

# INPLASY PROTOCOL

To cite: Cheng et al. Global prevalence of self-harm during the COVID-19 pandemic: A systematic review and meta-analysis. Inplasy protocol 202320049. doi: 10.37766/inplasy2023.2.0049

Received: 12 February 2023

Published: 12 February 2023

**Corresponding author:**  
Lu Wang

275977819@qq.com

**Author Affiliation:**  
Anhui Medical University

**Support:** Anhui Medical University.

**Review Stage at time of this submission:** Completed but not published.

**Conflicts of interest:**  
None declared.

## Global prevalence of self-harm during the COVID-19 pandemic: A systematic review and meta-analysis

Cheng, H<sup>1</sup>; Wang, L<sup>2</sup>; Zou, HO<sup>3</sup>; Qu, YH<sup>4</sup>.

**Review question / Objective:** COVID-19, and efforts to mitigate its spread, have created extensive mental health problems. Previous research has shown that the mental, economic, behavioral, and psychosocial problems linked to the COVID-19 pandemic may lead to a rise in self-harm. However, little is known about the prevalence of self-harm worldwide during the COVID-19. Therefore, a quantitative synthesis is needed to reach an overall conclusion regarding the prevalence of self-harm during the pandemic.

**Condition being studied:** This study was a systematic review of the studies on the prevalence of NSSI during the Covid-19, and the prevalence of NSSI during the Covid-19 was obtained.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 February 2023 and was last updated on 12 February 2023 (registration number INPLASY202320049).

### INTRODUCTION

**Review question / Objective:** COVID-19, and efforts to mitigate its spread, have created extensive mental health problems. Previous research has shown that the mental, economic, behavioral, and psychosocial problems linked to the COVID-19 pandemic may lead to a rise in

self-harm. However, little is known about the prevalence of self-harm worldwide during the COVID-19. Therefore, a quantitative synthesis is needed to reach an overall conclusion regarding the prevalence of self-harm during the pandemic.

**Condition being studied:** This study was a systematic review of the studies on the

prevalence of NSSI during the Covid-19, and the prevalence of NSSI during the Covid-19 was obtained.

## METHODS

**Participant or population:** General population.

**Intervention:** Unapplicable.

**Comparator:** Unapplicable.

**Study designs to be included:** Observational study.

**Eligibility criteria:** 1) Study design: All relevant studies were included without further restrictions on the study design (e.g. all relevant observational studies, including cohort studies and cross-sectional studies, were included); 2) Study subjects: Individuals of any age who harm themselves with a COVID-19 related adversity, whether for suicidal or non-suicidal purposes. Considering the limited number of relevant studies on specific types of population, there is no restrictions on the study population; 3) Sample source: All studies that reported individuals in any country or setting that reported self-harm in relation to the COVID-19 pandemic; 4) Outcomes: Clear introduction that described the measurement of self-harm, and adequate information that can calculate the prevalence of self-harm in a population of interest.

**Information sources:** Including English databases (Web of Science; PubMed; MEDLINE; Embase; PsycINFO; Cochrane Database of Systematic Reviews) and Chinese databases (China National Knowledge Infrastructure, Wanfang Database).

**Main outcome(s):** 16 studies that met the inclusion and exclusion criteria were identified, with the sample sizes ranging from 228 to 49,227. The methodological quality of the included studies were mostly at the medium level. By using random effect model, the pooled prevalence of self-harm was 15.8% (95%CI 13.3-18.3). Based

on subgroup analysis, the following characteristics of the included studies reported a higher prevalence of self-harm: studies conducted in Asia or prior to July 2020, cross-sectional studies, samples recruited in hospital or school, adolescents, female, the purpose of self-harm (NSSI), mental symptoms and restriction experiences.

**Quality assessment / Risk of bias analysis:** The quality of 16 eligible studies was assessed by 11-items checklists for assessing observational study recommended by Agency for Healthcare Research and Quality (AHRQ) and the Newcastle-Ottawa Scale (NOS) for assessing cohort study. In observational studies, the quality score of 14 studies reached 3-8 points, and most of them were at medium level of methodological quality (12/14).

**Strategy of data synthesis:** We conducted a meta-analysis of prevalence of self-harm. These studies provided data on the percentage of participants who reported self-harm. We meta-analysed the data examining the proportions. And the pooled prevalence with a 95% confidence interval (CI) was reported.

**Subgroup analysis:** Based on literature review and clinical experience, we extracted many characteristics that may affect heterogeneity in the included studies, including study place, study time, study design, sample source, age of participants, etc. The above possible variables were analyzed by calculating the estimated values of each subgroup and the corresponding 95% CI.

**Sensitivity analysis:** To explore the robustness and reliability of the results, we conducted sensitivity analysis based on the combined results of meta-analysis. By gradual exclusion of each study, the sensitivity analysis was performed. Encouragingly, the combined prevalence of self-harm did not change significantly after excluding the included studies one by one, which indicated that the results for this

---

meta-analysis were relatively stable and robust.

**Language restriction:** COVID; self-harm; prevalence; systematic review.

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

**Keywords:** COVID; self-harm; prevalence; systematic review.

**Contributions of each author:**

Author 1 - Huan Cheng.

Author 2 - Lu Wang.

Author 3 - Haiou Zou.

Author 4 - Yanhua Qu.