The prevalence and incidence of mental health conditions in healthcare workers during and after a pandemic: systematic review.

James E Hill, Catherine Harris, Danielle Christian, Paul Boland, Alison J Doherty, Valerio Benedetto, Ana Porroche-Escudero, Kath Abba, Clarissa Giebel, Andrew Clegg

Citation

James E Hill, Catherine Harris, Danielle Christian, Paul Boland, Alison J Doherty, Valerio Benedetto, Ana Porroche-Escudero, Kath Abba, Clarissa Giebel, Andrew Clegg. The prevalence and incidence of mental health conditions in healthcare workers during and after a pandemic: systematic review.. PROSPERO 2020 CRD42020181947 Available from:
https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020181947

Review question

What is the estimated prevalence and incidence rates of mental health conditions in healthcare workers during and after a pandemic outbreak?

Searches

We will search the following electronic bibliographic databases: MEDLINE, Embase, The Cochrane Library (Cochrane Database of Systematic Reviews) and PsycINFO using the terms identified by the review team (outlined in the search strategy). Additional snowball sampling of all included studies will be undertaken.

Search strategy

https://www.crd.york.ac.uk/PROSPEROFILES/181947_STRATEGY_20200423.pdf

Types of study to be included

• Cohort study

• Cross-sectional studies

• Case-control study

Condition or domain being studied

Pre or post pandemic: "an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people" eg. SARS, Covid-19, Ebola, MERS-CoV etc. (Port 2014, P.179).

Participants/population

Health workers e.g. nurses, doctors, allied health professionals, GPs, other primary care workers, social workers, pharmacists, midwives, health visitors, mental health workers, psychiatrists, surgeons, paramedics.

Intervention(s), exposure(s)

The focus of the systematic review is to examine prevalence and incidence rates of mental health conditions? of healthcare workers who experienced a pandemic outbreak.

Comparator(s)/control

There is no specific control population

Main outcome(s)

Prevalence of psychological conditions or symptoms during a pandemic.

Prevalence of psychological conditions or symptoms after a pandemic.

* Measures of effect

Percentage (%), prevalence odds ratio (POR), prevalence ratio (PR):

Additional outcome(s)

Incidence of psychological conditions or symptoms during a pandemic.

Incidence of psychological conditions or symptoms after a pandemic.

* Measures of effect

Person-years

Data extraction (selection and coding)

Using the predefined inclusion/exclusion criteria four reviewers in groups of two will independently screen title and abstract. In the event of disagreement, the two reviewers will be unmasked and discuss the disagreement. If consensus cannot be made a third reviewer will be used for arbitration.

Full paper screening will be carried out by a single reviewer and verified by a second. Data extraction will be undertaken using a pre-piloted data extraction form by one reviewer and verified by a second. Any disagreements that occur will be resolved through discuss, with a third reviewer used for arbitration, where necessary. Data items for data extraction will be; Pandemic, country, city, staff type, mean age, proportion of females, clinical setting, study type, control group (where applicable), point of observation, duration of observation, assessment tool.

Public advisers and healthcare staff / healthcare service commissioners will be invited to review and comment on drafts of the report to inform presentation, interpretation and practical application of the results.

Risk of bias (quality) assessment

One reviewer will assess risk of bias for individual studies using the Hoy quality assessment checklist for prevalence studies. In the event of disagreement, the two reviewers will discuss the disagreement. If consensus cannot be reached, a third reviewer will be used for arbitration. As per the Hoy checklist, included studies will be assessed against nine criteria based on the quality of the methods. The risk of bias assessment will be used to give a summary assessment of overall quality.

Strategy for data synthesis

The heterogeneity (difference) of pooled prevalence estimates collected from the studies will be assessed using the I^2 statistic (Der Simonian-Laird). Results will be pooled using random effects methods where statistical heterogeneity is moderate or high ($I^2 > 50\%$). To pool prevalence figures the jamovi software will be used using Project R Metafor package.

Analysis of subgroups or subsets

We will undertake a set of subgroup analyses on the pandemic period (pre-and post), age, country income, country, and clinical setting. If number of studies are greater than 10 for specific prevalence outcomes, then a meta-regression will be undertaken looking at the pandemic period (pre-and post), age, country income, country, and clinical setting. A descriptive assessment will be undertaken of possible statistically significant moderators/confounding factors reported in individual studies around specific disease/symptoms.

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Organisational affiliation of the review

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Type and method of review
Meta-analysis, Systematic review

Anticipated or actual start date
01 April 2020

Anticipated completion date
31 May 2020

Funding sources/sponsors
• University of Central Lancashire: www.uclan.ac.uk

• NIHR Applied Research Collaboration North West Coast (https://arc-nwc.nihr.ac.uk)

Conflicts of interest

Language
English

Country
England

Stage of review
Review Ongoing

Subject index terms status
Subject indexing assigned by CRD

Subject index terms
Health Personnel; Humans; Incidence; Influenza, Human; Mental Health; Pandemics; Prevalence

Date of registration in PROSPERO
24 April 2020

Date of first submission
23 April 2020

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
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

24 April 2020