 (1.57)	4.90 (1.27)	.478	n.s.
Positive reframing	5.99 (1.40)	5.74 (1.48)	1.108	n.s.
Humour	4.26 (1.49)	4.22 (1.30)	.197	n.s.
Acceptance	6.25 (1.28)	6.14 (1.34)	.477	n.s.
Religion	3.86 (1.87)	4.06 (1.88)	-.623	n.s.
Self-blame	5.90 (1.43)	6.03 (1.21)	-.565	n.s.
SWLS Life	23.51 (6.34)	25.14 (6.40)	-1.523	n.s.
SWLF Work	18.06 (4.75)	18.75 (4.17)	-.926	n.s.
Hopelessness	24.29 (3.80)	24.29 (3.80)	1.361	n.s.
Attachment style:				
General attachment	21.83 (6.44)			
Welfare, people sub.	10.58 (5.47)			
Animal rights	10.50 (1.85)			

Table 2 – Perceived quality of life, life and work satisfaction, pessimism/optimism, coping strategies and attachment style in pet owners engaged and not-engaged in first person in the pets' care (N = 79)

	First person pets' care <i>n</i> = 59 <i>M</i> (<i>DS</i>)	Not first-person pets' care <i>n</i> = 20 <i>M</i> (<i>DS</i>)	<i>t</i>	<i>p</i>
PGWBI-A	10 (2.80)	7.75 (1.81)	3.034	.002
Brief COPE:				
Self-distraction	4.46 (1.50)	4.37 (1.26)	.197	n.s.
Active coping	6.70 (1.32)	6.94 (1.18)	-.644	n.s.
Denial	3.67 (1.50)	4.06 (1.23)	-.964	n.s.
Substance use	2.28 (.67)	2.00 (.00)	1.655	n.s.
Emotional support	4.40 (1.38)	4.43 (1.36)	-.087	.026
Instrumental support	5.19 (1.40)	5.37 (1.75)	-.433	n.s.
Disengagement	3.09 (1.43)	3.19 (1.17)	-.256	n.s.
Venting	4.95 (1.56)	5.25 (1.57)	-.684	n.s.
Positive reframing	5.98 (1.40)	6.06 (1.44)	-.202	n.s.
Humour	4.35 (1.49)	3.88 (1.45)	1.132	n.s.
Acceptance	6.30 (1.16)	6.06 (1.61)	.655	n.s.
Religion	3.98 (1.84)	3.38 (1.93)	1.156	n.s.
Self-blame	5.84 (1.45)	6.00 (1.41)	-.387	n.s.
SWLS Life	23.44 (6.82)	23.81 (4.08)	-.208	n.s.
SWLF Work	17.98 (4.75)	18.50 (4.77)	-.385	n.s.
Hopelessness	24.35 (3.82)	24.12 (3.72)	.210	n.s.
Attachment style:				
General attachment	21.96 (6.26)	21.13 (7.09)	.461	n.s.
Welfare, people sub.	10.63 (5.46)	10.06 (5.67)	.365	n.s.
Animal rights	10.54 (1.77)	10.19 (2.20)	.673	n.s.

The first hypothesis of our work was that pet owners would have higher well-being and satisfaction, lower perceived hopelessness, and a higher propensity to use adaptive coping strategies than non-pet owners. This hypothesis was not confirmed: we found a nonsignificant difference in perceived quality of life and life satisfaction between pet owners and non-pet owners (see Table 1). These results are consistent with those of Le Roux and Wright (2020), Mháistir (2013), El-Alayli et al. (2006), and Ramirez and Hernandez (2014), who also found a nonsignificant difference in life satisfaction between pet owners and non-pet owners. However, these results differ from those of Bao and Schreer (2016), and Luhmann and Kalitzki (2016), who found that pet owners have significantly higher life satisfaction than non-pet owners. As Le Roux and Wright (2020) noted, the positive impact of leisure activities is not necessarily associated with pet care (Kellert, 1993). Other activities, such as gardening or nature walks, could also have a calming effect. Furthermore, consistent with the buffer hypothesis of social support theory, the benefits of pet ownership could account for the lack of other affections.

Interestingly, we found that non-pet owners tended to use the coping strategy of emotional support more than pet owners. Emotional support is a strategy by which a person seeks empathy and understanding from others. For example, the person receives emotional support by telling someone who offers sympathy when they have received bad news. Consistent with social support theory, pets have been found to meet the social needs of people who care for them by acting as friends and providing unconditional love and acceptance (Hill et al., 2008; Nebbe, 2001). Thus, one possible explanation is that pet owners are less likely to need to rely on others in moments of discouragement.

Among pet owners, attachment data indicated that general attachment was the most frequently reported general attachment style. These data are consistent with previous research, see for example Branson and colleagues (Branson, Boss, Cron & Turner, 2017). In addition, both the general attachment style and the welfare and people substituting styles were significantly related to acceptance and negatively related to religious coping strategies. Acceptance means acknowledging that something is the way it is, that it happened, and that it cannot be changed. Using this coping strategy can help prevent severe pain from escalating into suffering. Religion is a coping strategy that includes aspects of faith and spirituality understood as meaning, purpose, and hope (Damiano, Lucchetti & Peres, 2021) and is associated

with a connection to nature, a life force, or god(s). In addition, animal rights were negatively related to emotional support, suggesting that there is less need to share emotions with others and that emotions may be better processed.

Among nurse pet owners, a comparison was made between those who cared for pets in the first person and those who did not care for pets in the first person. The second hypothesis was that those who provide first-person care for the pet will experience lower life satisfaction and high attachment to the surrogate, while those who do not provide first-person care will experience high life satisfaction and overall attachment. Contrary to what we expected, owners who cared for their pet in the first person experienced higher well-being than owners who did not care for their pet in the first person. One possible explanation could be that caring for pets is associated with more happiness and meaning compared to other activities (Kalenkoski & Korankye, 2021). Regarding coping strategies, we expected to find no difference between those who engaged in first-person pet care and those who did not. Contrary to our expectation, the coping strategy of emotional support was more frequently reported by owners who did not engage in first-person care of their pet than by those who engaged in first-person care of their pet. A possible explanation could be the need to feel closer to others, to share emotions, and to receive support to cope with negative feelings at work. Regarding the attachment style, the results showed no difference between the pet owners who cared in the first person and those who did not care in the first person. However, the correlation analysis showed that general attachment style was negatively related to life satisfaction in non-first-person cared pets. In our opinion, this finding is very interesting and could be considered in future research to better understand how pet care might affect life satisfaction and perceived quality of life. The activities associated with caring for a pet are varied, such as cleaning the bedding, playing with the pet, having the pet do activities, taking the pet to the veterinarian. A more detailed examination of the activities that constitute pet care might be useful in understanding the types of activities that - in this working population - might influence perceived well-being. Another finding concerned the style of welfare and people substituting, which was significantly related to acceptance and negatively related to instrumental coping strategies. The use of instrumental support coping strategy is the tendency to rely on others for help in difficult situations. Thus, this could mean that these nurses try to

solve the difficult situation by themselves by accepting the situation as it is.

This study has several limitations. First, this is a cross-sectional study, so the results should not be generalised. The sample consisted of health professionals, a particular occupational group that is at higher risk of stress than other occupational groups (Bennett, Lowe, Matthews, Dourali & Tattersall, 2001; Foster, Roche, Giandinoto, Platania-Phung & Furness, 2021). Second, we did not consider the marital status of animal owners and nonanimal owners. Due to the size of the sample, no in-depth analysis was performed. In further research, marital status could be taken into account, as was intended by Mháistir (2013) and Himsworth and Rock (2013). For example, Himsworth and Rock (2013) found an inverse relationship between pet ownership and life satisfaction, but not among those who were divorced and lived alone. Third, work-related stress was not examined. Future research could examine perceived stress among pet owners and non-pet owners, taking into account the contrasting results of the studies by McConnell and colleagues (McConnell, Brown, Shoda, Stayton & Martin, 2011) and Ramirez and Hernandez (2014), for example. In addition, the study was conducted before the pandemic. As Applebaum and colleagues noted (Applebaum, Tomlinson, Matijczak, McDonald & Zsembik, 2020) pet owners had difficulty meeting the needs of the behavioural pet during the pandemic, which could impact the owners' personal and professional quality (for example, the pet could interrupt work from home). A qualitative study

could be used to examine perceived quality of life, job and life satisfaction, and attachment during the pandemic to gain a deeper understanding of the impact of forced home living among pet owners.

To optimize future implementation of programs and proposals for coping strategies to increase perceived quality of life, further research is needed to assess the individual and organizational factors that influence well-being. From an organizational perspective, facilities that promote activities that have a calming effect could have a positive impact on organizational climate. A review of facilities that have been used successfully in various healthcare settings or other organizations could be helpful in planning opportunities for nurses in their workplace. Future work could also explore the feasibility of implementing animal-assisted therapy programs for staff in facilities that do not currently have such programs for patients, the factors that contribute to the positive impact of the program on aspects of staff well-being, and how to optimize the impact.

Despite its limitations, this pilot study provides implications for professional practice and HRM in healthcare organizations. Indeed, the results contribute to a better understanding of how nurses who do or do not own a pet assess their quality of life, their satisfaction with life and work, and their coping with stressful events. The results of this study may be useful in gaining first-hand knowledge about whether or not to get, care for, or keep a pet and the impact this may have on one's personal and professional life.

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