

INPLASY PROTOCOL

To cite: Jiang et al. Influencing factors related to internet addiction among medical students in China: a protocol of systematic review and meta-analysis. *Inplasy protocol* 202110099. doi: 10.37766/inplasy2021.1.0099

Received: 27 January 2021

Published: 27 January 2021

Corresponding author:
Jing Gao

gaojing@cdutcm.edu.cn

Author Affiliation:
Chengdu University of TCM

Support: Science and
Technology Bureau.

**Review Stage at time of this
submission:** Preliminary
searches.

Conflicts of interest:
None declared.

Influencing factors related to internet addiction among medical students in China: a protocol of systematic review and meta-analysis

Jiang, XL¹; Gao, J²; Zheng, YP³.

Review question / Objective: Through meta-analysis, systematically evaluate the related influencing factors of internet addiction among Chinese medical students, and provide a scientific basis for formulating their related prevention and control measures.

Condition being studied: Internet addiction can be defined as overuse of the Internet leading to impairment of an individual's psychological state (both mental and emotional), as well as their scholastic or occupational and social interactions. Its symptoms generally include preoccupation, loss of control, high tolerance, withdrawal, craving, impairment of function and a reduction in the ability to make decision. In China, with the popularization of the Internet and the increasing number of Internet users, Internet addiction has become increasingly prominent as a social problem. Among the people who use the Internet, college students have the largest proportion. Especially, medical students are under more pressure than other majors, if they are addicted to the Internet, it will have a poor effect on their future study and work. there are many studies have conducted relevant discussions, but the conclusions are not nearly the same, so our meta-analysis aims to comprehensively investigate the influencing factors associated with internet addiction among Chinese medical Students. and to provide a scientific basis for formulating their related prevention and control measures.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 January 2021 and was last updated on 27 January 2021 (registration number INPLASY202110099).

INTRODUCTION

Review question / Objective: Through meta-analysis, systematically evaluate the

related influencing factors of internet addiction among Chinese medical students, and provide a scientific basis for

formulating their related prevention and control measures.

Condition being studied: Internet addiction can be defined as overuse of the Internet leading to impairment of an individual's psychological state (both mental and emotional), as well as their scholastic or occupational and social interactions. Its symptoms generally include preoccupation, loss of control, high tolerance, withdrawal, craving, impairment of function and a reduction in the ability to make decision. In China, with the popularization of the Internet and the increasing number of Internet users, Internet addiction has become increasingly prominent as a social problem. Among the people who use the Internet, college students have the largest proportion. Especially, medical students are under more pressure than other majors, if they are addicted to the Internet, it will have a poor effect on their future study and work. There are many studies have conducted relevant discussions, but the conclusions are not nearly the same, so our meta-analysis aims to comprehensively investigate the influencing factors associated with internet addiction among Chinese medical Students. and to provide a scientific basis for formulating their related prevention and control measures.

METHODS

Participant or population: The Chinese medical students with internet addiction (as diagnosed using Young's Internet Addiction Diagnostic Questionnaire (YDQ) or the Chen Internet Addiction Scale (CIAS)).

Intervention: Risk factors of internet addiction among Chinese medical students.

Comparator: The Chinese medical students without internet addiction.

Study designs to be included: Case-control studies, cohort studies, and cross-sectional surveys.

Eligibility criteria: Inclusion criteria included: (1) Studies published from January 2010 to December 2020; (2) Research types include case-control studies, cohort studies, and cross-sectional surveys; (3) the research objects are full-time Chinese medical students; (4) At least one risk factor has been reported. Exclusion criteria: (1) articles unrelated to the purpose of the study; (2) valid data cannot be extracted from the study; (3) data is incomplete or repeated publication.

Information sources: Articles related to influencing factors of Internet addiction among Chinese medical students between 2010 and 2020 will be retrieved from the Chinese periodical data-bases of Chinese Biomedical Literature Database (CBM), China National Knowledge Infrastructure (CNKI), VIP Database, WanFang Database and from PubMed, the Cochrane Library, Web of Science, Embase. We search the following keywords: "Internet addition", "Medical Students OR Medical graduate OR medical profession", "risk factors OR influencing factors OR population at risk", "China OR Chinese". Languages will be restricted to English and Chinese. In addition, relevant articles will be manually searched.

Main outcome(s): The influencing factors related to internet addiction among Chinese medical students such as family, school and sociodemography.

Quality assessment / Risk of bias analysis: According to selection criteria, data extraction will be completed independently by two researchers. Disagreements will be solved by discussion or a third reviewer. For missing information, we will contact the correspondent authors for completed data. The following information will extract from the literature: first author, year of publication, investigation time and area, sampling method, sample size, gender composition, and the scale used for Internet addition, influencing factors. Evaluation tools recommended by the well-established Newcastle-Ottawa scale (NOS) based on three categories, and a total

score of at least 6 was considered high quality.

Strategy of data synthesis: Stata 11.0 software will be used for the analysis. The odds ratio (OR), standard mean difference (SMD) and 95% confidence interval (CI) used as the effect indexes for the counting data and measurement data, respectively. The heterogeneity among the included results will be analyzed using Q test, and the heterogeneity will quantitatively determined by combining with I². When there is significant statistical heterogeneity among the studies ($P < 0.1$, $I^2 > 50\%$), the combined effect size of the random effect model was adopted, Otherwise, the fixed effect model be adopted.

Subgroup analysis: If there is heterogeneity, we will conduct a subgroup analysis, we will take an analysis of subgroup according to characteristic of participants, such as race, study location, gender.

Sensitivity analysis: The sensitivity analyses will be conducted by changing the statistical analysis model.

Language: English.

Country(ies) involved: China.

Keywords: China; Internet addiction; Influencing factors; Medical students; Meta-analysis.

Contributions of each author:

Author 1 - Xiaolin Jiang - Contributed to search databases, screen articles and draft the manuscript.

Author 2 - Jing Gao - Contributed to search related studies and analysis statistics.

Author 3 - Yuping Zheng - Contributed to literature retrieval and risk assessment of bias.