INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Prevalence of suicidal ideation and suicide plan in patients with major depressive disorder: a meta-analysis of observation studies

Cai, H[1]; Yu, J[2]; Liu, S[3]; Xiang, YT[4].

Review question / Objective: **The inclusion criteria according to the PICOS acronym were as follows: Participants (P): patients with major depressive disorder according to standardized diagnostic criteria, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM), the International Statistical Classification of Diseases and Related Health Problems (ICD) systems. Intervention (I): not applicable. Comparison (C): not applicable; Outcomes (O): the prevalence of suicidal ideation, suicide plan, or data that could generate prevalence of suicidal ideation, and suicide plan and Study design (S): cross-sectional or cohort studies (only the baseline data were extracted).**
Condition being studied: **We performed a meta-analysis of observation studies to estimate the prevalence of suicidal ideation and suicide plan in patients with major depressive disorder and its associated factors.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 March 2021 and was last updated on 08 March 2021 (registration number INPLASY202130027).

INTRODUCTION

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Condition being studied: We performed a meta-analysis of observation studies to estimate the prevalence of suicidal ideation and suicide plan in patients with major depressive disorder and its associated factors.

METHODS

Search strategy: PubMed, PsycINFO, Web of Science and EMBASE from their commencement date until 07 October 2020. The search terms were as follows: ((suicid* ideation) OR (suicid* idea) OR (suicid* thought) OR ((suicide* plan) OR (self-injurious behavior) OR (self-harm)) OR (self-injury)) AND ((major depress*) or (unipolar depress*) or (Depressive Disorder, Major)) AND (epidemiology OR prevalence OR rate). Two investigators (HC and YJ) independently screened the titles and abstracts, and the full texts of eligible studies were then identified.

Participant or population: Major depressive disorder.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: Cross-sectional or cohort studies (only the baseline data were extracted).

Eligibility criteria: The inclusion criteria according to the PICOS acronym were as follows: Participants (P): patients with major depressive disorder according to standardized diagnostic criteria, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM), the International Statistical Classification of Diseases and Related Health Problems (ICD) systems. Intervention (I): not applicable. Comparison (C): not applicable; Outcomes (O): the prevalence of suicidal ideation, suicide plan, or data that could generate prevalence of suicidal ideation, and suicide plan and Study design (S): cross-sectional or cohort studies (only the baseline data were extracted).

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Main outcome(s): The prevalence of suicidal ideation, suicide plan, or data that could generate prevalence of suicidal ideation, and suicide plan.

Quality assessment / Risk of bias analysis: Study quality was assessed using instrument for epidemiological studies (Boyle, 1998; Loney et al., 1998) with the following eight items: (1) clearly defined target population; (2) Probability sampling or entire population; (3) response rate equal to or greater than 80%; (4) clearly described non-responders; (5) the sample representative of the target population (6) standardized data collection methods (7) validated criteria for MDD; (8) prevalence estimates 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: This meta-analysis was conducted with Comprehensive Meta-Analysis (CMA) Version 2.0 (Biostat Inc., Englewood, New Jersey, USA). The random-effects was used to calculate the pooled prevalence of SI

and SP with their 95% confidence intervals (95% CIs). The heterogeneity between studies was assessed with I2 statistic, and I2 > 50% was considered high heterogeneity (Higgins et al., 2003). The moderating effects of categorical variables (e.g., timeframe, source of patients and region was classified by broad WHO regional classification (Africa/Americas/ Eastern Mediterranean/ Europe/South East Asia/Western Pacific)(Chen et al., 2018), survey year (using the median splitting methods) and study design) and continuous variable (e.g., depression score, percentage of males, survey year and quality evaluation score) were examined using subgroup and meta-regression analyses, respectively. Sensitivity analyses were performed to identify outlying studies by excluding included studies one by one. 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-tailed).

Subgroup analysis: The moderating effects of categorical variables (e.g., timeframe, source of patients and region was classified by broad WHO regional classification (Africa/Americas/Eastern Mediterranean/ Europe/South East Asia/ Western Pacific)(Chen et al., 2018), survey year (using the median splitting methods) and study design) and continuous variable (e.g., depression score, percentage of males, survey year and quality evaluation score) were examined using subgroup and meta-regression analyses, respectively.

Sensitivity analysis: Sensitivity analyses were performed to identify outlying studies by excluding included studies one by one. Publication bias of the included studies was estimated with funnel plots and Eegg's test.

Country(ies) involved: China.

Keywords: major depressive disorder; suicide ideation; suicide plan; meta-analysis.

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