

Psychological Effects of Quarantine and Isolation: A Protocol for a Systematic Review and Meta-Analysis

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1. Title of the systematic review and meta-analysis:

Psychological Effects of Quarantine and Isolation: A Systematic Review and Meta-Analysis

2. Start date:

30/03/2020

3. Planned date of completion:

30/04/2020

4. Stage of review at time of this online publishing.

Preliminary searches:	completed
Piloting of the study selection process:	completed
Formal screening of search results against eligibility criteria:	started
Data extraction:	not started
Risk of bias quality assessment:	not started
Data analysis:	not started

5. Contact address and organisational affiliation of the review:

Lasse Brandt (lasse.brandt@charite.de) and Jonathan Henssler (jonathan.henssler@charite.de)

Department of Psychiatry and Psychotherapy, Campus Mitte, Charité University Berlin, Charitéplatz 1, 10117 Berlin, Germany

Organisation web address: <https://psychiatrie-psychotherapie.charite.de/en/>

6. Review team members and their organisational affiliation.

Dr Jonathan Henssler. Charité University Berlin
Prof Dr Dr Andreas Heinz. Charité University Berlin
Dr Lasse Brandt. Charité University Berlin

7. Funding sources or sponsors.

None

8. Conflicts of interest.

None

9. Primary review question.

What are the psychological effects of quarantine and isolation in populations under infection control-associated quarantine or isolation (e.g. due to COVID-19 pandemic) compared to non-quarantined and non-isolated populations?

10. Search:

We will search PubMed, PsycINFO, and Embase databases for relevant studies published until 01.04.2020. No language restrictions will be applied.

11. Healthcare Domain:

All aspects integral to mental health, including psychological and behavioral conditions and wellbeing. Consistent with the WHO definition of mental health, this includes mental disorders diagnosed through standardized and established diagnostic criteria (e.g. ICD or DSM) alongside broader determinants such as emotional aspects (e.g. anger or irritability) and behavioral aspects (e.g. violence).

12. Population.

The target population is participants under infection control-associated quarantine or isolation (e.g. quarantine or isolation due to COVID-19 pandemic).

13. Interventions and exposures:

We will investigate the effect of infection control-associated quarantine or isolation (i.e. primary intervention/exposure). We will include quarantine or isolation in private homes or hospitals. Isolation that is not infection control-associated (e.g. isolation during imprisonment) will be excluded. Infection control here refers to precautions and interventions aimed at preventing or controlling the spread of infections among individuals and communities.

14. Controls:

Quarantined or isolated participants will be compared to non-quarantined or non-isolated participants. Non-controlled studies will be included and analyzed separately.

15. Included types of studies:

We will include studies providing quantitative information on our outcome parameters and exclude studies providing only qualitative data.

16. Main outcomes.

Our main outcome parameters will be 1. symptoms of depression 2. symptoms of anxiety, and 3. symptoms of stress-related disorders, measured in standardized mean difference (SMD) between quarantined/isolated groups and non-quarantined/non-isolated groups. As outcome parameters vary among studies, we will combine different assessment instruments by calculating SMD and SE (standard error) from, for example, means or Odds Ratios (OR), depending on the parameters of outcome reported.

For uncontrolled studies, we will calculate the weighted mean of the proportion of individuals regarding the outcome parameter.

17. Additional outcomes.

Where available, we will include additional psychological outcome parameters such as behavioral aspects (e.g. violence).

We will calculate risk ratios (RR) for the main outcomes including those studies that report the number of patients for dichotomous outcomes.

18. Risk of bias quality assessment.

Risk of bias and methodological rigor of each study will be assessed independently by two authors. Studies will be classified as holding low or unknown/high risk of bias according to the Newcastle-Ottawa Scale. Discrepancies will be resolved by consensus with additional review authors.

19. Data synthesis.

We will perform a quantitative meta-analysis using Comprehensive Meta-Analysis (Version 3). Depending on heterogeneity among included studies, we will pool effect sizes for the same outcome from different studies using fixed-effect or random-effects models (as appropriate) for the outcome parameters with the method proposed by DerSimonian & Laird

for pooling of the obtained effect sizes between the studies. Statistical heterogeneity between studies will be assessed using I²-statistic. Publication bias and possible underrepresentation of specific subsets of studies will be assessed via funnel plots and Egger's test.

20. Subgroup analysis:

Subgroup analyses will take into account effect sizes according to setting (i.e. quarantine, isolation long-term, isolation short-term).

Sensitivity analyses will take into account studies of different methodological rigor.

Studies among psychiatric populations will be analyzed separately.

21. Type and method of review.

Systematic review and Meta-analysis

22. Language.

English

23. Country.

Germany

24. Dissemination plans.

We intend to publish the review on completion

25. Current review status.

The review is ongoing