

Constructing A Conceptual Framework: Organizational Factors and Organizational Citizenship Behaviour among Nurses In-charge of Unit Management

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Abstract: In an era of globalization and rapid technological advancement, the healthcare sector is undergoing profound transformation and increasing complexity. Nursing services are pivotal in this evolving global landscape that must be connected to these dynamic changes. This study probes into the complex interplay of organizational factors and organizational citizenship behaviour, examining the mediating influence of unit management competencies and the moderating role of work experience within a comprehensive theoretical framework. The main purpose of this research is to establish a vigorous theoretical foundation for investigating the impact of organizational factors on organizational citizenship behavior, with specific attention on the mediating role played by unit management competencies among nurses in-charge. This study follows a systematic five-stage approach, commencing with a comprehensive literature review facilitated by the Zotero reference management system and VOS viewer software. This method identifies existing research gaps and clarifies empirical and theoretical associations between various variables. The results were that the blend of existing research led to the formulation of hypotheses and the creation of a refined conceptual framework. Empirical and theoretical evidence substantiated the relationships between four key organizational factors: burnout, work environment, organizational support, interpersonal relationships and organizational citizenship behaviour. This proposed conceptual framework has the potential to be empirically tested within healthcare institutions, thereby expanding our comprehension of these crucial dynamics. Subsequent research in this domain will contribute to a deeper understanding of these critical factors. The findings of this study hold significant implications for nurse managers, hospital administrators, and, ultimately, the welfare of clients and the community at large.

Keywords: Organizational Factors, Organizational Citizenship Behavior, Unit Management Competency, Nurses In-Charge

I. Introduction

The healthcare industry is undergoing substantial change, marked by complexity, volatility, and continuous transformation. Nursing services are vital in this evolving global context, and the nursing field must adapt to remain innovative and competitive. Nurse managers, registered nurses responsible for overseeing one or more distinct nursing service divisions, play a central role in this scenario [1]. Their management skills and civic responsibility demand comprehensive examination and discussion as organizations within the healthcare sector increasingly rely on nurse management. The nursing industry needs to scrutinize and modify its methodologies to elevate the standard of nursing care [2].

Healthcare delivery is fundamentally a global teamwork effort, and the nursing workforce is critical to this collaboration [2]. Nursing administration knowledge is pivotal in sustaining this teamwork, drawing from three primary sources: Nursing, Management, and Leadership theory [3]. Nurse managers (NMs) are responsible for maintaining this cohesive healthcare team, and their roles are pivotal in ensuring the effective and efficient delivery of patient care [4], [5]. To fulfil these roles, first-line nurse managers or ward managers require a higher level of management competency [6],[7]. These NMs, often called ward managers, ward sisters, or Grade I Nursing Officers, hold 24-hour responsibility for operational, fiscal, and performance accountability [8].

Research has shown that organizational support, work environment, and burnout significantly influence nurses' organizational citizenship behaviour (OCB) [8]. Organizational Support Theory, Social Exchange Theory, and Benner's Competency Theory elucidate the intricate relationships among these constructs and underscore their significance for employees.

In Sri Lanka, the Ministry of Health, Nutrition, and Indigenous Medicine governs the health sector, providing healthcare services to a population of 21.803 million [9]. Government hospitals constitute the largest and most secure healthcare providers in Sri Lanka, with most inpatient care facilities (643 curative care hospitals) falling within the government sector [9]. The health workforce in government hospitals includes doctors, nurses, paramedical staff, and other support staff categories [10].

Nursing in Sri Lanka is still a developing profession, with Ward Managers overseeing hospital units/wards at the micro level, known as Ward Sisters or Grade I Nursing Officers/First-line NMs [11]. These individuals require professional preparation to manage units at this micro-level effectively.

Ward Managers are the vital link between middle-level managers, staff nurses, and other hospital ward or unit staff. Their job description entails diverse roles and responsibilities [11]. However, there is a persistent shortage of Ward Managers in public hospitals, which has led to the appointment of experienced nurses to this position without prior preparation, termed as 'Nurses in-charge.' This common practice concerns their inadequate preparation for this crucial first-level management role. Furthermore, a preliminary study highlights discrepancies in the management competencies of nurses in-charge [8]. These individuals confront distinct organizational challenges, yet the adequacy of their work experience for this pivotal position still needs to be explored. Examining the perspectives of various higher and lower stakeholders regarding their roles, responsibilities, management competencies, and extra-role behaviour is essential for assessing their success as first-line nurse managers.

Therefore, this paper's overarching objective is to develop a comprehensive conceptual framework that integrates organizational factors, organizational citizenship behaviour, work experience, and unit management competencies within nursing management.

II. Preliminary Study

The researcher has already conducted a preliminary study (n =100) on nurses' perception of Unit Management Competencies (UMCs) of nurses in-charge. The analysis of this study revealed that 84% said that moderate-level competencies of nurses in-charge related to knowledge, decision-making skills, communication skills, and leadership competencies. Fifteen percent (15 %) said nurses in-charge have a higher level of competencies, and 1% responded said that nurses in-charge have poor competency. UMCs should be at a higher level because the nurse in-charge is the ideal nurse leader for nurses and the critical person who drives the unit toward achieving organizational goals by acting as a ward sister.

In addition, the researcher conducted a few interviews with junior nurses (5) who work under nurses in-charges, nurse managers who are immediate supervisors (5), and nurses in-charges (5). According to junior nurses' and nurse managers' points of view, nurses in-charges have poor knowledge and skills related to unit management, complaints from other team members, nurses' dissatisfaction, do not face issues properly and are weak in problem-solving, etc. However, few of them are managing units efficiently. From the nurses' in-charge end, they complained that they do not have any management or leadership training program related to unit management. However, NMs expect perfect unit management from them. Moreover, they disclosed how certain organizational factors affect them and their challenges with unit management. However, NMs do not pay attention to their grievances and do not value their service even if they perform extra roles.

III. Methodology

Five unique steps comprised an in-depth Systematic Literature Review (SLR) carried out as desk research. This research leveraged the Zotero reference management software, version 6, to carefully gather and analyze relevant literature [12].

The first stage involved an extensive review of the key concepts central to this study. These concepts were organizational factors, organizational citizenship behaviour, unit management competencies, and the work experience of nurses in charge. The second stage involved a thorough examination of numerous databases was conducted (Table 1).

This entailed recognizing and collecting a corpus of papers pertinent to the study questions. Furthermore, patterns in the distribution of these publications were found (Fig. 1). The third stage employed the PRISMA approach to summarize the screening process visually. This approach provided a clear and transparent depiction of the systematic review process.

Upon completion of the third stage, 162 pertinent articles remained for analysis. A quantitative bibliometric study was carried out in the fourth stage, employing an adapted approach from VOSviewer software, version 1.6.19[13]. This analysis aimed to uncover significant trends in the literature that would enable the mapping of key research areas. The last phase was a content analysis of each article within clusters defined by VOSviewer (Fig.2). This content analysis made identifying relationships between variables and critical themes easier. The VOSviewer application was instrumental in visualizing networks between investigators, organizations, publication years, and countries.

Visualization and Output

VOSviewer produced several essential visualizations, including networks of researchers, organizations, publication years, and countries. Furthermore, co-occurrence network visualizations were created using the term co-occurrence data retrieved by VOSviewer. This method divided key terms into clusters, allowing for the identification of themes[14]-[17].

The program was also helpful in creating visualizations showing the geographical distribution of publications by continent and country, as well as changes in article publication over time. Density visualizations were employed to identify gaps in empirical research by examining keyword co-occurrence.

Geographic Information Mapping

In addition to the analyses above, the researchers used geographic data from the examined publications to build a Google map. The Google map expanded the study's scope by giving the research findings a geographic dimension.

Overall, this methodology ensures that the literature review is rigorous and systematic, allowing it to spot important trends, relationships, and gaps in existing research.

IV. Results

Publisher Distribution

Most reviewed articles were sourced from Scopus databases, as illustrated in Table 1. Among the databases, the highest number of articles, 49 in total, were retrieved from Wiley Online Library. Thirty articles from PubMed followed this. Elsevier contributed 21 articles, Taylor & Francis 17, Academia.edu 9, Sage 8, ProQuest 8, Emerald 7, and a smaller number of articles were found in various other databases.

Table 1. The Publishers of The Reviewed Articles

Name of the publisher	Number of articles
Wiley Online Library	49
PubMed	30
Elsevier	21
Taylor & Francis	17
Academia.edu	9
Sage	8
ProQuest	8
Emerald	7
Springer	4
Mag online library	1
IOSR	1
JSTOR	2
Other	5
Total	162

Trend Analysis

Fig.1 provides a glimpse into published articles' trends from 2011 to 2021. Despite minor fluctuations, this field has a discernible upward trend in research activities. Notably, there were instances of decline in publications in 2013 and 2019.

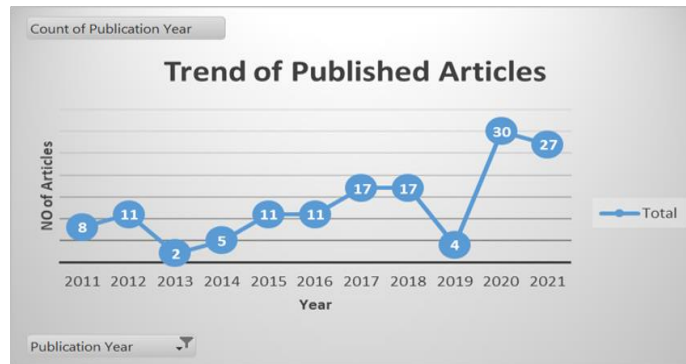


Fig. 1 The trend of the published articles over the time frame 2011–2021

Keyword Co-occurrence Network Visualization

A keyword co-occurrence network visualization known as the Temporal Co-World Map (Fig.2) was generated using VOSviewer. This map was developed by evaluating selected research papers through bibliometrics and visually representing the relationships between keywords. Each coloured node in the map represents a distinct cluster, and the connections between variables are discerned through cluster analysis.

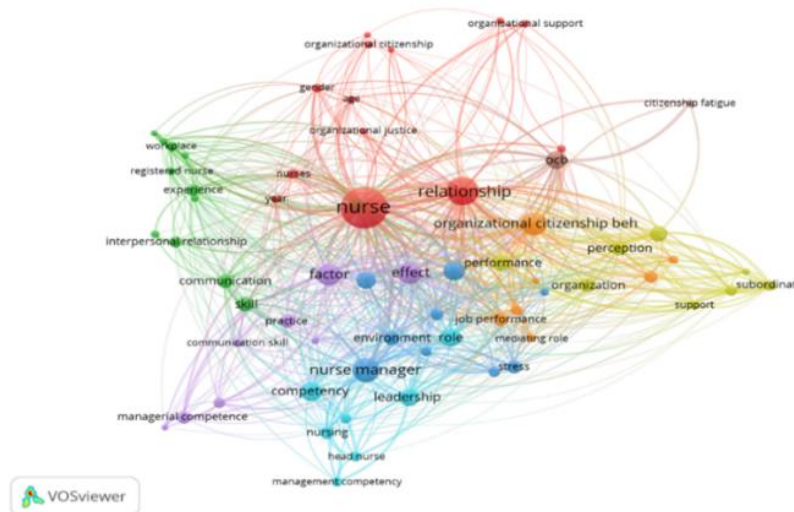


Fig.2 Temporal Co-World Map of the Literature

The size of each circular image indicates the importance of the associated keywords, with larger sizes signifying a higher frequency of appearance. Notable terms such as "perceived job burnout," "perceived organizational support," "perceived work environment," "perceived interpersonal relationships," "organizational citizenship behaviour," "unit management competencies", "nurses in-charge", "nurse managers" frequently recurred throughout the research period. Fig.2 also visually portrays the relationships among keywords through connecting lines.

Density Map of Keywords

The Density Map of keywords (Fig.3) serves to identify areas within the literature review where there is either an abundance of publications or a notable lack of knowledge. It elucidates the connections among keywords derived from the Temporal Co-World Map of the Literature.

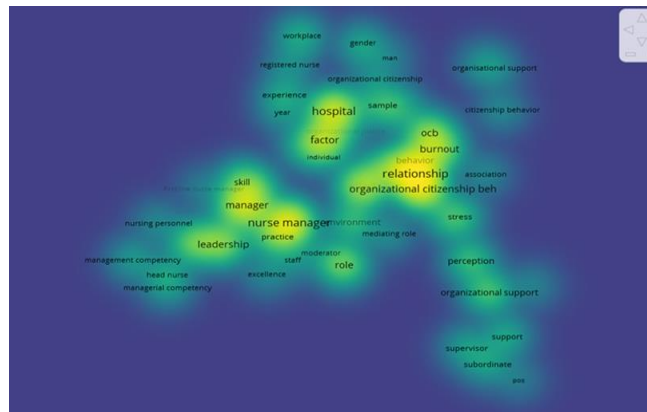


Fig.3 The Density Map of Keywords of the literature review

Global Publication Map

The researcher compiled a world map of publications (Fig.4), revealing a conspicuous absence of publications related to the research's focus in Sri Lanka. This visualization underscores the research gap in the Sri Lankan context.



Fig.4 The World Map of Publications

In conclusion, the central problem statement that guided this study was "What is the impact of organizational factors on organizational citizenship behavior with the mediating effect of unit management competencies and the moderating effect of work experience of nurses in-charge at government hospitals in the western province of Sri Lanka?". The presented results offer valuable insights into the literature landscape and research trends within this domain, highlighting established themes and areas that warrant further exploration.

V. Discussion

The researcher's comprehensive analysis of literature from Scopus databases spanning 2011-2022 has found several notable research gaps and areas requiring further exploration. These gaps can be categorized into four distinct categories:

Empirical Gap (Gap 1): The existing body of literature needs more empirical evidence concerning the factors influencing Organizational Citizenship Behavior (OCB) while considering the mediating effect of Unit Management Competencies (UMCs) among nurses in-charge. Despite the importance of this relationship, empirical studies on this topic still need to be expanded.

Knowledge Gap (Gap 2): Another significant gap pertains to the scarcity of research focusing on the influence of management competencies, burnout, work environment, interpersonal relationships, and perceived organizational support on the OCB of nurses in-charge. This knowledge gap is particularly noteworthy, given the potential impact of these factors on nursing practice and patient care.

Practice Gap (Gap 3): Over the past decades in the Sri Lankan nursing field, nurses in-charge have played a crucial role in filling the shortage of ward managers. However, there needs to be more studies investigating the management competencies or OCB of nurses in-charge. This practice gap reflects an area where research is urgently needed.

Theoretical Gap (Gap 4): Despite the utilization of several theories by previous scholars to explain relationships between constructs, no studies have been identified that test the combined application of Organizational Support Theory (OST), Benner's Competency Theory, and Social Exchange Theory within a single comprehensive model. Such testing could provide valuable insights into the complex interplay of these factors.

To gain a deeper understanding of the research field, it is essential to contextualize the relationships between keywords in network visualization. VOSviewer, by default, generates a two-dimensional network that employs association strength normalization. In this network, strongly linked terms are represented by closely positioned nodes, while weakly related keywords are depicted as more distant nodes. Cluster analysis conducted via VOSviewer yielded four prominent themes guiding future research. These themes encompassed organizational factors (e.g., job burnout, organizational support, work environment, interpersonal relationships), organizational citizenship behaviour, and management competencies of nurse managers and head nurses.

Fig. 4 highlights specific keywords against a yellow background, indicating insufficient research. These keywords, which include burnout, relationships, organizational citizenship behaviour, nurse management, practice, and skills, have been empirically tested but still need an established knowledge base. On the other hand, a lack of any nodes in a red background suggests no significant research presence in those areas. Keywords represented by nodes with a green background signify limited research, suggesting potential avenues for further exploration. In the nearly blue areas, critical terms indicate an empirical research gap.

This comprehensive analysis reveals considerable room for future research on OCB, organizational support, work environment, interpersonal relationships, head nurses, gender, work experience, and more. The proximity of points to blue regions indicates fewer nearby objects and lighter weights, further underscoring the empirical gap in these crucial areas. This analysis sets the stage for future research endeavours, encouraging scholars to delve into these unexplored domains to enrich our understanding of nursing management and organizational behaviour.

Conceptualization

Based on a preliminary study conducted among nurses in-charge at public hospitals in Sri Lanka, it has been established that four organizational factors hold particular relevance. These factors are perceived job burnout (PJB), perceived work environment (PWE), perceived organizational support (POS), and perceived interpersonal relationships (IPRs). Previous studies have also explored the relationships between these factors and organizational citizenship behaviour (OCB). The findings of VOSviewer bibliometric and cluster analyses further corroborated the significance of these four organizational factors [17].

Scholars have highlighted the need for further research to examine the relationships and interrelationships of these organizational factors with various outcomes for nurses. Consequently, OCB emerges as a consequential outcome to be explored. Thus, the first hypothesis of the study can be formulated between organizational factors and OCB as follows:

H₁: There is an impact of organizational factors on organizational citizenship behavior.

Organizational factors are variables within the organization that can influence nurse managers' leadership or managerial competence [19]. Drawing from existing research, there is a robust relationship between employee burnout and OCBs [20]. Specifically, reduced personal accomplishment was identified as the primary component of burnout contributing to OCB towards the organization (OCB-O). Further, a supportive work environment can mitigate job burnout, and a reduced burnout environment enhances nurse retention [21]. Thus, in light of the literature and identified research gaps, the first sub-hypothesis of the study can be established between perceived job burnout and OCB as follows:

H_{1a}: There is an impact of perceived job burnout on organizational citizenship behavior.

A healthy nurse work environment is characterized by security, empowerment, and fulfilment [1]. Hospital administration is pivotal in shaping the nursing work environment, influencing nurse-physician relationships, autonomy, organizational support, and control over the practice setting [21]. Hospital administrators should prioritize nurses' working conditions to cultivate respectful workplaces that enable nurses to concentrate on patient care [22]. Moreover, work-life balance and the work environment have been found to positively and significantly influence OCB concurrently [6]. Hence, the second sub-hypothesis of the study can be posited between the perceived work environment and OCB as follows:

H_{1b}: There is an impact of the perceived work environment on organizational citizenship behavior.

These hypotheses set the stage for investigating the intricate relationships between key organizational factors and organizational citizenship behavior among nurses in-charge within the healthcare context.

Previous studies have extensively explored the Organizational Support Theory (OST) in various contexts [23]-[25]. Additionally, the relationship between OST and Social Exchange Theory (SET) has been examined in the literature [26]-[28]. However, it is noteworthy that no studies have explored the relationships between OST and Benner's Competency Theory or between SET and Benner's Competency Theory. Consequently, understanding the interconnectedness of these three theories poses a challenge. To address this gap, the researcher has developed a diagrammatic representation to elucidate and describe the conceptual framework.

Social Exchange Theory plays a pivotal role in Perceived Organizational Support (POS) [29]. POS represents the most significant form of social exchange, assuming that employees with high POS will wholeheartedly contribute to the organization's success. In the current study, POS is considered an independent variable contributing to a positive relationship with the Organizational Citizenship Behavior (OCB) of nurses in charge.

Furthermore, the perception of organizational justice positively moderates the relationship between organizational support and OCB. Research has demonstrated that nurses' POS positively influences their OCB [26]. Although studies related to POS exist, these studies primarily focus on how POS impacts nurses' OCB. Therefore, with both empirical evidence and theoretical support, the researcher has formulated the following third sub-hypothesis to be tested:

H_{1c}: There is an impact of perceived organizational support on organizational citizenship behaviour.

Interpersonal relationships are pivotal in nurses performing their duties within clinical settings [30]. Further, investing in communication skills training for nurse supervisors yields substantial benefits in staff retention, patient care quality, and organizational success [31]. Various international studies have been conducted to understand nurses' perceived interpersonal relationships in diverse healthcare settings [8], [32]-[34]. While it was challenging to find direct relationships between interpersonal relationships and the OCB of nurses, nurse managers, or ward sisters, there may indeed be a connection between interpersonal relationships and OCB.

Additionally, the VOSviewer-generated Co-World Map visually represents the relationships among perceived job burnout (PJB), perceived work environment (PWE), perceived organizational support (POS), and perceived interpersonal relationships (PIRs). The density map highlights the scarcity of studies related to these areas.

This conceptualization forms the foundation for a comprehensive understanding of the complex relationships between these vital organizational factors and their influence on OCB among nurses in-charge in healthcare settings.

H_{1d}: There is an impact of perceived interpersonal relationships on organizational citizenship behaviour.

An investigation aimed to identify the relationship between nurse burnout and case manager competency. The study found that only three sub-competencies had a significant link with emotional exhaustion [35]. Creating conducive work conditions, which ultimately lead to improved nurse outcomes, such as reduced workplace rudeness, requires the leadership of nurse managers, nursing expertise, appropriate staffing, and adequate resources. Therefore, hospital administrators should focus on nurses' working conditions and create respectful workplaces that allow nurses to concentrate on patient care [22]. Additionally, nurse managers must enhance communication skills, as there is a positive association between patient and staff outcomes when leaders exhibit communication competencies [31].

According to Benner's five stages of competency development for nurses (novice, advanced beginner, competent, proficient, and expert), nurses gain expertise and knowledge through nursing practice, progressing through these stages. Even though Benner's work was conducted in the 1980s, today's nurses operate in a more complex healthcare environment, potentially delaying their development into competent professionals. Benner's framework can be applied to developing nurse managers' practice. Therefore, based on the existing literature and Benner's theory of competency development, it can be concluded that there is an impact between organizational factors and the Unit Management Competencies (UMCs) of nurses in-charge [36]. Building on these ideas, the second hypothesis is as follows:

H₂: There is an impact of organizational factors on the unit management competencies of nurses in-charge.

A recent study identified a significant relationship between ethical leadership in managers and OCB and between ethical climate and OCB. Additionally, the study found that transformational leadership does not significantly influence nurses OCB [37]. Moreover, OCB had a significant positive relationship with organizational trust and job satisfaction [38]. The practice of nurse managers can be developed using Benner's approach, considering factors such as clinical knowledge, leadership, and management skills when selecting nurse managers for managerial roles [39],[40]. Therefore, the following hypotheses are formulated:

H₃: There is an impact of the unit management competencies of nurses in-charge on organizational citizenship behavior.

H₄: There is a mediating effect of unit management competencies of nurses in-charge in the relationship between organizational factors and organizational citizenship behavior [41].

These hypotheses contribute to a deeper understanding of the intricate relationships between organizational factors, unit management competencies, and OCB among nurses in-charge in healthcare settings.

Finally, the following conceptual framework was developed based on the support of the literature and existing empirical evidence.

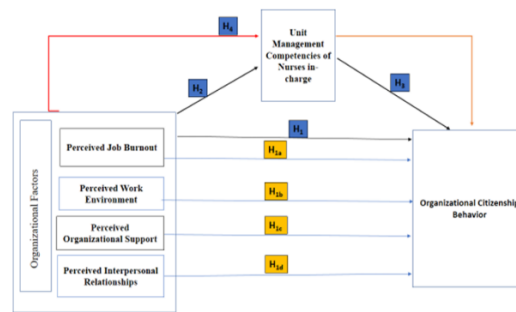


Fig.5 Proposed Conceptual Framework

VI. Conclusion

This paper has described constructing a conceptual framework that integrates organizational factors and OCB, considering the moderating effect of work experience and the mediating effect of unit management competencies of nurses in charge. Among the 162 publications chosen for the study, those published between 2011 and 2022 were the main emphasis. This method allowed for spotting publication trends and providing insightful information about areas that may be studied. The paper used recommended databases to find current publications relevant to the search terms.

The Cluster Analysis successfully revealed the links between the study's keywords. This systematic analysis enabled the identification of keywords-related clusters, shedding light on the critical research areas. Without red nodes, the density map indicates insufficient knowledge in these areas. Yellow nodes suggest that while some knowledge is available on critical areas such as OCB, burnout, and nurse managers, it is still insufficient. Conversely, the blue background highlights areas lacking knowledge, including management competency, organizational support, experience, work environment, and gender. Importantly, there is theoretical support for these relationships.

While some organizational factors, such as perceived job burnout, work environment, and organizational support, have been researched for their relationships with OCB, insufficient research remains to link them. Furthermore, establishing a relationship between organizational support and OCB and interpersonal relationships and OCB has proven challenging. Future research should consider delving into these areas.

VII. Limitations

This study had limitations of lack of previous research studies on some variables, only 162 articles were analyzed and time constraints.

Highlights

Current Knowledge

Perceived job burnout, perceived work environment, and perceived organizational support significantly correlate with OCB. Organizational Support Theory and Social Exchange Theory have been empirically tested with nurses [26]- [28].

What is New?

This model has incorporated perceived interpersonal relationships to test their relationship with OCB. The study proposes unit management competencies mediating organizational factors and UMCs.

Practical Significance

This study empirically tests the abovementioned theories in government hospitals. Nurse managers at middle and top levels, hospital administration, and nurse executives can gain insights into the factors affecting the OCB of nurses in-charge and the competencies required for successful nurses in-charge. It will assist in identifying the challenges they face and their perspectives on overcoming them. Moreover, it can inform the revision of existing policies to provide efficient and quality client services.

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