

Services and Interventions for People who are Homeless with Companion Animals (Pets): A Systematic Review Protocol

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ABSTRACT

Background: Many people who are homeless own a companion animal (a ‘pet’). Pet ownership has positive impacts on health and wellbeing. However, for people who are homeless, pet ownership also creates multiple challenges and may be a barrier to exiting homelessness. This systematic review will identify the types, and outcomes, of services and interventions to support people who are homeless with pets.

Methods/Design: This review will be conducted according to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines. Searches will be undertaken on five databases. Combinations of search terms and subject headings or index terms will be used. Citation chaining and citation tracking will also be undertaken. Literature will be screened for relevance in a two-step process. Each study will be quality assessed using an evidence-based tool relevant to its methods. Relevant data will be extracted and synthesised using a meta-analytic, or narrative, approach.

Discussion: This review will address an identified gap in the knowledge about the types, and outcomes, of services/interventions for people who are homeless with pets. The results may increase recognition about the importance of protecting and promoting the relationship between people who are homeless and their pets, and inform future work.

Keywords: homeless, pets, companion animals, dogs, cats, services, interventions

1. Background

1.1 Homelessness

In Australia, a person is considered to be ‘homeless’ if they lack access to “suitable accommodation alternatives”; this includes people who are unsheltered, as well as those staying in households other than their own, in overcrowded or substandard housing, and in emergency shelters (Australian Bureau of Statistics, 2018b). In Australia, approximately 116,000 people –

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equivalent to 1 in every 200 – are homeless (Australian Bureau of Statistics, 2016). This is a similar rate to Britain, where around 320,000 people – also 1 in every 200 – are homeless (Shelter, 2020). In both regions, the rate of homelessness is increasing (Australian Bureau of Statistics, 2018a; Shelter, 2020).

1.2 Pet ownership in people who are homeless

There is uncertainty about the proportion of homeless people who own a companion animal (pet). Research in the US has returned findings ranging from 5.5% (Cronley, Strand, Patterson, & Gwaltney, 2009) to 47.1% (Lem, Coe, Haley, Stone, & O'Grady, 2016). There has been no similar research in Australia; however, 8.0% of people who sought information about homelessness services from the Infoxchange website 'Ask Izzy' in 2018 reported they had a pet (Australian Institute of Health and Welfare, 2019).

Pet ownership has a range of positive impacts on people who are homeless. Many homeless people identify their pet as a source of companionship, protection and comfort (Howe & Easterbrook, 2018; Irvine, 2013; Lem, Coe, Haley, Stone, & O'Grady, 2013; Rhoades, Winetrobe, & Rice, 2015; Thompson et al., 2016). A pet may improve a homeless person's behavioural regulation, motivation, resilience, responsibility, self-care, socialisation and sense of purpose (Howe & Easterbrook, 2018; Irvine, 2013; Labrecque & Walsh, 2011; Lem et al., 2013; Slatter, Lloyd, & King, 2012). A pet may decrease a homeless person's loneliness, risk of depression and suicidality (Howe & Easterbrook, 2018; Irvine, 2013; Lem et al., 2016; Rew, 2000; Rhoades et al., 2015).

However, for people who are homeless, pet ownership can also result in challenges. Many homeless people refuse or are refused housing because of their pet (Howe & Easterbrook, 2018; Irvine, 2013; Lem et al., 2013; Rhoades et al., 2015; Slatter et al., 2012). A pet may limit a homeless person's access to job services, employment, medical care and public transport (Howe & Easterbrook, 2018; Lem et al., 2013; Rhoades et al., 2015; Slatter et al., 2012; Taylor, Williams, & Gray, 2004). A pet may also increase a homeless person's psychological vulnerability (Howe & Easterbrook, 2018; Lem et al., 2013; Rhoades et al., 2015; Slatter et al., 2012; Thompson et al., 2016).

There are two recent literature reviews which consider pet ownership in people who are homeless (Cleary et al., 2020; Kerman, Gran-Ruaz, & Lem, 2019). Both reviews identify the importance of organisations providing services and interventions which meet the specific, complex needs of this population (Cleary et al., 2020; Kerman et al., 2019). Both acknowledge there is insufficient knowledge on and, in Australia, a lack of practice focus in relation to, the topic (Cleary et al., 2020; Kerman et al., 2019). However, neither review examines in detail services/interventions for people who are homeless with pets (rather, they focus on the benefits and challenges of pet ownership in this population).

1.3 Aim of the review

The aim of this proposed review is to address the above gaps. The review will achieve this by: (1) identifying, and (2) evaluating the outcomes of, services/interventions for people who are homeless with pets, as reported in the research literature.

1.4 Review question

This review will answer the questions: (1) what services and interventions exist for, and (2) what is the impact or effect of these on, people who are homeless with a pet?

2. Methods/Design

2.1 Study design

This study will involve a systematic review of the existing literature. Preliminary scoping searches have been undertaken to identify the types of literature likely to be available, suitable databases and effective search terms, to inform this protocol. The protocol has been reported using the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) guidelines (Shamseer et al., 2015) (Additional File #1).

2.2 Participants, intervention design and focus, and outcomes of interest

Eligibility criteria for this review were developed using the PICO framework (population, intervention, comparator, outcome). This is recommended by the Cochrane Collaboration as a model for developing a relevant, well-defined review question (Higgins et al., 2019). The application of the framework to the topic is as follows:

- Population: people (1) who are homeless OR at risk of homelessness, according to the definition cited in the introduction (Australian Bureau of Statistics, 2018b), AND (2) who are accompanied by ≥ 1 pet(s)
- Intervention: any service or intervention, implemented or planned, to: (1) prevent homelessness in people with a pet, AND/OR (2) provide support to people who are homeless with a pet, AND/OR (3) assist people to exit homelessness with a pet
- Comparator: standard services or interventions for people who are homeless
- Outcome: (1) the service/intervention type, AND (2) its impact or effect

Qualitative, quantitative and mixed-methods studies will be considered for inclusion. Literature will be considered if it relates to Australia, OR to a similar international context (i.e. New Zealand, Western Europe [including the UK], North America [including the US]). Only literature published in English, in full-text and in a peer-reviewed journal will be considered. Literature which is *not* primarily focused on services and/or interventions *will still* be considered. Literature will be limited to that published 2010 to 2020 inclusive (10 years' duration). Literature on unaccompanied homeless animals (stray/shelter animals), which is not of direct relevance to the review topic, will be excluded.

2.3 Search strategy

Similar to the previous reviews on pet ownership and homelessness (Cleary et al., 2020; Kerman et al., 2019), the searches will use two groups of keywords: (1) those related to 'homelessness', and (2) those related to 'pets'. Index terms and subject headings will be used on databases where available. Sample search strategies are provided in Additional File #2. The keywords will be batched and placed in parentheses and combined using the AND/OR Boolean

operators. Truncation will be used. Where possible, databases will be instructed to search article titles, abstracts *and* full text.

2.4 Information sources

Systematic searches will be undertaken on electronic databases. From the 82 databases tested in the scoping searches, the following were selected for use in the final searches: CINAHL Complete (via Ebscohost), Embase, MEDLINE (via Ebscohost), PsycInfo (via Ovid), Scopus and Web of Science (via Clarivate Analytics). Reference lists of each piece of literature selected for inclusion will also be manually searched. Citation tracking, where it is available on a database, will also be used.

2.5 Data collection

The results of each search will be exported into the current version of Endnote. Duplicate items will be identified and removed using EndNote's 'find duplicate' function. The remaining literature will be screened progressively against the eligibility criteria: (1) for all items: reading of the title and the abstract, then (2) for items which pass Step 1: reading of the full text. Each stage will be carried out by one researcher, and checked by a second researcher; if necessary, concurrence will be achieved through discussion or by involving a third researcher. The inclusion/exclusion process will be recorded in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) chart (Moher, Liberati, Tetzlaff, & Altman, 2009).

2.6 Data extraction

Data will be extracted using a standard, electronic data extraction table. Data extraction will be carried out by one researcher, and checked by a second researcher; if necessary, concurrence will be achieved through discussion or by involving a third researcher. The data extracted will include:

- The type of study – including the author(s), the date of publication, the purpose/aim, the design/methods, the duration, the country/ies and the characteristics of the participants and their pets
- The type of service/intervention – including its date of establishment, its aim/focus, its key activity(ies), its provider(s), its target population(s), its size/reach [i.e. the number of homeless people, pets, employees, volunteers and partners involved], its frequency/length, its geographical location(s), its setting(s) and its resource/funding requirements
- The outcomes of the service/intervention – including physical health outcomes for the homeless person, psychological health outcomes for the homeless person, any outcomes for the pet(s), and the perceptions and experiences of the service's/intervention's key stakeholders (i.e. the homeless pet owner, the provider(s), the funder(s), the workers/volunteers, the community)

2.7 Quality assessment

Literature selected for inclusion will be evaluated using an evidence-based tool:

- For systematic reviews: the revised Assessing the Methodological Quality of Systematic Reviews (AMSTAR 2) tool (Shea et al., 2017)
- For randomised-controlled trials: the revised Cochrane Risk-of-Bias Tool for Randomised Controlled Trials (RoB 2) (Sterne et al., 2019)
- For cohort studies: the Risk of Bias in Non-Randomised Studies of Interventions (ROBINS-1) tool (Cochrane Methods, ND)
- For cross-sectional studies: the Appraisal Tool or Cross-Sectional Studies (AXIS) (Downes, Brennan, Williams, & Dean, 2016)
- For qualitative studies: the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Qualitative Research (Joanna Briggs Institute [JBI]s, 2019)

2.8 Data synthesis

As this review is expected to retrieve studies which use diverse methods, a narrative synthesis will be undertaken. Narrative syntheses involve describing and summarising the main features of the literature, and also critically investigating the similarities, differences, strengths and weaknesses in it (Lisy & Porritt, 2016). If possible, a meta-analysis will also be performed to evaluate the overall impacts or effects of the services and interventions identified.

2.9 Ethics

Human research ethics approval is not required for this systematic review.

3. Discussion

It must be acknowledged that the previous reviews on pet ownership in people who are homeless (Cleary et al., 2020; Kerman et al., 2019), and the scoping searches undertaken to prepare for this review, identified no high-grade studies about services/interventions for people who are homeless with pets. This includes no systematic reviews or randomised-controlled trials, which produce the highest level of evidence for decision-making (National Health and Medical Research Council, 2009). This may result in difficulties in evaluating the true impacts or effects of services/interventions identified. There is also expected to be a considerable lack of consistency across the studies.

Nevertheless, this systematic review will address an identified gap in the current knowledge about the types, and outcomes, of services/interventions for people who are homeless with pets. The results will inform future research on the topic, including the design, implementation and evaluation of evidence-based services and interventions for people who are homeless with pets. The results may also lead to an increased recognition among homelessness service providers, and also policy makers, about the importance of protecting and promoting the relationship between people who are homeless and their pet(s).

Declarations

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Competing Interests: The authors declare they have no competing interests.

Authors' Contributions: LKM developed the research topic/question, conducted the scoping searches, designed the search strategy and drafted the manuscript. MJD, AM and NH assisted with the development of the topic/question and the design of the search strategy, edited the manuscript and approved the final manuscript. LKM is the guarantor of this work.

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Additional File #1

PRISMA-P (Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols) Checklist (Shamseer et al., 2015)

| Section and topic | Item No | Checklist item | Location in submission |
|-----------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| ADMINISTRATIVE INFORMATION | | | |
| Title: | | | |
| Identification | 1a | Identify the report as a protocol of a systematic review | Title |
| Update | 1b | If the protocol is for an update of a previous systematic review, identify as such | N/A |
| Registration | 2 | If registered, provide the name of the registry (such as PROSPERO) and registration number | N/A |
| Authors: | | | |
| Contact | 3a | Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author | Authors and Affiliations |
| Contributions | 3b | Describe contributions of protocol authors and identify the guarantor of the review | Authors' Contributions |
| Amendments | 4 | If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments | N/A |
| Support: | | | |
| Sources | 5a | Indicate sources of financial or other support for the review | Funding Statement |
| Sponsor | 5b | Provide name for the review funder and/or sponsor | |
| Role of sponsor or funder | 5c | Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol | N/A |
| INTRODUCTION | | | |
| Rationale | 6 | Describe the rationale for the review in the context of what is already known | Sections, 1.1, 1.2, 1.3 |
| Objectives | 7 | Provide an explicit statement of the question(s) the review will address with reference to | Section 1.4 |

participants, interventions, comparators, and outcomes (PICO)

METHODS

| | | | |
|------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Eligibility criteria | 8 | Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review | Section 2.2 |
| Information sources | 9 | Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage | Section 2.4 |
| Search strategy | 10 | Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated | Section 2.3, Additional File #1 |
| Study records: | | | |
| Data management | 11a | Describe the mechanism(s) that will be used to manage records and data throughout the review | Section 2.5 |
| Selection process | 11b | State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis) | Section 2.5 |
| Data collection process | 11c | Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators | Section 2.6 |
| Data items | 12 | List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications | Section 2.6 |
| Outcomes and prioritization | 13 | List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale | Section 2.6 |
| Risk of bias in individual studies | 14 | Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis | Section 2.7 |
| Data synthesis | 15a | Describe criteria under which study data will be quantitatively synthesised | Section 2.8 |
| | 15b | If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2 , Kendall's τ) | |

| | | | |
|-----------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------|-------------|
| | 15c | Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression) | |
| | 15d | If quantitative synthesis is not appropriate, describe the type of summary planned | |
| Meta-bias(es) | 16 | Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies) | N/A |
| Confidence in cumulative evidence | 17 | Describe how the strength of the body of evidence will be assessed (such as GRADE) | Section 2.7 |

Additional File #2

Groups of keywords:

Search #1: homeless* OR unsheltered OR unhoused OR roofless OR houseless OR "rough sleep*" OR "rough-sleep*" OR "sleep* rough" OR "liv* rough" OR "no fixed address" OR "no fixed abode" OR hostel* OR "boarding hous*" OR "boarding-hous*" OR "couch surf*" OR "couch-surf*" OR "sofa surf*" OR "sofa-surf*" OR "unstabl* hous*" OR "vulnerabl* hous*" OR squatt* OR panhandl*

Search #2: pet OR pets OR dog* OR cat OR cats OR animal*

Sample search strategies to be included in an additional file:

CINAHL Complete with subject headings: (MH "homeless persons" OR MH "homelessness" OR Search #1) AND (MH "pets" OR MH "dogs" OR MH "cats" OR MH "animals" OR Search #2)

Embase with index terms: ('homeless person'/exp OR Search #1) AND ('dog'/exp OR 'domestic cat'/exp OR 'domestic animal'/exp OR Search #2)

MEDLINE (via EBSCOhost) with subject headings: [("homeless persons"[Mesh] OR "homeless youth"[Mesh]) OR Search #1] AND [("pets"[Mesh]) OR Search #2]

PsycInfo (via Ovid) with subject headings: [(exp Homeless/) OR Search #1] AND [(exp Pets/) OR (exp Dogs/) OR (exp Cats/) OR Search #2]

Scopus: (Search #1) AND (Search #2)

Web of Science: (Search #1) AND (Search #2)

Search terms including the words 'street', 'shelter' and 'refuge' were eliminated, as these returned a large number of irrelevant results about unaccompanied homeless animals (i.e. stray/shelter animals). Search terms including the words 'tramp', 'vagrant', 'vagabond', 'hobo', 'drifter', 'down and out', 'runaway', 'indigent' and 'itinerant' were also excluded: although these terms have been used in other recent systematic reviews on the topic of homelessness and services/interventions for homelessness, the authors considered them outdated and discriminatory, and moreover they did not return any relevant results in the scoping searches.