

## A systematic review on the prevalence of physical activity in informal / unpaid carers worldwide

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### Citation

Jitka Vseteckova, Joanna Horne, Lee Smith, Mike Trott, Nichola Kentzer. A systematic review on the prevalence of physical activity in informal / unpaid carers worldwide. PROSPERO 2020 CRD42020184204 Available from:

[https://www.crd.york.ac.uk/prospERO/display\\_record.php?ID=CRD42020184204](https://www.crd.york.ac.uk/prospERO/display_record.php?ID=CRD42020184204)

### Review question

What is the prevalence of physical activity in unpaid / informal carers worldwide?

### Searches

The search will include both quantitative and qualitative studies. There will be no restrictions on study design or date. Language will be limited to English only. The search strategy will be created by an expert in systematic review searching, in collaboration with the authors. A draft PubMed search is shown in the table below. Once this strategy is finalised, it will be adapted to the syntax and subject headings of the other databases.

Draft PubMed search:

Key words:

('Carer' OR 'caregiver' OR 'family member' OR 'informal carer') AND ('physical activity')

Syntax:

(carer[Title/Abstract] OR caregiver[Title/Abstract] OR family member[Title/Abstract] OR informal carer[Title/Abstract]) AND (physical activity[Title/Abstract])

The following electronic databases will be searched:

1. PubMed
2. SPORTDiscus
3. PsycINFO
4. CINAHL

Additionally, grey literature will be searched in OpenGrey, Google and Google Scholar. The search term "physical activity of carers" will be used to identify grey literature because they were identified as the most relevant terms in the exploratory and database searches. In addition, reference lists of all relevant studies, reviews and reports will be searched.

### Types of study to be included

Articles and reports related to the topic of physical activity of carers will be identified through searches using electronic databases. The purpose of the current systematic review is to synthesize all relevant available knowledge. To provide a comprehensive overview of this research topic, all existing literature will be included, e.g. primary research studies, systematic reviews, meta-analyses, letters, guidelines, websites etc. The search will be limited to literature written in English and based on carers worldwide, excluding the UK as this is focus of another review (PROSPERO 2020 CRD42020162032). No date restrictions will be applied.

### Condition or domain being studied

This review will focus on informal (unpaid carers). The New Policy Institute states that “Informal carers provide care on an unpaid basis, often to family members... Formal care, in contrast, is provided in return for payment”. However, although frequently used, there are objections to the term ‘informal carers’ as “the caring service provided by ‘informal’ carers is formal in everything but the receipt of pay, and many carers feel that they have had little choice in taking on their role” (p. 1) and so the term ‘unpaid carer’ is often used instead. This review will utilise both the terms ‘informal’ and ‘unpaid’ carer and will include anyone “who looks after a family member, partner or friend who needs help because of their illness, frailty, disability, a mental health problem or an addiction and cannot cope without their support. The care they give is unpaid”.

### Participants/population

Participants

Eligible participants include:

- i) Carers for individuals suffering from any condition requiring care, we will exclude parenthood and exclude bereaved carers
- ii) Carers must not be caring for the individual as part of their professional vocation i.e. they will be unpaid family members or friends
- iii) Carers can be from any age group (including ageing carers of 65+, working age carers aged 25-65, and young carers <25)
- iv) Carers must be based outside of the UK

### Intervention(s), exposure(s)

Interventions

Levels of physical activity - all physical activity will be included

### Comparator(s)/control

None

### Main outcome(s)

The primary outcomes of interest are levels of physical activity in unpaid / informal carers for individuals with any condition requiring care. To be included in the review, records will be required to report at least one of the following outcome measures:

1. Carers' level of physical activity (either self-report or objective)
2. Carers' desired level of physical activity

Physical activity has been shown to provide clear health benefits including reduced risk of cardiovascular disease, certain cancers, stress and depression, and improved mental / cognitive health, wellbeing and sleep (Reiner et al., 2013; Warburton et al., 2006). Therefore, knowing the barriers and facilitators to physical activity for carers allows researchers to develop targeted interventions to improve the mental and physical wellbeing of this specific population. Furthermore, physical activity per se is now recognised as a health outcome by major funding councils and government organisations.

### \* Measures of effect

Not applicable

### Additional outcome(s)

The primary outcomes of interest relate to the levels and types of physical activity being achieved by unpaid carers outside of the UK. It is expected that outcomes will be diverse and context-specific, therefore it is not possible to produce an exhaustive list at the outset. However, examples of primary outcomes may include:

- Measure of time (e.g. minutes / hours) spent on physical activity per time period (e.g. day / week) – either self-reported or objectively measured
- Percentage of carers reporting that they achieve their own desired level of physical activity
- Types of physical activity that carers report undertaking

Secondary outcomes relate to the level of physical activity desired by carers worldwide, outside of the UK. Again, these are expected to be context-specific, but secondary outcomes may include:

- Amount of time (e.g. minutes / hours) that carers would like to spend on physical activity per time period (e.g. day / week)
- Types of physical activity that carers would like to partake in

\* **Measures of effect**

Not applicable

**Data extraction (selection and coding)**

We plan to extract data on the participants, interventions, comparators, and outcomes. In addition to that the extraction sheet will include authors, year of study/report, aim/purpose, type of paper (e.g. journal article, annual evaluation report, etc), geographical area, study population (e.g. age of carers and condition of individuals being cared for), sample size, study design, and key findings that relate to the systematic review question. Two reviewers will independently extract data using a structured data extraction form. Disagreements between review authors will be resolved by discussion or a third author.

At least two reviewers will independently extract data from each included study and insert this into the Excel spreadsheet. Disagreements between the reviewers will be resolved by discussion, or by a third reviewer. Study authors will be contacted to resolve any uncertainties.

**Risk of bias (quality) assessment**

Two reviewers will independently assess the risk of bias using the Cochrane risk of bias tool, which includes the following domains: random sequence generation, allocation concealment, blinding of outcome assessors, completeness of outcome data, and selective outcome reporting. We also plan to assess the following additional sources of bias: baseline imbalance and inappropriate administration of an intervention as recommended by the Cochrane Handbook for Systematic Reviews of Interventions. Studies will be judged at high risk of bias if there was a high risk of bias for 1 or more key domains and at unclear risk of bias if they had an unclear risk of bias for at least 2 domains. Authors of papers will be contacted if information is missing.

**Strategy for data synthesis**

Findings from included studies will be synthesized narratively. The 'Guidance on the Conduct of Narrative Synthesis in Systematic Reviews' will be used to advise the narrative synthesis. First, a preliminary synthesis will be conducted to develop an initial description of the findings of included records and to organize them so that patterns across records can be identified. In a second step, thematic analysis will be used to analyse the findings. The following five steps of thematic analysis will be followed adopting a recursive process:

- a) Familiarization with the extracted data
- b) Generation of initial codes
- c) Searching for themes
- d) Reviewing themes
- e) Defining and naming themes

Depending on the findings available, the reviewers will aim to provide a flow chart mapping the physical activity of carers. This review will highlight the current and desired levels of physical activity of carers, as well as the need for more high-quality research in this field. The information presented in this review may be considered, in the future, by primary care providers and funding bodies when planning future support for this growing population of carers.

Meta-analysis will be conducted if data is found to be sufficiently homogeneous. We will decide if it is appropriate to pool our measures of effect by assessing if the included studies are similar enough (in terms of their population, intervention characteristics, and reported outcomes) to draw meaningful conclusions.

### Analysis of subgroups or subsets

Not applicable

### Contact details for further information

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### Organisational affiliation of the review

The Open University

### Review team members and their organisational affiliations

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### Type and method of review

Narrative synthesis, Systematic review

### Anticipated or actual start date

01 April 2020

### Anticipated completion date

31 December 2021

### Funding sources/sponsors

Not applicable

### Conflicts of interest

None known

### Language

English

### Country

England

### Stage of review

Review Ongoing

### Subject index terms status

Subject indexing assigned by CRD

### Subject index terms

Caregivers; Exercise; Humans; Prevalence; Social Support

### Date of registration in PROSPERO

27 May 2020

Date of first submission

04 May 2020

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

Versions

27 May 2020

PROSPERO

This information has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. The registrant confirms that the information supplied for this submission is accurate and complete. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.