

**Prediction models for compassion fatigue in nurses:
A protocol for systematic review and critical appraisal**

INPLASY202530051

doi: 10.37766/inplasy2025.3.0051

Received: 12 March 2025

Published: 12 March 2025

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ADMINISTRATIVE INFORMATION**Support** - None.**Review Stage at time of this submission** - The review has not yet started.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202530051**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 March 2025 and was last updated on 12 March 2025.**INTRODUCTION**

Review question / Objective The purpose of this systematic review is to assess Prediction models for compassion fatigue in nurses based on a comprehensive literature review.

Condition being studied Compassion fatigue refers to a phenomenon in which healthcare professionals gradually lose emotional empathy and experience emotional exhaustion after prolonged exposure to patients' suffering, stress, and trauma. Nurse compassion fatigue is a widespread occupational health crisis in healthcare systems, particularly prevalent in high-pressure departments (e.g., emergency rooms, ICUs) and developing countries. It manifests as emotional depletion, diminished empathetic capacity, and triggers chain reactions such as deteriorating physical and mental health among nurses, reduced quality of care, and workforce attrition. Its development is influenced by multiple factors, including individual traits, work environments with

high emotional labor demands, and sociocultural pressures. Existing research exhibits inconsistent conclusions due to variations in measurement tools, cultural disparities, and sample biases. Through a preliminary literature review, we found that while some scholars have investigated predictive models for nurse compassion fatigue, their findings remain divergent.

METHODS**Participant or population** Nurses.**Intervention** Not Applicable.**Comparator** Not Applicable.**Study designs to be included** Unrestricted.

Eligibility criteria Inclusion and exclusion criteria are categorized by population, index prediction model, comparative model, outcomes to be predicated, timing and setting (PICOTS). The year of publication is restricted from database

establishment to 2025 and there were no restrictions regarding the language of the article.

Information sources Web of Science, PubMed and The Cochrane Library will be been comprehensive searched. Given China's extensive research on dialysis, we will search the following Chinese databases: China National Knowledge Infrastructure to2025.

Main outcome(s) Compassion fatigue.

Additional outcome(s) Not Applicable.

Data management Retrieved studies will be imported into Endnote reference manager software. (Version X8.2, Clarivate Analytics, Philadelphia, USA. Available at <https://endnote.com/>) Duplicate records will be identified and excluded using a systematic, rigorous and reproducible method utilising a sequential combination of fields including author, year, title, journal and pages.

Two review authors will independently extract data on methods, population, index prediction model, comparative model, outcomes to be predicated, timing and setting, using a preformulated data collection form.

Quality assessment / Risk of bias analysis The corresponding assessment tools were used according to the types of included studies. Disagreements will be resolved by discussion or by involving another reviewer.

Strategy of data synthesis Not Applicable.

Subgroup analysis Not Applicable.

Sensitivity analysis Not Applicable.

Country(ies) involved China.

Keywords Compassion fatigue, Nurse, Prediction Models, Systematic Review.

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