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The Prevalence of Moral Sensitivity Among Nurses: A Systematic Review and Meta-Analysis Protocol

Abbas Heydari [1], Saeed Khayat Kakhki [2,*]

1. School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.
2. Student Research Committee, Mashhad University of Medical Sciences, Mashhad, Iran.

ABSTRACT

Background: Moral sensitivity is crucial in nursing ethics, significantly impacting patient care and decision-making. By recognizing ethical dilemmas, nurses provide compassionate, patient-centered care that improves outcomes. This review explores the levels of moral sensitivity among nurses and factors influencing its role, aiming to enhance ethical decision-making and standards in nursing. **Methods:** This systematic review will follow the Joanna Briggs Institute methodology and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A comprehensive search will be conducted across multiple databases, including PubMed, Web of Science, Scopus, PsycINFO, Embase, and CINAHL, from January 1995 to April 2025. The search will not be restricted by study design or language. Studies on moral sensitivity scores in nursing practice, their levels, and the factors influencing them will be considered. The evidence synthesis will incorporate qualitative and quantitative analyses, with the results examined using descriptive statistics and thematic synthesis. The Theoretical Domains Framework will be utilised to categorise the factors influencing moral sensitivity. **Discussion:** This study highlights the significance of moral sensitivity in nurses for ethical decision-making and patient care. Findings will reveal factors influencing moral sensitivity in nursing and showcase strengths and gaps in practices and education. Ultimately, the data will inform targeted interventions and educational strategies aimed at enhancing moral sensitivity and improving patient outcomes. **Systematic review registration:** PROSPERO CRD420251010641. This protocol follows the PRISMA-P guidelines for reporting systematic reviews.

Keywords:

Moral Sensitivity, Ethical Sensitivity, Morale, Nurse.

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***Correspondence to: Saeed Khayat Kakhki,** PhD Student of Nursing, Student Research Committee, Mashhad University of Medical Sciences, Mashhad, Iran.
Email: Zistfrom@gmail.com
ORCID ID: 0000-0002-2739-7103

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INTRODUCTION

Moral sensitivity in nursing is a critical aspect of ethical practice that significantly influences patient care quality. This concept is defined as an individual's ability to recognise and interpret ethical issues within the framework of their professional duties and to respond appropriately to these issues (1, 2). It enables nurses to identify ethical dilemmas, consider the patient's vulnerability, predict the outcomes of decisions, and ultimately make sound moral choices (3). Numerous studies emphasise that nurses with high levels of moral sensitivity more easily navigate complex ethical dilemmas and ensure that patient well-being is prioritised while adhering to ethical standards in their practice (4, 5). Studies show that moral sensitivity is essential for improving the quality of care. For instance, a survey by Fouladi and colleagues found that higher moral sensitivity is associated with fewer instances of missed care, underscoring its impact on patient outcomes (5). Additionally, considering the broader implications of moral sensitivity in healthcare systems is vital. As Khorani and colleagues demonstrated, higher moral sensitivity can enhance a nurse's competence in ethical decision-making, ultimately leading to higher-quality care and improved outcomes for patients (6). Therefore, integrating moral sensitivity into nursing curricula and ongoing professional development could be a pivotal strategy for healthcare institutions striving for excellence in patient care.

Furthermore, studies have shown that nurses' moral sensitivity positively correlates with patient satisfaction. For example, findings indicate that nurses who demonstrate high moral sensitivity are more capable of providing sensitive and dignified care, which directly increases patient satisfaction (7, 8). This relationship highlights the importance of fostering moral sensitivity for ethical compliance and enhancing the overall quality of care. Moreover, influencing components of moral sensitivity, such as empathy, also play a crucial role in nursing ethical performance. Empathetic nurses are more engaged in person-centred care, which is inherently linked to moral sensitivity (9, 10)Consequently, moral sen-

sitivity is crucial in nursing practice, as it directly impacts patient care quality, ethical decision-making, and the overall morale of the workplace. Healthcare organisations should prioritise enhancing moral sensitivity through continuous education and supportive work environments. This investment benefits patients and promotes a more ethical and compassionate healthcare system.

There are various questionnaires available to measure moral sensitivity (11). The main questionnaire used in most studies, with other versions developed based on it, is the Moral Sensitivity Questionnaire (MSQ). This tool was developed to measure moral sensitivity in nursing practice. The primary dimensions of this questionnaire include interpersonal orientation, moral meaning structure, benevolence, moral autonomy, experience of ethical conflict, and trust in medical knowledge and principles of care. The MSQ was first developed by Kim Lützen and colleagues in 1995 in Sweden (12) and later revised by Kim Lützen in 2006 (13). The original version of the questionnaire includes 30 items related to moral sensitivity, scored on a Likert scale from 1 (strongly agree) to 6 (strongly disagree), with a minimum total score of 30 and a maximum score of 180 (15). The revised version of the questionnaire includes three dimensions—moral burden, moral power, and moral responsibility assessed through 9 items with a Likert scale from 1 (strongly agree) to 6 (strongly disagree), with a minimum total score of 9 and a maximum of 54 (13).

Previous studies have investigated moral sensitivity among nurses, students, and healthcare providers, encompassing quantitative and qualitative designs. Research on nurses has advanced considerably, especially regarding its connection to patient outcomes and care behaviours. Nevertheless, gaps that could enhance the understanding and application of moral sensitivity in practice persist. Prevalence studies can aid in bridging these gaps by clarifying the levels of moral sensitivity across different nursing contexts and demographics. While existing studies have significantly contributed to understanding the effects of moral sensitivity, future studies on levels of moral sensitivity could provide deeper insights into its role.

This study conducts a systematic review and meta-analysis to ascertain the levels of moral sensitivity among nurses. It seeks to address knowledge gaps and provide dependable insights into moral sensitivity in nursing. To consider unique characteristics, subgroup analyses will investigate moral sensitivity in specific countries and contexts, such as emergency departments and intensive care units. Ultimately, this study could offer policy, educational, and support strategies to improve working conditions for nurses and enhance healthcare delivery across all settings.

METHODS AND ANALYSIS

PROTOCOL AND REGISTRATION

Since this study aims to determine the levels of moral sensitivity among nurses, a systematic review and meta-analysis approach will be employed. This review will follow established methodologies, including those outlined by the Joanna Briggs Institute, and will be reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) checklist (14). The protocol for this study will adhere to the guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols (PRISMA-P) (S1 File) (15).

This protocol is currently registered in the International Prospective Register of Systematic Reviews (PROSPERO) (registration number: CRD420251010641). Any necessary modifications to this protocol will be made during the study's execution. If any changes occur, they will be reported to PROSPERO and explicitly stated in the final version of the article prior to publication.

SEARCH STRATEGY AND INFORMATION SOURCES

Implementing the current study will entail the utilization of reputable databases, which include PubMed, Web of Science, Scopus, PsycINFO, Embase, and CINAHL. Studies published within these databases from January 1995 to April 2025 will be scrutinized utilizing a predetermined search strategy to identify pertinent evidence. To mitigate publication bias, grey literature sources will also be explored to uncover studies relevant to this review. In addition, to ensure that no relevant literature is overlooked, we will also examine the reference lists of included studies and those from pertinent systematic reviews. The search strategy appropriate to each database is comprehensively detailed in the S2 File.

ELIGIBILITY CRITERIA

The research question was formulated using the PIECOT framework as follows: Population (P): Nurses, Intervention (I): None, Exposure (E): Moral sensitivity, Comparison (C): None

Outcome (O): Levels of moral sensitivity, Time (T): From 1995 to 2025 (16, 17).

The aim of this systematic review encompasses all primary studies involving nurses. The inclusion criteria do not impose gender restrictions; consequently, this systematic review will consider any primary research that includes at least one male or female participant (or both genders). Given the global nature of this study, primary studies from all regions of the world will be included. Furthermore, participants in primary studies will not be limited by ethnicity or race. If a primary research involves any ethnic group, it will be included in this review. However, the inclusion criteria are as follows:

- High-quality articles using JBI (Joanna Briggs Institute) tools for descriptive-analytical studies and the Newcastle-Ottawa Scale (NOS) for observational studies (case-control and cohort studies)
- Studies published in English or other languages
- Descriptive-analytical or observational study designs
- Studies focused on moral sensitivity in nurses
- Studies with full text available

The exclusion criteria for this study are as follows:

- If a study has no full text available, the corresponding author will be contacted via email. The study will be excluded if there is no response within two weeks.
- Studies on moral sensitivity in nursing students

Selection of sources of evidence

Google Sheets will manage the articles identified during the search process. Two reviewers will eliminate duplicates. Subse-

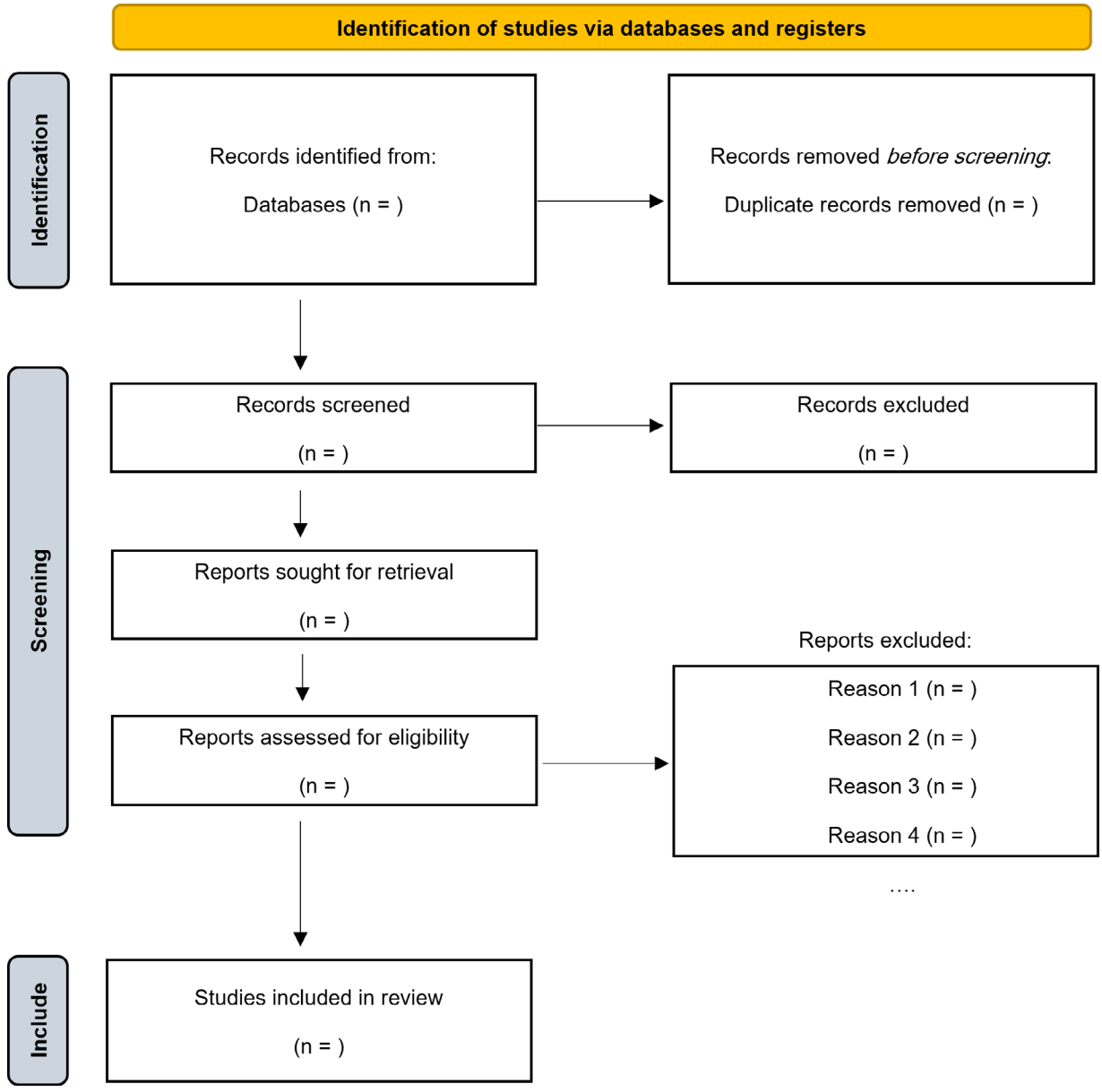
quently, two independent reviewers will evaluate each abstract to ascertain whether a full-text article review is necessary. A third reviewer will settle any disagreements between the two reviewers. The full texts of potentially eligible studies will be retrieved, reviewed, and assessed for final inclusion by two reviewers, who will consult with one another if required. Following PRISMA guidelines, a flowchart will illustrate the study selection process. Databases such as ProQuest, WHO, CDC, medRxiv, and Research Square will be utilised to review grey literature and unpublished studies. The AACODS checklist (Authority, Accuracy, Coverage, Objectivity, Date, Significance) will also be employed to evaluate these studies. The selection process will be depicted in a flowchart (S1 Fig 1).

DATA EXTRACTION

Two independent reviewers will conduct the study selection and data extraction process, with a third reviewer addressing any disagreements. The data extraction form will encompass the following details: the first author's name, country, population (nurses), age, sample size, name of the tool used, gender, educational levels, and the mean score of moral sensitivity. The sample chart of data items to be abstracted from each study is provided in an S3 file.

Quality and Risk of Bias Assessment

This phase will also involve two independent reviewers, with any discrepancies resolved by a third reviewer. The methodological quality of the evidence will be assessed using the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) approach (18, 19). All studies will be assessed using the JBI (Joana Briggs Institute) tool, which is designed explicitly for prevalence and observational studies, but will be applied here for assessing the quality of included studies. Based on the final scores,



S1 Fig 1. PRISMA 2020 flow diagram for the identification, screening, and inclusion of studies in this review.

quality analysis will be performed through subgroup analysis.

DATA ANALYSIS

R software and its associated packages will be used to calculate the pooled mean scores of moral sensitivity with their 95% confidence intervals. The I^2 statistic will be applied to assess heterogeneity, with values greater than 50% indicating substantial heterogeneity. The Random-Effects Model will be adopted to account for expected variability across studies.

Subgroup analyses will be conducted based on population characteristics, country, measurement tools, gender, educational level, and study quality to explore potential sources of heterogeneity.

In addition, meta-regression will be performed to evaluate the impact of continuous moderators (e.g., age) on moral sensitivity levels. Standardized Mean Differences (SMD) will be applied when combining results from studies that have used different instruments or scoring versions, ensuring comparability of findings.

The final results will be presented using pooled estimates with 95% confidence intervals, forest plots to visually summarize effect sizes, and heterogeneity statistics (I^2). Funnel plots and Egger's test will be applied to examine potential publication bias. In addition, sensitivity analyses will be conducted to evaluate the robustness of the findings.

STATUS AND TIMELINE OF THE STUDY

In the current study, several preliminary steps have already been completed, including pilot work, formal searching and study identification. Based on our current progress, the study timeline is as follows:

- Participant recruitment is expected to be completed within one month from the publication of this protocol.
- Data collection will be completed within one month following the recruitment phase.
- The study is expected to be fully completed, and results will be available within nine months from the publication of this protocol.

This timeline will enable us to conduct the study efficiently while adhering to the proposed schedule.

DISCUSSION

Moral sensitivity in nursing plays a vital role in ensuring ethical practice and improving the quality of patient care. Nurses' ability to recognise and address ethical dilemmas is crucial in providing compassionate, patient-centred care, which ultimately enhances patient outcomes and ensures adherence to ethical standards (1, 2). This concept not only facilitates ethical decision-making but also promotes the consideration of patients' vulnerability, the prediction of the outcomes of decisions, and the making of ethically sound choices (1, 3). High moral sensitivity enables nurses to navigate complex ethical challenges, prioritising patient well-being and consistently upholding ethical standards in practice (5).

However, despite its significance, the levels of moral sensitivity among nurses and its impact on clinical practice remains underexplored. Understanding the levels of moral sensitivity in nursing is crucial for improving patient care and supporting the professional development of nurses (3). The growing complexity of healthcare environments, the increasing diversity of patient populations, and the demands of modern medical practice make it essential to explore the role of moral sensitivity in nursing more comprehensively. Numerous studies have shown the importance of moral sensitivity for enhancing care quality, yet many gaps remain regarding how it can be effectively integrated into nursing education and practice (7, 8).

This systematic review addresses gaps by synthesising evidence on moral sensitivity among nurses. It rigorously analyses existing studies to map current knowledge and identify factors influencing moral sensitivity in nursing. The findings will develop strategies for enhancing ethical decision-making and promoting a more ethically sound healthcare system. Furthermore, insights will aid in designing educational programs and professional development to foster higher moral sensitivity, ultimately enhancing patient care quality.

The comprehensive review methodology adheres to high standards, including studies from various healthcare settings, ensuring broad applicability. It will explore determinants of moral sensitivity, such as gender, education, and culture, assessing their impact on ethical decisions. This study lays a strong foundation for future research and informs policies to improve moral sensitivity in nursing practice by addressing literature gaps.

To ensure methodological transparency and scientific rigor, the final review will comprehensively report pooled estimates, confidence intervals, heterogeneity measures, forest and funnel plots, and the results of sensitivity analyses. This approach will guarantee a robust synthesis of the available evidence and strengthen the applicability of the findings.

CONCLUSION

This study emphasizes the importance of understanding the levels of moral sensitivity among nurses, which is crucial in ensuring ethical decision-making and enhancing patient care. The findings of this systematic review will provide valuable insights into the factors that influence moral sensitivity in nursing practice. We aim to highlight the strengths and gaps in current practices and education by synthesising existing evidence. Ultimately, the data gathered from this review will inform the development of targeted interventions and educational strategies that can enhance moral sensitivity, ensuring improved nursing practice and patient outcomes.

ABBREVIATIONS

MSQ; Moral Sensitivity Questionnaire, GRADE; Grading of Recommendations, Assessment, Development, and Evaluation, SMD; Standardized Mean Difference, Prospero; Protocols in the International Prospective Register of Systematic Reviews, PRISMA-P; The Preferred Reporting Items for Systematic Reviews and Meta-Analysis for Protocols 2020. JBI; Joanna Briggs Institute.

SUPPORTING INFORMATION

S1 File. The PRISMA-P checklist for this systematic review protocol.

S 1 Figure 1. PRISMA 2020 flow diagram for the identification,

screening, and inclusion of studies in this review.

S2 File. Details of Search Strategy for each database.

S3 File. The sample chart of data items to be extracted from included study

CONFLICT OF INTRESETS

All authors have no any conflict of interest.

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Ethics declarations: This systematic review protocol outlines our approach to exploring the levels of moral sensitivity among nurses and its impact on nursing practice. Although systematic reviews of published data generally do not require ethical approval, according to the policies of Mashhad University of Medical Sciences, all research projects including secondary analyses must be registered with the institutional Ethics Committee. Accordingly, this study has obtained ethical approval from the Ethics Committee of Mashhad University of Medical Sciences (Approval code: IR.MUMS.NURSE.REC.1404.018, dated April 21, 2025). The research team remains fully committed to adhering to ethical principles throughout the study. The findings of this review will be published in a peer-reviewed journal and presented at relevant academic conferences. Additionally, the results will be shared with healthcare professionals, administrators, and policymakers to inform future strategies to improve moral sensitivity in nursing practice.

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