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STRATEGIES TO ALLEVIATE THE NURSING SHORTAGE

Literature Review

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<p>Abstract Addressing the nursing shortage for sustained change and assurance of an adequate supply of nurses is very crucial in the healthcare sector. This shortage alleviation is not solely nursing's issue and requires a collaborative effort among nursing leaders in practice and education, health care executives and government.</p> <p>This paper poses several ideas of strategies to alleviate the nursing shortage. The purpose of this study was to find out the strategies that have been adopted to alleviate nursing shortage. The aim is to contribute to nursing shortage management by deepening the knowledge of different strategies of alleviating nursing shortage.</p> <p>Literature review was performed as a method of the study. Ten (N=10) articles were included from Cinahl Complete, PubMed and Science Direct from 2018 to 2024. The data was analyzed by using inductive content analysis. This thesis was done in cooperation with Mehiläinen Hoivapalvelut Oy, Mainiokoti Kallavesi.</p> <p>The findings of these papers were synthesized into five (5) themes, namely, migration approach, model testing approach, mentorship approach, gender-based approach and leadership approach. While addressing nursing shortage can be multifaceted, some strategies have proven to be beneficial in guaranteeing the retention of nurses. Proper guidance and assistance, team building sessions, cultural integration, and communication skills have been demonstrated to be useful measures for retaining nurses. Language complexity and racism showed to be a challenge during cultural integration, also, staff and patient safety should be properly addressed when attempting to maximize the nurses available.</p> <p>Addressing the nurse shortage is a complex endeavour that necessitates an understanding of the intricate relationships among teams, mentors, policymakers, line managers, and employers, along with their individual experiences. These approaches could positively impact the retention of valued nursing staff if executed and planned well.</p>	
Keywords nursing, nursing shortage, strategies of alleviation, implementation, challenges,	

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1 INTRODUCTION

Nurses constitute the largest professional group in the healthcare system, significantly contributing to the provision of high-quality healthcare services and improving health outcomes for individuals, families, and communities. This is accomplished through preventive and curative measures. (Alameddine, Bauer, Richter, and Sousa-Poza; Drennan and Ross 2019.) Moreover, nurses are highly esteemed professionals and frontline healthcare workers within the global healthcare system. Their significance lies not only in providing effective and high-quality care but also in enhancing the efficiency of the healthcare system. Consequently, ensuring an appropriate number of nurses is imperative for fortifying the health system and advancing health coverage, as well as accomplishing all health-related objectives. (Aboshaiqah 2016; Alameddine et al. 2017.)

According to the World Health Organization (WHO), the global shortage of nurses was estimated at 5.9 million in 2018, and by 2030, the shortfall is projected to increase to 9 million if no significant interventions are made (WHO, 2020). The problem is not confined to any single region, rather, it is a pervasive issue that affects countries of varying income levels, affecting both high-income countries with aging workforces and burnout, and low- to middle-income countries struggling with inadequate training, migration of skilled nurses, and poor healthcare infrastructure (Liu, Luo, Haase, Guo, Wang, Liu, Xia, Liu, Yang, & Yang 2020).

According to the World Health Organization (WHO), an estimated 9 million additional nurses and midwives will be required by 2030 to meet the growing demands of healthcare and achieve Universal Health Coverage (UHC) (WHO, 2020). Addressing this shortage is vital for ensuring that healthcare systems remain resilient and capable of delivering essential services to all populations.

Efforts to alleviate the nursing shortage must focus on both immediate and long-term solutions. WHO's Global Strategic Directions for Nursing and Midwifery (2021–2025) emphasize strengthening nursing education, improving working conditions, and providing opportunities for professional growth and leadership. Additionally, governments and health organizations are encouraged to implement policies that enhance job satisfaction and retention, attract new nurses to the field, and optimize the use of existing healthcare workers. Through a coordinated global response, the shortage can be mitigated, ensuring a sustainable healthcare workforce for future generations (WHO, 2021.)

The literature review method was employed to implement the thesis, and content analysis was employed to analyse the data. This was accomplished in collaboration with Mehiläinen Hoivapalvelut Oy, Mainiokoti Kallavesi. The purpose of the study was to determine the strategies that have been adopted to alleviate the nursing shortage. The aim is to enhance the understanding of various strategies for addressing nursing shortages in order to contribute to the management of nursing shortages.

2 NURSING SHORTAGE

The nursing shortage is a condition in which the demand for qualified nursing professionals exceeds the available supply, resulting in staffing shortages and, ultimately, compromising the quality of healthcare delivery. There is a nursing shortage when the demand for competent nursing professionals exceeds the supply of qualified nurses. (Artificion, Guce, Ilagan, & Adarlo, 2020.) The health systems face a significant and multifaceted challenge in the form of a nursing shortage; as a result, the factors that contribute to this shortage differ from one country to another (Shamsi & Peyravi 2020).

2.1 Causes of nursing shortage

The nursing shortage is a complex and multifaceted issue driven by a combination of demographic, socioeconomic, organizational, and policy-related factors. Understanding these underlying causes is crucial for developing effective strategies to address the shortage. Theoretical frameworks from health workforce research, labor economics, and organizational behavior provide insights into the root causes of this global problem. (Shamsi & Peyravi 2020.) (Figure 1)

Demographic shifts and aging workforce The shifts in demographics within the nursing workforce represent a critical factor influencing the nursing shortage. A considerable segment of the nursing workforce in various high-income countries is nearing retirement age, leading to a gap that is not being sufficiently filled by the younger generations. According to Haddad, Annamaraju, Toney-Butler (2022), the aging of the nursing workforce is a critical issue, with many nurses expected to retire over the next decade, leading to a significant loss of experienced professionals. This demographic trend is compounded by a global increase in life expectancy, resulting in a higher demand for healthcare services and, consequently, a greater need for nurses (Buchan, Catton, & Shaffer 2022).

Workplace conditions and burnout The theory of job demand-resource (JD-R) model offers a lens through which to understand the high rates of burnout among nurses, a major factor contributing to the shortage. The JD-R model posits that high job demands, when not balanced by adequate job resources, lead to stress and burnout. (Demerouti E., Bakker A.B., Nachreiner F., Schaufeli W.B. 2001.) In the context of nursing, high patient-to-nurse ratios, long working hours, and emotional exhaustion are prevalent, leading to decreased job satisfaction and increased turnover rates (Griffiths et al., 2018). Burnout has been particularly exacerbated by the COVID-19 pandemic, which placed unprecedented pressure on healthcare workers, further intensifying the shortage (Buchan et al., 2022).

Inadequate educational and training capacity The pipeline of new nurses is constrained by limited educational and training capacity. The theory of supply and demand can be applied here to understand the mismatch between the number of nursing graduates and the healthcare system's needs. Nursing schools often face challenges such as insufficient faculty, limited clinical placements, and inadequate funding, which restrict the number of students who can be admitted and trained. (American Association of Colleges of Nursing, 2021.) As Marć, Bartosiewicz, Burzyńska, Chmiel, & Januszewicz (2019) note, this bottleneck in nursing education contributes to the persistent shortage, as the supply of new nurses entering the workforce fails to meet the growing demand. While there is confidence in the quality of nurse educators worldwide, emerging evidence points to a growing crisis in the recruitment and retention of this workforce (Aragon, Babbo, Bear, Schaffner 2020). In 2023, according to Nursing times, the number of applications to study nursing across the UK has fallen by almost 20%. The shift in the age distribution has resulted in a decrease in the number of potential applicants for nursing education, as the younger generations make up a smaller portion of the population. (Michel & Ecartot, 2020.)

Economic and policy factors Economic theories of labor markets also explain the nursing shortage. Wages and working conditions in the nursing profession often do not reflect the high demands of the job, leading to dissatisfaction and attrition (Liu et al., 2021). Moreover, policy decisions at national and international levels play a crucial role in shaping the nursing workforce. For instance, in many countries, immigration policies affect the ability to recruit nurses from abroad, which can either alleviate or exacerbate local shortages. (Miyamoto et al., 2023.) Additionally, healthcare funding policies that do not adequately support the hiring and retention of nurses contribute to the shortage by failing to create a stable and attractive working environment for these professionals (Chen, Fang, Wang & Wang 2021).

Global health workforce migration Theories of migration and brain drain are relevant in understanding the international dimension of the nursing shortage. Nurses from low- and middle-income countries often migrate to high-income countries in search of better pay and working conditions, leading to a "brain drain" from the countries that can least afford to lose healthcare workers. (Miyamoto et al., 2023.) This migration is driven by both push factors, poor working conditions, low wages, political instability and pull factors, higher salaries, better working conditions, opportunities for professional development (World Health Organization, 2020).

Technological and organizational change The adoption of new healthcare technologies and organizational changes also impact the nursing workforce. While technology can enhance efficiency and reduce workload, it can also create new demands and stressors for nurses, especially if they are not adequately trained or supported. (Griffiths et al., 2019.) Organizational changes, such as shifts toward more complex care delivery models, require nurses to acquire new skills and adapt to new

roles, which can contribute to job dissatisfaction and turnover if not managed effectively (Chen et al., 2021).

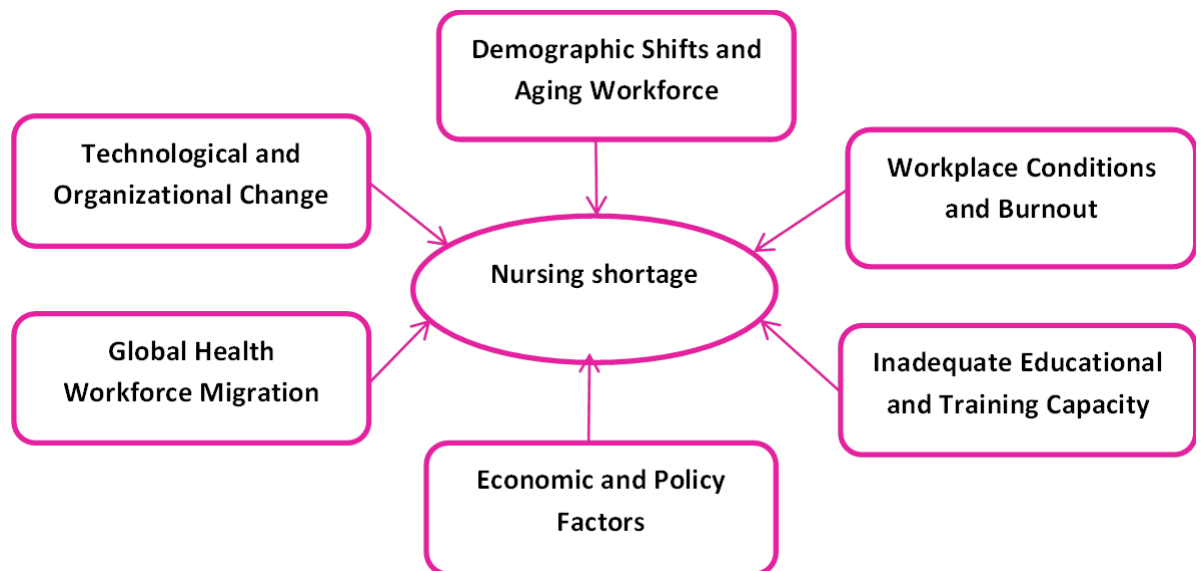


FIGURE 1. Overview of factors contributing to nursing shortage.

2.2 Effects of nursing shortage

Nurses-to-patient ratio and patient safety Several studies have provided evidence that a decrease in hospital-related mortality, failure to rescue, and duration of stay is associated with an increase in the number of registered nurses to patients (Aiken, Clarke, & Sloane 2002). Dimick, Swoboda, Pronovost, and Lipsett (2001) have long recognised the personnel ratio as a substantial factor that influences the outcomes of patients in acute settings. Aiken and associates (2002) discovered a 31% disparity in mortality rates between hospitals where registered nurses cared for eight (8) patients each and those where nurses cared for four (4) patients at a time. This ratio may also affect the emotional and physical well-being of nurses and their perception of their practice (Dimick et al., 2001).

Increased workload The shortage of nursing staff can lead to increased workloads, prolonged working hours, and consecutive shifts, which may adversely affect nurses, patient outcomes, and the overall quality of care. Nurses are thought to manage their workload and time constraints by extending their shifts, which in turn raises the probability of making mistakes. (Scott, Rogers, Hwang & Zhang 2006.) Teng, Shyu, Chiou, Fan, & Lam (2010) indicate that an extended work schedule negatively affects decision quality, judgement accuracy, and the overall performance of nurses. Furthermore, elevated mortality rates were closely associated with extended working hours (Aiken, Clarke, Sloane, Sochalski, Busse, & Clarke 2001), as nurses may encounter significant levels of fa

tigue, burnout, and dissatisfaction, which subsequently leads to a decline in the quality of care (Sheward, Hunt, Hagen, Macleod & Ball 2005).

Quality of care concerns Better working conditions and high-quality patient care have been associated with adequate nurse employment (Van Bogaert, Meulemans, Clarke, Vermeyen 2009). According to Stordeur and D'Hoore (2007), these circumstances seem to mitigate nurses' fatigue and enhance their job satisfaction and patient care. In addition, the presence of an adequate number of nursing staff at hospitals was associated with nurse job satisfaction and autonomy (Needleman, Buerhaus, Mattke, Stewart & Zelevinsky 2002). This suggests that nurses would provide superior quality of care when they are content with their positions. According to certain studies, the presence of an adequate number of nursing staff was significantly associated with a reduction in adverse events, including medication errors, falls, and nosocomial infections (Rafferty, Clarke, Coles, Ball, James, McKee, & Aiken 2007; Laschinger & Leiter 2006). During an additional investigation, nurses in Belgium identified several obstacles to the quality of care. One of these obstacles was the absence of sufficient personnel (Milisen, 2006). Some consequences of inadequate nursing staffing include irregular schedules, mandatory overtime, on-call obligations, and rotating shifts (Jacobsen 2002). (Figure 2)

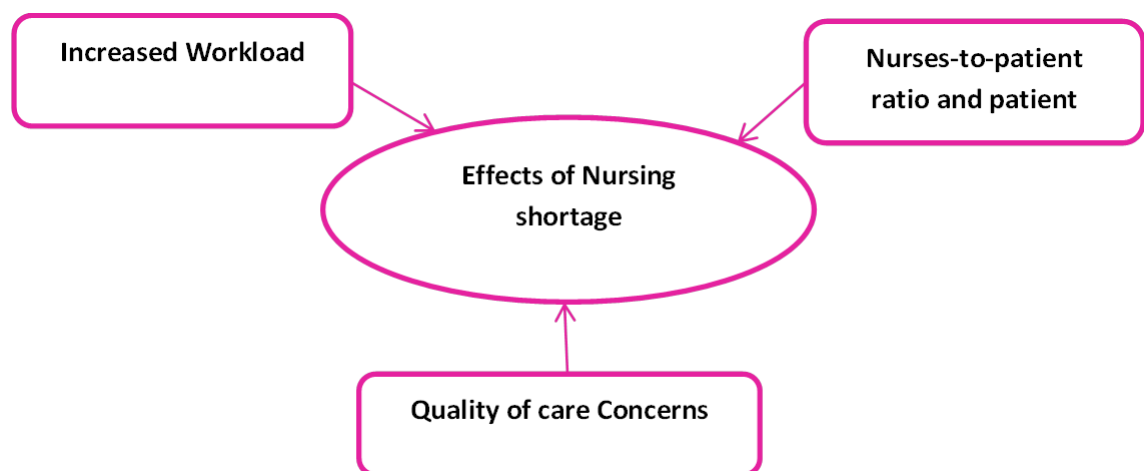


FIGURE 2. Overview of the effects of nursing shortage.

3 STRATEGIES OF ALLEVIATING NURSING SHORTAGE

Despite two decades of extensive focused nursing workforce research, quick fix solutions to resolve the increasing global nursing shortage have yet to be found. It is estimated that there is currently a global shortage of 7.2 million nurses while shortages of at least 12.9 million nurses by 2035 are predicted. (WHO, 2018.) Indeed, the current COVID 19 pandemic has highlighted the global necessity of having enough nurses and shines a light on the catastrophic impacts of nursing shortages throughout health systems in many countries. While nurses remain the largest group of health service employees accounting for 60% of the healthcare workforce globally and delivering an estimated 90% of primary healthcare services. (WHO 2020.) A recent report on nurse staffing trends indicates clearly that the problem of retaining nurses will not be resolved anytime soon (Buchan et al. 2019). How to retain nurses remains contentious with the predominant singular solution of adequate nurse staffing levels as a panacea for increasing patient safety outcomes and consequently increasing nurse retention (Aiken, Sloane, Bruyneel, Van den Heede, Sermeus 2012).

Education Research conducted in the United States (Gerolamo et al., 2014; Reid et al., 2013), Canada (Allen, 2008; Cash et al., 2009), Australia (McDermid et al., 2012), and the United Kingdom (Girof & Albarran, 2012) indicates a significant shortage of nurse educators, a concern that has received less focus compared to the broader nursing shortage. The World Health Organisation (WHO, 2020) estimates a global deficit of 18 million healthcare professionals by the year 2030. To address the needs of health systems both nationally and globally, the WHO (2020) recommends increasing student enrolment in nursing programs to ensure a sufficient number of qualified nurses capable of meeting the complex health requirements of an ageing population and alleviating the challenges posed by an ageing health workforce.

Government policy In response to the growing nursing shortage across Europe, several governments have implemented strategic policies aimed at recruitment, retention, and workforce expansion. Recruitment initiatives include international hiring and encouraging mobility within the European Union, as seen in countries like Germany and Ireland. Additionally, many countries have expanded nursing education programs and reformed curricula to produce more qualified nurses. Retention policies, such as improving wages, working conditions, and offering flexible work schedules, have been implemented in nations like France and Sweden to reduce burnout. Digital health innovations and task-shifting strategies also support nurses by easing workloads through telemedicine and other technological solutions. (Racoviță, Tate, Wait & Adams 2023.)

Also, the Finnish government has implemented policies focused on international recruitment, retention, education, and innovation. To supplement the domestic workforce, Finland is actively recruiting nurses from abroad, streamlining the recognition of foreign qualifications, particularly for non-EU nurses as stated in the Integration Act (1386/2010.) Retention policies include wage increases, flex

ible working hours, and mental health support to combat burnout. These efforts aim to improve working conditions and reduce attrition among nurses as provided in the Health Care Act (1326/2010) and the Collective Agreement for the Public Sector (2018-2020). Moreover, Finland encourages career development through continuing education and specializations to enhance job satisfaction and retention. On the education front, Finland has expanded nursing programs and introduced accelerated pathways, ensuring a steady supply of new nurses. (Racoviță et al. 2023.)

Work-life balance The issue of work-life balance is commonly mentioned as a contributing factor to the present scarcity of nurses. However, it is equally important for nursing staff and is often a cause of burnout. (Ahmed & Bourgeault 2022; Almost & Mildon 2022; Ball, Ejebu, & Saville 2022; Murphy, Sampalli, Bearskin, Cashen, Cummings, Rose, Villeneuve 2022.) There are various ways to support this equilibrium. Implementing policies that no longer require overtime, cancel vacation time, and provide on-site childcare with extended hours to suit different shift lengths have significantly enhanced job satisfaction among nursing staff. (Ahmed & Bourgeault 2022; Ball et al. 2022; Murphy et al. 2022.) Another method to promote work-life balance is by implementing scheduling flexibility. An innovative programme in Alberta allows nurses to choose a certain time during which they work, such as winter or summer. (Weidner, Graham, Smith, Aitken, & Odell 2012.)

Pay and reward Although addressing the nursing crisis requires more than just higher wages, offering competitive compensation and benefits plays a crucial role in enhancing nurses' motivation and job satisfaction (Ahmed & Bourgeault 2022). Compensation should be commensurate with the skills, exertion, accountability, and working environment associated with the position. Furthermore, the task should provide non-financial incentives, such as being intellectually stimulating and appealing enough to provide its own inherent gratification to individuals who undertake it. It is crucial that rewards like as acknowledgement and esteem are not merely given as symbolic acts during times of crisis, but rather should be consistently provided to cultivate the professional satisfaction that nurses truly merit. (Almost & Mildon 2022.)

Career Opportunities Employers could offer programmes lies not only in acquiring the key aspects of a certain skill or unit, but also in comprehending the entire operation of the facility and effectively operating within it (Ahmed & Bourgeault 2022). In addition, offering education days, which can be either reimbursed or integrated into an employee's calendar, presents possibilities for staff members to enhance and broaden their abilities. A notable example was the Ontario nurse education project which encompasses additional jurisdictions. The programme was specifically designed to grant nurses access to ongoing education and professional growth opportunities. The employer covers the cost of registration fees for courses, conferences, seminars, or workshops that aim to enhance nurses' knowledge and abilities. This programme achieved significant success, leading to its implementation

in several other areas of the healthcare industry, such as primary care, home health care, and long-term care facilities. (Ahmed & Bourgeault 2022.)

4 THE PURPOSE AND AIMS OF THE STUDY

The purpose of this study was to find out the strategies that have been adopted to alleviate nursing shortage. The aim is to contribute to nursing shortage management by deepening the knowledge of different strategies of alleviating nursing shortage.

To achieve the purpose, the authors have set the following research questions.

- What are the strategies of alleviating nursing shortage?
- How were these strategies implemented?

5 IMPLEMENTATION

5.1 Literature Review

This study followed a review of literature approach. A literature review is a critical study and synthesis of the body of current work on a given subject. It presents a thorough overview of the present level of knowledge, points up gaps, and stresses the most important results from the literature. (Denneys and Tewksbury 2013.) A literature review is a rigorous process for compiling and synthesizing earlier studies (Denyer & Smart 2003).

Conducting literature review begins with choosing a topic and defining research question(s). This helps to select a topic that is relevant to one's field of study and determine what specific aspect you want to explore. (Denney & Tewksbury 2013.) For certain research enquiries, a literature review may serve as the most effective methodological instrument to yield solutions. For instance, reviews are beneficial when a researcher seeks to assess theory or evidence in a certain domain or to scrutinise the validity or precision of particular theories or rival theories. (Tranfield, Denyer, & Smart 2003.) The subsequent step is to do a literature review. It is necessary to obtain answers through the examination and analysis of pertinent material. A comprehensive examination and analysis of literature are beneficial for acquiring fresh insights. Synthesis follows analysis. In synthesising, the knowledge acquired from the research articles is amalgamated. The final section is the conclusion, in which the writers reflect upon and summarise the findings in relation to the research questions and the subject of the study. (Coughlan & Cronin 2021,2-4.)

The research method was carried out by conducting a search for theoretical information regarding strategies to address the nursing shortage. Numerous articles regarding the subject were reviewed. The research queries were established and identified by the authors. Following the establishment of the research questions, the authors selected research articles and extracted the requisite data to address the research questions. The results of the articles were presented after the data was collected. These steps are pointed out in Figure 3.



FIGURE 3. Steps of the literature review process.

5.2 Data collection

The articles were chosen from electronic databases. The authors started the data collection process in March 2020 with possible different search words. After consideration and appraisal of what kind of information was needed, the authors concluded to use Cinahl complete, PubMed and ScienceDirect for the search. The authors also consulted a librarian about the use of different search words, which was quite helpful in the search. Cinahl Complete is a definitive database for healthcare professionals and nursing students (EBSCO s.a.). PubMed offers more than 30 million research and literature articles in the fields of medical and life sciences (National Centre for Biotechnology Information s.a.). ScienceDirect is a reliable source that provides a substantial collection of academic literature and research articles from a variety of scientific disciplines. (Elsevier s.a.)

Including and excluding factors added to the study method helped to boost its credibility (Table 1). Inclusion criteria included the articles related to the topic, especially the ones gathering theoretical information of strategies of alleviating nursing shortage, setting aim and the purpose of the research, setting research questions and selecting research articles, extracting the necessary data for answering the research questions and presenting results which can answer the research questions. Only articles released between 2018 and 2024 were selected to offer current research. A peer-reviewed article is a study report assessed by one or more persons working in the same field as the author, such as researchers and scholars (Purssell & McCrae 2020, 177). To guarantee legitimacy in this study, then, only peer-reviewed publications were included.

In Cinahl complete, a combination of (Nursing Shortage OR "lack of nursing staff" OR "nurse staff shortage) AND (strategies OR techniques OR interventions) was employed. The preliminary count of findings was 1440 articles. By applying criteria such as publication years, availability of abstracts, peer-reviewed papers, research articles, full text, and English language, 131 publications were found. 44 publications were selected based on their titles; subsequently, after reviewing the abstracts and complete texts, twenty-two articles were examined, and seven (n=7) were finally selected.

In PubMed, 896 articles appeared with a combination of "(Nursing Shortage) AND (Nurse Retention). 22 articles were published after the establishment of criteria that included English language, years, full text, review, systematic review, and abstract availability. A total of 12 were selected by titles by the authors. Six articles (n=6) were selected based on their abstracts, and two articles (n=2) were selected after reading the full text.

In Science direct, 1148 articles appeared with a combination of "Nursing Shortage"[tw] OR "nurse shortage"[tw] AND "strategies". 923 articles appeared after adding criteria that includes review articles, research articles, year and language. 401 articles were chosen by titles, and after reading abstract, 52 articles were chosen, one article was chosen based on full-text availability (n=1).

The countries in which the research were conducted were the U.S. (n=3), Netherlands (n=1), Canada (n=1), United Kingdom (n=1), South Africa (n=1), China (n=1), Saudi Arabia (n=1) and Thailand (n=1). Both quantitative research method and qualitative research method were used in those articles. To get broad view of on different strategies used in alleviating shortage, the articles cover almost all the continents including North America (n=4), Europe (n=2), Africa (n=1) and Asia (n=3)

TABLE 1: Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> - Related to the research topic - Published from 2018 to present - Written in English - Abstracts are available - Research articles - Full free text - Peer-reviewed articles 	<ul style="list-style-type: none"> - Not related to the research topic - Published before 2018 - Written in other languages than English - Articles without abstracts - Not research articles - Not full free text - Not peer-reviewed article

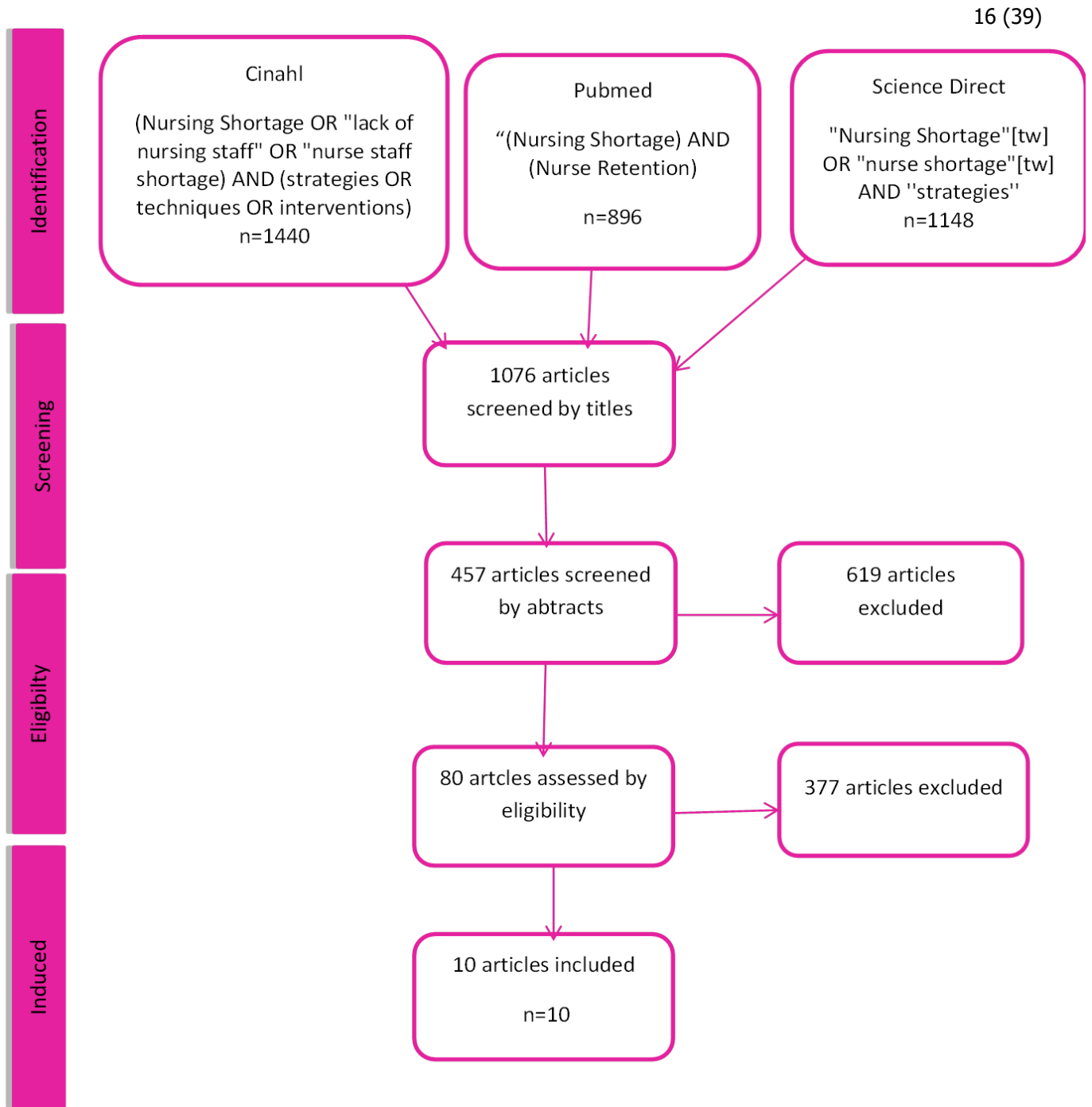


FIGURE 3: Process of articles selection.

5.3 Content analysis

Content analysis encompasses a variety of strategies that are employed to analyse text (Powers and Knapp 2006). It is a methodical coding and categorising approach that is employed to unobtrusively investigate vast quantities of textual information in order to ascertain the structures and discourses of communication, the frequency, relationships, and trends and patterns of words used (Mayring 2000; Pope, Ziebland, & Mays 2006; Gbrich 2007). Content analysis is a technique that can be employed in an inductive or deductive manner with either qualitative or quantitative data. The objective of content analysis was to construct a model that would provide a conceptual representation of the

phenomenon. Therefore, data abstraction is accomplished through content analysis. Both inductive and deductive analysis processes are represented as three primary phases: preparation, organisation, and reporting. Inductive content analysis is utilised to develop concepts, categories, and themes derived from data, while deductive content analysis employs either a structured or unstructured matrix of analysis based on the objectives of the study. (Kyngäs 2020.)

The authors selected inductive content analysis as the methodology for this literature review. Inductive content analysis is employed in qualitative studies that begin with an inductive approach, meaning that the data collection method is flexible and adheres to broadly outlined themes. This approach to content analysis is appropriate when the subject being examined has not been addressed in earlier research or when existing knowledge is incomplete. (Elo and Kyngäs 2008.) The process of conducting a basic inductive content analysis involves several distinct phases: first, data reduction; next, data grouping; and finally, the formation of concepts that serve to address the research questions. The primary objective of the authors is to generate abstracts of the raw data that encapsulate the key categories, concepts, and themes, while also offering insights into possible theoretical relationships.

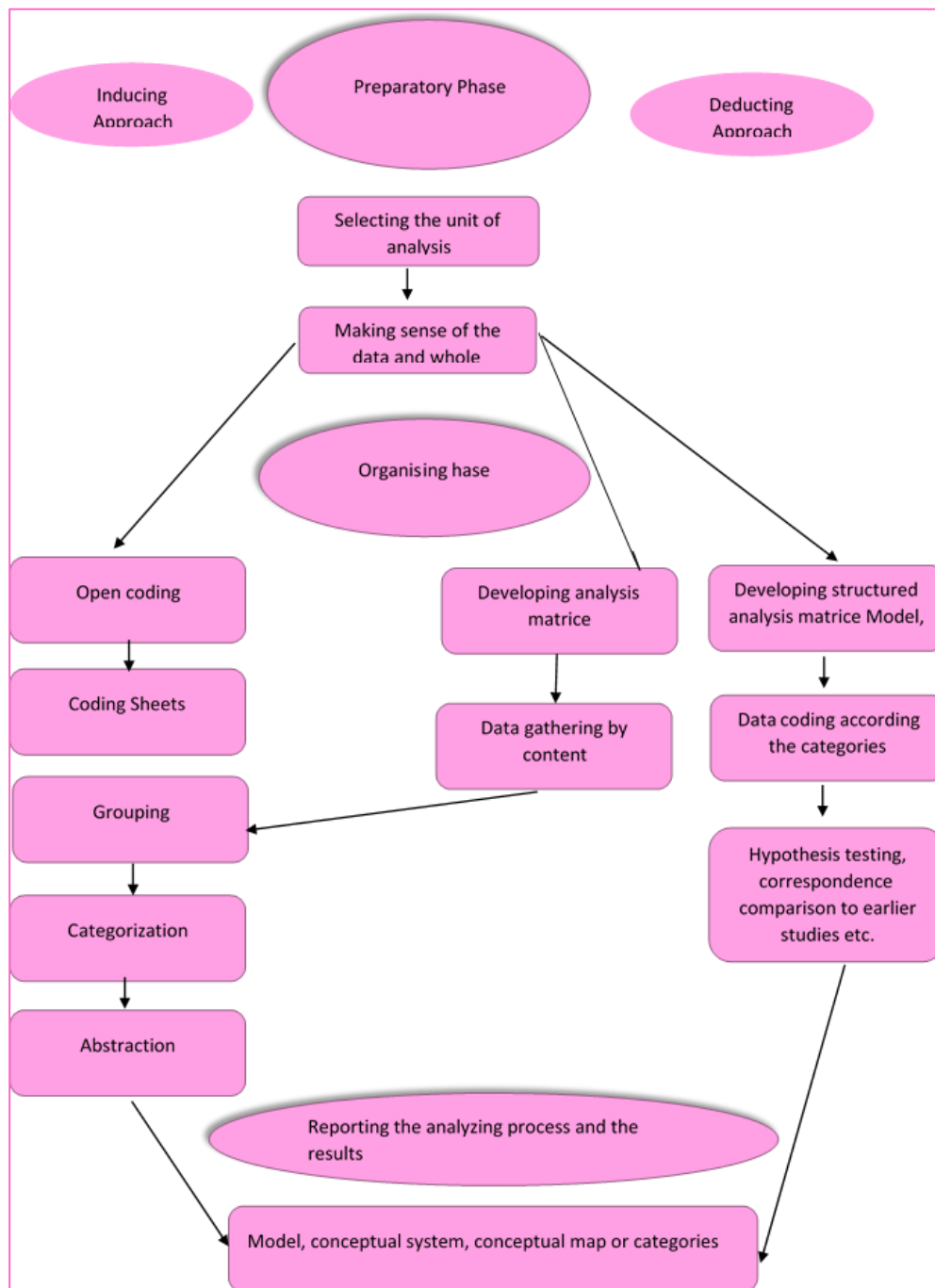


FIGURE 4. The process of content analysis (Elo & Kyngäs 2008).

6 RESULTS

6.1 Strategies of nursing shortage alleviation

Leadership approach The National Strategic Plan for Nurse Education, Training and Practice introduced various incentives aimed at retaining nurses, thereby improving workforce stability and the quality of patient care. Examples of these initiatives encompass regular team-building meetings with staff, a hospital-based incentive system that includes paid maternity leave, double pay on Sundays and public holidays, as well as provisions for sick leave and annual leave. (Pillay, Kerr & Ramukumba 2022,7; Hodgson, Kwun, Gorbalkin, Davies, Fisher & ACEP 2024,3; Mhawish & Rasheed 2022,373.) The end-of-year awards for nurses include categories such as the best performance award, recognising outstanding individual contributions; the best mentorship award, honouring the mentor who fosters a positive and continuous learning environment; a research award for the nurse engaged in investigating a practice issue; and a clinical practice award for the nurse who successfully implements an effective program aimed at enhancing the quality of care. (Pillay et al. 2022,8.)

Policymakers should consider assigning civil servant positions to temporary nursing staff, increase the number of nursing instructors by instituting high-paying incentives, career advancement, and maximum scholarship, and issue regulations on salary and overtime pay. It is recommended that additional benefits be provided, including regulations for free meals during a shift, a framework for expanded career advancement to promote more nurses to senior professional positions, trainings to increase skills and expertise in related fields, reconsideration of the nurse-to-patient ratio to reduce workload, and training programs on transformational leadership behaviours for nurses seeking an executive position. (Theucksuban, Kunaviktikul, Wichaikhum, & Abhicharttibutra 2022,456.)

The leadership ability of nurse leaders shows a positive correlation with the work performance of nurses and the development of nurse resilience (Wei, Roberts, Strickler & Corbett 2018,681). The studies employed a demographic form alongside an in-depth face-to-face interview to ascertain the strategies utilised by nurse leaders in fostering nurse resilience. Seven strategies for building resilience were identified: facilitating social connections, promoting positivity, capitalising on nurses' strengths, nurturing nurses' growth, encouraging nurses' self-care, fostering mindfulness practice, and conveying altruism. (Wei et al., 2018,683.) Nurse managers effectively utilised role modelling and the practice of gratitude as approaches to foster positivity (Wei et al., 2018,683). Identifying the strengths of nurses and facilitating their application in the workplace serves to fulfil their aspirations while simultaneously enhancing their self-confidence and engagement in their roles. The readiness of nurse managers to provide guidance and support fosters an environment that is both nurturing and non-judgmental, thereby enabling nurses to engage in learning and development. Promoting self-care among nurses has been recognised as an essential responsibility of nurse leaders.

It is imperative for nurse leaders to assist nurses in understanding the significance of self-care in enhancing their resilience. (Wei et al. 2018,684; Theucksuban et al. 2022,456.)

One way nurses could feel refreshed is through mindfulness practice; journaling, colouring, drawing, music all help. Deep breathing is a basic method of [mindfulness]; take three deep breaths either before visiting patient rooms or during hand washing. Building nurse resilience and enhancing patient care depends mostly on nurse leaders. (Wei et al. 2018,685.)

Gender-based approach Male nurses represent a minority within the nursing profession; however, they possess several distinct advantages in delivering nursing care (Lyu, Akkadechanunt, Soivong, & Juntasopeepun 2022,323). A study conducted among registered male nurses in China indicates that younger nurses face greater exposure to repetitive tasks, receive lower compensation, and engage less in decision-making processes. Consequently, younger male nurses struggle to make definitive choices regarding their continuation in the profession. In comparison to other male-dominated professions, the professional status and income of male nurses are comparatively lower. Poor working conditions, low salaries, and heavy workloads negatively impact male nurses' long-term motivation to remain in the nursing profession. Workgroup cohesion, career growth, and transformational leadership were significant factors influencing the intention to stay of male nurses. (Lyu et al. 2022,324.)

Mentorship approach Mentorship served as an effective mechanism for facilitating the development of nurses (Wei et al. 2018,684). The role of mentorships and the significance of social networks are highlighted as crucial factors that contribute to personal and professional integration during the initial stages of the acculturation process (Pressley, Newton, Gar-side, Simkhada & Simkhada 2022,10). Mentorship has the potential to improve problem-solving skills and enhance professional communication. Their influence on teamwork, quality, and safety can be linked to enhanced patient outcomes. Moreover, the beneficial impact on problem-solving skills in relation to work or school challenges carries significant implications for both academic and practical environments. (Gularte-Rinaldo, Baumgardner, Tilton & Brailoff 2023,264-265.) Internationally educated nurses credited their enhanced confidence in their nursing abilities to the skill development facilitated by their mentor and the use of high-fidelity simulation (Lawrence, Boyd, Rashleigh & DasGupta, 2023,36).

Model testing approach Several authors have discussed some models that can be applied to alleviate the nursing shortage. These are nursing staffing surge model, the causal model of intent to stay and, professional practice model.

The nursing employment surge model is a methodical approach to optimising the deployment of experienced nursing personnel. It entails the strategic redeployment of nurses from a variety of divisions and wards, which is executed with precision to guarantee patient safety. The objective of this model is to consistently maintain the utmost quality of care. (Mhawish & Rasheed 2022.) Nursing administrators strategically redeployed nurses from a variety of units and departments to address

the critical staffing deficiencies in critical care units in response to the concurrent nurse shortage and the increased demand. The experienced personnel provided direct supervision and guidance to the deployed staff, enabling them to operate as a collaborative team. During this phase, an experienced nurse provided direct supervision and guidance to the two or three redeployed nurses, culminating in a team that consisted of one seasoned nurse and two or three redeployed nurses. The redeployed nurses in each team were responsible for the direct nursing care, execution of routine procedures, and completion of routine duties for two or three critically ill patients. One charge nurse supervised each of the four experienced nurses. (Mhawish & Rasheed 2022,371-373.)

The Causal Model elucidates the factors that influence the intention of nurses to continue their employment. The intent to remain is directly positively influenced by transformational leadership, coworker support, professional autonomy, promotional opportunity, marital status, and job satisfaction, while burnout has a direct negative impact on the intent to remain. (Theucksuban et al. 2022.) Coworker support, professional autonomy, promotional opportunities, and years of nursing experience all contributed to job satisfaction, which in turn positively influenced the intent to remain for some nurses. Furthermore, the intend to remain was significantly influenced by marital status and job satisfaction when viewed through the lens of burnout. (Theucksuban et al. 2022.)

The professional practice paradigm employed the Dutch Essentials of Magnetism (D-EOMII), which is a Dutch adaptation of Essentials of Magnetism II (EOMII). This instrument is a process measurement tool that is intended to assess the health of the unit work environment. Eight subscales constitute the D-EOMII: clinical autonomy, support from nurse managers, control over nursing practice, perceived staffing adequacy, educational support, a culture prioritising patient care, collaboration with clinically competent peers, and nurse-physician relationship dynamics. The professional practice model is characterised by a shared governance structure and a supportive work environment, both of which were assessed against D-EOMII, which is a critical component for nurses to provide high-quality care. The results suggest that the nurse work environment is improved by the implementation of a professional practice model. (Bloemhof, Knol, Van Rijn & Buurman 2021.)

Migration approach In the study, migration was highlighted as means of mitigating nursing shortage in some developed regions. International nurses are instrumental in addressing the global health and care workforce challenges that are present due to domestic nurse deficits. They are recruited to work in a variety of countries. Health and care employers must understand the lived experiences of international nurses in light of the increase in global recruitment and migration. This comprehension is essential for the purpose of promoting acculturation and improving retention rates. (Pressley et al. 2022.)

The nursing workforce scarcity is a substantial global challenge, characterised by a growing disparity between the demand for healthcare services and the limited availability of nursing professionals. Countries that are experiencing nursing shortages have implemented international recruitment

strategies to fill vacant positions, which has led to an increasing dependence on foreign nurses to satisfy domestic requirements. (Pressley et al. 2022.) The following assertion is confirmed by Finland's Integration Act (1386/2010), which states that the country is aggressively recruiting nurses from other countries to bolster its indigenous workforce.

Various strategies of alleviating the nursing shortage were explored in these studies. The interventions varied from Leadership (n=3), Different models (3), Migration (n=2), Mentorship (n=1) and Gender-based (n=1) (Table 2).

TABLE 2. Types of interventions used in the articles.

Type of Intervention	Frequency (N=10)
Leadership	n=3
Model Testing	n=3
Migration	n=2
Mentorship	n=1
Gender-based	n=1

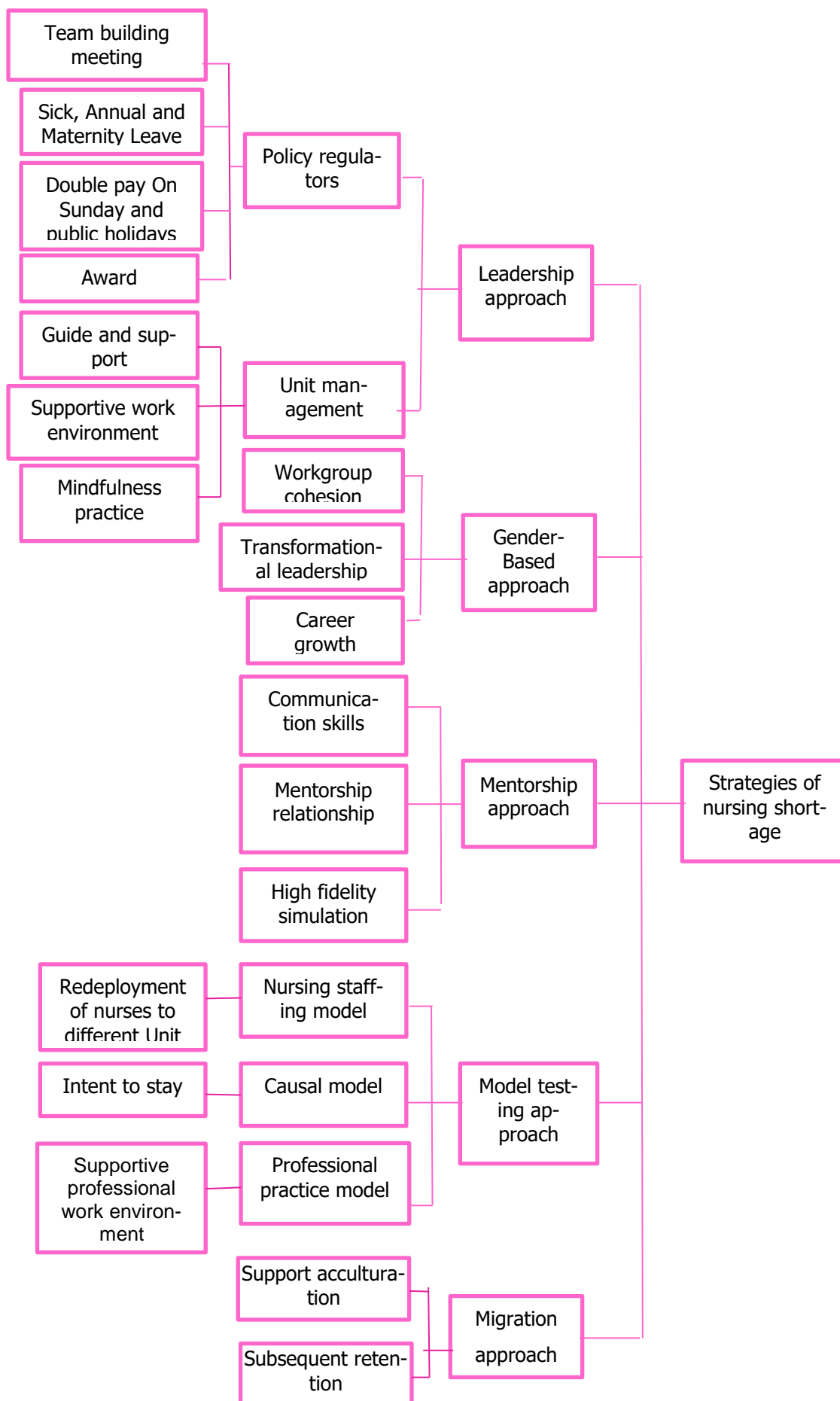


FIGURE 5. Strategies of nursing shortage alleviation.

6.2 Implementation of the strategies

Process The identification of resource sharing emerged as a strategy to facilitate effective communication for internationally educated nurses in a manner deemed appropriate. Supporting migrated nurses to switch between jargon and documentation helps to remember certain words in expressing what they want to say. (Lawrence et al. 2023,34.) It was also described by Lawrence et al. (2023) that encouraging internationally educated nurses to utilise and investigate various terms during therapeutic communication to promote a supportive and non-judgmental atmosphere for patients.

Connection with teams through the encouragement of dialogue among colleagues and fostering independent work were identified as effective strategies for enhancing confidence and facilitating transitions. The relationships formed between nurses and leaders enhance connections, transcending professional associations to establish a fundamental human bond. (Lawrence et al. 2023,35; Pressley et al. 2022,10-11; Wei et al. 2018,685.)

Cultural integration is an integral part of experience for international nurses by understanding different cultural backgrounds and dialects help to reduce patient's anxieties and de-escalate situations. Moreover, effective integration plays a crucial role since it fosters a sense of belonging among international nurses and promotes teamwork. Cultural knowledge reduced systemic barriers which inherently contributed to increased equity, diversity and inclusion in the units. (Lawrence et al. 2023,36; Pressley et al. 2022,13.)

Consistent team-building meetings with staff to examine workplace challenges and successes, as well as to enhance teamwork and support work effectiveness, have demonstrated a positive impact on engaging nurses in discussions about diagnoses, sharing innovative ideas, resolving conflicts, and addressing patient care plans (Pillay et al. 2022,7). Also, In the study, during the surge in demand coupled with a shortage of nurses, nursing administrators implemented the redeployment of nurses from other units and departments to address the significant staff deficit in critical care units (Mhawish & Rasheed 2022,371-373).

It was reported that the mentoring relationship had a positive impact on the decision to remain in the nursing profession, as well as on self-confidence, problem-solving ability, and professional communication skills. Additionally, the mentorship relationship was found to be beneficial during the transition from new graduate to practicing professional. (Gularte-Rinaldo et al. 2023, 264-265.) This advantage can be realised when it commences in nursing academia, during nursing education or training programs, and extends to work environments through the establishment of innovative partnerships (Gularte-Rinaldo et al. 2023,266).

Professional enrichment, education, nurse leadership and interprofessional teamwork are important resources to improve nurse autonomy (Bloemhof et al. 2021,4930), also, building a fair and attract

tive reward system to improve nurses' job satisfaction and to promote excellence in performance (Bloemhof et al. 2021,4930).

Nurses' resilience is bolstered by the establishment of a work environment that is conducive to self-care, as identified by nurses' leaders. This includes the implementation of flexible scheduling, home-like break rooms, and the prohibition of nurses from flipping shifts in order to promote self-care. (Wei et al. 2018,684; Hodgson et al. 2024,3; Theucksuban et al. 2022,456.) Nurse supervisors must identify methods to assist nurses in recharging by ensuring that they receive sufficient sleep, consume a balanced diet, and participate in regular physical activity (Wei et al. 2018,684).

Potential Challenges However, international registered nurses adjusting to a new work environment required assistance that went beyond addressing the well-documented credentialing issues (Lawrence et al. 2023, 31). International nurses may struggle to recognise complex nursing situations due to language complications such as regional dialects, colloquialisms, conversational speeds, abbreviations and medical terminology (Pressley et al. 2022,10).

The nurses in the study characterised their relationship with physicians as a "friendly stranger" and a "negative" relationship (Bloemhof et al. 2021,4925), which is in opposition to the conventional norm of a collegial relationship, in which both parties exerted equal but distinct influences (Bloemhof et al.2021,4930). The redeployment presents a challenge in terms of ensuring the welfare of patients and staff, as the staff that was redeployed to new areas had only received "on-the-fly" training. The nurses' physical and mental exhaustion overtime was another potential challenge that could arise during redeployment. During the crisis, nurses encountered an increase in tension and fatigue as a result of the increasing number of cases admitted to critical care units. (Mhawish & Rasheed 2022,373.)

Overt racism was predominantly evident in patients' opinions towards receiving treatment from 'racialised' international nurses, defined as nurses for whom 'race' was viewed as a distinguishing characteristic, and was infrequently reinforced by local professionals (Pressley et al. 2022, 12). Foreign nurses are divided between the 'West and the Rest,' with those from European and Western cultures viewing themselves as superior than foreign nurses from minority backgrounds. International nurses have characterised their nursing work as being under observation and increased scrutiny compared to their native counterparts. International nurses recognised the necessity to exert greater effort and acquire superior qualifications to attain comparable positions to those held by (white) host country nurses. (Pressley et al. 2022,12.)

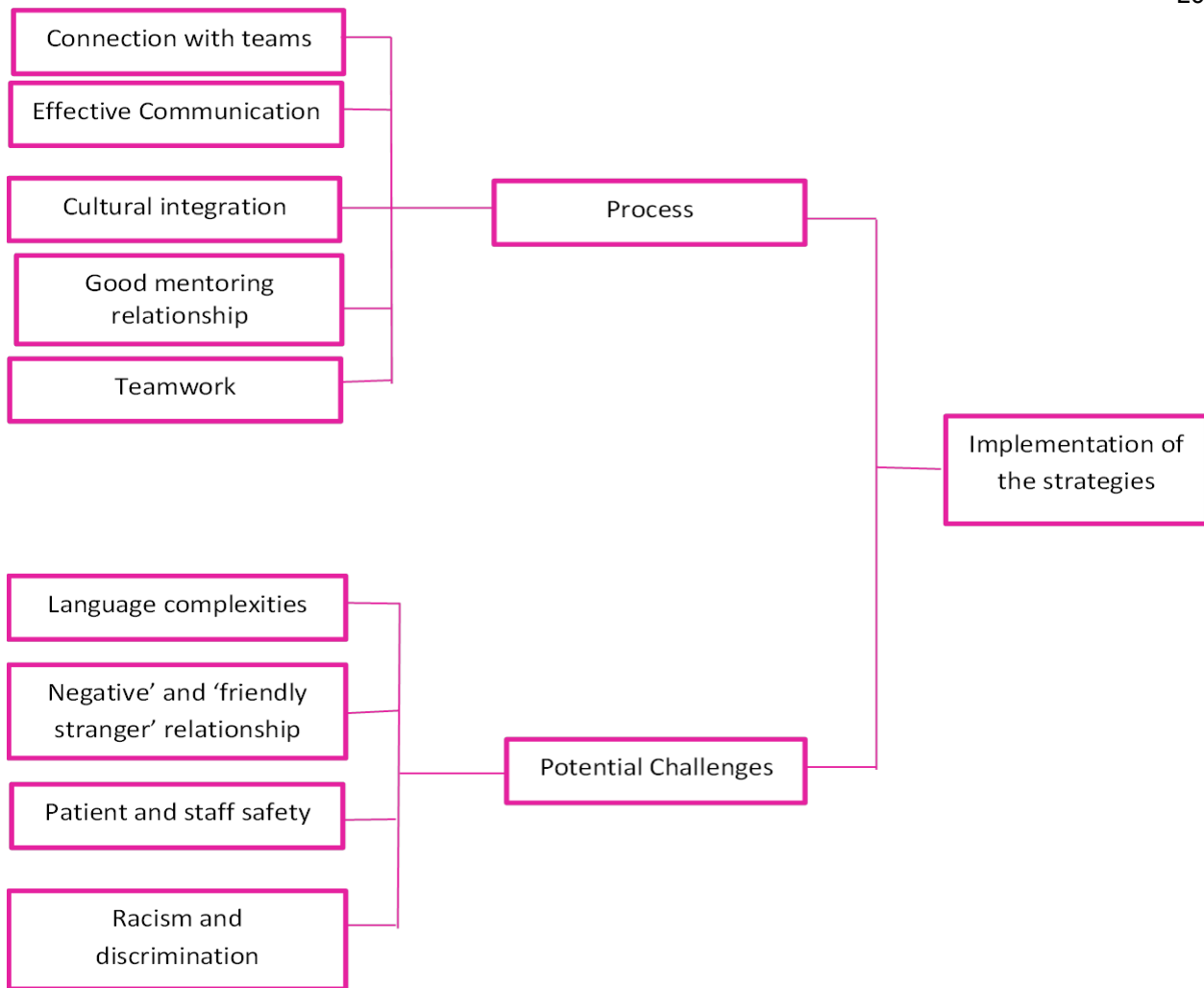


FIGURE 6. Implementation of the strategies.

7 CONCLUSION

7.1 Consideration of result

The objective of the thesis was to conduct a literature review to examine several approaches to alleviate the nursing shortage and diverse methods of implementing those approaches. It is evident from the data retrieval table that there was sufficient research conducted on the subject to establish its validity. Nevertheless, only a limited number of studies were accessible for use based on the time limit and the relevancy to the subjects of this thesis.

Global nursing shortages arise from diverse causes based on the geographical location (Boamah et al. 2021), this study aimed to identify diverse techniques employed in different parts of the world to alleviate these shortages. Results showed that combined strategies produced more significant impacts on the companies' performance than a single strategy. (Mongkol 2021.)

Leadership styles play a crucial role in shaping a work environment that enhances commitment levels, both in terms of occupational and organisational commitment, which serve as clear indicators of job satisfaction. Nurse leaders are essential in enhancing the nursing workforce by fostering inclusive work environments that prioritise equity, diversity, and inclusion. (Alrobai, 2020; Lawrence et al. 2023; Hodgson et al. 2024.) Nurse leaders aiming to retain internationally educated nurses should evaluate strategies that establish a welcoming work environment, encourage mentorship and preceptorship, and facilitate cultural integration (Lawrence et al. 2023).

Internationally trained nurses play a crucial role in establishing and maintaining the nursing workforce in most developed nations. Enabling international nurses through the provision of opportunities to use skills and collaborate with teams, therefore promoting cultural assimilation. (Lawrence et al. 2023.) This study identifies language and communication as obstacles to integration into the professional workforce and achieving successful job integration within teams. In order to address these obstacles, Moyce et al. (2015) propose orientation training that incorporates frequently used terminology in practical settings, telephone contact, and transcribing instructions and medications to minimize any adverse effects. In addition, international nurses must undergo a psychological adaptation to their cognitive framework, known as acculturation (Lin 2014).

Proper mentorship was shown to be of greatest benefits as perceived by majority of newly graduated nurses in transitioning into professional practice. The study indicates that mentorship can enhance problem-solving ability and professional communication which can positively impact teamwork, quality, and safety, and may be associated with improved patient outcomes. (Gularte-Rinaldo et al. 2023.)

Nurse autonomy is viewed favourably as it emphasises the establishment of a professional working environment, the implementation of a shared governance structure, and the encouragement of

nurses to demonstrate leadership capabilities. Clinical autonomy is dependent on the clinical knowledge and judgement of nurses, whereas the control over nursing practices is determined by their organisational knowledge and influence. Enhancing autonomy can be achieved by integrating the distinct knowledge and expertise of nurses into clinical patient care, such as through nurse-driven protocols and established nursing standards. (Bloemhof et al. 2021.)

Workgroup cohesion was identified by Lyu et al. (2021) as the most significant factor influencing the intention to remain among male nurses. The integration of a staff member fosters a sense of belonging within the organisation and cultivates a collegial atmosphere. This discovery is consistent with research that suggests that workgroup cohesion is frequently designated as the primary factor that influences nurses' decisions to remain in or leave their positions (Bontrager et al., 2016). The intention of male nurses to persist in the nursing profession was significantly influenced by transformational leadership. Staff nurses fostered a more harmonious and secure professional environment, improved their perceptions of organisational support, and decreased their intention to quit their positions as a result of transformational leadership among nurse leaders. (Cummings et al. 2010; Lyu et al. 2021; Theucksuban et al. 2022).

Based on the results, it is possible to draw the conclusion that the solution to the nurse shortage is a multifaceted process that requires an awareness of the intricate relationship between teams, mentors, policy makers, line managers, and employers, as well as their respective experiences. These measures have the potential to positively influence the success of efforts to retain valued nursing staff if they are planned and implemented effectively once the strategies have been developed.

7.2 Ethics and reliability

The study strictly adhered to the ethical guidelines outlined by the Finnish Advisory Board on Research Integrity TENK 2012, 30-31. All steps were carried out with integrity, honesty, and transparency, ensuring accuracy in every phase of the research process—data collection, documentation, result evaluation, and presentation of findings. While permission was not required, all procurement of research materials followed ethical sustainability standards, and findings were disseminated in a transparent manner. Proper citation and referencing were carefully managed to ensure correct attribution to original authors.

To ensure the reliability of the research, reputable databases like PubMed, Cinahl, ScienceDirect, and Google Scholar were used, with the assistance of a librarian. Sources were selected based on credibility, with preference given to those authored by at least two experts. Special attention was given to selecting up-to-date sources to support claims and cross-verify information from multiple perspectives, while minimizing potential biases. These criteria included publication date, peer-reviewed status, and relevance to topic. Evaluation of each source based on the defined criteria.

The two authors engaged in cross-checking to validate the findings, ensuring they appropriately represented the opinions of the writers.

The ethical guidelines for thesis work and student's checklist by the Rectors' Conference of Finnish University of Applied Sciences Arene (2020,15) was used when implementing the thesis. Conflicts of interest were ascertained, and the researchers were acquainted with the topic of the thesis, guidelines of research ethics, principles linked with the handling of personal information and data protection. Also, instructions from the school were acquainted with.

The thesis was upheld by minimizing researcher bias through reflective journaling and peer debriefing, allowing the supervisor review of the research process. Supervisor convened monthly to examine and verify that the findings were based on data rather than the researcher's interpretations alone. Detailed records of the source selection criteria and evaluation process were maintained, including the rationale behind including or excluding specific sources. Collaborative agreements were signed together with the supervisor and the collaborative partners.

This thesis was substantiated by offering detailed descriptions of the research context and methodologies, allowing others to evaluate the relevance of the findings to various environments. The research provided comprehensive contextual information regarding the mitigation of nursing shortages to assist future academics, policymakers, and healthcare managers in assessing the applicability of the findings to their respective contexts.

7.3 Professional growth

The authors are familiar with writing theses, nonetheless, the literature review presents a novel challenge for them. The process of comprehension and assembling the necessary steps demanded significant work and time. Composing this thesis allows the writers to enhance their critical thinking, refine their academic writing skills, and acquire expertise on executing a thesis from inception to completion. The research for the theoretical framework commenced in March and concluded in October. The content analysis was effectively executed, and the stages were straightforward, facilitating a logical approach to data collection and analysis.

This thesis has equipped the writers with enhanced understanding of the many variables contributing to nursing shortages and the strategies for mitigation at multiple levels. This understanding has enabled the authors to identify methods through which they might assist, albeit modestly, to alleviating the shortages in their units. Throughout the thesis process, the writers collaborated and distributed the work, enhancing their cooperation skills. The thesis process facilitated the management of schedules, the distribution of various tasks, the identification of individual strengths, and their application to the work. Collaborating closely with the supervisor through scheduled meetings that provided guidance and constructive criticism significantly helped to the thesis's success.

Due to disparities in both writers' schedules, there were few opportunities to meet, however, the authors were able to manage their time with inspiration and encouragement from both their supervisor and family members. The writers used a variety of groupwork strategies, such as sharing written materials and holding meetings at both home, day and night, and school. It was sometimes difficult, but overall, this was a positive experience.

The thesis work has equipped the writers with the skills to extract information from health sciences databases and to critically assess and utilise scientific material. The writers acquired knowledge about research, development, and innovation processes while working on their thesis and implementing research methodologies. Both authors have cultivated evidence-based practice and decision-making competencies, including the capacity to get information from health sciences databases. Additionally, the ability to read and critically assess scientific literature is essential, along with an understanding of evidence-based practice and its significance in social and health care.

7.4 Usability and development ideas

The objective of the study was to identify various strategies employed to mitigate the nursing shortage in different nations. In light of the findings of the study, it was found that there are numerous approaches to addressing the shortage of nurses, however, it is not possible to examine all of these approaches in this thesis. The strategies were employed according to the urgent requirements or prevailing circumstances of a certain unit. Most approaches addressing nursing shortages concentrate on improving retention via policy regulation and management, leadership and mentorship strategies, and drawing on international human resources. It may be deduced from this that there is no single solution that can be implemented to alleviate the lack of nurses.

The existing literature and findings from this thesis elucidate the significance of government and management policies in establishing a conducive work environment, facilitating mentorship and preceptorship, and enhancing cultural integration. The study findings elaborate on the recommendations of Almost & Mildon (2022), which emphasise the significance of incentives for nurses, including sick leave, annual leave, maternity leave, and double pay on Sundays and holidays.

This study may serve as a resource for healthcare centres to formulate plans by concentrating on the nursing work environment. The authors emphasise the managerial dimension that policymakers and nurse managers might utilise. Transformational leadership and workgroup cohesion were emphasised in the retention of both male and young nurses.

The study's findings suggest several recommendations, including the involvement of nurses at all levels in healthcare decision-making by managers, as well as the necessity of policy reforms at local, national, and global levels, requiring collaboration among employers, educational institutions, and governments. Further research is advised to assess the reliability of diverse strategies pertinent to certain places.

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APPENDICES: PRESENTATION OF THE SELECTED ARTICLES

	Author, title, country and published year	Purpose	Participants	Study design	Main Findings
1.	Lawrence, Kimberly; Boyd, Kathryn; Rashleigh, Laura; DasGupta, Tracey From Recruitment to Retention: Evaluating the Experiences of Internationally Educated Nurses in the Supervised Practice Experience Partnership Toronto, 2023	To evaluate the experience of Internationally Educated Nurses (IENs), preceptors and nurse leaders engaged with the Supervised Practice Experience Partnership (SPEP) to inform strategies that retain IENs and sustain the nursing workforce	International educated nurses between 31-35 years of age studied nursing in the Philippines, India or Jamaica. (N =24)	The IENs, preceptor and nurse leader (advanced practice nurse (APN), clinical educator and manager) participants were recruited from the first, second and third SPEP cohorts that spanned from January 2022 to October2022. The SPEP is an integral component of the pathway where IENs are supported by a preceptor and a mentor for a minimum of 140 practice hours.	Four major themes emerged from the survey and focus group findings for the IENs, preceptor and nurse leader groups, including (1) Communication in the Canadian healthcare context, (2) Connecting with teams (3) Fostering cultural integration and (4) Establishing support networks
2	Nicole R. Hodgson, Richard Kwun, Chad Gorbakkin, Jeanie Davies , Jonathan Fisher and on behalf of the ACEP Emergency Medicine Practice Committee Emergency department responses to nursing shortages USA, 2024	To examine the impact of nursing shortages and to obtain information regarding interventions employed to mitigate the effects of these shortages	American College of Emergency Physicians' (ACEP) Medical Directors (N=450) and Emergency Medicine Practice Committee (EMPC) (N=75) information collected via an electronic collection tool N=525	Statistical analyses for multiple-choice responses (counts, percentages). For free-text responses, content analysis combining similar responses into categories with counts	Emergency Department leaders reported a range of interventions, including operational flow changes, utilizing alternative staff to fill nurse roles, recruitment of new nurses, and retention strategies for existing nurses. They employed temporary and permanent pay increases as well as efforts to improve the Emergency Department work environment and techniques to hire new nurses from atypical pipelines

3	<p>Charlene Pressley, Dillon Newton, Joane Gar-side, Padam Simkhada, Bibha Simkahada.</p> <p>Global migration and factors that supports acculturation and retention of international nurses: a systematic review.</p> <p>United Kingdom, 2022</p>	<p>To explore the lived experiences of interna-tional nurses working and living in different countries globally</p>	<p>Research studies conducted in Aus-tralia, Canada, New Zealand, the United Kingdom and the United States were identified, quality ap-praised and subjected to data extrac-tion/analysis</p>	<p>A systematic literature search was carried out in Medline, CINAHL, PsychInfo, PubMed and Web of Science for global re-search publications from 2010 to 2020</p>	<p>The findings of twenty seven papers were synthesised into six themes: (1) individual and organisational preparedness, (2) communication and the art of language, (3) principles and practices of nursing, (4) social and cultural reality, (5) equality, diversity and inclusion, and (6) facilitators of integration and adaptation</p>
4	<p>Pillay, Zoe; Ramukumba, Mokholelana M.; Kerr, Jane</p> <p>Nurse Managers' Views of Measures to Im-prove Nurse Retention at a Selected Hospital in KwaZulu-Natal, South Africa</p> <p>South Africa, 2022</p>	<p>To determine the views of nurse managers regarding staff turnover and retention, and based on these views to recommend con-sistent and effective measures to address the critical issues related to staff turnover</p>	<p>A total of 18 nurse managers com-prising four senior nurse managers and 14 departmental nurse managers aged between 35 and 64 years par-ticipated in the study.</p> <p>N=18</p>	<p>Non-probability purposive sam-pling was used as the partici-pants were directly involved in the management and retention of nurses. An exploratory and descriptive qualitative approach was adopted for the study.</p>	<p>The analysis revealed some recommendation for Retention which include improving bene-fits and rewards; increasing staff development; developing nursing support systems; main-taining adequate resources for optimal functioning; using emerging technology applica-tions; and strengthening lead-ership roles.</p>
5	<p>Jeneva Gularte-Rinaldo, Roberta Baumgardner, Tip Tilton, Vivian Brailoff.</p> <p>Mentorship ReSPeCT Study: A Nurse mentor-ship Program's Impact on Transition to Practise and Decision to Remain in Nursing for Newly Graduated Nurses.</p> <p>California, USA, 2023.</p>	<p>To analyze the effectiveness of a mentor-ship program offering individualized men-torship through culturally congruent, cus-tomized pairing.</p>	<p>A total of 96 registered nurses who had not practiced nursing for a mini-mum of three years prior to their return to work, and had been work-ing as nurses for at least three months following their return</p> <p>N=96</p>	<p>Face-to-face or online semi-structured interviews were conducted, and qualitative inductive analysis was employed to analyze the collected data</p>	<p>The analysis revealed five key themes, two of which were related to the enabling factors making it possible for the nurs-es to continue their work, while the remaining three pertained to the motivating factors driving the pursuit of professional careers</p>

6	<p>Janet Bloemhof, Jeannette Knol, Marjon Van Rijn, Bianca M Buurman</p> <p>The implementation of a professional practice model to improve the nurse work environment in a Dutch hospital: A quasi-experimental study</p> <p>Dutch, Netherland, 2021</p>	<p>To evaluate the effects of the implementation of a professional practice model based on Magnet principles on the nurse work environment in a Dutch teaching hospital.</p>	<p>The study was conducted between 2016 and 2019 in a Dutch teaching hospital.</p> <p>N= 750</p>	<p>This was a quasi-experimental (one group, pre- and post-test design) study.</p>	<p>Seven of the eight subscales (essentials of magnetism) improved significantly. Score for overall job satisfaction increased from 7.3 to 8.0 and score for quality of care increased from 7.0 to 7.6. On unit level, 17 of the 19 units showed improvement in the nurse work environment.</p>
7	<p>Holly Wei, Paige Roberts, Jeff Strickler, Robin Webb Corbett</p> <p>Nurse leaders' strategies to foster nurse resilience.</p> <p>North Carolina, USA, 2018</p>	<p>To identify nurse leaders' strategies to cultivate nurse resilience.</p>	<p>Nurse leaders who were defined as charge nurses, nurse managers and nurse executives of a tertiary hospital in the United States. 20 nurse leaders were used altogether.</p> <p>N=20</p>	<p>A qualitative descriptive study occurred from November 2017 to June 2018. A purposive sampling method was used to have recruited 20 nurse leaders.</p>	<p>Seven strategies are identified to cultivate nurse resilience: facilitating social connections, promoting positivity, capitalizing on nurses' strengths, nurturing nurses' growth, encouraging nurses' self-care, fostering mindfulness practice and conveying altruism.</p>
8	<p>Xiaochen Lyu, Thitinut Akkadechanunt, Pratum Soivong, Phanida Juntasopeepun</p> <p>Factors influencing intention to stay of male nurses:A descriptive predictive study</p> <p>China 2022</p>	<p>To examine the level of intention to stay among male nurses in China.</p>	<p>Registered male nurses (N=480)</p>	<p>Descriptive statistics and binary logistic regression were employed to analyze the data</p>	<p>The findings of this study provide suggestions for nursing administrators and policymakers to develop appropriate strategies or interventions to increase the intention to stay for male nurses to stay in the profession, based on the four predictors: career growth, job satisfaction, transformational leadership and workgroup cohesion</p>
9.	<p>Mhawish Huda A., Rasheed Akram M.</p> <p>Staffing critical care nurse amid covid-19 cises: strategies and plans.</p> <p>Saudi Arabia, 2022.</p>	<p>To describe a nursing staffing surge model in critical care units that can be used during a pandemic or crisis.</p>	<p>Nurses working in the ICU. (N= unknown)</p>	<p>Experimental approach was utilized.</p>	<p>Evidence-based experience in dealing with the acute shortage of nursing staffing during the first wave of covid-19.</p>

10	<p>Boontida Theucksuban, Wipada Kunaviktikul, Orn-Anong Wichaikhum, Kulwadee Abhichart-tibutra</p> <p>Testing a model of Thai nurses' intent to stay in employment</p> <p>Thailand, 2022</p>	<p>To test the causal model of intent to stay in employment of nurses in regional medical centers.</p>	<p>The sample was 1224 registered nurses from nine regional medical centers across Thailand, data were collected between January and July 2019.</p>	<p>This study employed a cross-sectional design, using multi-stage random sampling, and analyzed with structural equation modeling.</p>	<p>The final model explained 40.3% of the variance in intent to stay. The study indicated seven factors that can be considered by nurse managers in developing a framework for constructing interventions to increase nurses' intention to continue working in their organization.</p>
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