# INPLASY PROTOCOL

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Support: None.

# Review Stage at time of this submission: Data analysis -Completed but not published.

Conflicts of interest: None declared.

## **INTRODUCTION**

**Review question / Objective:** Evaluation on the effectiveness of Moxibustion in the treatment of mental disorders caused by COVID-19.

**Condition being studied:** Psychological disorders lead to depression, anxiety and negative emotions.

# Meta-analysis of the effectiveness of moxibustion intervention on psychological disorders in COVID-19 patients

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**Review question / Objective:** Evaluation on the effectiveness of Moxibustion in the treatment of mental disorders caused by COVID-19.

**Condition being studied:** Psychological disorders lead to depression, anxiety and negative emotions.

Eligibility criteria: (1) Study design type: all clinical trials of moxibustion to improve the psychological disorders of the population under the COVID-19, whether blind or not. (2) Participants: those who do not have chronic diseases of heart, brain, liver and other important organs, serious primary diseases of hematopoietic system, no suicidal tendency, no mental, intellectual or language disorders, can understand the contents of the scale, and can evaluate the efficacy under the COVID-19 epidemic situation. (3) Intervention group measures: moxibustion therapy in different ways.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 May 2022 and was last updated on 12 May 2022 (registration number INPLASY202250071).

## **METHODS**

Participant or population: People with psychological disorders caused by COVID-19.

**Intervention: Various forms of moxibustion therapy.** 

Comparator: Conventional observation.

Study designs to be included: RCTs and non-RCTs.

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Information sources: PubMed, Embase, Cochrane Library, Web of science, ClinicalTrials, Wanfang Medicine, VIP, CNKI, China Biomedical Literature Database.

Main outcome(s): ① Anxiety score (including SAS scale and single anxiety item in SCL-90) ② depression score (including SDS scale and single depression item in SCL-90) ③ incidence of negative emotion.

Quality assessment / Risk of bias analysis: The included RCTs used the bias risk assessment tool recommended by Cochrane Handbook 5.1.0 to evaluate the methodological quality of the included research data . The evaluation contents include: the generation of random sequence, whether the distribution is hidden, whether the researchers and subjects implement blind method, whether the research outcome is evaluated by blind method, the integrity of outcome data, whether the research results are selectively reported, and whether there are other sources of bias. Each bias risk is divided into three levels: "low risk", "unclear" and "high risk", and the evaluation reasons are indicated after the level. MINROS scale was used to evaluate non-RCTs literature. There were 12 evaluational items in total. with 0-2 points for each item. 0 means no report, 1 means report but insufficient information, and 2 means report and provide sufficient information. It shall be conducted independently by two evaluators and cross checked after completion. In case of dispute, the thirdparty evaluator shall participate in the arbitration discussion.

Strategy of data synthesis: Revman5.3 statistical software for analysis, the continuous variables with different measurement units are expressed by SMD and its 95% CI and the secondary classification variables are expressed by OR and its 95% CI. Chi square test was used to judge the heterogeneity of the included study. P> 0.1 and  $I2 \leq 50\%$ , the homogeneity among the studies is good, and the fixed effect model is used for metaanalysis; When p < 0.1 and I2 > 50%, there is heterogeneity among studies. Further sensitivity analysis is needed to find the source of heterogeneity. If there is no obvious clinical heterogeneity, the random effect model is selected for combination: If the heterogeneity is large, do not conduct meta-analysis, only descriptive research.

Subgroup analysis: There was no subgroup analysis in this study.

Sensitivity analysis: When p < 0.1 and I2 > 50%, there is heterogeneity among studies. Sensitivity analysis is needed to find the source of heterogeneity. If there is no obvious clinical heterogeneity, the random effect model is selected for combination; If the heterogeneity is large, not to conduct meta-analysis, only using descriptive research.

Country(ies) involved: China.

Keywords: Moxibustion; COVID - 19; Psychological condition; Meta-analysis.

Contributions of each author: Author 1 - YiHao Zhao. Author 2 - DongBin Zhang. Author 3 - Xingyan Ma.