

Pet ownership in the homeless population: do pets improve mental health status?

A Knowledge Summary by

Kimberly Conway DVM ^{1*}

¹ UC Davis School of Veterinary Medicine, 944 Garrod Dr, Davis, CA 95616

* Corresponding Author (kconway@ucdavis.edu)

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Reviewed by: Andy Morris (BSc[Hons] BVSc CertAVP[GSAS] MRCVS) and Brian Pound (FCIM)

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PICO question

Among homeless individuals, does owning a pet improve their mental health?

Clinical bottom line

Category of research question

Qualitative assessment

The number and type of study designs reviewed

Fifteen (eight qualitative assessments, two cross-sectional quantitative studies, three qualitative/cross-sectional studies, and two scoping/systematic reviews)

Strength of evidence

Moderate

Outcomes reported

Homeless individuals who own pets reported improvement in their mental health status by having fewer symptoms of depression, reduced feelings of loneliness, reduced stress, increased feelings of happiness, and decreased intentions of suicide, all as a result of owning a pet.

However, homeless individuals who own pets may suffer a decrease in mental health due to the loss or anticipated loss of their pet

Conclusion

It is concluded among qualitative and cross-sectional studies that there are clearly multiple benefits to mental health associated with pet ownership among homeless individuals. However, the lack of quantitative, longitudinal, and/or experimental studies in this topic prevents a causative relationship from being established and caution should be exercised when interpreting the results as pet ownership causing an improvement in mental health

[How to apply this evidence in practice](#)

The application of evidence into practice should take into account multiple factors, not limited to: individual clinical expertise, patient's circumstances and owners' values, country, location or clinic where you work, the individual case in front of you, the availability of therapies and resources.

Knowledge Summaries are a resource to help reinforce or inform decision making. They do not override the responsibility or judgement of the practitioner to do what is best for the animal in their care.

Clinical Scenario

You are a small animal veterinarian working at a busy clinic in downtown Sacramento, CA, USA. Your next appointment is a 3 year old female intact Pitbull scheduled for a rabies vaccine. You walk in the room to find a patient who is friendly, has a body condition score (BCS) of 4/9 and a dirty coat, but otherwise apparently healthy. Based on the owner's appearance, you suspect both she and the dog are homeless. The owner only has enough funds for the rabies vaccine, which she needs in order to license her pet with the city to be able to move into a transitional housing unit. As you and your technician* exit the room to get the vaccine, your technician

expresses concern for the welfare of the dog, and is considering calling Animal Control or even offering to help the owner rehome the dog. You consider how important this pet must be to this owner, and want to find some evidence to share with your technician that may change her perspective.

*A veterinary technician is the US equivalent of a veterinary nurse (UK).

The evidence

The 11 qualitative studies all reported are mostly anecdotal and opinion-based evidence regarding the benefits to mental health associated with pet ownership, and nearly all were lacking in sufficient sample size and statistical analysis, and had clear evidence of selection bias. Nevertheless, all of the papers reported near unanimous conclusions supporting the benefits that pets can have on a homeless individual’s mental health. These conclusions were also captured by the two scoping review studies.

The two cross-sectional studies provided stronger evidence as they incorporated more of a quantitative assessment (for example, standardised Center for Epidemiologic Studies – Depression (CES–D) scores or odds ratios). These studies also had more appropriate sample sizes and comparison groups. Thus, the conclusions from these two studies are more scientifically substantiated.

While the content of the studies supports the hypothesis, there is a strong need for more quantitative and longitudinal studies in this topic area.

Summary of the evidence

Yang et al. (2020)	
Population:	Homeless pet owners in Phoenix, AZ.
Sample size:	34 homeless individuals.
Intervention details:	Survey administered to homeless pet owners seeking care at a free pilot veterinary clinic.
Study design:	Qualitative study with Rasch modeling.
Outcome studied:	Human-animal bond (HAB) based on attachment scores from the Lexington Attachment to Pets Scale (LAPS) (Johnson et al., 1992) instrument (a commonly used tool to measure emotional attachment).
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • Homeless individuals have a high attachment to their pets based on the LAPS instrument. • The most important factors related to attachment were ‘companion’, ‘willingness to do anything for their pet’, and ‘happiness from pet’. • No associations between pet ownership and mental health specifically.
Limitations:	<ul style="list-style-type: none"> • Only incorporated one facet of the HAB (owner attachment). • Small sample size.

Cleary et al. (2020)	
Population:	N/A – literature review.
Sample size:	N/A – 13 papers were reviewed.
Intervention details:	N/A – literature review.

Study design:	Systematic/integrative review.
Outcome studied:	Impact of pets in the homeless population.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> All studies reported emotional benefits including but not limited to decreased stress, improved loneliness, and improved mood. Mental health effects reported included reduced symptoms of depression, improved resilience, and reduced thoughts of suicide.
Limitations:	Studies selected for review were qualitative or cross-sectional with convenience sampling (selection bias) and low sample size.

Lem et al. (2016)	
Population:	Homeless youth in Ontario, Canada.
Sample size:	189 homeless individuals (89 pet owners, 100 non-pet owners).
Intervention details:	Survey administration to youths at homeless centres.
Study design:	Cross sectional.
Outcome studied:	<ul style="list-style-type: none"> Variable: Pet ownership vs no pet ownership. Outcome: Depression based on CES-D scores.
Main findings: (relevant to PICO question):	Odds of depression is three times higher in youths who did not own pets compared to those who do own pets.
Limitations:	<ul style="list-style-type: none"> Relatively small sample size. Selection bias of youths who had access to study sites. No causation or temporality between association can be established.

Labrecque & Walsh (2011)	
Population:	Homeless women in shelters in six Canadian cities.
Sample size:	51 homeless individuals.
Intervention details:	Semi-structured interviews.
Study design:	Qualitative (phenomenological approach).
Outcome studied:	Subjective assessment of the impacts of companion animals in homeless women.
Main findings: (relevant to PICO question):	23/51 (45%) of respondents reported psychological benefits of pet ownership including being more relaxed and calm.
Limitations:	<ul style="list-style-type: none"> Selection bias towards homeless women who have access to the shelter. Less representative of pet owners since homeless individuals with pets are less likely to be allowed in shelters. No standardised methods/models to assess outcome being studied.

Rhoades et al. (2015)	
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Population:	Homeless youth in Los Angeles, CA.
Sample size:	337 homeless individuals.
Intervention details:	Survey administration.
Study design:	Cross-sectional.
Outcome studied:	<ul style="list-style-type: none"> • Variable: Pet ownership vs no pet ownership. • Outcome: Depression based on CES-D scores (a clinical tool to measure depressive symptoms in the human population), loneliness based on the short form of the UCLA Loneliness Scale (Hughes et al., 2004). This study also evaluated multiple other outcomes not associated with the PICO question.
Main findings: (relevant to PICO question):	Homeless pet owners had fewer symptoms of depression (CES-D score = 7.8) and loneliness (UCLA Loneliness Scale = 1.8) compared with homeless non-pet owners (CES-D score = 10.2 and UCLA Loneliness Scale = 2.3). There was no association between pet ownership and post-traumatic stress disorder (PTSD) symptoms.
Limitations:	<ul style="list-style-type: none"> • No causality/temporality can be established. • Biased towards youth accessing shelters/drop-in centres. • Selection bias towards those without a pet, since homeless people with pets may not have known they were allowed to come to the shelter.

Cleary et al. (2021)	
Population:	Homeless pet owners in Sydney, Australia.
Sample size:	Two homeless individuals.
Intervention details:	Narrative, qualitative interviews.
Study design:	Qualitative study (narrative).
Outcome studied:	Various impacts of pet ownership including the emotional bond, mental health, and multiple other benefits and challenges among two homeless individuals who had experience owning a pet while homeless.
Main findings: (relevant to PICO question):	The first respondent reported that her pets helped prevent suicide, but that the loss of the pet had detrimental effects to her mental health. The second respondent reported his pet gave him 'positive feelings' that improved his mental health, but that when he was separate from his pet for a short period of time, he was distraught.
Limitations:	Small sample size due to Covid-19 restrictions during data collection.

Kerman et al. (2019)	
Population:	N/A – scoping literature review.
Sample size:	N/A – 18 papers selected for review.
Intervention details:	Scoping literature review of all articles published on the impacts of pet ownership among homeless individuals.

Study design:	A scoping review.
Outcome studied:	Objective review and summary of the literature.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • 6/18 studies evaluated the mental health impacts associated with pet ownership in the homeless population. • Three of these papers concluded that pet ownership in this population is associated with lower symptoms of depression. • One paper evaluated if pet ownership decreased PTSD symptoms but no significant correlation was found. • One paper did not find pet ownership to be a predictor of mental health. • 6/18 studies evaluated potential psychological consequences of losing a pet. • One study reported losing a pet could lead to depression. • One study reported losing a pet could worsen symptoms of loneliness.
Limitations:	None identified.

Howe & Easterbrook (2018)	
Population:	Homeless pet owners in the United Kingdom.
Sample size:	Seven homeless individuals (six of whom owned a pet at the time of the study).
Intervention details:	Semi-structured interviews conducted at homeless day centres.
Study design:	Qualitative.
Outcome studied:	Subjective assessment of the impact pets have had on homeless pet owners.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • Pet ownership improves well-being and increases resilience. • Pet loss can lead to significant distress.
Limitations:	<ul style="list-style-type: none"> • The term 'resilience' appears to be chosen by the authors to encompass the participants' responses that involved companionship when facing loneliness and trauma. • The authors do not mention if there were any metrics to truly assess resilience in the participants.

Lem et al. (2013)	
Population:	Homeless youth who currently or previously owned a pet while homeless in Ottawa and Toronto, Ontario, Canada.
Sample size:	10 homeless individuals.
Intervention details:	Interviews were conducted at homeless day centres.
Study design:	Qualitative.
Outcome studied:	Impacts that pet ownership has in homeless youth.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • No positive effects on mental health were noted in the study.

	<ul style="list-style-type: none"> The study concluded that pet ownership increased stress among pet owners due to having to fund food and veterinary care, as well as the stress associated with the loss of a pet.
Limitations:	<ul style="list-style-type: none"> Respondent bias. Small sample size. Selection bias due to incentivisation.

Kidd & Kidd (1994)	
Population:	Homeless individuals, with or without pets, in San Francisco, CA (27 men with pets, 27 men without pets, 25 women with pets, and 26 women without pets) aged 17–71.
Sample size:	105 homeless individuals.
Intervention details:	Subjects were recruited from soup kitchens, parks, and off the street to complete a questionnaire.
Study design:	Cross sectional/qualitative.
Outcome studied:	Attachment of homeless individuals to their pets, problems and benefits of pet ownership.
Main findings: (relevant to PICO question):	<p>This study did not conclude or report any association of pet ownership and mental health in the homeless population, but rather reported anecdotal pieces supporting other benefits (not PICO related).</p> <p>The authors stated generally that other studies have found that pets contribute to the mental health of their owners and suggest this benefit may be more profound among homeless pet owners, but that further research in the area is needed.</p>
Limitations:	<ul style="list-style-type: none"> Hypotheses focused on comparing the attachment of owners to their pets compared to owners who did not have pets, which holds little clinical or societal impact. The authors did not include the questions they asked to participants. The authors did not report any Institutional Review Board (IRB)/similar organisation approval for the study.

Slatter et al. (2012)	
Population:	Homeless individuals (19 males, seven females) aged 20–60 years, recruited from free food venues and emergency accommodation centres.
Sample size:	26 homeless individuals.
Intervention details:	<ul style="list-style-type: none"> Semi structured interviews were conducted. One questionnaire was used for participants with pets (approximately 25% of all respondents), and a different questionnaire was used for participants without pets. Participants were convenience sampled by approaching every fourth person lined up for food to inquire if they were interested in participating.

	<ul style="list-style-type: none"> Interviews were conducted face to face and lasted approximately 45 minutes each.
Study design:	Qualitative.
Outcome studied:	The importance of pets to homeless individuals, and the effects of homelessness on owning a pet. Responses were categorised and summarised into main themes.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> Respondents reported grief associated with having to give up a pet. Over a quarter of respondents reported improved mental health, such as making them happier, as a result of having a pet.
Limitations:	<ul style="list-style-type: none"> Small sample size. No causation or temporality can be established from study. Lack of applicability to larger population. Authors did not state number of respondents or denominator for all percentages reported.

Rew (2000)	
Population:	Homeless adolescents in central Texas, aged 16–23 (18 males, 14 females).
Sample size:	32 homeless individuals.
Intervention details:	Focus groups (4 group consisting of 6–10 participants each) and individual interviews (n = 10) were conducted via convenience sampling at a community outreach event.
Study design:	Qualitative.
Outcome studied:	Factors associated with coping with loneliness as a homeless youth.
Main findings: (relevant to PICO question):	The study stated ‘multiple’ respondents reported that owning a pet improved feelings of loneliness.
Limitations:	<ul style="list-style-type: none"> No quantitative or hard scientific structure. None of the focus group questions directly asked about pets, but rather, the topics were brought up by one focus group member that were then echoed by other members. Author did not clearly specify topics of discussion in the focus groups.

Brewbaker (2012)	
Population:	Homeless pet owners seeking pet care at a street veterinarian clinic in San Francisco, CA.
Sample size:	12 homeless individuals.
Intervention details:	Semi-structured interviews were conducted to homeless individuals over 18 years old who were lucid, English-speaking, accompanied by a pet, and seeking veterinary services. Participants were purposely recruited in line on a first-come, first-serve basis. Interviews lasted approximately 15 minutes and occurred on site at the clinic.

Study design:	Cross-sectional qualitative assessment.
Outcome studied:	Experience related to being homeless, a homeless pet owner, and access to services.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • ‘Several’ respondents reported that pets decreased their stress and increased their happiness. • One respondent described how her pet helped her recover from depression. • Two respondents expressed their concern for the devastation they will face if/when they lose their pet.
Limitations:	<ul style="list-style-type: none"> • Small sample size. • Respondent and selection bias. • Lack of generalisability to larger population.

Scanlon et al. (2021)	
Population:	Pet owners who were homeless, vulnerably housed, or previously homeless at events providing free veterinary care for homeless pet owners in the UK.
Sample size:	20 homeless individuals.
Intervention details:	Semi-structured interviews were conducted with dog owners who were homeless, vulnerably housed, or previously homeless at the time of the interview. Recruitment occurred at various events that provide accommodations and/or services for homeless pets.
Study design:	Cross-sectional qualitative assessment.
Outcome studied:	The human-animal bond between homeless individuals and their pets and the implications of this bond on owner and pet health/welfare.
Main findings: (relevant to PICO question):	<ul style="list-style-type: none"> • ‘Several’ respondents reported statements consistent with ‘anticipatory grief’ over the thought of losing their pet. • One respondent implied she would have committed suicide without her pet (implied by stating she ‘wouldn’t be here’). • One respondent stated their pet knows when she is anxious and eases her anxiety.
Limitations:	<ul style="list-style-type: none"> • Small sample size. • Lack of generalisability to larger population outside of study population.

Schmitz et al. (2021)	
Population:	LGBTQ+ young adults aged 18–25 experiencing homelessness in Oklahoma.
Sample size:	17 homeless individuals.
Intervention details:	In-depth qualitative interviews lasting approximately 1 hour consisting of 15 open-ended questions were conducted via convenience sampling and snowball sampling at shelters and drop-in centres.

Study design:	Qualitative.
Outcome studied:	The role of pet ownership and view of companion animals on the mental health of LGBTQ+ individuals experiencing homelessness.
Main findings: (relevant to PICO question):	One respondent stated she takes better care of herself and is more mentally 'okay' so that she is able to care for her pets. One respondent stated their suicidal ideations are reduced when he thinks about his pets because he knows he needs to take care of them.
Limitations:	<ul style="list-style-type: none"> • No quantitative or hard scientific structure. • Only 65% of the respondents had pets. • Not inclusive of more marginalised individuals. • Questions may have biased respondents to only report positive effects of pets.

Appraisal, application and reflection

Homelessness is an increasing public health epidemic in the United States, and up to 25% of homeless individuals own pets (Rhoades et al., 2015). By understanding the potential mental health benefits that pets provide to these individuals, there is a potential to increase the amount of scientific information available to the general public, to potentially change negative perceptions associated with pet ownership in the homeless population.

While the conclusions made among the qualitative and qualitative/cross-sectional hybrid studies were near unanimous in their findings, that pets can improve the mental health status of homeless individuals (Yang et al., 2020; Labrecque & Walsh., 2011; Cleary et al., 2020; Howe & Easterbrook, 2018; Lem et al., 2013; Slatter et al., 2012; Kidd & Kidd, 1994; Rew, 2000; Brewbaker, 2012; Cleary et al., 2021; Scanlon et al., 2021; and Schmitz et al., 2021), these results should be interpreted with caution as there are multiple limitations and biases in these studies. Nine out of these 11 studies had small sample sizes ranging from 2–34 subjects, while the Kidd & Kidd (1994) and Labrecque & Walsh (2011) studies had a sample size of 105 and 51, respectively. Given the nature of qualitative studies, which generally do not report any statistical analysis, the small sample size is understandable given the degree of in-depth interviews conducted. However, the biases associated with these studies cannot be ignored; most notably the selection bias. Many of these studies focused solely on pet owners, with targeted questions regarding the effects their pet has had on them. Few studies asked similar questions to non-pet owners, so the generalisability of these results is limited. Additionally, with the exception of Kidd & Kidd (1994), all of these studies selected participants by recruiting at shelters, day clinics, free street veterinary clinics, or similar scenarios. This creates a significant selection bias towards individuals who have access to these facilities, who feel safe and welcome at them, and who knew they could bring their pet. This leaves a potentially large proportion of homeless individuals who are unreachable – whether they were not qualified to access clinics (if guests are required to have a drug test before coming, for example), or perhaps they did not think their pet would be allowed. Thus, the population of people who were already in a position to come to these clinics may already have better circumstances and thus, improved mental health compared to those who are even more marginalised. With all limitations and biases considered, there is still an effect to be noted that those who were included in the study, albeit part of a small sample size or fairly unavoidably biased population, all reported various ways their pets improved their own perception of their mental health.

Unlike the qualitative studies, the two cross-sectional studies provided more quantitative and statistically significant results with a larger sample size and a comparison group. The study performed by Lem et al. (2016) is the only study to perform a quantitative measure of effect (odds ratio) using prevalence to show the odds of depression in pet owners is three times lower compared to non-pet owners. Similarly, Rhoades et al. (2015) was able to perform a chi-square quantitative analysis showing that homeless pet owners' scores on a depression and loneliness scale were significantly lower than non-pet owning homeless individuals. Despite the strength behind these quantitative studies compared to the qualitative studies, these studies were also limited in the

same selection bias that results from only selecting participants who had access to shelter services. Additionally, these cross-sectional studies can only conclude there is an association between pet owners and depression, without any means of determining causality. As such, it is possible that individuals who are in a better mental health state are more likely to be a pet owner.

Based on the literature described above, it is evident there is a clear need for more quantitative and longitudinal studies in this area. However, the feasibility of performing a cohort study in this population would be very challenging. Many individuals experiencing homelessness would be likely lost to follow-up, or potentially become temporarily housed which would complicate their role in the study. Additionally, the selective bias in all of these studies indicates a need to access a proportion of the homeless population that does not have access to shelters, but attempts to reach this population may be complicated by an increased chance of encountering individuals whose ability to consent to participate may be influenced by other factors. Additionally, as Schmitz et al. (2021) pointed out, some questions may be framed to encourage a positive response regarding pet ownership, leading respondents to only report the positive mental effects associated with pet ownership.

Overall, there is a clear need to continue research in this area, as homelessness continues to increase nationwide. While the evidence does support the conclusion that there is an increase in the mental health status associated with pet ownership in this population, many individuals reported grief and stress associated with the loss of a pet. Future efforts should attempt to address these potential negative impacts to mental health as well. Thus, further research should be focused on the potential decrease in mental health associated with pet loss that many of these studies highlighted, and the long-term consequences associated with that loss.

Methodology Section

Search Strategy	
Databases searched and dates covered:	CAB Abstracts accessed via the CAB Direct platform (1973–2021) PubMed accessed via the NCBI platform (1920-August 2021 week 34) Scopus accessed via the Elsevier platform (1994–2021) Google scholar (select articles hand-picked via specific search)
Search terms:	CAB Abstracts: ((dog* or pet* or cats*) AND (homeless* or "homeless people") AND (benefit* or emotion* or mental* or depress*)) PubMed: (Pet or "pet owner") and homeless* Scopus: ALL("pet owner" AND homeless*) AND (benefit* OR emotion* OR depress* OR mental) Google scholar: Hand-picked three relevant articles found through references of other included articles – searched directly by author and title
Dates searches performed:	9 Aug 2021

Exclusion / Inclusion Criteria	
Exclusion:	Not in English, did not jointly include homeless pet owners and/or did not evaluate any aspect of mental health.
Inclusion:	In English, jointly evaluated homeless pet owners and directly evaluated any factor relating to mental health.

Search Outcome					
Database	Number of results	Excluded – Did not jointly evaluate mental health and pet ownership	Excluded – Duplicate/already included from previous search	Excluded – Purely narrative with minimal to no outcomes evaluated	Total relevant papers
CAB Abstracts	28	25	0	0	3
PubMed	10	9	0	0	1
Scopus	100	86	4	1	8
Google Scholar (select articles)	3	0	0	0	3
Total relevant papers when duplicates removed					4

CONFLICT OF INTEREST

The author, Dr. Kimberly Conway, has co-led efforts to establish a new veterinary clinic offering free veterinary services for pet owners experiencing homelessness in Davis, CA (Davis Pet Advocacy and Wellness Clinic).

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