INPLASY PROTOCOL

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Review Stage at time of this submission: Data analysis.

Conflicts of interest: None declared.

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

Xie, XM[1]; Cai, H[2]; Bai, W[3]; Liu, R[4]; Sha, S[5]; Ng, CH[6]; Xiang, YT[7].

Review question / Objective: The inclusion criteria according to the PICOS acronym were as follows: Participants (P): patients with bipolar 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 bipolar disorder and its associated factors.

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INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 June 2021 and was last updated on 16 September 2022 (registration number INPLASY202160077).

INTRODUCTION

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METHODS

Search strategy: PubMed, PsycINFO, Web of Science and EMBASE from their commencement date until 31 June 2022. The search terms were as follows: ((suicid* ideation) OR (suicid* idea) OR (suicid* thought) OR (suicid* plan) OR (self-injurious behavior)) AND (bipolar OR (manicdepressive disorder) OR mania OR manic OR hypomani*) AND (epidemiology OR prevalence OR rate). Two investigators (HC and WWB) independently screened the titles and abstracts, and the full texts of eligible studies were then identified.

Participant or population: Bipolar disorder patients.

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 bipolar 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).

Information sources: PubMed, PsycINFO, Web of Science and EMBASE from their commencement date until 31 May 2021. The search terms were as follows: ((suicid* ideation) OR (suicid* idea) OR (suicid* thought) OR (suicid* plan) OR (self-injurious behavior)) AND (bipolar OR (manic-depressive disorder) OR mania OR manic OR hypomani*) AND (epidemiology OR prevalence OR rate). Two investigators (HC and WWB) independently screened the titles and abstracts, and the full texts of eligible studies were then identified. Moreover, we manually checked the relevant reviews to identify the studies that might be missed in the first literature search.

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 assessment was conducted using an eight-item assessment instrument for epidemiological studies with the total score ranging from 1 to 8 points. Study quality were collapsed into low (0-3 points), moderate (4-6 points), and high quality (7 and 8 points). Any uncertainty was resolved by consensus or a discussion with the senior researcher (YTX).

Strategy of data synthesis: The pooled prevalence of SI/SP and corresponding 95% confidence interval (CI) was calculated using the random-effect model. The heterogeneity was evaluated by I2 statistic, with I2 more than 50% indicating

high heterogeneity. Subgroup and meta-regression analyses were performed to explore the source of heterogeneity. Subgroup analyses were conducted when there were at least three studies in each subgroup.

Subgroup analysis: Subgroup analyses were performed based on the following categorical variables: gender, BD types (BDI/BDII), timeframe, source of patients, sampling method, type of countries (developed vs. non-developed countries according to the International Monetary Fund), measure instrument of SI/ SP, average education year (dichotomized using the median splitting method), and sample size (dichotomized using the median splitting method).

Sensitivity analysis: Sensitivity analysis was conducted to test the consistency of primary results by removing each study one by one.

Language: English.

Country(ies) involved: China.

Keywords: bipolar disorder; prevalence; suicide ideation; suicide plan; meta-analysis.

Contributions of each author:
Author 1 - Xiaomeng Xie - completed the data collection, analysis, interpretation, and finished the approval of the final version for publication.
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