



BMJ Open Effect and outcome of equity, diversity and inclusion programs in healthcare institutions: a systematic review protocol

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ABSTRACT

Background Equity, diversity and inclusion (EDI) in the healthcare field are crucial in meeting the healthcare needs of a progressively diverse society. In fact, a diverse healthcare workforce enables culturally sensitive care, promotes health equity and enhances the understanding of various needs and patients' viewpoints, potentially resulting in more effective patient treatment and improved patient outcomes. Despite this, information on the effectiveness of policies or programmes promoting EDI in health institutions is scarce. The objective of this systematic review is to assess the effects and outcomes of EDI programmes in healthcare institutions.

Methods We will conduct Preferred Reporting Items for Systematic Reviews and Meta-Analyses-compliant systematic review of studies on EDI programmes and describe their effects and outcomes in healthcare institutions. We will search PubMed, Scopus, Web of Science, CINAHL and PsycINFO databases. Selected studies will include randomised control trials (RCTs), non-RCTs and cross-sectional studies published either in English or French. Quality appraisal of studies and a narrative synthesis of extracted data will be conducted as well as a meta-analysis if possible. The quality of evidence in this review will be assessed by the Grades of Recommendation, Assessment, Development and Evaluation.

Anticipated results We anticipate that this systematic review will reveal information on the effect of EDI programmes and their outcomes in healthcare institutions. We expect this information will provide insights that will lead to improvements in designing EDI policies and programmes in healthcare institutions.

Ethics and dissemination No ethical clearance is required for this study as no primary data will be collected. The final manuscript will be submitted to a journal for publication. In addition to this, the results of the study will also be disseminated through conference presentations to inform the research and clinical practice.

Review registration This protocol has been registered with the International Prospective Register of Systematic Reviews; registration number CRD42024502781.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Inclusion criteria are broad, involving both randomised controlled trials and observational studies.
- ⇒ Narrative synthesis and meta-analysis (if nature of literature permits) of the data will be conducted.
- ⇒ Study quality and risk of bias will be assessed using standard critical appraisal tools from the Joanna Briggs Institute Meta-Analysis of Statistical Assessment and Review Instrument.
- ⇒ Search algorithm was developed by an experienced librarian and customised to five large databases.
- ⇒ The scarcity of published studies on the effect of equity, diversity and inclusion programmes in healthcare institutions as well as issues related to publication bias and variations in methodological quality among the published studies may limit the certainty of the evidence of this systematic review.

BACKGROUND

Globally, the diversity of the world's population is increasing and this is accompanied by an increase in health inequities especially among the under-represented minority populations.^{1 2} To effectively manage healthcare disparities in the midst of this growing diversity, the promotion of equity, diversity and inclusion (EDI) in healthcare institutions has been highly recommended.^{3 4} In fact, EDI programmes are initiatives that measure and track progress within the organisations and are best suited to inform the organisation and address health disparities at the population level.⁵ Nonetheless, the healthcare workforce responsible for caring for a highly diverse array of patients is relatively homogeneous.⁶

For example, the US healthcare workforce in 2020 was comprised of more than 50% White, 20% Asian, 7% Black, less than 1% Hispanic and less than 1% Native American workers.^{1 6} Additionally, only 3.6% of medical

faculty in the USA are Black, 3.3% are Hispanic or Latino and 0.1% are Native Americans.⁷ Still in the USA, it has also been documented that two-thirds of physicians and surgeons are Christians, 14% are Jewish and less than 15% represent other religions.^{6,8} Furthermore, although more than half of the most graduating medical classes are females, only 5.5% of full professors and 26% of departmental chairs are female physicians.⁷ This lack of diversity in the healthcare workforce poses challenges for caring for diverse populations of patients, potentially leading to variable and often detrimental effects on patient outcomes, access to care and patient trust, as well as workplace experiences and employee retention.^{6,7}

Nevertheless, the evidence reveals that a diverse healthcare workforce enables culturally sensitive care, promotes health equity and enhances the understanding of various needs and patient viewpoints, resulting in more effective patient treatment and improved patient outcomes.⁹ Despite the increased attention on workforce diversity-related issues, organisational actions and inaction, structural racism and unequal opportunity throughout the education continuum continue to fuel unequal representation in healthcare institutions.⁷ Although EDI has been endorsed in healthcare and academic institutions, there is evidence that stepwise implementation of this endorsement has neither been extensively evaluated nor documented.^{10–14} Added to this, information on the effectiveness of policies or programmes promoting EDI in healthcare institutions is scarce. Therefore, the objective of this review is to assess the effects and outcomes of EDI programmes in healthcare institutions.

Research question

What are the effects and outcomes of EDI programmes in healthcare institutions?

METHODS

Study design

We will systematically review the studies that have assessed EDI programmes or policies in healthcare institutions. This review has been registered with the International Prospective Register of Systematic Reviews; registration number CRD42024502781. The review will be conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses criteria (online supplemental appendix 1).¹⁵

Inclusion criteria

Population

This review will include studies that assessed the effect of EDI programmes in healthcare institutions.

Intervention

This review will consider studies that evaluated any EDI programmes or policies, liaisons/committees in healthcare institutions.

Comparison

The effect of the interventions will be evaluated in comparison with before and after the implementation of EDI programmes interventions, or no interventions.

Outcomes

This review will consider studies that assessed the following outcome measures:

- ▶ Increased diversity in the workforce.
- ▶ Employee satisfaction.
- ▶ Employee retention.
- ▶ Patient satisfaction.
- ▶ Patient clinical outcomes.
- ▶ Institution performance.

Specifically, the outcomes will directly report the proportion of diversity among the workforce, the level of satisfaction of employees and patients, and the percentage of employees recruited and retained following the implementation of EDI programmes in healthcare institutions. Outcomes rating health institutions' effectiveness and efficiency and patient clinical outcomes (cure rate, patient recovery rate, readmission, mortality rate, etc.) following the implementation of EDI programmes will also be taken into consideration as measures of the effectiveness of EDI programmes.

Types of studies to be included

This review will include experimental study designs including randomised control trials, cohort and cross-sectional studies, qualitative studies, as well as before-and-after studies. Studies published either in English or French that have assessed the effect of EDI programmes in healthcare institutions will be included in this review.

Search strategy

This review will follow a three-step strategy to find studies conducted on the effect of EDI programmes. First, we will conduct an initial search in the PubMed database using an analysis of text words found in the title and abstract, and the index terms used to describe the article. Second, the identified keywords and index terms from the first step will be used to search for articles in other databases. Third, the reference list of selected studies from the first and second steps will be used to look for studies not found in the databases.

The databases that will be searched for this review will include PubMed, Scopus, Web of Science, CINAHL and PsycINFO.

The initial keywords used for the searches in the PubMed database included 'Equity', 'diversity', 'inclusion', 'healthcare facility', 'healthcare institution', 'hospital', 'health clinic', 'nursing home', 'university', 'faculty' (online supplemental appendix 2).

Screening and selection process

All the articles found in the search databases will be imported into the Covidence software for screening. Two reviewers will independently screen the titles and abstracts to identify the potentially relevant studies. Any

disagreements will be resolved through discussion. The same procedure will be repeated in screening the full text of studies retained after the title and abstract screening.

Assessment of methodological quality

Two independent reviewers will assess the methodological validity of the studies selected for retrieval prior to inclusion in this review. The assessment will be conducted using a standard critical appraisal tool from the Joanna Briggs Institute Meta-Analysis of Statistical Assessment and Review Instrument (JBI-MAStARI) (online supplemental appendix 3). Any disagreements between the two reviewers will be settled through discussion.

Data extraction

Data will be extracted from the selected studies independently by two reviewers, using a standardised data extraction tool from the JBI-MAStAR (online supplemental appendix 4). The extracted data will include specific details about the effect of EDI programmes, study institutions, study methods and outcomes significant to the review question. In the event of any missing data in a study, the corresponding author of that study will be contacted to provide the missing data.

Data synthesis

We plan to conduct both a narrative synthesis and random-effects meta-analysis if two or more studies with information permitting these analyses are included in the review. The meta-analysis will be conducted to identify EDI programmes with a significant impact on improving equity and diversity in healthcare institutions. For this analysis, we will first assess the statistical heterogeneity with I^2 , which indicates the percentage of the total variation across studies; where 0%–40% indicates low heterogeneity, 30%–60% indicates moderate heterogeneity, 50%–90% indicates substantial heterogeneity and 75%–100% indicates considerable heterogeneity. If there is substantial heterogeneity (75%), we will examine sources of heterogeneity through subgroup and sensitivity analyses. We will use χ^2 test to test the heterogeneity and consider $p < 0.05$ as statistically significant. We will select a fixed-effects model for significant homogeneous studies; otherwise, we will apply a random-effects model. We will summarise our outcomes using OR and 95% CI. We will consider an $OR < 1$ to indicate a lower rate of outcome (impact of EDI programme) among the group of healthcare institutions implementing a particular EDI programme. Publication bias will be assessed by visual inspections of funnel plots and Egger's test.

The narrative synthesis will involve a description of the EDI programmes and their impact on healthcare institutions. This synthesis will be structured by describing studies according to the type of EDI programme implemented, and the outcome. The findings will be presented in tables and figures where possible.

Confidence in cumulative evidence

The quality of evidence in this review will be assessed by the Grades of Recommendation, Assessment, Development and Evaluation.¹⁶

Ethics and dissemination

No ethical clearance is required for this study as no primary data will be collected. The study will strictly adhere to the procedures outlined in this protocol in reviewing published and unpublished material on the review topic. However, in case of any amendments to this protocol, the amendments will be notified and registered. The final manuscript will be submitted to a journal for publication. In addition to this, the results of the study will also be disseminated through conference presentations to inform research and clinical practice.

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