

# INPLASY PROTOCOL

To cite: Cai et al. Global prevalence of major depressive disorder in LGBT: a meta-analysis and systematic review of epidemiological surveys. Inplasy protocol 202230061. doi: 10.37766/inplasy2022.3.0061

Received: 13 March 2022

Published: 13 March 2022

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**Support:** None.

**Review Stage at time of this submission:** Preliminary searches.

**Conflicts of interest:**  
None declared.

## Global prevalence of major depressive disorder in LGBT: a meta-analysis and systematic review of epidemiological surveys

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**Review question / Objective:** Examine prevalence of major depressive disorder in LGBT.

**Condition being studied:** The prevalence of MDD was high in LGBT populations. But, there is lack of study summerise the global prevelance of MDD in LGBT population.

**Information sources:** Two investigators (HC and PC) independently searched the literature in PubMed, PsycINFO, Web of Science, EMBASE, CNKI, WANFANG from their commencement date until 10 December 2021. The search terms were as follows: (Sexual and Gender Minorities [MeSH Terms] OR transgender OR transsexual OR gender-nonconforming OR gender identity disorder OR gender dysphoria OR gender minority OR LGBT OR lgbt OR bisexuality) AND(major depress\* OR unipolar depress\* OR Depressive Disorder, Major) AND (epidemiology OR prevalence OR rate).

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 March 2022 and was last updated on 13 March 2022 (registration number INPLASY202230061).

### INTRODUCTION

**Review question / Objective:** Examine prevalence of major depressive disorder in LGBT.

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### METHODS

**Search strategy:** Two investigators (HC and PC) independently searched the literature in PubMed, PsycINFO, Web of Science, EMBASE, CNKI, WANFANG from their

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**Participant or population:** LGBT (lesbian, gay, bisexual, and/or transgender and gender non-conforming people).

**Intervention:** NA.

**Comparator:** NA.

**Study designs to be included:** One-arm epidemiological surveys, or comparative studies including both LGBT sample and non-LGBT general populations.

**Eligibility criteria:** Two investigators (HC and PC) independently assessed the eligible studies for inclusion and exclusion. The inclusion criteria according to the PICOS acronym were as follows: Participants (P): LGBT (lesbian, gay, bisexual, and/or transgender and gender non-conforming people). Intervention (I): not applicable. Comparison (C): not applicable; Outcomes (O): the prevalence of major depressive disorder according to standardized diagnostic criteria, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM), Composite Interview Diagnostic Instrument (CIDI), the International Statistical Classification of Diseases and Related Health Problems (ICD) systems and International Neuropsychiatric Interview (MINI)(The MINI is a structured interview to assess DSM-IV Axis I disorder) and Study design (S): one-arm epidemiological surveys, or comparative studies including both LGBT sample and non-LGBT general populations.

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**Main outcome(s):** The prevalence of major depressive disorder or data that could generate prevalence of major depressive disorder.

**Quality assessment / Risk of bias analysis:** Study quality was assessed using a standardized instrument for epidemiological studies (Boyle, 1998; Loney, Chambers, Bennett, Roberts, & Stratford, 1998) with 8 items as follows: (1) Target population was defined clearly, (2) Probability sampling or entire population surveyed (3) Response rate was equal or greater than 80%, (4) Non-responders clearly described (5) Sample representative of the target population (6) Data collection methods standardized (7) Validated criteria used to diagnose MDD (8) Prevalence estimates given with confidence intervals and detailed by subgroups (if applicable). The total score ranges from 0 to 8. Studies with a total score of "7-8" were considered as "high quality", "4-6" as "moderate quality" and "0-3" as "low quality" (Yang et al. 2016).

**Strategy of data synthesis:** XThis meta-analysis was conducted with Comprehensive Meta-Analysis (CMA) Version 2.0 (Biostat Inc., Englewood, New Jersey, USA). The random effect model calculated the pooled prevalence of MDD and its 95% confidence interval (95% CI). The heterogeneity across studies was assessed with I<sup>2</sup> statistic and when I<sup>2</sup> > 50% was defined as high heterogeneity (Higgins et al., 2003). We performed subgroup analyses for categorical variables (timeframe, source of populations, survey year (using the median splitting methods), sampling methods, diagnose criteria, adult or adolescents and study design), meta-

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regression for continuous variable (mean age, survey time and quality evaluation score) and sensitivity analyses to explore the possible sources of heterogeneity across studies. Publication bias of the included studies was estimated with funnel plots and Eegg's test. A  $p < 0.05$  was considered as statistically significant (two sided).

**Subgroup analysis:** We performed subgroup analyses for categorical variables (timeframe, source of populations, survey year (using the median splitting methods), sampling methods, diagnose criteria, adult or adolescents and study design).

**Sensitivity analysis:** The sensitivity analysis used trim and filled.

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

**Keywords:** LGBT, MDD prevelance.

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