Citation

Tracy Epton, Lucie Byrne-Davis, Jo Hart, Angel Chater, John Drury, Gillian Shorter, Atiya Kamal. What interventions are effective for promoting the performance of physical distancing behaviours during pandemics/epidemics of infectious diseases (spread via aerosols or droplets)?. PROSPERO 2021 CRD42021230821 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42021230821

Review question

Are interventions for promoting performance of physical distancing behaviours during a pandemic effective?

What are the most effective components (e.g., behaviour change techniques; modes of delivery) of the interventions?

Who are the interventions most effective for?

In what circumstances do these interventions work best (e.g., phase of pandemic; other restrictions e.g., lockdown; infection rate; case fatality ratio)?

Searches

The following databases will be searched:
PubMed
PsycINFO

Web of Science

https://psyarxiv.com/discover

https://www.medrxiv.org/

https://osf.io/search/

There will be no restrictions on date

The included studies must be in English

Search filters for:

behaviours (physical distance / social distance / shared equipment / social contact)

Intervention (e.g., trial)

context (covid-19 / pandemic / epidemic)

Example search strategy

(physical-distance OR social-distance OR physically-distanced OR socially-distanced OR physical-distancing OR social-distancing OR physical-proximity OR social-proximity OR social-contact OR physical-contact)

AND (intervention OR trial OR experiment) AND (pandemic OR epidemic OR Covid OR coronavirus OR SARS OR MERS OR H1N1 OR ebola OR influenza OR swine flu)

Types of study to be included
Inclusions: randomised controlled trials; pre-post studies; non randomised controlled trials; natural experiments

Exclusions: cohort studies without a comparison group of a measure of pre-intervention behaviour

Condition or domain being studied
Pandemics, epidemics

Participants/population
Inclusion: All human participants - adults and children

Exclusion: non human participants or computational modelling studies

Intervention(s), exposure(s)
Inclusion: Interventions designed to promote the performance of physical distancing behaviour (i.e., those that focus on distancing when people are co-located in the same physical space e.g., keepign 1-2m apart)

Exclusion: Interventions that do not aim to promote the performance of physical distancing behaviour or foucs on distancing by keeping people apart (e.g., self isolation, quarantine, working from home)

Comparator(s)/control
Inclusions: any comparator including pre-intervention behaviour; an alternative intervention; a control group; measurement only group

Exclusions: studies that do not have a comparison group or do not measure pre-intervention behaviour for comparison

Context
Inclusions: any setting where an intervention to promote the performance of physical distancing to stop the spread of pandemics / epidemics of infectious diseases (spread via aerosols or droplets) has been used

Exclusions: none

Main outcome(s)
Performance of physical distancing behaviour (e.g., observational measures of number of people distancing vs not distancing; self reported frequency or quality of distancing behaviour)

Measures of effect
Mean difference between intervention and comparator and mean difference between pre and post intervention

Additional outcome(s)
Predictors of behaviour: e.g.,

Self-efficacy to physically distance

intentions to physically distance

Willingness to physically distance

Attitudes to physical distancing

Norms regarding physical distancing

Outcomes of behaviour: e.g.,

Number of infections

Mortality data

Measures of effect

Mean difference between intervention and comparator and mean difference between pre and post intervention

Data extraction (selection and coding)

Selection process:

Once any duplicates have been removed, the titles and abstracts of the studies retrieved during the searches will be screened against the inclusion/exclusion criteria. Following this, the full-texts of the studies identified as being potentially eligible from the initial title and abstract screening stage will be screened.

Reliability of selection process:

At least two reviewers will independently screen all titles and abstracts, and, in addition, at least 20% of the titles and abstracts, and 20% of the full-texts will be screened by a second reviewer.

The abstracts and full-texts will be randomly selected using a random generator

Any disagreements will be resolved through discussion and, if an agreement cannot be reached, a third researcher will moderate.

Data extraction:

A standardised data extraction tool to extract data relating to characteristics of the included studies. This will include details of the sample (e.g., mean age; percentage females, % of each ethnicity), details of the intervention (e.g., theory-based, behaviour change techniques, how delivered, intensity, duration), study details (e.g., study design, date of data collection, country of data collection, quality assessment) results/findings (e.g., data to calculate effect sizes).

The data extraction form will be piloted on at least two of the included studies to ensure that all information relevant to the present review is captured and that the data extraction is consistent.

Risk of bias (quality) assessment

The methodological quality of the included studies will be assessed using the Mixed Methods Appraisal Tool (MMAT) – http://mixedmethodsappraisaltoolpublic.pbworks.com.

Strategy for data synthesis

A meta analysis will be conducted - We will use Cohen’s d to estimate the effect size for the analyses, with means, standard deviations and the sample size. We will calculate d for between participants (for the social comparison group vs the control group) and within participants (for intervention groups in controlled designs and in pre and post intervention study designs) effect sizes. In the case where these statistics are not available, we will use the F value, t value, $?^2$ value and the probability value to estimate the effect size. If the moderation variables are qualitative, we will re-code them quantitatively.

A random effects model will be used with Q and I squared used to assess heterogeneity

A narrative description of studies will also be included

Analysis of subgroups or subsets

Moderation analyses will be conducted on subgroups (e.g. type of sample).

For categorical variables a meta analysis will be conducted on each subgroup (e.g., general population vs. clinical sample) and a Q statistic will be calculated to determine if these are significantly different.

For continuous variables (e.g., age) meta regression will be used.

Contact details for further information

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Organisational affiliation of the review

University of Manchester

Review team members and their organisational affiliations

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Type and method of review

Intervention, Meta-analysis, Narrative synthesis, Systematic review

Anticipated or actual start date

18 January 2021

Anticipated completion date

28 February 2021

Funding sources/sponsors

None

Conflicts of interest

Language

English

Country

England

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Aerosols; Communicable Diseases; Humans; Pandemics; Physical Distancing

Date of registration in PROSPERO

28 January 2021

Date of first submission

23 January 2021

Stage of review at time of this submission

The review has not started

Stage	Started	Completed
Preliminary searches	No	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

28 January 2021