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Author Affiliation:The First Affiliated Hospital of
Chongqing Medical University.**ADMINISTRATIVE INFORMATION****Support** - Joint project of Chongqing Health Commission and Science and Technology Bureau.**Review Stage at time of this submission** - Completed but not published.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202480031**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 August 2024 and was last updated on 06 August 2024.**INTRODUCTION**

Review question / Objective 1. What is the current status of educational research on order-oriented medical students in rural China; 2. What is the quality of educational research in this field? 3. What are the effect evaluation methods and indicators for research in this field?

Condition being studied The free training program for rural order-directed medical students (referred to as "targeted medical students") is a significant measure to alleviate the shortage of grassroots doctors in rural areas of China and to enhance the overall level of the grassroots medical and health workforce. Previous studies have lacked comprehensive analysis of the current state, methods, and effectiveness evaluations of educational research on targeted medical students across various institutions in China.

METHODS

Search strategy Literature on the training of targeted medical students published from January 1, 2010, to December 31, 2023, was retrieved from seven Chinese and English databases: CNKI, Wanfang, VIP, PubScholar, PubMed, Web of Science, and Cochrane Library. Two researchers independently screened the literature and extracted data according to inclusion and exclusion criteria. Strategy such as PUNMED: (("oriented"[Title/Abstract] OR "compulsory"[Title/Abstract]) AND ("medical graduate"[Title/Abstract] OR "medical students"[Title/Abstract] OR "generalpractitioners"[Title/Abstract] OR "primary care physicians"[Title/Abstract]) AND ("ruralarea"[Title/Abstract] OR "remote area"[Title/Abstract]) AND ("education"[Title/Abstract] OR "training"[Title/Abstract])) AND (2010/1/1:2023/12/31[pdat]).

Participant or population Inclusion criteria: (1) Literature researching the implementation process and effect evaluation of free training programs for

rural order-oriented medical students; (2) Training programs include institutional education, standardized training of residents, and continuing medical education; (3) The type of study is random Empirical research such as controlled trials and other controlled trials; (4) Research conducted within China.

Exclusion criteria: (1) Research that only targets three-year college-oriented medical students; (2) Research that only focuses on theoretical content such as the introduction and descriptive comments of the training program and does not include specific evaluation indicators; or Report relevant evaluation indicators without describing the training program or curriculum construction content in detail; (3) Duplicate documents, that is, the same document is published in different journals, or the same research content is reported in both journals and dissertations, or is included in both journals and dissertations at the same time. Research on one or more databases (only documents published in authoritative core journals will be retained during screening); (4) Non-scientific research documents, including government gazettes, government work reports, meeting minutes, news, news interviews, etc.; (5) Overview Literature, including systematic review, meta-analysis, descriptive review, etc.; (6) Literature where the full text cannot be obtained.

Intervention Not applicable.

Comparator Not applicable.

Study designs to be included The type of study is random Empirical research such as controlled trials and other controlled trials.

Eligibility criteria Not involving.

Information sources Seven Chinese and English databases: CNKI, Wanfang, VIP, PubScholar, PubMed, Web of Science, and Cochrane Library.

Main outcome(s) A total of 37 papers were included, 36 in Chinese and 1 in English. Among the research designs, non-randomized controlled designs accounted for the largest proportion (46%), followed by randomized controlled designs (24%), single-group post-tests (22%), and single-group pre-and post-tests (8%). 97% of the studies focused on undergraduate education. The research topics included curriculum adjustment (89%), changes in teaching methods (81%), and the construction of new training models (8%). Of these, 3 studies (8%) on model construction and 7 studies (19%) on curriculum specifically targeted courses for rural, grassroots, or general practice.

Outcome evaluations mainly focused on students' assessments of teaching (70%) and the improvement of knowledge and skills after teaching (86%), with less coverage of actual behavior changes (3%) and benefits to patients and medical institutions (3%).

Quality assessment / Risk of bias analysis The quality of the literature was evaluated and comprehensively analyzed using MERSQI (The Medical Education Research Study Quality Instrument) and NOS-E (The Newcastle-Ottawa Scale-Education).

Strategy of data synthesis Descriptive analysis was used to summarize and analyze the results.

Subgroup analysis Not involving.

Sensitivity analysis Not involving.

Country(ies) involved China.

Keywords Rural-oriented Medical Students; Educational research; Training model; Kirkpatrick's four-level model of evaluation; Systematic review.

Contributions of each author

Author 1 - Xintao Huang - Huang Xintao is responsible for the conception and design of the article, the collection and organization of research data, and the writing of the paper.

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Author 2 - Chen Mo are responsible for the collection and organization of research data, and paper revision.

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