



RESEARCH PROPOSAL

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Table of Contents

1. Title	2
2. Prevalence of the problem	2
3. Introduction.....	2
4. Research methodology	4
5. Implication of research	7
6. Plan of Work and Time Schedule	7
References.....	9

1. Title

“Assessing the role of nurse staffing levels in patient safety and clinical outcomes in NHS hospitals”.

2. Prevalence of the problem

Lack of sufficient nurses in the NHS hospitals of the UK is a big problem. An analysis reveals that nursing shortages continue to be witnessed in acute care units. In England, the percentage of vacant nursing posts stands at 6.5. Lack of nurses will lead to diminished quality of care and increased incidents that are likely to occur (NHS, 2025). Research indicates that a reduction in the number of registered nurses is fully connected to poor patient outcomes (Lukewich *et al.* 2022). A meta-analysis of numerous studies has discovered that an increased number of registered nurses always indicates lower deaths in hospitals (Papazian *et al.* 2023). One UK study reported that on a day having low nursing staff, there were higher odds of death of a patient by 7.9% relative to those days when there was sufficient nursing staff. Besides deaths, a shortage of nurses results in increased falls, delayed care, readmission, or increased stays (NIHR, 2025). Thus, evidence reveals that the lack of nurses is a massive and prevalent issue in NHS hospitals: the shortage of nurses and the associated lack of patient care and poor patient outcomes. It has been determined that in NHS hospitals nurses have faced several issues such as lack of satisfaction and poor collaboration contributing to staffing problems. Such staffing issues make problems in clinical outcomes such as missed care, burnout, and mortality, dissatisfaction among patients and poor quality of healthcare services. Several clinical outcomes might also reduce patients' safety in NHS hospitals. Thus it can be said that nurse staffing level is closely related with patients' safety and clinical outcomes.

3. Introduction

3.1 Background

Retention of sufficient nurses in NHS hospitals is a major issue that negatively impacts patient outcomes and results. According to official figures, as of March 31, 2024, approximately 7.5% of registered nursing positions were vacant; that is, there were 31,294 unfilled positions (NHS, 2025). This implies that there are always staffing shortfalls in many wards, increasing workload and complicating the provision of regular quality care. Attempting to cover deficits with temporary or agency employees does not wholly eradicate the dangers that accrue from low permanent staffing (Saville *et al.* 2025). In a long-term analysis of 626,313 admissions in four acute Trusts, the overall risk of death rose when the RN staffing was low (hazard ratio 1.08) (NIHR, 2025). Although temporary employees were employed, the increased mortality remained above the normal range. Outside of death, low staffing of nurses contributes to increased medical errors, omitted or delayed care, and negative events (Abdelhadi *et al.* 2022). It has been identified that NHS hospitals have faced shortage of nurses that has increased from 2018 to 2022. Shortage of nurse has enhanced by about 4817 in 2022 from

previous years at NHS hospitals (Parliament, 2025). This might be due to Covid 19 outbreak and high level of stress during that time. Shortage of nurses in NHS hospitals might make issues in patients' outcomes which further make a negative effect on patients' safety.

An examination of the evidence globally indicates that an increased number of RN staffing will reduce avoidable deaths (Bennett *et al.* 2025). The bodies of professionals in the UK indicate that there is an apparent correlation between adequate registered nurses and safer care (Aiken *et al.* 2021). The issue of recruitment and retention continues to occur. According to a parliamentary committee report, around the NHS are 40,000 unfilled nursing posts (12% of the available positions) (Parliament, 2025). Because of the stress, burnout, and poor working conditions, which nurses increasingly complain about, staff losses increase (Alexander, 2024). The mismatch of the required and delivered nursing personnel is a significant problem as the level of health care in the ageing population grows and intricate demands persist. The combination of all these high vacancy numbers, employment of temporary workers, established associations with rising mortality levels and adverse incidences, and continued workforce instability demonstrates a considerable issue with significant implications. It urges the urgency to consider nurse staffing, safety, and outcomes in NHS hospitals, and how we might respond to safe staffing through the development of policy.

3.2 Rationale

Proper staffing of hospitals in terms of the number of nurses working in wards is imperative to successful and quality nurse-patient care. It has been demonstrated that the workforce of registered nurses (RNs) on a ward has a significant influence on patient outcomes, in particular, death and safety (Alanazi *et al.* 2022). It has been determined that over 27000 nurse staffing vacancies in NHS hospitals in 2024-2025 (Statista, 2025). Understaffing per day can increase the probability of death, exhibiting a cumulative, real effect of the staffing changes (Andel *et al.* 2022). The risk of death has been associated with a reduction of approximately 3% with the addition of only one hour of additional RN care to patients daily. In addition to death, low staffing has been associated with increased missed care, or those tasks that are not performed promptly, which reduces the element of safety, increases the chances of developing complications, and compromises the quality of care (NIHR, 2025). The NHS national reviews reveal that the combination of the staff skills and the number of staff per ward has a substantial impact on the safety and quality. The staffing issue is apparent and permanent since many acute hospitals still report nurse shortages (Hegarty *et al.* 2022). Failure to find a solution can continue to cause and sustain deaths and preventable injuries, and low-quality care (Shaban *et al.* 2025). Thus, the gap in studies on the impact of nurse staffing rates on the achievements in NHS hospitals requires robust research to establish the policy to secure adequate staffing and optimized care.

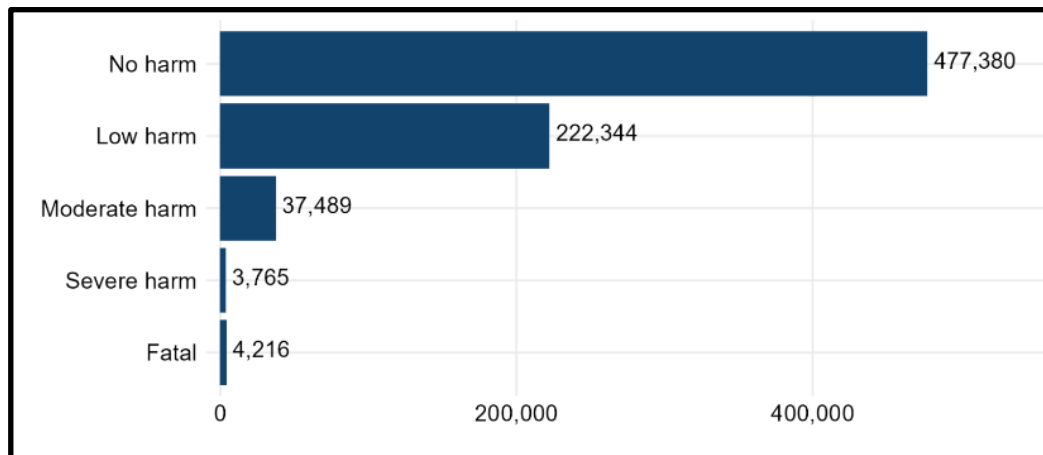


Figure 1: Information regarding patients' safety and outcomes in NHS hospitals
(Source: NHS, 2025)

3.3 Questions

Research question will be

What are the impacts of nurse staffing levels of patients' safety and clinical outcomes within NHS hospitals and identify key staffing factors that contribute to optimal patient care and system efficiency?

3.4 Aim

This research will aim to assess the role of nurse staffing levels in patient safety and clinical outcomes in NHS hospitals.

4. Research methodology

4.1 Research Design

The research will focus on a **qualitative research design** to determine the process through which nurse staffing levels can influence patients' safety and outcomes in NHS hospitals. This research design might be useful for the effective evaluation of the perception of nurses in terms of staffing pressure and safety-related outcomes. As per the view of Coleman (2022), qualitative research design is effective for maintaining the validity and reliability of the research, contributing to the development of understanding. This research design will be useful for getting the life experience of nurses in NHS hospitals, contributing to the development of knowledge about staffing levels and their effects on patients' safety and outcomes.

The research will select a **systematic review** of 12 articles to gather information about the role of nurse staffing levels on patients' safety and outcomes. This design will provide effective information about the research topic, which might help to meet the research questions. In the view of Ruslin *et al.* (2022), qualitative research design can provide relevant and necessary information about a research topic. This research design will provide effective information regarding nurse staffing levels, such as working conditions, teamwork dynamics, and patient-

care approaches that are associated with patients' safety and outcomes. Moreover, qualitative research design might be useful for the determination of patterns in terms of nurse staffing levels, which are connected with patients' safety and outcomes (Blume *et al.* 2021). The qualitative research design will be useful for gathering insight into the nurse staffing shortage, contributing to a better understanding of the effects of nurse staffing levels on patient safety and outcomes.

4.2 Search strategy

The study will be a systematic review; it will browse the literature, as opposed to enlisting individuals. The systematic review is useful for meta-analysis and the extraction of information that is relevant to a topic (Veginadu *et al.* 2022). To select the studies under focus, the research will apply purposive sampling to the studies examining the level of nurse staffing and its impact on patient safety in the NHS hospitals or other organizations. The search engine will primarily be Google Scholar since it has numerous peer-reviewed articles in the world. The research is going to limit the search with Boolean operators (AND, OR, NOT) to the levels of staffing, the indicators of safety, and the contexts of hospitals. The PRISMA model will be used, and it will begin by screening the titles and abstracts and then reading full papers based on the previously established inclusion and exclusion criteria. PRISMA framework is used as a methodological guideline for conducting an effective analysis and review (Sarkis-Onofre *et al.* 2021). These studies should be empirical, written in English, and published within the past decade and should deal with nurse staffing, patient safety outcomes, mortality, adverse events, or the quality of care.

The research will eliminate those studies that do not take place in a hospital, study of non-nursing staff, or studies that do not evaluate results. The study will pick up approximately a dozen good-quality relevant studies. Each of the studies will be rated based on the criteria of validity, clarity, and strength of evidence using a quality appraisal tool. The study shall extract information on the studies and cluster them into themes in an attempt to get common findings, discrepancies, and trend differences in approaches.

4.3 Data collection method

Data collection will be achieved through the systematic search of the literature and not new fieldwork. The process will be facilitated by the **PRISMA framework** in order to make it transparent, repeatable, and rigorous. The research will consider Google Scholar along with other databases such as PubMed, University Library and Website of NHS, as these are broadly accessible to peer-reviewed papers on the topics of public health, nursing, and health-care management. Falsehoods to structure and narrow the search will be blocked with **Boolean operators**. As stated by MacFarlane *et al.* (2022), Boolean operators can be considered as a searching approach for developing an effective systematic review. Such keywords as **nurse staffing, patient safety, clinical outcomes, mortality in hospitals, and**

NHS hospitals will be used along with **AND, OR, and NOT** to locate the studies that meet our objective. About 12 articles will be selected to conduct analysis and gather effective knowledge about the role of nurse staffing levels on patient safety and outcomes.

There will be three stages in the search. First, the study will go through titles and abstracts and eliminate irrelevant articles. Second, the researchers are going to read entire texts to verify whether they fit our inclusion criteria. Lastly, the study will select approximately a dozen studies with high method and content top-quality. Each study will be recorded on a standard data-collection sheet with a record of its author, geographic site, design, staffing interventions, patient outcomes, sample record, and major findings. It will store the data in a secure place and prepare it so that it can be analyzed through thematic synthesis. This approach is comprehensive to the subject matter and ensures there is cohesion in the evidence, and the overall quality of the review improves.

4.4 Data analysis method

The data of the twelve selected articles will be analyzed by means of thematic synthesis. About 4 of these will be prepared by considering research questions along with objectives and information from 12 collected articles. This is a suitable approach when it comes to a systematic review, which aims to comprehend multifaceted correlations between the conditions of staffing and patient safety. Thematic analysis is effective for reviewing qualitative information as it helps in the extraction of complex data (Naeem *et al.* 2023). Upon selection of the studies in type 1, the researcher will read them repeatedly in an attempt to become familiar with important ideas, designs, results, and interpretations. Authorship, setting, methods, as well as staffing variables, safety outcomes, and primary conclusions will be represented in a structured matrix.

The data will be coded inductively. The comparison of codes is a part of the studies to identify emerging patterns and variations that provide answers to the research questions (Bingham, 2023). Afterward, the research will cluster those codes into four broad themes of analysis in line with the objectives of the review.

The paper is going to weave themes into a story to demonstrate where the evidence comes across or not, and to reference findings to the objectives of the research. The study will take into account the quality of studies to give them a proper weight. This will offer a clear picture of the impact that nurse staffing has on patient safety within NHS contexts and will make it possible to make policy and practice recommendations.

4.5 Ethical considerations

The research will follow all ethical considerations for maintaining integrity and ethics. All information will be gathered from peer-reviewed articles and journals. In-text citations will be made properly to avoid plagiarism and maintain the integrity of this paper. Moreover, the research will consider the “Data Protection Act 2018” to maintain ethics in that study

(Legislation, 2025). All gathered information will not be used for any illegal activities and will only be used for academic purposes. All data will be stored in password-protected devices that might also reduce ethical risks. All gathered information will be handled transparently and will not be shared with a third party.

5. Implication of research

This systematic review will provide an effective understanding of the role of nurse staffing levels on patient safety and outcomes in NHS hospitals. Healthcare leaders and policymakers might implement effective approaches for the betterment of nurse staffing levels to enhance patients' safety and outcomes. The study also might be useful for developing a safety culture for nurses to develop patient-related outcomes. Developing a safety culture for nurses in hospitals is important for improving the quality of care to patients and increasing the availability of resources (da Costa Brás *et al.* 2023). Future research on a similar topic might also address gaps in this study that can improve future research quality. NHS hospitals can also make effective decisions in terms of nurse staffing levels to improve patients' safety and outcomes. The study will be useful for determination of nurse shortage in NHS hospitals that might be useful for mitigation of staffing issues. Hospitals might make effective policies and approaches for betterment of nurse staffing that can contributively to betterment of patients safety and outcomes.

6. Plan of Work and Time Schedule

Task	Duration	Timeframe
Final refinement of research aim and questions	1 week	Week 1
Systematic search using Boolean operators	2 weeks	Weeks 2–3
PRISMA screening and selection of 12 studies	2 weeks	Weeks 4–5
Data extraction and quality appraisal	2 weeks	Weeks 6–7
Thematic analysis and theme development	2 weeks	Weeks 8–9
Writing and structuring findings chapters	3 weeks	Weeks 10–12
Editing, proofreading, and final submission	4 week	Week 13-16

Table 1: plan of work and timeline

(Source: Created by author)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Task	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16
2	Finalise re	X															
3	Systematic search us	X	X														
4	PRISMA screening & article selection				X	X											
5	Data extraction & quality appraisal						X	X									
6	Thematic analysis & theme development								X	X							
7	Writing findings & discussion										X	X	X				
8	Editing, proofreading & submission													X	X	X	X
9																	
10																	

Figure 4: Gantt chart for timeline

(Source: Excel)

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