The effectiveness of peer support interventions for community-dwelling adults with chronic non-cancer pain: a systematic review protocol

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Review question/objective
The objective is to identify the effectiveness of peer support interventions in community-dwelling adults with chronic non-cancer pain. More specifically, the objectives are to identify:

The effectiveness of peer support interventions in function, pain, quality of life, self-efficacy and health service utilization for adults with chronic non-cancer pain dwelling in the community, compared to those receiving usual care or other self-management interventions.

The specific review question is therefore:

- Is peer support more effective than usual care or other self-management interventions in reducing pain and health service utilization, and enhancing function, self-efficacy and quality of life in community-dwelling older adults with chronic non-cancer pain?

Background
Peer support is increasingly being investigated as a strategy to support the self-management of chronic conditions such as diabetes, heart disease, brain injury, cancer and venous leg ulcers. This is due in part to the beneficial effect that social support is known to have on health, and is in response to the growing need for services that support chronic condition self-management.

Peer support as its simplest can be defined as "the giving of assistance and encouragement by an individual considered equal". However, peer support is complex and takes many varied forms; therefore a more comprehensive definition is "the provision of emotional, appraisal and informational assistance by a created social network member who possesses experiential knowledge...".
support interventions are delivered in many forms, including phone calls, email support, home visits and group meetings. Moreover, peer support can be a lone intervention or, more commonly, it can form part of a complex intervention, components of which may be delivered by a healthcare professional.8

Peers are lay people who receive a moderate amount of training in order to deliver an intervention to people with whom they have shared experiences.2 It is suggested that this shared knowledge that health professionals do not possess is key to creating the assistance that people need to manage their condition.1 The amount of training peers have differentiates them from "paraprofessionals" who have received a substantial amount of training and have less mutual identification with the people they are supporting.8

Chronic pain is defined as "continuous, long-term pain of more than 12 weeks or after the time that healing would have been thought to have occurred in pain after trauma or surgery".1 Chronic pain is a major public health problem which affects physical and psychological health as well as social and economic well-being. It is estimated to affect approximately half the UK population.11-12 Due to the multidimensional nature of chronic pain, in which several aspects of health can be affected, multiple outcomes are measured in clinical trials, with current recommendations being the measurement of pain, global improvement, physical functioning and emotional functioning.13 There are many management options for people with chronic pain;14 however due to the chronic nature of the problem self-management is an inevitable part of living with chronic pain.

Self-management interventions do exist for people with chronic pain15 and are aimed at enhancing an individual's ability to live with their chronic condition. In addition to the chronic pain outcomes described above, self-management studies commonly measure health-related quality of life, self-efficacy, self-management knowledge and skills, and health behaviours including physician visits.16-17

Several barriers to continued self-management have been reported, including lack of support from family and friends,16 time constraints, fear of pain, and lack of a self-management plan to follow.19-20 Failure to adequately self-manage chronic pain can adversely affect a person's quality of life, and lead to increased physical discomfort and psychosocial problems, and consequently increased health service utilization. Therefore, any intervention that can help a person to self-manage their chronic condition is important to explore.

Peer support may help to overcome some of the common barriers to the self-management of chronic pain and has been the topic of research in recent years.20-22 Several systematic reviews on peer support have been published in relation to breastfeeding, diabetes, mental health conditions, cancer and HIV. On the topic of chronic non-cancer pain, only two systematic reviews were identified from a detailed search. Parry and Watt-Watson2 reviewed six studies on peer support for people with heart disease, where chronic pain can be an issue. They reported some positive effects on outcomes, including improved self-efficacy and activity levels, and reduced pain and emergency room visits. Bender at al23 reviewed 17 studies on internet-based pain management; this included two studies that evaluated online peer support programs. They reported similar findings to Parry and Watt-Watson2 with improvements in self-efficacy, activity levels and health distress, and reductions in pain intensity. These systematic reviews provide initial evidence of positive effects of peer support in chronic pain. However, chronic pain is prevalent in many other conditions in addition to heart disease, and peer support is delivered in several formats in addition to the internet. To date there has been no systematic review conducted on peer support for community-dwelling adults with chronic non-cancer pain. This review will

doi: 10.11124/jbisrir-2013-476
therefore add to the literature on peer support by assessing the effectiveness of peer support interventions in adults with chronic non-cancer pain.

**Keywords**

Chronic Disease; Chronic Pain; Peer Support; Self-management; Systematic Review

**Inclusion criteria**

**Types of participants**

Since chronic pain affects adults of all ages there will be no upper limit set; we will include participants aged 18 or over.

Chronic pain in children is often managed differently than in adults, with specific guidelines,\(^1\) therefore participants under 18 are outwith the scope of this review.

Cancer pain is also considered outwith the scope of this review due to its specific nature and management\(^2\) which often differs from non-cancer related causes of chronic pain.

Adults who are hospitalized or living in residential care will also be excluded from this review. Peer support interventions in these settings are likely to differ greatly from those designed for community dwelling adults; the focus of this review is on interventions designed for community-dwelling adults.

**Types of intervention(s)/phenomena of interest**

The review will consider studies that evaluate any peer support intervention or any intervention that includes a defined element of peer support. Peer support interventions can be aimed at individuals or groups, therefore both will be included in this review.

Interventions will include support groups or clubs, email discussion groups, telephone calls, home visits, and any other intervention that can be considered to be peer support. Peers will have knowledge of chronic pain. They may be self-selected or selected by health professionals, and will have received a moderate amount of training to deliver an intervention, in keeping with the definition presented above.\(^2\) People with no training are considered natural lay helpers and are excluded from this review. People who have undergone extensive training are considered paraprofessionals and are likewise excluded from this review. In cases where it is not possible to determine whether the support was provided by a natural lay helper, peer or paraprofessional, studies will be included in order to minimize the risk of omitting relevant data.

**Types of comparator**

This review will consider studies that have compared peer support interventions to other self-management interventions that are not delivered by peers. These will include one-on-one or group interventions delivered by paraprofessionals or by health professionals. This review will also consider studies that have compared peer support to usual care. Since there is no one agreed definition of usual care for long term management of adults with chronic pain, any study that provides a description of usual care as their comparator will be included. There may also be studies in which the
self-management intervention is the same in the experimental and comparison group, the only difference being the addition of a peer support element to the experimental group; these studies will also be considered.

**Types of outcomes**

This review will consider studies that include the following quantitative measures: function, pain, quality of life, self-efficacy and health service utilization. This is in keeping with recommendations for outcome measurement in chronic pain and self-management research,\(^{13,16-17}\) therefore these measures should be available for consideration.

Measures of function may be specific to the region of chronic pain, eg Roland Morris Low Back Pain Disability Questionnaire and Oswestry Low Back Pain Disability Questionnaire, or more general measures, eg Pain Disability Index. In addition to these measures of physical function, measures of emotional function will also be considered, eg scales that measure depression, anxiety and loneliness.

Any measure of pain will be included, eg Visual Analogue Scale and Multidimensional Pain Inventory.

Any quality of life measure will be included eg SF-36, Euroqol.

Any measure of self-efficacy will be included, eg self-care of chronic pain and self-efficacy questionnaires. In addition, where self-management knowledge and skills have been measured these will likewise be considered (eg Health Education Impact Questionnaire)

Any measure of health service utilization will be considered, such as emergency room and physician visits. Economic evaluation is however outwith the scope of this review.

Where possible, outcomes measured with similar scales will be pooled together.

**Types of studies**

This review will consider any randomized controlled trials (RCTs); in the absence of RCTs other research designs such as non-randomized controlled trials and before and after studies will be considered for inclusion in a narrative summary to enable the identification of current best evidence regarding peer-support interventions for community-dwelling adults with chronic pain. Qualitative studies will be excluded as this is a quantitative review investigating effectiveness of interventions. The meaning or experiences of peer support are outwith the scope of this review.

**Search strategy**

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilized in each component of this review. An initial limited search of MEDLINE and CINAHL will be undertaken followed by an analysis of the text words contained in the title and abstract, and of the index terms used to describe the articles. A second search using all identified keywords and index terms will then be undertaken across all included databases. Thirdly, the reference list of all identified reports and articles will be searched for additional studies.

The databases to be searched include:
The search for unpublished studies will include:
- Dissertation abstracts
- Networked Digital Library of Theses and Dissertations
- Conference proceedings
- Centre for Reviews and Dissertations.

Initial keywords to be used will be:
- Peer support, peer group, peer*, social support, social network, support, advis*, counsel*, lay support, self help group, pain, chronic disease, pain, intractable

Peer support is a relatively new concept within research literature, with many of the first key papers being published in the late 1990s and 2000s. However, it is possible that peer support interventions or interventions containing an element of peer support have been investigated without being defined as peer support. For this reason, and for the reason that initial scoping of the literature is suggestive of a relatively small number of papers that will fulfil the inclusion criteria, all available years will be searched for each database.

Only studies published in the English language will be considered, since translation services are not available to the authors.

**Assessment of methodological quality**

Quantitative papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardised critical appraisal instruments from the Joanna Briggs Institute Meta Analysis for Statistics Assessment and Review Instrument (JBI-MAStARI).*

*Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

**Data collection**

Quantitative data will be extracted from papers included in the review using the standardised data extraction tool from JBI-MAStARI.*

*The data extracted will include specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

Authors of primary studies will be contacted where necessary to clarify any unclear data or provide missing data.
Data synthesis

Quantitative papers will, where possible, be pooled in statistical meta-analysis using JBI-MAStARI. All results will be subject to double data entry. For experimental studies, effect sizes expressed as Odds ratio (for categorical data) and weighted mean differences (for continuous data) and their 95% confidence intervals will be calculated for analysis. Heterogeneity will be assessed using the standard Chi-square. For observational studies, effect sizes expressed as relative risk (cohort studies) and odds ratio (case control studies) for categorical data and weighted mean differences (continuous data) and their 95% confidence intervals will be calculated for analysis. A random effects model will be used and heterogeneity will be assessed using the standard Chi-square. Where statistical pooling is not possible findings will be presented in narrative form including tables and figures to aid in data presentation where appropriate. Findings from descriptive studies will, where possible, be synthesised and presented in a tabular summary with the aid of narrative and figures.

Conflicts of interest

None

Acknowledgements

None
References


Appendix I: Appraisal instruments

MAStARI appraisal instrument

JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer ___________________________ Date ___________________________

Author ___________________________ Year ______ Record Number ________

1. Was the assignment to treatment groups truly random? Yes ☐ No ☐ Unclear ☐ Not Applicable ☐
2. Were participants blinded to treatment allocation? ☐ ☐ ☐ ☐
3. Was allocation to treatment groups concealed from the allocator? ☐ ☐ ☐ ☐
4. Were the outcomes of people who withdrew described and included in the analysis? ☐ ☐ ☐ ☐
5. Were those assessing outcomes blind to the treatment allocation? ☐ ☐ ☐ ☐
6. Were the control and treatment groups comparable at entry? ☐ ☐ ☐ ☐
7. Were groups treated identically other than for the named interventions? ☐ ☐ ☐ ☐
8. Were outcomes measured in the same way for all groups? ☐ ☐ ☐ ☐
9. Were outcomes measured in a reliable way? ☐ ☐ ☐ ☐
10. Was appropriate statistical analysis used? ☐ ☐ ☐ ☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info. ☐

Comments (Including reason for exclusion)
________________________________________________________________________
________________________________________________________________________
### JBI Critical Appraisal Checklist for Descriptive / Case Series

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<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
<th>Not Applicable</th>
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<tbody>
<tr>
<td>1. Was study based on a random or pseudo-random sample?</td>
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<td>2. Were the criteria for inclusion in the sample clearly defined?</td>
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<td>3. Were confounding factors identified and strategies to deal with them stated?</td>
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<td>4. Were outcomes assessed using objective criteria?</td>
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<td>5. If comparisons are being made, was there sufficient descriptions of the groups?</td>
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<td>6. Was follow up carried out over a sufficient time period?</td>
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<td>7. Were the outcomes of people who withdrew described and included in the analysis?</td>
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<td>8. Were outcomes measured in a reliable way?</td>
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<td>9. Was appropriate statistical analysis used?</td>
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Overall appraisal: Include [ ] Exclude [ ] Seek further info [ ]

Comments (Including reason for exclusion)

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*doi: 10.11124/jbrisrir-2013-476*
JBI Critical Appraisal Checklist for Comparable Cohort/Case Control

Reviewer ___________________________ Date ___________________________

Author ___________________________ Year __________ Record Number ________

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<th>Unclear</th>
<th>Not Applicable</th>
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<td>1. Is sample representative of patients in the population as a whole?</td>
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<td>2. Are the patients at a similar point in the course of their condition/illness?</td>
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<td>3. Has bias been minimised in relation to selection of cases and of controls?</td>
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<td>4. Are confounding factors identified and strategies to deal with them stated?</td>
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Overall appraisal: Include ☐ Exclude ☐ Seek further info. ☐

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Appendix II: Data extraction instruments

MAStARI data extraction instrument

**JBI Data Extraction Form for Experimental / Observational Studies**

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<td>Year</td>
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<td>Journal</td>
<td>Record Number</td>
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**Study Method**

- [ ] RCT
- [ ] Quasi-RCT
- [ ] Longitudinal
- [ ] Retrospective
- [ ] Observational
- [ ] Other

**Participants**

Setting

Population

**Sample size**

Group A  

Group B  

**Interventions**

Intervention A

Intervention B

Authors Conclusions:

Reviewers Conclusions:
### Study results

#### Dichotomous data

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<th>Outcome</th>
<th>Intervention (1) number / total number</th>
<th>Intervention (2) number / total number</th>
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#### Continuous data

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<th>Outcome</th>
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<th>Intervention (2) number / total number</th>
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