INPLASY PROTOCOL

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Support: **None.**

Review Stage at time of this submission: **Formal screening of search results against eligibility criteria.**

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The prevalence of academic burnout among Chinese medical students: a meta-analysis and systematic review protocol

Mu, M[1]; He, Y[2]; Zhang, B[3]; Cai, Z[4]; Zeng, W[5].

Review question / Objective: To explore the prevalence of academic burnout among Chinese medical students and find its potential factors.

Condition being studied: Burnout is a global psychological problem that affects people in the medical field. Burnout may diminish medical students' determination to be doctors, reduce their ability to construct an understanding of the basis of medicine and cause psychological problems, even suicide. There are important knowledge gaps in the prevalence of burnout in Chinese medical students. A meta-analysis will be performed to assess burnout and discover potential influencing factors.

INTRODUCTION

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METHODS

Participant or population: Participants were Chinese medical students suffering from burnout. Degree limit including higher vocational education, junior college students, undergraduates, postgraduates (masters or doctors) and students who were receiving resident training would be included

Intervention: Burnout was measured by validated tools.

Comparator: NA.

Study designs to be included: Cross-sectional studies published before 23 April 2020

Eligibility criteria: 1.P: Participants were Chinese medical students suffering from burnout. Degree limit including higher vocational education, junior college students, undergraduates, postgraduates (masters or doctors) and students who were receiving resident training would be included; 2.I: Burnout was measured by validated tools; 3.C: Contrast is not applicable in our study; 4.O: Studies that contains the prevalence data with concrete number of participants suffering from burnout or its 3 dimensions; 5. S: Cross-sectional studies published before 23 April 2020.

Information sources: Relevant citations will be identified by searching general databases (PubMed, Embase, the Cochrane Library and Web of Science) and Chinese databases, including China National Knowledge Infrastructure (CNKI), WanFang, VIP and CBM (Sinomed) from inception to 23 April 2020 with no language restrictions.

Main outcome(s): The primary outcome is the total prevalence of student burnout.

Quality assessment / Risk of bias analysis: For a meta-analysis of prevalence research, the Joanna Briggs Institute (JBI) critical appraisal checklist for studies reporting prevalence data will be used to evaluate the quality of the studies. This tool assesses studies according to nine items with four answers: yes, no, unclear and not applicable. If the answer is yes, then the question is scored as one. Other answers are scored as zero. Total quality scores ≤ 4, 5-7 and ≥ 8 are regarded as low, moderate and high quality, respectively. Evaluation of study quality will be performed by two investigators (MMC and CZL), and disagreements will be settled by a third assessor (ZQ). The number of included studies will be more than 10 according to our preliminary search and rough screening, and publication bias will be assessed using Begg's test and Egger's test.

Strategy of data synthesis: The aggregate prevalence of emotional exhaustion, depersonalization and personal accomplishment will be pooled in STATA 12.0 software (STATA Corporation, College Station, TX). The between-study heterogeneities will be assessed, and $P50\%$ will indicate significant heterogeneity. If significant heterogeneity exists, the fixed effects model will be used for the meta-analysis. If not, a random-effects model will be used, and the reasons for the heterogeneity will be examined. Variance stabilizing transformations will be applied as appropriate to the row data before meta-analysis.

Subgroup analysis: Because there may be diversity in the measurement tools and participant characteristics in the eligible investigations, for example, degree designations may not be parallel, subtype analysis will be used to detect the sources of heterogeneity.

Sensibility analysis: Sensitivity analyses will be used to test the stability of the pooled

prevalence by excluding studies one at a time.

Country(ies) involved: China.

Keywords: Burnout; China; Medical students.

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