

The Impact of Childhood Psychological Maltreatment on Mental Health Outcomes in Adulthood: A Protocol for a Systematic Review and Meta-Analysis

Zhuoni Xiao (✉ Z.Xiao-10@sms.ed.ac.uk)

University of Edinburgh <https://orcid.org/0000-0002-9715-174X>

Mina Murat Baldwin

University of Edinburgh

Franziska Meinck

University of Edinburgh

Ingrid Obsuth

University of Edinburgh

Aja Louise Murray

University of Edinburgh

Protocol

Keywords: child abuse, childhood psychological maltreatment, Adulthood, mental health outcomes, protocol

Posted Date: November 6th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-102460/v1>

License:  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Version of Record: A version of this preprint was published at Systematic Reviews on August 12th, 2021. See the published version at <https://doi.org/10.1186/s13643-021-01777-4>.

Abstract

Background: Research suggests that childhood psychological maltreatment (i.e., emotional abuse and emotional neglect) is associated with mental and physical health problems that persist into adulthood, for example anxiety, depression, post-traumatic stress disorder (PTSD), suicidal ideation, and aggression; however, a systematic review and meta-analysis of the existing literature would help clarify the magnitude and moderators of these associations, and the extent to which they may be affected by publication bias, as well as the methodological strengths and weakness of studies in this area.

Method: Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guideline will be employed to structure the review. Several searches will be carried out via databases including Web of Science, Medline, PubMed, PsycINFO, Applied Social Science Index and Abstract, ERIC and EMBASE. Empirical peer reviewed research articles that fit pre-specified eligibility criteria will be included in the review. This review will include literature written in either English or Chinese. Two independent reviewers will screen and assess studies for inclusion in the review as well as extract the data, with consensus reached through discussion in cases of discrepancy. A third reviewer will be consulted to resolve any discrepancies that cannot be resolved through discussion between the original reviewers. The relevant Newcastle-Ottawa scales will be used for assessing the quality of studies. If a sufficient number of comparable studies are retrieved, a meta-analysis will be conducted using a random effects model.

Discussion: This systematic review will provide an understanding of the long-term effects of childhood psychological maltreatment on adult mental health, which adds to previous reviews focusing primarily on the effects of physical and sexual abuse. The results of the review will help inform clinical practice in approaches to treating those with a history of psychological maltreatment in childhood. The gaps and weaknesses in the evidence identified will also inform recommendations for future research.

Background

Childhood abuse is significantly associated with adverse emotional, cognitive, behavioural and social outcomes for children (Norman et al., 2012; Maguire et al., 2015; Hughes et al., 2017), with difficulties frequently continuing into adulthood (Bor et al., 2010). According to the World Health Organization (WHO) (2016), childhood abuse refers to all forms of abuse (e.g., physical, sexual, emotional, psychological and neglect) that result in potential or actual harm to a child's physical or psychological health. Emotional abuse is the type of abuse least well-studied (Afroz & Tiwari, 2015). There has been one systematic review on the association between emotional abuse and neglect in school-aged children (Maguire et al., 2015); however, there has been no systematic review or meta-analysis on the long-term mental health effects of childhood psychological maltreatment on adults.

There are different definitions of psychological maltreatment; however, for the purpose of this review, psychological maltreatment is defined as including emotional abuse and emotional neglect. Specific forms of psychological maltreatment may include rejecting, isolating, neglecting, exploiting and

terrorizing (Garbarino, Guttman, & Seeley, 1986). Emotional abuse refers to continual deliberate mistreatment of a child, which may include deliberately trying to scare, humiliate, ignore and isolate the child. Emotional abuse is often a part of other forms of abuse; however, it can also happen on its own (Baker, & Festinger, 2011). Unlike emotional abuse, emotional neglect may be unintentional, and caregivers are sometimes unaware that they are emotionally neglecting their child. Emotional neglect refers to caregivers' failure to recognize, understand or provide what a child really needs, and may sometimes refer to lack of attention to a child (Baker, & Festinger, 2011). The primary distinction between emotional neglect and emotional abuse is that the former reflects indifferent parenting while the latter reflects hostile parenting (Iwaniec, 1995).

This review will focus on psychological maltreatment perpetrated by parents (or primary caregivers or another adult in household) specifically. This focus is motivated by the fact that in the traditional family model, parents are the most important figures for a child. The focus on psychological maltreatment is motivated by the fact that it is currently the least-well studied form of abuse in terms of its effects on adult mental health. Part of the reason may be the challenges inherent in measuring psychological maltreatment. Compared with physical and sexual abuse, the assessment and identification of psychological maltreatment can be more difficult (Kaplan, Pelcovitz, & Aburna, 1999), since there is no physical evidence of its occurrence. However, the negative outcomes of it may manifest in numerous ways such as impaired emotional, cognitive, or social development, including outcomes such as depression (Gibb et al., 2001), helplessness (Black, SlepAM, & Heyman, 2001), aggression (Diza, Simantov, & Rickert, 2002; Johsona et al., 2002), emotional dysregulation (Burns, Jacksons, & Harding, 2010) delinquency, substance abuse, PTSD, anxiety and low self-esteem (Kilpatrick, Saunders, & Smith, 2003).

Rationale for the current review

There are numerous systematic reviews on the associations between physical or sexual abuse and adult mental health (Angelakis, Austin, & Gooding, 2020; Hovdestad et al., 2015); however, – to the best of the authors' knowledge – to date, no research has been carried out to synthesize current evidence on the relationships between childhood emotional abuse/neglect by parents and adult mental health. A systematic review on this topic can provide an understanding of the consistency and strength of the link between early childhood maltreatment and adult mental health outcomes at both the clinical and sub-clinical level. A systematic review and meta-analysis can help provide a more precise estimate of the association than has been provided by primary studies to date. It will also allow us to examine the factors that moderate the magnitude of this association, and to evaluate whether the field is affected by publication bias. Further, it will provide a characterization of the quality of empirical studies in this field and identify gaps in the literature.

The primary review questions will be:

- What are the long-term effects of childhood psychological maltreatment on adult mental health?

What are the unique effects of childhood psychological maltreatment by caregivers on adult mental health after adjusting for other forms of abuse?

- How do study-level moderators such as year of publication, quality of study, and location of study affect these associations?

Method

The Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) recommendations have been used for preparing this systematic review protocol (Moher et al., 2015). This systematic review protocol has been registered in the International Prospective Register of Systematic Reviews (PROSPERO) with registration number CRD42020197833.

Search strategy

To search the existing literature on childhood emotional abuse and neglect, the following keywords will be used: 'child abuse', 'childhood psychological maltreatment', 'childhood emotional abuse', 'childhood emotional neglect', 'psychological aggression', 'psychological violence', 'psychological domestic violence' and 'childhood psychological victimisation'. The Boolean operator 'OR' will be used to combine the search term and will be adapted to the syntax of different databases.

To capture the concept of mental health, these key search terms will be used: 'mental health', 'generalised anxiety disorder', 'depression', 'major depression disorder', 'PTSD', 'personality disorder', 'eating disorder', 'bipolar disorder', 'schizophrenia', 'panic disorder', 'psychosis', 'social anxiety disorder', 'suicide ideation', 'suicide attempt', 'non-suicidal self-injury' and 'substance abuse'. The Boolean operator 'OR' will be used to combine these search terms and will be adapted to the syntax of different databases.

The Boolean operator ('AND') will be used to combine the results from psychological maltreatment and mental health. In addition, the maltreatment terms will be combined with child* and the mental health terms with adult* using the AND operator in order to link the concepts to the relevant developmental stages.

Several databases will be used searching for relevant papers: Web of Science, Medline, PubMed, PsycINFO, Applied Social Science Index and Abstract, ERIC and EMBASE. For grey literature, several databases will be used: WHO database, PhD thesis/dissertation databases, and Open Grey.

For literature written in Chinese, ZhiWang which is a well-known database in China, and covers various journals written in Chinese, will be used for searching the literature.

Inclusion criteria

- Participants aged over 18 at assessment of the mental health problems.

- Measurement of abuse: studies that measured emotional abuse and emotional neglect using retrospective self-report, questionnaires, interviews, or police or social work records will be included.
- Measurement of mental health: studies that measured mental health problems (standard diagnoses as listed in the DSM-V or ICD-10 or using mental health scores based on validated measures) using self-report, questionnaires or clinical interviews will be included.
- Types of maltreatment: studies that only assessed childhood psychological maltreatment, childhood emotional neglect, childhood emotional abuses, or studies that assessed both emotional abuse and neglect and other types of abuse (e.g., physical or sexual) will be included. The abuse must have been committed by the primary caregivers.
- Comparison: adults who experienced only childhood emotional neglect and childhood emotional abuse versus adults who experienced different forms of abuse during childhood, with or without psychological maltreatment versus adults who experienced no abuse during childhood will be compared.
- Ascertainment of exposure to childhood emotional abuse or neglect by parents: Study using either retrospective or prospective data will be included.

Studies that reported odds ratio or effect size: If the studies do not report the relevant effect size, they will be eligible for inclusion only if they provide the raw information such that the effect size could be calculated.

Additional inclusion criteria

- Articles written in either English or Chinese will be included reflecting the language capabilities of the team.

Exclusion criteria

- Any, book chapters, case studies, letter, opinions, and editorials that do not present new data will be excluded.
- Qualitative investigations will be excluded.
- Studies that do not provide an analysis of emotional abuse/neglect will be excluded. Studies that focus on psychological maltreatment perpetrated by non-parental others or where data for primary caregivers or another adult in household cannot be disaggregated from data on abuse perpetrated by others will not be included.
- Studies where different types of abuse are combined and not separately reported so that it is not possible to obtain an effect for emotional abuse or emotional neglect will be excluded.
- Studies where the outcome is physical rather than mental illness will be excluded. Review papers (narrative reviews, systematic reviews, and meta-analyses) will be excluded.

Study selection

The bibliographic software program Zotero will be used to manage and store relevant studies. Duplicate studies will be removed via this software. Two independent reviewers will scrutinise the electronic searches for eligibility and inclusion of studies into the systematic review based on their title and abstract. Full texts of potentially relevant papers will be retrieved and reviewed independently by two reviewers. A final determination of whether an article meets inclusion criteria will be made on examination of the full article, the reason for each excluded study will be documented. Figure 1 presents the flow diagram to be adopted in the systematic review for study selection (Moher et al., 2009).

Methodological appraisal of study

Classification of risk of bias as recommended by the Newcastle-Ottawa Quality Assessment Scale will be used to assess the quality of selected case control for retrospective study or cohort studies for longitudinal studies (Wells et al., 2017). Main domains of this assessment are selection (adequateness of case definition, representativeness of the cases, selection of controls and definition of controls), comparability (comparability of cases and controls based on the design or analysis) and exposure (ascertainment of exposure, same method of ascertainment for cases and control and non-response rate). A study can be awarded a maximum of four stars for selection, two stars for comparability and three stars for exposure. More stars represent lower risk of bias. Two reviewers will independently assess the studies for methodological quality with discrepancies being resolved through discussion and a third reviewer will be consulted where consensus cannot be reached through discussion.

Data extraction

Study findings will be extracted using a structured database. It will include pertinent information such as author name and date of publication, sample size, sample population, study geographical location, sample population demographic, study setting, study methodology, types of abuse, measurement of emotional abuse/neglect, duration of abuse, measurement of various mental health outcomes, perpetrator of the maltreatment, age at exposure to maltreatment, the relation between emotional abuse/neglect and mental health outcomes (as an odds ratio or risk ratios), and covariates adjusted for. When available, both adjusted and unadjusted statistics will be extracted. Two reviewers will independently conduct the data extraction with consensus reached through discussion in case of discrepancies. Where consensus is not reached through discussion, a third reviewer will be consulted. If any new categories are identified during the course of the review they will be added, and the extraction database will be modified as needed. If there are any missing data or relevant information, authors will be contacted to supply the information.

Data analysis

A narrative synthesis of the findings from the included studies will be presented. The narrative synthesis will focus on socio-demographic characteristics of the samples (duration of abuse, who the maltreatment was inflicted by, age at exposure to maltreatment), characteristic of the studies (study setting, sample

size, study design), methodology (questionnaire, self-report, experimental design, clinical interview, police or social work records), types of mental health issues, effect size and odd/risk ratios.

A meta-analysis will be conducted if there are enough studies with information related to both childhood emotional abuse/neglect and mental health. Results will be summarized using a forest plot. Results from different study designs will not be pooled together (e.g., studies that assessed only emotional abuse/neglect and studies that assessed different types of abuse) to prevent a misleading summary of the study effect; rather, they will be analysed separately. If possible, meta-analyses of both adjusted and unadjusted effects will be conducted and results compared. A random effects model will be utilized for the meta-analysis as it is likely that studies will not be homogeneous. Studies are expected to represent fairly substantial differences in method (i.e., types of participants, measurements) and are thus not anticipated to reflect a single underlying effect size. The “Metafor” package for R statistical software will be used for meta-analysis (Viechtbauer, 2010).

The GRADE criteria will be used to assess the quality of the evidence provided by the observational studies in relation to the outcome (Higgins & Green, 2011). The quality of the evidence will be rated as very low, low, moderate and high; and factors that may decrease the quality are risk of bias, imprecision, inconsistency and indirectness (Higgins & Green, 2011).

Moderator analysis and assessment of heterogeneity

Study heterogeneity will be assessed by examining the characteristics of studies and similarities between emotional abuse/neglect and mental health outcomes. Statistical heterogeneity will be assessed by calculating Q and I². Where there are sufficient numbers of studies and variability in moderators, moderators will be included in the moderator analysis in meta-analysis as well. Examples of the kinds of moderators to be tested include study quality (based on the quality assessment described above), study geographical location, year of publication, and sample size.

Assessment of reporting bias

In case of appropriate number of studies ($n \geq 10$), publication bias will be assessed using a funnel plot for each outcome by plotting the effect size against study size (Higgins & Green, 2011). An Egger test (Egger et al. 1997) and the trim and fill method (Duval, 2006) will be used to statistically test for publication bias and its potential impact.

Discussion

This protocol outlines the plan for a systematic review and, if applicable, a meta-analysis on the effects of emotional abuse and emotional neglect (collectively ‘psychological maltreatment’) perpetrated by parents in childhood on adult mental health outcomes. There is currently no systematic review and meta-analysis focusing specifically on the long-term effects of childhood emotional abuse and emotional neglect on adult mental health outcomes, therefore, the review will help fill this important gap. The findings from this review could help illuminate the long-term impact of psychological maltreatment, in

combination with and net of other forms of abuse. This can help inform prevention and intervention strategies to help target resources and minimise the impact of psychological maltreatment. It will also potentially provide insights into whether the impact of psychological maltreatment varies across contexts; which mental health outcomes it is most strongly related to; and whether its impact has changed over time. This review will also explore where the major gaps are in current evidence in order to make recommendations for future research. Finally, it will help provide an assessment of the quality of the work on the field and identify areas for improvement in future research to strengthen the evidence in the field.

Abbreviations

Abbreviation	Meaning
DSM-V	The Diagnostic and Statistical Manual of Mental Disorders-5
ICD-10	International Classification of Diseases, tenth revision
PRISMA	Preferred Reporting Items for Systematic Review and Meta-Analysis
PTSD	Post-Traumatic Stress Disorder
WHO	World Health Organization

Declarations

Ethics approval and consent to participate

This study will base on the previous study and will not collect new data or involve identifiable data. Therefore, ethical review is not required.

Availability of data and material

Not applicable

Competing interests

Not applicable

Funding

Not applicable

Author's contributions

ZX is the guarantor of this review and has conceived the original research idea with guidance from AM, IO and FM. ZX developed the first draft of the protocol, and AM, IO and FM contributed the revision of the

protocol. ZX have developed the selection criteria and search strategy, and it was verified by AM, IO and FM. ZX and MB will extract the data from studies and will assess the risk of bias of each study. AM will resolve any disagreements and will make the final judgement. AM will provide the guidance for interpreting the analysis. ZX will analyse the data. AM, IO and FM will supervise the review process and will provide feedback if needed. All authors have read and approved the final manuscript of the review protocol.

Acknowledgements

Not applicable

References

1. Afroz, S., & Tiwari, P. S. N. (2015). Psychological abuse: Impact on children. *Indian Journal of Health & Wellbeing, 6*(5).
2. Angelakis, I., Austin, J., & Gooding, P. (2020). Childhood maltreatment and suicide attempts in prisoners: A systematic meta-analytic review. *Psychological Medicine, 50*(1), 1-10.
3. Baker, A., & Festinger, T. (2011). Emotional abuse and emotional neglect subscales of the CTQ: Associations with each other, other measures of psychological maltreatment, and demographic variables. *Children and Youth Services Review, 33*(11), 2297-2302.
4. Black DA, Smith SlepAM, Heyman RE. Risk factors for psychological abuse. *Aggression Violent Behavior. 2001;6*:189-201.
5. Bor W, Collerson M, Cupit SC, McDermott B, Stallman HM, Walmsley KE (2010) New directions in treatment of child physical abuse and neglect in Australia: MST-CAN a case study. *Adv Mental Health 9*: 148–161.
6. Burns, E. E., Jackson, J. L., & Harding, H. G. (2010). Child maltreatment, emotion regulation, and posttraumatic stress: The impact of emotional abuse. *Journal of Aggression, Maltreatment & Trauma, 19*, 801–819. doi:10.1080/10926771.2010.522947
7. Duval, S. (2006). The Trim and Fill Method. In *Publication Bias in Meta-Analysis: Prevention, Assessment and Adjustments* (pp. 127-144). John Wiley & Sons.
8. Egger, M., Smith, G., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ, 315*(7109), 629-634.
9. Garbarino, J., Guttman, E., & Seeley, J. W. (1986). *The psychologically battered child*. San Francisco, CA: Jossey-Bass.
10. Gibb, B. E., Alloy, L. B., Abrahamson, L. Y., Rose, D. T., Whitehouse, W. G., Donovan, P., & Tierney, S. (2001). History of child maltreatment, negative cognitive styles and episodes of depression in adulthood. *Cognitive Therapy and Research, 25*, 426–446. doi:10.1023/ A:1005586519986
11. Higgins, J. P., & Green, S. (2011). *Cochrane Handbook for Systematic Reviews of Interventions Version 5.1. 0* [updated March 2011]. The Cochrane Collaboration, 2011. Available from www.cochrane.org.

cochrane-handbook. org. Accessed August, 29.

12. Hovdestad, W., Campeau, A., Potter, D., & Tonmyr, L. (2015). A systematic review of childhood maltreatment assessments in population-representative surveys since 1990. *PloS One*, *10*(5).
13. Iwaniec, D. (1995). *The emotionally abused and neglect child: Identification, assessment, and intervention*. New York: John Wiley and Sons.
14. Leung, P. W., Wong, W. C., Chen, W. Q., & Tang, C. S. (2008). Prevalence and determinants of child maltreatment among high school students in Southern China: A large scale school based survey. *Child and adolescent psychiatry and mental health*, *2*(1), 27.
15. Maguire, Williams, Naughton, Cowley, Tempest, Mann, . . . Kemp. (2015). A systematic review of the emotional, behavioural and cognitive features exhibited by school-aged children experiencing neglect or emotional abuse. *Child: Care, Health and Development*, *41*(5), 641-653.
16. May-Chalal, C., & Cawson, P. (2005). Measuring child maltreatment in the United Kingdom: A study of the prevalence of child abuse and neglect. *Child Abuse and Neglect*, *29*, 969–984.
17. Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, *151*(4), 264-269.
18. Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., ... & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, *4*(1), 1.
19. Rohner, Ronald P, & Rohner, Evelyn C. (1980). Antecedents and consequences of parental rejection: A theory of emotional abuse. *Child Abuse & Neglect*, *4*(3), 189-198.
20. Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of statistical software*, *36*(3), 1-48.
21. Wells, G., Shea, B., O'Connell, D., Peterson, J., Welch, V., Losos, M., & Tugwell, P. (2017). Newcastle–Ottawa quality assessment scale—case control studies. 2012-06-15]. http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp.

Figures

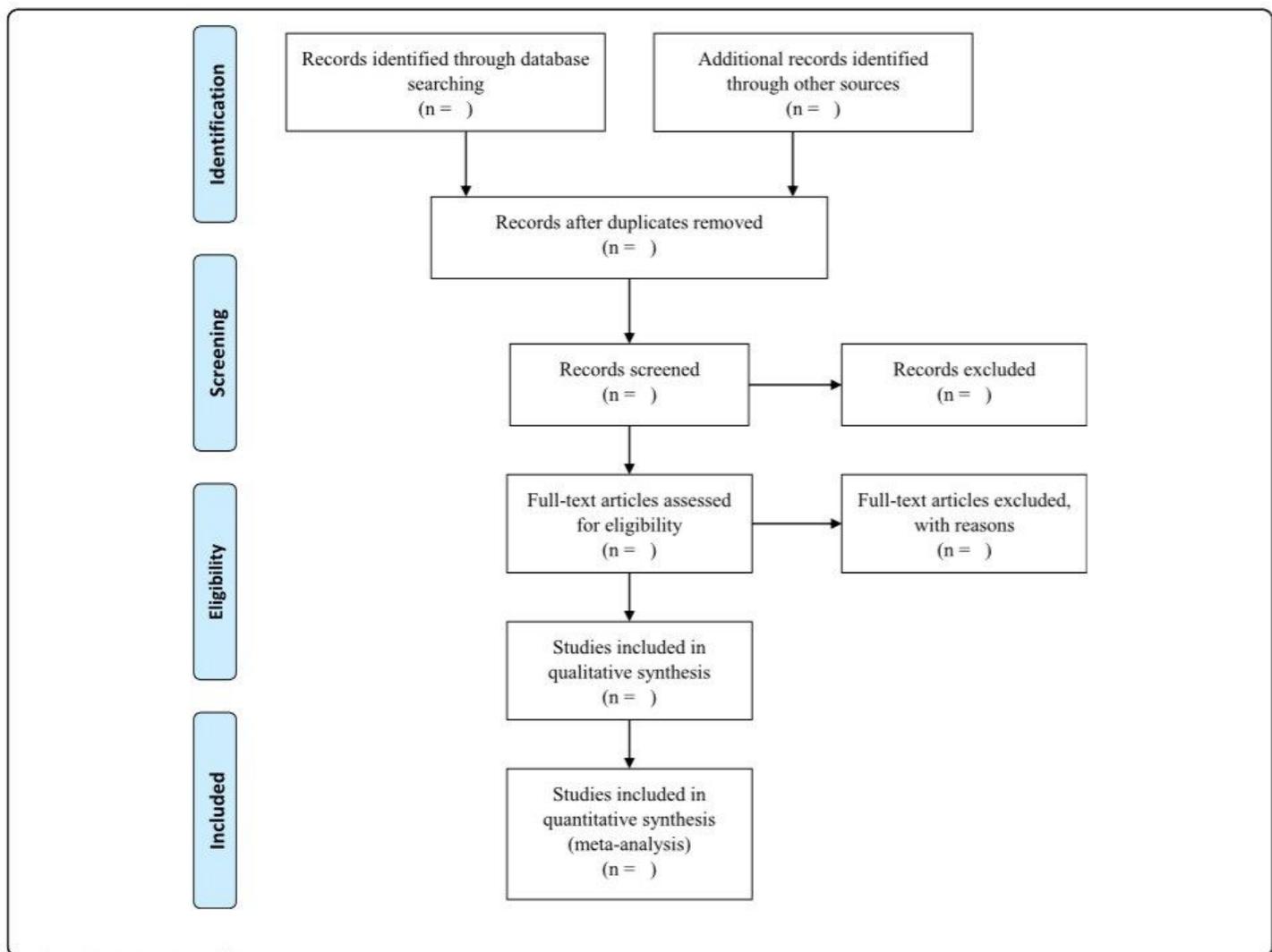


Figure 1

PRISMA flow diagram

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [reviewprotocolPRISMAchecklist.pdf](#)