INPLASY PROTOCOL

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Conflicts of interest:
None declared.

The effectiveness and associated factors of online psychotherapy on COVID-19 related distress: A systematic review and meta-analysis

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Review question / Objective: **This study aims to estimate the effectiveness and associated factors of online psychological interventions on COVID-19-related psychological distress.**
Condition being studied: **The COVID-19 pandemic arises a constellation of issues that challenge people's mental health, including social isolation, worries of infection of the self and significant others, financial difficulties, and uncertainties (Brooks et al. 2020). Elevated psychiatric symptoms are found in people with COVID-19 and preexisted mental illnesses, health care workers, and the general population (Vindegaard and Benros 2020). Thus, effective mental health services are essential and urgent under such a circumstance. This meta-analysis aims to estimate the effectiveness of online psychological intervention of COVID-19 related distress in randomized controlled trials and explore associated influential factors.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 July 2022 and was last updated on 17 July 2022 (registration number INPLASY202270081).

INTRODUCTION

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METHODS

Search strategy: Multi-databases will be searched, including PubMed, EBSCO, ProQuest, and Cochrane. Hand-picking will also be utilized for relevant papers. Searching queries: (online OR remote OR internet):ti,ab,kw AND ("covid-19" or "coronavirus" or "2019-ncov" or "sars-cov-2" or "cov-19"):ti,ab,kw AND (“therap*” or “counsel*” or “intervention” or “treatment”):ti,ab,kw AND (psycho):ti,ab,kw (Word variations have been searched).

Participant or population: Adult participants who perceived COVID-19 related distress, without preexisted mental condition or severe physical illnesses.

Intervention: Online psychological interventions which are empirically valid.

Comparator: Waitlist or routine care control.

Study designs to be included: Randomized controlled trial.

Eligibility criteria: Inclusion criteria: 1. used validated quantitative measures to examine the effects of the interventions on depressive mood, anxiety, perceived psychological stress or distress, and sleep quality; 2. administered interventions to people aged 18 years old or above; 3. delivered psychological interventions online through digital devices; 4. used a randomized controlled design; and 5. administered to people who perceived stress or distress related to Covid-19. Exclusion criteria included: 1. The intervention was not aimed at treating COVID-19 related psychological conditions; 2. The study did not provide sufficient data to calculate the effect sizes.

Information sources: Multiple electronic databases (e.g., PubMed, EBSCO, ProQuest, and Cochrane); Hand-picked processes will be applied to find the references in relevant articles and reviews. In addition, emails will be sent to authors who have registered potentially relevant protocols to detect completed but not yet published papers.

Main outcome(s): Post-treatment measures of depression or anxiety or stress or quality of sleep.

Quality assessment / Risk of bias analysis: The risk of bias assessment will be conducted by two authors independently, and disagreement will be resolved through discussion. Criteria provided in Review Manager (version 5.4.1) will be applied: random sequence generation and allocation concealment, blinding of participants and outcomes assessment, incomplete outcome data, selective reporting, and other biases.

Strategy of data synthesis: Data will be analyzed with Cochrane RevMan (version 5.4.1). The effect of online psychological intervention compared to inactive control will be assessed using the standardized mean difference (SMD) at post-treatment as the outcome. For each comparison between a treated and a control group, effect sizes will be calculated per outcome variable (i.e., depression, anxiety, stress, and quality of sleep).

Subgroup analysis: Criterions of subgroups include types of intervention (e.g., CBT, mindfulness), guidance (therapist-guided or self-help), and duration and frequency of interventions. Subgroup analyses will be conducted to explore the effect differences of online psychological intervention on the outcomes.

Sensitivity analysis: Sensitivity analyses will be conducted to test the stability of the results by assessing whether study quality

is related to outcome by comparing the low-risk studies in risk of bias assessment.

Language: English.

Country(ies) involved: China.

Keywords: psychotherapy, COVID-19, online, effectiveness, settings, telepsychology, telepsychiatry.

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