

# BMJ Open Protocol for scoping review on well-being among theatre nurses in large public hospitals in low-income and middle-income countries

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## ABSTRACT

**Introduction** Theatre nurses report higher levels of stress and burn-out due to the nature of their work environment. Workplace stress among nurses is associated with decreased well-being resulting in poor health outcomes for patients. However, evidence on well-being among nurses varies considerably, due to the multiple perspectives, definitions and focus on different aspects of well-being. Existing literature has not been consolidated to map out well-being concepts and instruments. In addition, due to limited research in low-income and middle-income countries, the most contextually relevant instruments for this context has not been identified. The aim of this scoping review is to map out existing literature on well-being, key concepts and instruments used to measure well-being among theatre nurses working in public hospitals in low-income and middle-income countries.

**Methods and analysis** A scoping review guided by the Joanna Briggs Institute's methodological approach will be used. PubMed, Scopus, Ebscohost, Web of Science, Emerald Insight, Informa World, Oxford Journals, ScienceDirect and Google scholar will be searched for literature published from 2000 to date. Reference lists of selected articles will also be reviewed. Two reviewers will conduct the screening of articles and data extraction independently and differences will be resolved through a discussion. Data analysis will be guided by both qualitative and quantitative methods.

The scoping review will take place from 1 May 2022 to 1 November 2022, completing the screening, data extraction and analysis phases.

**Ethics and dissemination** The study does not require ethical approval. Findings will be published and shared at events to raise awareness on the importance of monitoring well-being among theatre nurses as a strategy to improve surgical outcomes. The review could shed light on an instrument most suitable for low-income and middle-income contexts.

## INTRODUCTION

The interdependent relationship between well-being and quality of care among health professionals is widely acknowledged. Burn-out, a characteristic of poor well-being has been extensively reported among health professionals. A systematic review on

## Strengths and limitations of this study

- The identified databases host peer-reviewed articles, therefore, an extensive search will enable identification of the most relevant scientific evidence.
- A strategy to synthesise existing knowledge on well-being among theatre nurses in low-income and middle-income countries.
- A recognised strategy for mapping out research and knowledge gaps on well-being in the last two decades.
- The review will only include literature published since 2000 due to resource limitations.
- Only including texts in English language is a limitation of this scoping review.

burn-out among front-line primary health workers in low-income and middle-income countries reported high levels of burn-out among these workers<sup>1</sup> and similar findings were documented for a systematic review and meta analyses on burn-out among inpatient and outpatient healthcare providers in high-income countries.<sup>2</sup> Burn-out among health professionals negatively impacts patient care<sup>1</sup> and has been associated with medical errors.<sup>3</sup>

Work place stress has been singled out as a major cause of poor well-being among health professionals. Specific to nurses, decreased psychological well-being is associated with work place stress<sup>4 5</sup> and this is correlated with poor caring behaviours<sup>4</sup> that lead to unsatisfactory patient care and poor health outcomes.<sup>6</sup> There are variations in levels of stress experienced by nurses in different areas of care. In comparison to other departments, nurses in surgical wards report higher levels of stress and burn-out<sup>7</sup> due to the nature of their work environment. Working in the operating room requires high levels of overall cognitive functioning, physical endurance, emotional control and ability to handle exposure to other occupational risks.<sup>8 9</sup> This



pressure could have a significant impact on the well-being and quality of care among this category of personnel. For this review, theatre nurses are all qualified nurses registered with their professional body in the respective country, therefore, accountable for their practice while patients are in theatre. This includes scrub nurses, anaesthetic nurses, recovery nurses, operating room nurses and surgical nurses.

There is increasing attention to well-being among health professionals<sup>10</sup> due to impact on the level of care. Studies that explore well-being among nurses and impact on patient outcomes have predominantly been conducted in high-income countries with limited research in low-income and middle income countries.<sup>11</sup> For instance, the first large scale study exploring the work environment, quality of care and aspects of well-being among nurses in South Africa was conducted in 2013.<sup>12</sup> Assessing and monitoring the health and well-being of health personnel is important<sup>13</sup> to ensure improved patient outcomes.<sup>14</sup> The importance and urgency of this exercise has increased with the current COVID-19 pandemic and the impact on nurses in low-income and middle-income countries.

There are various definitions of the concept of well-being due to multiple perspectives and philosophical frameworks that inform the perspectives.<sup>15</sup> As a result, it is acknowledged that well-being is a complex construct.<sup>16</sup> For instance, well-being is defined as ‘the pursuit of personal aspirations and the development and exercise of human capabilities, within a context of mutual recognition, equality and interdependence’.<sup>5 17</sup> This definition foregrounds the role of context in attaining well-being. Another view of well-being is that it is a state of overall contentment with one’s physical and mental health, self-esteem, sense of belonging, personal and economic security, and opportunities for self-determination and meaningful occupation.<sup>17 18</sup> The relationship between what people do and their experience of well-being is evident in this definition. In this review, the authors note that well-being, wellness and health, could be considered synonymous but, although the terms are related, they are distinct. Well-being and wellness are components of health,<sup>19</sup> as the WHO<sup>20</sup> definition of health states that health is a state of well-being in different aspects of the person. Wellness is considered freedom from illness and encompasses prevention of ill health<sup>19 21</sup> (for a more robust unpacking of the term wellness, see Kirkland, 2014).

Existing evidence on well-being varies considerably, due to the various perspectives and focus on different aspects of well-being. In turn, there is a variety of instruments used for measuring well-being. However, a review of literature or meta-analysis on well-being and various tools used to assess well-being has not been reported in the last decade. This limits comparison of findings across studies and growth in scholarship in the area. In addition, education on well-being and development of strategies to improve well-being among theatre nurses could be lagging behind or focused on one aspect while neglecting

others. The aim of this review is therefore to map out existing literature on well-being, key concepts and instruments used to measure well-being among theatre nurses working in public hospitals in low-income and middle-income countries.

### Objectives

1. To identify and compare concepts used to refer to well-being in literature on low-income and middle-income countries.
2. To establish how well-being among theatre nurses in large public hospitals in low-income and middle-income countries is measured.

### METHODS

A scoping review methodology will be used. This method is suitable as it is a type of review method that is used to map existing evidence, and to map and clarify key concepts within an area of research.<sup>22–24</sup> This review will be guided by the Joanna Briggs Institute’s (JBI) methodological approach to conducting scoping reviews and two reviewers will conduct the review.<sup>22</sup> This approach has been refined from the original work by Arksey and O’Malley,<sup>24</sup> providing a guide that is systematic, rigorous and transparent, as well as tools for use, such as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart for scoping reviews.<sup>22</sup> As a result, the JBI approach has become the most widely recognised approach for this type of knowledge synthesis. The scoping review will take place from 1 May 2022 to 1 November 2022, completing the screening, data extraction and analysis phases.

### Refining the research question

The research question for this scoping review was developed using the PCC elements with ‘P’ denoting population, ‘C’, the concept and ‘C’, the context according to the JBI’s methodological approach to conducting scoping reviews,<sup>19</sup> as depicted in [table 1](#).

The elements outlined above enabled the authors to define the scope and focus of this proposed scoping review and the following research question was developed.

How is well-being described and measured for theatre nurses in large public hospitals in low-income and middle-income countries?

**Table 1** PCC elements

PCC elements		
P	Population	Theatre nurses
C	Concept	Well-being and measuring tools/instruments used
C	Context	Large public hospitals in low-income and middle-income countries

### Inclusion criteria

The PCC elements mentioned above were used to design the selection criteria and frame the search for relevant evidence. In addition, the following parameters were also applied:

- ▶ Types of evidence: primary research studies that adopted qualitative, quantitative or mixed methodologies. Reviews of all types with or without meta-analysis will be included.
- ▶ Language: Only studies published in English will be included as the reviewers only have access to full-text articles published in English and are proficient in English.
- ▶ Publication date: Studies published in the period of January 2000 to date.

### Search strategy

The search strategy in this review will follow a three-step search strategy as recommended by the JBI.<sup>22</sup> The assistance of a librarian was sought to refine the search strategy and a complete initial search strategy for PubMed is attached (online supplemental appendix 1). The librarian also provided guidance on databases that were most likely to index articles relevant to the topic and the search technique. The Cochrane Database and the JBI Evidence Synthesis were searched to establish whether a review had been conducted or was currently underway on this topic and no evidence was found.

### Sources of evidence

Databases that will be searched are PubMed/Medline, Scopus, Ebscohost, Web of Science, Emerald Insight, InformaWorld, Oxford Journals, ScienceDirect and Google scholar. In addition, reference lists of selected articles will also be reviewed to identify studies that are relevant to answering the research question as recommended by Peters and colleagues.<sup>22</sup>

The following search strategy will be used and Boolean operators modified accordingly for each database:

((theater nurse OR theater nurses OR theatre nurse OR theatre nurses OR surgical nurse OR surgical nurses)) OR (“Operating Room Nursing”[Mesh]) OR ((operating room nurse OR operating room nurses)) AND (((well-being OR “well being” OR wellbeing OR quality-of-life OR “quality of life”) OR (“Quality of Life”[Mesh]) AND ((tool OR tools OR measuring OR measurement OR measurements OR instrument OR instruments)))) AND (((state hospital OR state hospitals OR government hospital OR government hospitals OR public hospital OR public hospitals OR national hospital OR national hospitals)) OR (“Hospitals, State”[Mesh])) AND (((“Developing Countries”[Mesh])

An extensive MeSH terms list for low-income and middle-income countries keyword (online supplemental appendix 2) was provided by the librarian, and this was copied and pasted into searches without altering terms.

Search results were saved on respective databases and emailed to the first author. Endnote will be used as the reference manager.

The reviewers have access to full-text articles through their affiliation with the University and the second author is a member of the Royal Council of Nursing, which offers support to members on literature searches. Each reviewer will independently search for evidence on specific databases; Reviewer 1 will search Ebscohost, Scopus, Web of Science and Google scholar. Reviewer 2 will search PubMed, Emerald Insight, InformaWorld, Oxford Journals and ScienceDirect. The identified articles will be imported to Endnote for archiving and to enable deletion of duplicates. The reviewers will also document their detailed search strategy and results for each database using an Excel spreadsheet that will be designed by the reviewers to ensure uniformity of recording searches. This spreadsheet will capture the search terms used, the date the search was conducted and the results retrieved.

### Study selection

The initial screening of all articles retrieved will be done by each reviewer independently and any discrepancies will be resolved through a discussion. The title and abstract will be screened using the inclusion criteria above to determine eligibility of articles and reasons for excluding articles at this stage, will be documented.

The reviewers will then independently source full-text articles and those without full-text access will be excluded. The full-text articles will be read by each reviewer independently and decisions on their inclusion or exclusion documented. Excluded articles will be reread by both reviewers to ensure agreement on their exclusion. The PRISMA flow diagram (online supplemental appendix 3)<sup>25</sup> will be used to succinctly present the search and screening process.

### Data extraction

A data extraction tool based on the JBI<sup>22</sup> data extraction template (online supplemental appendix 4) will be developed. The fields for this instrument will include aspects of the inclusion criteria and the following information:

- ▶ Author(s).
- ▶ Title.
- ▶ Year of publication.
- ▶ Language of publication.
- ▶ Concept.
- ▶ Study design.
- ▶ Context of study.
- ▶ Sample.
- ▶ Data collection instrument/tool. Studies that report on well-being or an aspect of well-being will be included, but studies that report exclusively on mental health will not be included as their focus will be narrow.
- ▶ Key findings that relate to the scoping review question, including types of evidence retrieved and therefore research gaps that exist.



The reviewers will work together to pilot the tool on a selection of five full-text articles. The next step will be for the reviewers to continue the data extraction process independently. The extracted data from each reviewer will be consolidated into a single summary and disagreements will be resolved by rereading the particular article together and discussing the extraction to reach a consensus. Other information that is deemed relevant for meeting the study objectives and strengthening description of findings will also be included in the results summary.

#### Risk of bias assessment

In alignment with the JBI approach, establishing the risk of bias or critical appraisal of evidence is not required for a scoping review<sup>22</sup> therefore will not be conducted for this study.

#### Risk of searching bias

All studies selected will be those published in English language, therefore introducing a searching bias. The reviewers acknowledge that other studies written in other languages especially those published in low-income countries will not be included, because the reviewers are not competent in these languages.

#### Data analysis

The extracted data will be collated and described in a narrative summary in preparation for reporting the findings. Quantitative data extracted will be analysed using descriptive statistics namely arithmetic averages and possibly cross-tabulation if comparisons are needed. The summary will outline concepts used to refer to well-being, highlighting differences and similarities between them. In alignment with the objectives, a description of instruments used to measure well-being will be provided and their suitability for use in low-income and middle-income contexts discussed. The analysis will be a summary as the aim of a scoping review is to map out existing evidence, and not to necessarily assess the quality of the evidence or to synthesise findings.<sup>22 24</sup>

#### Presentation of findings

A table will be used to present the findings as capturing data in the table will enable comparison of concepts and instruments. A table, such as [table 2](#), will be used to capture information on the instruments.

In addition, information on the design of the instruments and the psychometric validation of the tool will be reported on.

**Table 2** Presentation of instruments

Name	Format	No of items	Domains/ aspects assessed	Where it was used

#### Ethics and dissemination

The study does not require ethical approval. The findings of this review will be published in peer-reviewed journals and presented at academic activities targeted at nurses to raise awareness on the importance of well-being among theatre nurses and impact on outcomes. The review could shed light on instruments that are most suitable for low-middle income contexts.

#### Patient and public involvement

No patient involved.

The public will not be involved in the planning, conducting or dissemination of the findings of the proposed review as the review maps out evidence intended for nursing personnel.

## DISCUSSION

### Implications

The findings of this scoping review will inform researchers and other decision makers on the concept of well-being among theatre nurses and aspects of well-being that are of concern could be identified. This information could be used by decision-makers to develop proactive plans to support theatre nurses' well-being. The findings could also be drawn on when planning curriculum and continued professional development activities for theatre nursing staff and students.

The findings on the instruments used to measure well-being could shed light on the range of available instruments, therefore, enabling researchers to identify instruments that are most suitable for low-income and middle-income countries. The discussion could explore the appropriateness of such instruments for contexts where there is great diversity in the population, therefore the nursing personnel.

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