

# INPLASY PROTOCOL

## An Overview of the systematic review of the global gender difference in anxiety

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**Conflicts of interest:**  
The authors declare that they have no conflict of interest.

**Review question / Objective:** **P:** Adult female diagnosed with anxiety (including students with college degree or above) **I:** Medication or psychotherapy **I:** Medication or psychotherapy **C:** Adult males **O:** Proportion of women (overall participation rate, regional distribution, ethnic distribution, education, income occupation) prevalence rate, age, intervention effectiveness **S:** Systematic review and meta-analysis.

**Condition being studied:** Anxiety disorder, characterized as the continuous feelings of nervousness, trembling, together with fears, worries, and forebodings (World Health Organization, 1992), is closely associated with suicide (WHO 2000). As WHO's report, 264 million of people living with anxiety disorders in the world, increased by 14.9% since 2005, ranked as the sixth-largest contributor to non-fatal health loss globally and appear in the top 10 causes of Years Lived with Disability (YLD), in all WHO regions (WHO 2017). However, the trend remains unclear. A reliable estimation of the prevalence of anxiety symptoms among the global is essential to inform tailored efforts to prevent, identify, and treat mental distress. Further, the study of sex and gender differences represents an increasingly significant line of research, involving all levels of biomedical and health sciences, from basic research to population studies. We will conduct an overview of systematic review combined with a bibliometric analysis aimed to answer the following question: In existing studies, whether there is a gender difference in the sample size of patients with anxiety? At the same time, whether the effectiveness of the same treatment effectiveness varies by different gender?

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 August 2020 and was last updated on 13 August 2020 (registration number INPLASY202080054).

### INTRODUCTION

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## METHODS

**Participant or population:** Adult female diagnosed with anxiety (including students with college degree or above).

**Intervention:** Medication or psychotherapy.

**Comparator:** Adult males.

**Study designs to be included:** Systematic review and meta-analysis.

**Eligibility criteria:** 1. Systematic review and meta-analysis 2. Detailed sample size of patients with anxiety of different genders 3. Exclude postpartum and antenatal anxiety.

**Information sources:** A comprehensive search for relevant studies published in

English timespan was from the seven databases built to August 12, 2020 (Cochrane, Campbell, SAGE, ProQuest, PubMed, EMBASE, and Web of Science) Moreover, the reference lists of the studies were searched manually to identify additional studies not indexed in databases. Reference lists of identified review articles were manually scanned to identify any other relevant studies.

**Main outcome(s):** 1. Participation-to-prevalence ratio 2. Various intervention effectiveness by different gender 3. GRADE assessment (AMSTAR-2 and PRISMA) of the included systematic review and meta-analysis studies.

**Quality assessment / Risk of bias analysis:** Assessing the Quality of SRs : A Measurement Tool to Assess SRs (AMSTAR) (Shea et al., 2007), which consists of 11 items was used to evaluate the methodological quality of all included SRs. For each item, a judgement of "Yes," "No," "Can't answer" or "Not applicable" was assigned according to judgment criteria of AMSTAR. Assessing the Quality of Evidence: For the primary outcome measures with detailed information, GRADE (Guyatt et al., 2008) was used to evaluate the quality of evidence following the GRADE handbook (Guyatt et al., 2008) by two researchers independently and disagreements were resolved by a third author. GRADE classified the quality of evidence into four levels: high, moderate, low, and very low.

**Strategy of data synthesis:** A narrative description of the included SRs was conducted. Review-level summaries for all the primary and secondary outcomes from the included SRs were tabulated. We extracted and reported pooled effect sizes, when outcomes were meta-analyzed within a SR. If there was no quantitative pooling of effect sizes, we reported results with a standardized language indicating direction of effect and statistical significance. Risk ratio (RR) with 95% confidence interval (CI) was involved when summary the dichotomous outcomes, while weighted

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mean difference (WMD) or standard mean difference (SMD) and 95% CI was involved when summary the continuous data. The heterogeneity of each included SR was also summary and analyzed, which was detected by I<sup>2</sup> and Chi<sup>2</sup> tests.

**Subgroup analysis:** The region/age/education/income of the anxiety person. The therapeutic effects of different interventions (medication and psychotherapy) in different genders.

**Sensitivity analysis:** To assess the influence of each individual study, leave-one-out sensitivity analysis was performed iteratively by removing one study at a time to confirm that the findings were not influenced by any single study.

**Language:** English.

**Country(ies) involved:** China.

**Keywords:** anxiety; gender difference; systematic review; meta-analysis; bibliometric.

**Contributions of each author:**

**Author 1 - Jieyun Li -** Designed and performed. Do the literature searches and designed the data extraction form. The paper was written by Jieyun Li and Liping Guo.

**Author 2 - Liping Guo -** Designed and performed. Do the literature searches and designed the data extraction form. The paper was written by Jieyun Li and Liping Guo.

**Author 3 - Jingwen Li -** finally checked and revised.

**Author 4 - Kehu Yang -** finally checked and revised.