INPLASY PROTOCOL

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Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
None declared.

Psychological distress among healthcare providers during COVID-19 in Asia: systematic review and meta-analysis

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Review question / Objective: **1. What is the prevalence of psychological distress (depression, anxiety, stress, burnout, fear and resilience) among healthcare providers in Asia during covid-19? 2. What are the factors associated with psychological distress (depression, anxiety, stress, burnout, fear and resilience) among healthcare providers in Asia during covid-19?**
Main outcome(s): **Prevalence/ percentages of depression, anxiety, stress, burnout, fear and resilience among healthcare providers in Asia during COVID-19.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 April 2021 and was last updated on 08 April 2021 (registration number INPLASY202140043).

INTRODUCTION

Review question / Objective: **1. What is the prevalence of psychological distress (depression, anxiety, stress, burnout, fear and resilience) among healthcare providers in Asia during covid-19? 2. What are the factors associated with psychological distress (depression, anxiety, stress, burnout, fear and resilience) among healthcare providers in Asia during covid-19?**

Rationale: **There is no systematic and meta-analysis on this title in Asia.**

Condition being studied: **Introduction In late December 2019, an unexplained mass pneumonia cases occurred in Wuhan, China, which attracted the attention of the**

health authorities. The causative pathogen was quickly identified and confirmed as a new coronavirus (2010-nCov). This is a highly contagious disease as it had been declared a public health emergency and become an ongoing 2019–20 coronavirus pandemic To date, there are 221 countries affected by coronavirus disease (COVID-19) by 8th of February, 105,394,301 cases were confirmed to be positive for COVID-19, and 2,302,302 of them succumb to this disease (reference: COVID-19 CORONAVIRUS PANDEMIC (https://ftp.worldometers.info/coronavirus/) and WHO Coronavirus Disease (COVID-19) Dashboard (https://covid19.who.int/) People were fear due to the nature of transmission and the rapid spread within the communities, especially there is too many asymptomatic carriers in the surrounding. The World Health Organization has distributed guidelines to manage the biomedical and psychological problem related to COVID-19. This covers patients, relatives, caregivers, and particularly health care providers who are taking care of the patients with COVID-19. Public health emergency situation like the Covid-19 pandemic is a typically stressful condition and would have a huge impact on the well-being of health care providers especially primary care physician who works at the front line. They may be vulnerable to experiencing higher than normal levels of stress resulting from the extra work-related burden on top of usual family responsibilities. In the case of highly contagious infectious diseases like COVID19, they are most likely worry that they are either being infected or infecting their own family members. Their fear and worry could be intensified as they might contact those asymptomatic COVID patients without having proper protection. Furthermore, some of the patients may not reveal their travelling history to the HCPs. Fears and anxieties may peak during significant events. These can include when the HCPs has a contact with a patient who diagnosed with Covid-19 and needs to go for nasopharyngeal swabbing or when there is a fatality secondary to Covid-19 among HCPs. The worst scenario is the demand for health care services may increase simultaneously with manpower shortages which causing extra stress on HCPs. Stigmatization towards HCPs may happen at the community level and further dampen their social networking and support. The prolonged stress and disruptions to normal patterns of life may lead to a lasting effect on the overall well-being and cause them to suffer from burnout. The consequence of mental health problems of health care providers would impair their decision making and jeopardise patients' care and safety. Some of the healthcare providers are given support and start to be resilient in this situation and develop their own coping strategies. Considering the uncertainty regarding the prevalence of burnout, fear and resilience among healthcare providers during COVID-19, the present study will be conducted to determine the prevalence of Burnout, fear and resilience among healthcare providers during COVID-19.

METHODS

Search strategy: #1 depression OR anxiety OR stress OR burnout, professional OR fatigue OR fear OR resilience, psychological OR adjustment; #2 healthcare workers OR medical staff OR healthcare professionals OR medical personnel; #3 coronavirus OR SARS-COV-2 OR COVID-19; #4 Asia; Final search strategy is #1 AND #2 AND #3 AND #4.

Participant or population: Healthcare providers (doctors, nurses, pharmacists, midwives, paramedics, physical therapists, technicians, personnel support workers, and community health workers) from Asia.

Intervention: Exposure to a pandemic (e.g., coronavirus like COVID-19, or SARS-COV-2).

Comparator: None.

Study designs to be included: We will accept those data from cross-sectional study, cohort, case-control and intervention studies (baseline data only).

Eligibility criteria: 1. Studies will be eligible for inclusion if they report prevalence and/

or factors associated with burnout, fear and resilience among healthcare providers during COVID-19 2. Studies must be published in English. 3. Studies must be peer reviewed Both diagnostic and screening measures for burnout, fear and resilience will be accepted, as were data obtained using self-reported questionnaire or medical record.

Information sources: Pubmed, Medline, Cinahl and Scopus.

Main outcome(s): Prevalence/ percentages of depression, anxiety, stress, burnout, fear and resilience among healthcare providers in Asia during COVID-19.

Additional outcome(s): The common factors associated with depression, anxiety, stress, burnout, fear and resilience among healthcare providers in Asia during COVID-19.

Data management: We will select the studies for analysis based on PRISMA guidelines. Studies identified using the search strategies will be transferred into software such as Endnote (version 19) for screening, removing duplication and data extraction. Two reviewers will screen the title and abstract to determine the eligibility of the studies. For those potentially eligible articles, further screening on the full text will be conducted to determine the availability of data and whether the articles fulfil the inclusion criteria (types of studies, participants, setting and outcomes). We will use excel to perform data extraction. We will extract those data from the selected studies: author, publication year, country of the study, design and method, sample size, total number of patients with burnout, fear and resilience, a diagnostic method for burnout, fear and resilience, socio-demographic and any clinical characteristics of the respondents. We will also perform quality appraisal using the STROBE checklist to grade included studies.

Quality assessment / Risk of bias analysis: We will use assess the risk of bias of the studies based on the STROBE checklist. Two reviewers will independently assess all the studies that fulfil the inclusion after the full-text screening. Any disagreement will be resolved by a discussion with a third reviewer.

Strategy of data synthesis: We aim to synthesis the available evidence in the form of a meta-analysis. We will give a formal narrative overview if the quantitative analysis is unsuitable due to the heterogeneity and/or a small number of studies. We will use I^2 inconsistency statistic to assess the heterogeneity between the studies. An I^2 value greater than or equal to 50% will be categorized as evidence of substantial levels of heterogeneity. We will use the fixed-effect model if the I^2 value is less than 50% and we will apply the random-effect model if the I^2 value is more or equal to 50%. We will report the result as a percentage and 95% confidence intervals.

Subgroup analysis: We plan to perform subgroup analysis to look for the differences among profession (physician, nurses allied health), age group, gender, country and study design that potentially explain the heterogeneity that occurs among the study.

Sensitivity analysis: We plan to perform sensitivity analysis to look for the differences among profession (physician, nurses allied health), age group, gender, country and study design that potentially explain the heterogeneity that occurs among the study.

Language: English.

Country(ies) involved: Malaysia.

Other relevant information: Not related.

Keywords: Depression, anxiety, stress, burnout, fear, resilience, healthcare providers,COVID-19, systematic review, meta-analysis, Asia.

Dissemination plans: We will publish the finding in citation indexed journal.

Contributions of each author:

Author 1 - Siew Mooi Ching - Draft the protocol, perform the search and data extraction, analyse the result, write the manuscript and approve for submission.
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