INPLASY PROTOCOL

Corresponding author:
Yu-Tao Xiang

xyutly@gmail.com

Author Affiliation:
Unit of Psychiatry, Institute of Translational Medicine, Faculty of Health Sciences, University of Macau, Macao SAR, China

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Prevalence of suicidal ideation and suicide plan in schizophrenia patients: a meta-analysis and systematic review of epidemiological surveys

Bai, W[1]; Liu, ZH[2]; Jiang, YY[3]; Zhang, QE[4]; Rao, WW[5]; Cheung, T[6]; Hall, BJ[7]; Xiang, YT[8].

Review question / Objective: What is the Prevalence of suicidal ideation and suicide plan in schizophrenia patients in epidemiological surveys?

Condition being studied: Schizophrenia is a severe psychiatric disorder characterized by cognitive impairment and behavioral dysfunction. Compared with the general population, schizophrenia patients have a reduction of 10-25 years of life expectancies and higher premature mortality rates, with suicide as a common cause of death. Suicide is a great public health issue worldwide. Suicide behavior is a continuum extending from keeping thinking killing oneself (suicidal ideation, SI), planning to commit suicide (suicide plan, SP), suicide attempts (SA) to completed suicide. In order to develop and adopt effective measures to reduce suicide risk and relevant negative health outcomes, exploring the epidemiology of suicidality in schizophrenia patients is of great importance. Therefore, we conducted this meta-analysis to examine the prevalence of SI and SP in schizophrenia patients and associated factors.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 December 2020 and was last updated on 30 December 2020 (registration number INPLASY2020120142).

INTRODUCTION

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METHODS

Participant or population: Schizophrenia patients.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: Cross-sectional or cohort studies.

Eligibility criteria: To be eligible, the following inclusion criteria according to the PICOS acronym were made: Participants (P): individuals with schizophrenia diagnosed according to study-defined diagnostic criteria; Intervention (I): not applicable; Comparison (C): not applicable; Outcome (O): prevalence of SI and/or SP or relevant data that enable to calculate the prevalence of SI / SP; Study design (S): cross-sectional or cohort studies (only the baseline data of cohort studies were extracted). Exclusion criteria included: (1) timeframe of prevalence of SI and/or SP was missing; (2) studies published in non-English; (3) in order to increase homogeneity, studies with mixed samples (e.g. schizoaffective or schizophrenia spectrum disorders) in which data on schizophrenia cannot be extracted were excluded.

Information sources: Three researchers (WB, YYJ, and ZHL) independently searched relevant publications in PubMed, Web of Science, Embase, and PsycINFO from their respective inception to October 10, 2020 using the following search terms: suicid* ideation, suicid* idea, suicid* thought, suicid* plan, self-injurious behavior, self-harm, self-injury, schizophrenia, schizophrenic, Dementia Praecox, epidemiology, prevalence and rate.

Main outcome(s): prevalence of SI and/or SP or relevant data that enable to calculate the prevalence of SI / SP.

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, 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).

Sensibility 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: Meta-analysis; prevalence; schizophrenia; suicidal ideation; suicide plan.

Contributions of each author:
Author 1 - Wei Bai completed the data collection, analysis, interpretation, drafted the manuscript, and finished the approval of the final version for publication.
Email: yc07611@connect.um.edu.mo
Author 2 - Zi-Han Liu completed the data collection, analysis, interpretation, and finished the approval of the final version for publication.
Email: yb97603@connect.um.edu.mo
Author 3 - Yuan-Yuan Jiang completed the data collection, analysis, interpretation, and finished the approval of the final version for publication.
Email: yuanyuanjiang@um.edu.mo
Author 4 - Qiange Zhang completed the data collection, analysis, interpretation, and finished the approval of the final version for publication.
Email: zqe81@126.com
Author 5 - Wen-Wang Rao completed the data collection, analysis, interpretation, and finished the approval of the final version for publication.
Email: raoww14@gmail.com
Author 6 - Teris Cheung finished the critical revision of the manuscript and the approval of the final version for publication.
Email: teris.cheung@polyu.edu.hk
Author 7 - Brian J. Hall finished the critical revision of the manuscript and the approval of the final version for publication.
Email: brianhall@nyu.edu
Author 8 - Yu-Tao Xiang completed study design, the data collection, analysis, interpretation, drafted the manuscript, and finished the approval of the final version for publication.
Email: xyutly@gmail.com