

Master of Nursing

Dissertation Module

Title:

A quasi-systematic literature review of the Organisational and Individual Factors Influencing Nurses' Job Satisfaction and Retention

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Acknowledgements

I would like to express my gratitude to my dissertation supervisor, [REDACTED] for her support, valuable guidance, and remarkable patience throughout this research journey. Her insightful feedback has been instrumental in enhancing the quality of this research. I also extend my sincere thanks to the faculty and staff of [REDACTED] University for their academic and technical support. To my family and friends, thank you for your constant encouragement, understanding, and emotional support. Your belief in me gave me the strength to finish this dissertation. Lastly, I am grateful to the researchers whose work formed the foundation of this review. Their contributions to the field of nursing continue to inspire evidence-based practice and improve the healthcare workforce.

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Abstract:

Background: Job satisfaction along with nurse retention represents critical components essential for maintaining a global healthcare workforce. The existing problems with staff shortages together with employee burnout and high nurse turnover rates present serious challenges to the delivery of healthcare in public institutions. This paper aimed to identify organizational and individual factors that affect nurses' job satisfaction and retention. **Methods:**

The author performed a quasi-systematic literature review to identify peer-reviewed quantitative and qualitative studies published in English between 2010 and 2024 were identified through structured searches across CINAHL, PubMed, APA PsycINFO, MEDLINE and ProQuest. Quality appraisal was conducted using CASP checklists, and thematic analysis was applied to extract and categorize key findings. **Results:** A search across the above

databases produced 426 study results from which the author selected 12 studies. The studies highlighted leadership support as vital to retention and increasing staff satisfaction. Chronic understaffing and burnout were closely linked to job dissatisfaction and turnover. Additionally, intrinsic motivation and alignment with personal values were found to enhance job satisfaction and retention. **Conclusion:** To improve nurses' job satisfaction and retention, a multi-factor

approach is necessary that addresses both organizational and individual factors. Healthcare organizations can employ strategies like leadership development, workload management, and burnout prevention to foster meaningful work experiences and opportunities for professional growth.

Keywords: Nurse retention, job satisfaction, leadership, burnout, staffing, work-life balance, healthcare management

1: INTRODUCTION AND BACKGROUND

1.1: Introduction

Nurses are the backbone of healthcare systems, and they play a critical role in delivering high-quality patient care. In most healthcare systems, nurses make up more than 50% of the healthcare workforce and are the primary providers of hospital patient care, as well as the majority of residential patient care (Godsey et al., 2020). The World Health Organization emphasises the role of nurses in improving health, contributing to the wider economy, driving primary health care and shaping health policies. Thus, investing in their job satisfaction and retention is important to achieve an efficient, effective, resilient and sustainable healthcare system (World Health Organization, 2024).

1.2: Background

In Hong Kong, just like in other countries, nurses are the largest workforce within the healthcare sector, constituting approximately 54.6% (66 492) of registered healthcare professionals as of the end of 2022 (Health Bureau, 2023). Given the pivotal role of nurses, workforce recruitment and retention of diverse nursing staff should be a priority. The Hong Kong public healthcare system is facing a significant challenge, one of them being the nursing workforce shortage. The shortage has been attributed to a general shortage in workforce supply, an ageing

population, demographic changes, a lack of long-term and coherent manpower policies, and the obstacles imposed on nurses who have not been locally trained (Lam, 2022). The shortage has been further aggravated by the high turnover rates of nurses, especially those working in the Hospital Authority, which negatively affects timely high-quality medical services. As of 2021-

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reached the age of 50 and beyond, and thus, they are close to retirement (Health Bureau, 2023). The social welfare sector also faces challenges in recruiting and retaining nursing professionals.

Given the problem surrounding the quantity and quality of nurses, the high nurse turnover in the public healthcare system remains unsolved. Thus, it is imperative to investigate the individual and organisational factors influencing nurses' job satisfaction, which can be used to inform effective strategies to improve retention rates. Job satisfaction and retention of nurses are the basis of good healthcare service delivery, patient care quality, and a stable healthcare system. Job satisfaction is the degree to which employees feel positive and content with their work, encompassing various aspects of their professional life and relationship with their employer (Kim et al., 2024).

1.3: Personal Perspective

I currently work as a registered nurse at the Hospital Authority, and I have witnessed the high rate of job dissatisfaction, burnout, and turnover among my colleagues. Prior research suggests that the common factors associated with job satisfaction are burnout-emotional

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management to address these issues to enhance nurse satisfaction. Job satisfaction is subjective, but a growing body of research supports that low job satisfaction is highly correlated with increased turnover intentions, burnout and absenteeism (Lu et al., 2012).

1.4 Theoretical Framework

Herzberg's theory of job satisfaction suggests that job satisfaction is influenced by two main factors, namely hygiene factors and motivators (Alrawahi et al., 2020). The theory identifies the hygiene (job dissatisfaction) factors as heavy workload, safety, promotion, salary, recognition and organisational policies, while the motivators (satisfaction) factors are professional development relationships with leaders and co-workers. Drawing from another theoretical

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level of job satisfaction are inherent in everybody. The dispositional theory produces a notable explanation of job satisfaction and shows that job satisfaction is relatively constant cross-temporal as well as cross-career and job (Staw & Cohen-Charash, 2005).

1.5: Aim of the Study

Considering the multidimensional role of job satisfaction and the fact that there may not be a single strategy that is appropriate for all nursing staff, the management of healthcare organisations should be aware of various strategies that can be used to improve job satisfaction. This quasi-literature review aims to systematically investigate the organisational and individual factors influencing nurses' job satisfaction and retention of nurses in order to solve some of the workforce shortages present in healthcare organizations.

2: METHODOLOGY AND METHODS

2.1: Introduction

This chapter outlines the methodology and methods used in this research study. It provides an overview of the search strategy utilized to locate relevant research related to organisational and individual factors that influence nurse's job satisfaction and retention. The section will address the following subsections: search methods, the literature search process, inclusion and exclusion criteria, critiquing framework, and data analysis method.

2.2: Research Design

A quasi-systematic literature review was adopted as a design for this review. This quasi-systematic literature review will help to generate a primary outcome a list of the main constructs

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systematic literature review is less rigorous than a systematic literature review but still uses a structured approach. It involves a less comprehensive search and inclusion process, potentially lacking the rigour of a fully systematic review, but it still aims to provide a structured overview of the literature. I opted for a quasi-systematic review because my time was limited, and conducting a full systematic review can be highly time-consuming, requiring extensive data collection and analysis that I could not accommodate within my schedule.

2.3: Search Strategy

The first method in conducting a quasi-systematic literature review is to establish a good search strategy (García-Peñalvo, 2022). The search was conducted across several key databases, including the Cumulative Index of Nursing and Allied Health (CINAHL), PubMed, APA PsycINFO, MEDLINE and ProQuest Nursing & Allied Health Source. These databases were

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strings verbatim. The researcher used forward and backward snowballing techniques to complement database searches and identify more relevant articles, thus ensuring a thorough review (Wohlin, 2014). Furthermore, truncation and wildcards were used to expand the scope of the search queries.

Table 2.1: Boolean Search

Keyword and synonym	Boolean operator	Interest	Boolean operator	Population
Organisational factors OR Work environment OR	AND	Job satisfaction / Job satisfac* OR Nurse job contentment OR	AND	Nurses/ Nurs* OR Registered nurse/ register?d Nurs* OR

Workplace conditions OR Workplace challenges OR Organisational culture OR Management Practices OR Individual factors Personal factors		Nurse job satisfaction OR Nurse retention OR Nurse turnover OR Nurse attrition OR Workforce retention OR Nurse burnout		Enrolled nurses OR General nurses OR Mental health nurses
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2.4: Inclusion and Exclusion Criteria

Following the application of inclusion and exclusion criteria (Table 2), the articles were refined to identify those most relevant to the study. This review included all the studies that have investigated organisational and individual factors that influence job satisfaction and retention among nurses. Studies were excluded if the population of interest was not registered nurses, enrolled nurses, or nursing staff working within a healthcare setting. The author selected

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excluded. In this dissertation, an international approach is adopted to explore the

organisational and individual factors influencing nurses’ job satisfaction and retention, thus, studies were not excluded based on the country of origin.

Table 2.2: Inclusion and Exclusion Criteria

<u>TYPE OF CRITERIA</u>	<u>INCLUSION CRITERIA</u>	<u>EXCLUSION CRITERIA</u>	<u>JUSTIFICATION</u>
Population		Studies focusing on other healthcare professionals or non-nursing populations	To ensure the study focuses specifically on nurses.
Setting		Other nursing work environments such as academic nursing faculty.	The author was interested in a healthcare environment
Measures		Studies without measures related to job satisfaction or retention	To include studies that provide data-driven insights into factors influencing job satisfaction and retention.
Language		Studies published in languages other than English	The author was more comfortable using English to avoid translation errors.
Published between 2010 and 2024		Studies published before 2010	To ensure that the evidence is up to date and reflects current trends in nursing job satisfaction.
Study design		Non-peer-reviewed articles and dissertations	To ensure the inclusion of high-quality, credible research.

2.5: Quality Assessment

The researcher assessed the quality of the studies included in this review based on their methodology and the strength of evidence that these articles provided in evaluating the organisational and individual factors influencing nurses' job satisfaction and retention. To

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Murad *et al.*, 2016). For this review, CASP Cross-Sectional Studies Checklist and CASP Qualitative Checklist were used to assess the quality of the studies. There were no studies that were excluded based on their quality but the quality of the studies was taken into consideration when presenting the findings and conclusion in this review.

2.6 Data Analysis Method

Thematic analysis was conducted to identify patterns and themes across the data and to tell an interpretative story about the data in relation to the research question. As explained by Braun and Clarke (2021), a thematic analysis involves a recursive six-phase process including

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guided by prior research and theory. First, data were systematically collected and common ideas were paraphrased to identify patterns. All data relevant to these patterns were classified, and related concepts were grouped under corresponding patterns. Next, related patterns were combined into sub-themes, ensuring they align with the research topic (Clarke and Braun, 2014; Nowell *et al.*, 2017; Polit & Beck, 2021). The validity of the chosen themes was established by re-reading the related literature to support inferences.

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3: RESULTS AND ANALYSIS

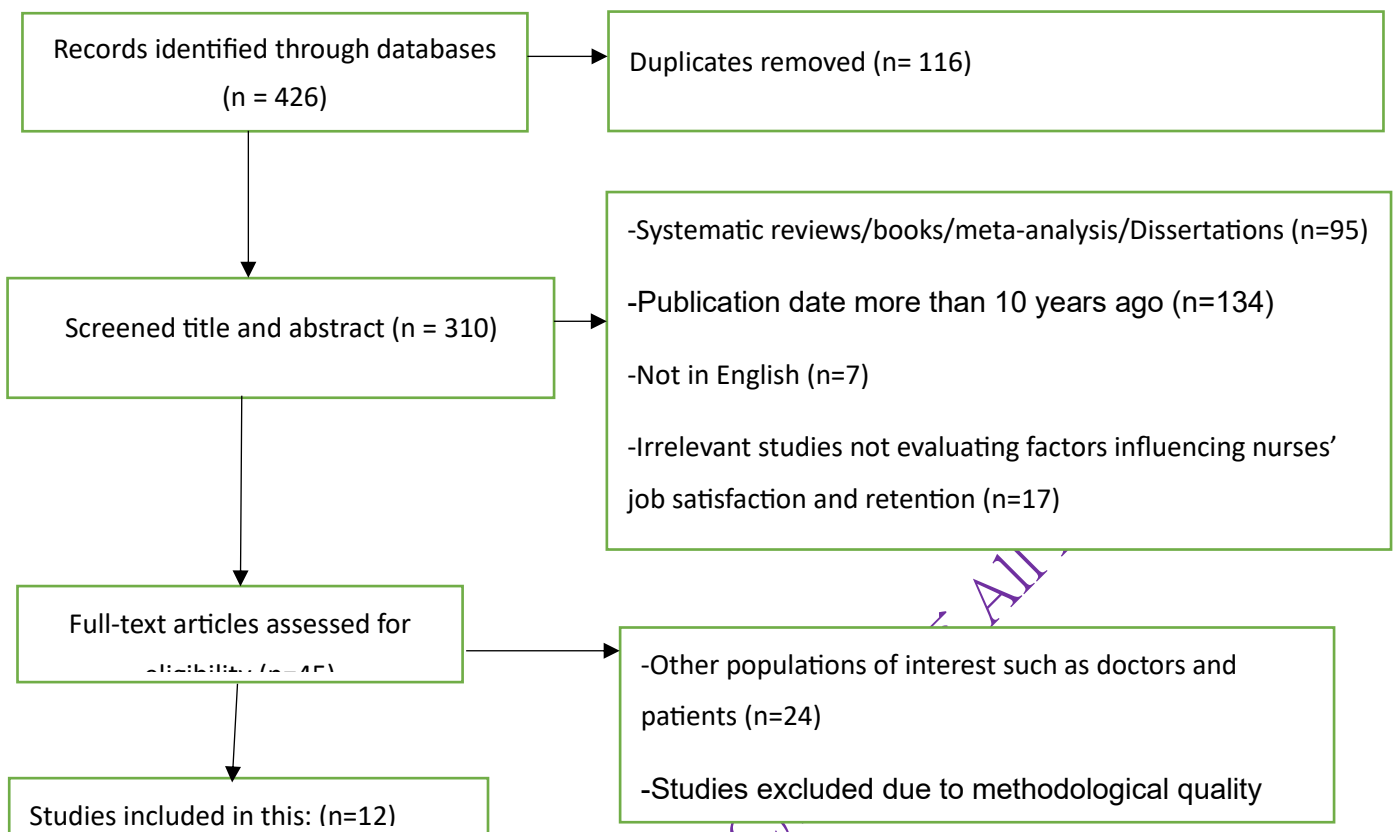
3.1: Introduction

This chapter presents the results of the quasi-systematic literature review conducted to answer the research question; what are the organisational and individual factors influencing job satisfaction and retention of nurses in healthcare settings in an international context?

3.2: Eligible studies

A total of 426 articles were initially retrieved from various databases accessed through Oxford Brookes University, including CINAHL (113), PubMed (66), APA PsycINFO (15), MEDLINE (128), and ProQuest Nursing & Allied Health Source (114). After the removal of duplicates ($n = 116$), 310 articles remained and underwent screening based on title and abstract. This first level of screening led to the exclusion of an additional 265 articles. A total of 45 articles were assessed for eligibility through full-text screening and of these, 12 studies met the inclusion criteria for the review (Figure 3.1).

Figure 3.1: A Prisma Flow Chart of The Selected Studies



3.3: Study characteristics

The research studies identified were conducted across various geographical regions, including Europe, Asia, and the Middle East, reflecting a broad perspective on nurses' job satisfaction and turnover intentions. The studies were from the Netherlands (n=1), Norway (n=1), Belgium (n=1), Turkey (n=1), Hong Kong (n=2), the UK (n=3), France (n=1), Finland (n=1) and across 10 European countries (n=1). Out of the 12 selected studies, 11 were cross-sectional studies and one was a qualitative study. The sample sizes across these studies varied significantly,

ranging from 15 participants (Flinkman and Salanterä, 2014) to 23,159 participants (Heinen et

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commitment to the organization and profession (Çamveren and Kocaman, 2021; Robson and Robson, 2016), work pressure, social support, age, autonomy, development opportunities (Van *et al.*, 2012; Wong *et al.*, 2024).

3.4: Methodological quality of included studies

The methodological quality of the included studies was assessed separately by the author, using two validated tools. The CASP Cross-Sectional Studies Checklist 2024 and CASP Qualitative Studies Checklist 2024 was used to assess the quality of the studies in this review.

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and valid measurement tools. The studies had clearly focused research aims, and appropriate designs for answering the research questions, and employed valid and reliable tools for

measuring outcomes such as job satisfaction, burnout, and turnover intention. For example, Gillet et al. (2018) employed the psychological need satisfaction scale, a validated psychometric tool, to assess how psychological needs such as autonomy, competence, and

sizes (ranging from 144 to over 2321 participants), meeting CASP standards for sampling adequacy and generalizability. Flinkman and Salanterä (2014) conducted in-depth semi-structured interviews with 15 early-career nurses in Finland to explore turnover motivations. While CASP acknowledged the appropriateness of their qualitative approach, the small sample size (n=15) was a limitation in terms of transferability. All studies clearly reported ethical considerations, including informed consent and confidentiality, and none were rated as having significant methodological unknowns.

3.5: Individual/Organizational factors of job satisfaction

3.5.1: Qualitative Findings

Factors identified in the qualitative studies were categorized as either individual, organizational or others. The studies by Flinkman and Salanterä (2014) highlight a complex interplay of

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especially early in their careers, view nursing as a fallback profession, which weakens their professional commitment. Additionally, unpaid overtime and the sense of moral distress from compromised care further diminish morale.

3.5.2: Cross-Sectional Studies

The synthesis of findings from the cross-sectional studies reveals a clear and consistent pattern that both organisational and individual factors critically influence nurses' job satisfaction and their intention to stay or leave the profession. Organisationally, poor working conditions

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workplace which in turn reduces their intention to leave (Robson and Robson, 2016). Unfavourable patient-to-nurse ratios and increased emotional and physical demands were associated with higher burnout and a greater desire to leave the profession (Van Dam et al., 2013; Wong et al., 2024). Nurses who perceived their work environment positively especially one that is characterized by effective leadership, professional respect, participation in hospital

decisions, and alignment between personal and organisational values significantly demonstrated higher job satisfaction and were less likely to leave (Gillet et al., 2018; Andresen et al., 2017; Heinen et al., 2013; Senek et al. (2023).

Support from supervisors and colleagues played a particularly strong role in promoting psychological need satisfaction (i.e., autonomy, competence, relatedness), which in turn enhanced motivation and commitment (Gillet et al., 2018; Fasbender et al., 2019). Conversely,

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had a more immediate impact on their intent to leave their current unit or employer (Çamveren & Kocaman, 2021). Embeddedness both within the workplace (on-the-job) and outside of it (off-the-job) was shown to moderate the impact of stress and satisfaction, suggesting that strong community or family ties can hinder occupational burnout and turnover (Fasbender et al., 2019).

Individual factors like age, career stage, burnout levels, personal values, and psychological well-being were strong predictors of retention. Younger nurses and those in temporary

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stronger intentions to leave (Senek et al., 2023; Wong et al., 2024). Meanwhile, satisfaction with life and personal alignment with the nursing profession was linked to higher job commitment and lower turnover intention, emphasizing the importance of intrinsic motivation and personal meaning in nursing roles (Andresen et al., 2017).

Table 3.1: Summary grid

Reference	Population	Country	Topic/Background	Study design	Outcome	Main findings	Strength
██████████ ██████████ ██████████	Intervention group: Nurses (n = 498) comparison group: Non-nurses (n= 3714)	Norway	To examine nurses' satisfaction with life and job and their intention to leave their jobs compared to non-nurses	Cross-sectional study Telephone interviews and questionnaires	Measured quality of life and job satisfaction using standardized questionnaires	Found that job satisfaction is significantly associated with appreciative leaders, lower age, autonomy, less monotonous tasks, and less stressful work environment	positive
██████████ ██████████ ██████████	Intensive care nurses (n=2321)	Belgium	Investigates the relationship between burnout, intention to leave the profession, and work environment among Belgian	Cross-sectional study	Assessed burnout levels and intention to leave using validated scales	Identified a strong association between negative work environments , high burnout levels due to high patient-	positive

			ICU nurses post-pandemic.			to-nurse ratio and increased intentions to leave the profession	
■■■■■	Nurses in a university hospital (n=335)	Turkey	To determine the factors affecting nurses' intentions to leave their unit, organisation, and the profession	cross-sectional descriptive study	Measured intentions to leave and associated factors through questionnaires and a scale	Found that job-improving nursing practices, working conditions, and having a collective culture, increase satisfaction and encourage nurses to stay in the organisation.	positive
■■■■■	Registered nurses working in 10 hospitals in Hong Kong (n= 1271)	Hong Kong	To identify how frontline registered nurses perceived their work environment and how it predicts nurses' job satisfaction and intention to leave.	cross-sectional correlational survey	Measured nurses' lived experience with a detailed instrument	Staffing and resources, ward practice, management and professionalism significantly influence nurses' job satisfaction and retention.	positive
■■■■■	Nurses (n=361)	UK	To test nurses' job satisfaction and job stress as possible predictors of	Cross-sectional study	Measured job satisfaction, stress, and turnover intentions	Job stress was a significant predictor of turnover	positive

			their turnover intentions		using survey data	intentions, moderated by job embeddedness.	
■■■■■	Young registered nurses (n=15)	Finland	To explore early career experiences and perceptions of turnover among young nurses.	Qualitative study	Explored perceptions of turnover through interviews.	Social support, Supportive work culture, adequate staffing, and resources, managerial support, and good nurse-physician relations play a role in nurse retention.	positive
■■■■■	Oncology nurses (n=144)	France	To examine the effects of work factors on job satisfaction, quality of care, and turnover intentions.	Cross-sectional study	Measured job satisfaction, quality of care, and turnover intentions using validated scales.	Psychological need satisfaction influences perceived supervisor support, value congruence and hospital staffing influences job satisfaction which is linked to turnover intentions.	positive
■■■■■	Nurses from 10 European countries	10 European countries	To investigate factors associated with	Cross-sectional	Measured intention to	Nurse–physician relationships,	positive

	countries (n=23,159)		nurses' intention to leave their profession across multiple European countries.	observational study	leave using surveys.	leadership, hospital affairs, older age, female gender, working full-time, and burnout are associated with the intention to leave the profession.	
■■■■■	UK nurses (n=433)	UK	To investigate relationships between leader-member exchange, perceived organisational support, affective commitment and intention to leave	Cross-sectional study	Measured factors influencing turnover intentions using surveys.	Effective commitment, leave intention, leader-member exchange and perceived organisational support significantly influence leave intention.	positive
■■■■■	Community Nurses (n=533)	UK	To explore working conditions and characteristics of community nursing that influence intentions to leave.	Cross-sectional study	Measured turnover intentions and explored reasons using a validated questionnaire.	Job dissatisfaction, with factors such as unpaid overtime, lack of manager support, team composition, and working conditions significantly	positive

						influencing leave intentions.	
■■■■■ ■■■■■	ICU nurses (n=461)	Netherlands	To explore individual and contextual factors that are related to nurses perception of work pressure and turnover	Correlational, cross-sectional design	Measured work pressure and turnover intentions using validated scales.	Higher work pressure was associated with increased physical and emotional demands, lack of autonomy, social support, and exposure to aggression, while turnover intention was influenced by age, ability to handle night shifts, lack of development opportunities, and social support.	positive
■■■■■ ■■■■■	Registered nurses in public hospitals (n=502)	Hong Kong	To examine the relationship between burnout, pay level satisfaction and turnover intentions.	Cross-sectional study	Measured job demands, burnout, and turnover intentions using validated scales.	Burnout mediated the relationship between job demands-related factors such as work overload, job stress, work-family conflict,	positive

						family-work conflict, and conflicts with nurses to turnover intentions.	
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3.6: Themes

The following themes and sub-themes emerged

Theme 1: Supportive Leadership and organizational commitment.

A dominant theme across the studies was the role of leadership in shaping nurses' job satisfaction and intent to stay. Nurses who felt genuinely supported by their supervisors and

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Robson, 2016; Andresen et al., 2016; Heinen et al., 2012). Furthermore, participation in decision-making processes and involvement in hospital affairs reinforced nurses' sense of value and professional autonomy, strengthening their intent to remain in their positions.

Theme 2: Workload, Staffing, and Work Environment

Heavy workloads, poor staffing levels, and low-resource environments were strongly linked to dissatisfaction and turnover. Nurses reported physical and emotional strain when patient-to-

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performance (Bruyneel et al., 2022; Senek et al., 2023; Choi et al., 2012; Van et al., 2012; Wong et al., 2024). Inadequate nurse-to-patient ratios and chronic understaffing (Bruyneel et

(Choi et al., 2012; Van et al., 2012) were essential to maintaining a supportive environment.

Theme 3: Burnout and Emotional Exhaustion

Burnout was a common individual-level predictor of nurse turnover. Emotional exhaustion and reduced sense of accomplishment were exacerbated by high workloads, insufficient rest, and emotional demands. Nurses experiencing these symptoms reported a greater desire to exit the profession (Wong et al., 2024; Fasbender et al., 2018).

Theme 4: Meaningful Work

When nurses felt their work aligned with their values and that they were making a difference, they were more likely to report higher job and life satisfaction (Andresen et al., 2016; Çamveren

Emotional investment in the nursing role (Çamveren and Kocaman, 2021) further reinforced commitment and fulfilment, emphasizing the significance of meaningful work in enhancing overall satisfaction.

Theme 5: Opportunities for Growth and Autonomy

Those who had access to training, mentoring, or clear advancement pathways were more likely to remain in the profession. Autonomy in clinical decision-making also played a crucial role in

along with perceived career progression and future security, contributed significantly to nurses' retention. Autonomy in clinical practice and reduced micromanagement further enhanced their sense of professional control and satisfaction.

Theme 6: Work-Life Balance and Job Embeddedness

Work-life balance emerged as a critical individual factor. Nurses with high off-the-job embeddedness (e.g., family ties, and social commitments) were more resilient to burnout and less likely to leave. Conversely, work-family conflict and the inability to disconnect from work increased stress and turnover intentions (Fasbender et al., 2018; Wong et al., 2024; Flinkman and Salanterä, 2014).

Table 3.2 displays the thematic analysis that maps the organisational and individual factors influencing nurse job satisfaction and retention as identified in the 12 studies.

Table 3.2: Analysis of Themes

	Supportive Leadership and Organisational Commitment	Workload, Staffing, and Work Environment	Burnout and Emotional Exhaustion	Meaningful Work	Opportunities for Growth and Autonomy	Work-Life Balance and Job Embeddedness
■■■■■ ■■■■■	✓			✓	✓	
■■■■■ ■■■■■	✓	✓				
■■■■■ ■■■■■ ■■■■■		✓		✓		
■■■■■ ■■■■■	✓	✓			✓	
■■■■■ ■■■■■			✓			✓
■■■■■ ■■■■■ ■■■■■				✓	✓	✓
■■■■■ ■■■■■	✓			✓	✓	
■■■■■ ■■■■■	✓					

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leadership styles, particularly transformational leadership, contribute to better nurse performance, satisfaction, retention and improved patient safety (Ystaas et al., 2023). Transformational leadership theory, emphasizes the importance of leaders who motivate,

highlights the crucial role of leadership in an organization. Leadership behaviors that address motivators such as providing recognition and opportunities for growth have been found to enhance job satisfaction and addressing hygiene factors helps prevent dissatisfaction (Alrawahi et al., 2020).

This theme is relevant to the research question as it highlights that leadership is not just about

Robson (2016); Andresen et al. (2016) and Heinen et al. (2012), emphasize how leadership support fosters a positive work environment, directly impacting retention.

The second prominent theme involves workload and staffing, which were found to be directly linked to job dissatisfaction and high turnover rates. Studies consistently highlighted that inadequate staffing and heavy workloads lead to physical and emotional strain, which ultimately

job resources like leadership support, autonomy, and having the opportunity to be promoted stimulate personal growth and development which is likely to increase satisfaction and retention (Montgomery et al., 2015). When job demands exceed available resources, nurses are more prone to experience emotional exhaustion and a sense of depersonalization, which leads to reduced personal accomplishment and higher turnover intentions. This theory aligns with the studies in this review, where positive work environments and adequate staffing were identified as key factors in reducing turnover.

Workload and staffing issues directly relate to the research question as they are organizational conditions that can be altered to improve job satisfaction and retention. This is important,

emotional exhaustion, burnout, and turnover intentions, making it imperative for healthcare organizations to take proactive measures (Wong et al., 2024).

The findings confirm the vast body of literature linking burnout to job dissatisfaction and turnover (Fasbender et al., 2018; Wong et al., 2024). Emotional exhaustion, a core component

emotional energy, time, and support), and when these resources are threatened, burnout occurs (Bon & Shire, 2022). In the case of nurses, insufficient emotional and professional resources such as lack of support, excessive workload and poor work-life balance can lead to burnout.

Nurses who found alignment between their personal values and professional roles were more likely to remain in the profession (Andresen et al., 2016; Çamveren and Kocaman, 2021;

engagement at work (Ahlstedt et al., 2020). Nurses who feel that their work is meaningful are more likely to experience higher levels of autonomy, competence, and relatedness, all of which contribute to job satisfaction.

Opportunities for career growth and autonomy were strongly linked to job satisfaction and retention. Nurses who had access to professional development opportunities and greater autonomy in clinical decision-making were more likely to stay in their roles (Gillet et al., 2018; Van et al., 2012; Choi et al., 2012; Flinkman and Salanterä, 2014). This theme ties into Herzberg's Motivation-Hygiene Theory which suggests that opportunities for growth and

[REDACTED]

how personal and professional connections to the organization and community influence retention (Setthakorn et al., 2024). Nurses who are embedded in their work and community are less likely to leave, even in the face of stressors such as burnout. This emphasizes the need for healthcare institutions to consider nurses' personal lives when designing retention strategies.

4.3: Implications for Practice, Policy and Research

Thus, healthcare organizations must invest in leadership development programs that cultivate knowledge and skills regarding teamwork, managing, leadership and communication skills,

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ward manager should prioritise appropriate staffing ratios and advocate for the allocation of sufficient resources in the wards so as to mitigate burnout and foster a sustainable working environment for nurses. From the background literature, the need for institutional interventions to support nurses' mental health and well-being is evident. Emotional exhaustion not only leads to higher turnover but also impacts the quality of care provided to patients. Therefore, healthcare institutions must implement strategies that address the emotional and psychological needs of nurses, such as burnout prevention programs. Healthcare organizations must ensure that nurses feel connected to the purpose of their work. This could involve aligning roles with

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facing a significant problem in healthcare professional shortage but also on a global scale (Schoeb, 2016). Policies that support work-life balance, such as flexible scheduling and family leave, are essential in promoting retention. Several critical research questions have emerged

from this review, highlighting the necessity for further studies to deepen the understanding of factors influencing nurses' job satisfaction and retention.

4.4: Future Research

Several critical research questions have emerged from this review, highlighting the necessity for further studies to deepen the understanding of factors influencing nurses' job satisfaction and retention. Firstly, identifying the most effective leadership styles and practices remains

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considered the gold standard in research because they allow for the control of confounding variables and offer the strongest level of evidence (Hariton & Locascio, 2018). By randomly assigning nurse units to intervention and control groups, researchers can confidently assess whether a leadership style directly improves outcomes like satisfaction, retention, or patient safety. Further research should examine the relationship between autonomy in nursing practice

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term retention. Mixed-method studies combining qualitative interviews and large-scale quantitative surveys would provide comprehensive insights into this relationship. Moreover,

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[REDACTED]

Addressing these research questions requires comprehensive and methodologically rigorous studies, with an emphasis on quantitative methodologies and well-structured RCTs to ensure the generation of robust and generalizable findings.

4.5: Strengths and limitations

This systematic review critically examined the existing literature on nurses' job satisfaction and retention, which constitutes a key strength of this study. The researcher independently

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

in definitions and the multitude of factors influencing job satisfaction and retention identified across the reviewed studies represent a notable limitation. The lack of standardized conceptualizations may introduce difficulties in generalizing and synthesizing the findings

effectively. Additionally, this review included only studies published in English, potentially excluding valuable research published in other languages and thus possibly limiting the scope and depth of the insights gained. Furthermore, cultural factors could significantly influence

predominantly cross-sectional and qualitative in nature. Qualitative studies, including those by Flinkman and Salanterä (2014) provided rich, context-specific insights into nurses' lived experiences, revealing the personal and emotional factors influencing retention. The overall CASP appraisal revealed several notable strengths across all studies, including clear, focused research questions and methodologically rigorous designs. These studies provided comprehensive information on the correlation between work environment, leadership, and turnover intentions. The studies generally employed large sample sizes, lending external validity to the findings. However, the limitations of cross-sectional studies, particularly their

report power calculations or address potential response bias from non-respondents. The exclusive reliance on self-reported data also introduces the possibility of recall and social desirability biases.

4.6 Reflection

Reflecting on my experiences conducting this systematic review, I recognize both personal growth and several opportunities for improvement. The ability to systematically appraise numerous studies using the CASP tools enhanced my critical thinking skills and understanding

[REDACTED]

also be beneficial in refining search strategies, ensuring comprehensive database searches, and possibly identifying relevant studies that were initially overlooked. Finally, proactively incorporating non-English studies could significantly broaden the cultural applicability and generalizability of the findings, addressing a key limitation identified during this review.

5: CONCLUSION AND RECOMMENDATIONS

The quasi-systematic review analyzed both organizational and individual factors which affect nurse satisfaction and retention to develop insights and evidence-based implications for healthcare systems. The study highlighted significant themes, including leadership, workload

[REDACTED]

workforce outcomes (Tummers and Bakker, 2021; Alrawahi et al., 2020).

The research question sought to identify the critical factors influencing nurses' job satisfaction and retention, as well as to provide evidence-based recommendations for improving healthcare systems. The findings revealed that specific organizational factors, such as leadership support, adequate staffing, and resource availability, significantly impact nurses' sense of fulfilment and

[REDACTED]

understaffing to burnout and increased job dissatisfaction.

At the individual level, emotional exhaustion and burnout were found to play pivotal roles in shaping nurses' intentions to stay or leave the profession. The Conservation of Resources theory explains how resource depletion, such as time and emotional energy, leads to burnout and higher turnover rates (Bon and Shire, 2022). Furthermore, intrinsic motivation and alignment with personal values were identified as critical factors influencing job satisfaction. Studies like Andresen et al. (2016) and Çamveren and Kocaman (2021) emphasized how meaningful work and alignment with professional values enhance nurses' psychological well-being and commitment to their roles.

While these findings provide a comprehensive understanding of the factors influencing nurse retention, they also underscore the complexity of the issue. From my point of view, enhancing

[REDACTED]

This multifactor approach aligns with the JD-R model, which emphasizes the balance between job demands and resources as critical to employee well-being (Tummers and Bakker, 2021). As generally observed from the articles, improving nurses' job satisfaction and retention is not only a matter of addressing systemic challenges but also of fostering environments where

[REDACTED]

who are the backbone of a healthcare system. By prioritizing their well-being and job satisfaction, healthcare organizations can reduce turnover rates, enhance workforce stability, and ultimately improve patient care outcomes.

5.1 Recommendations

Based on the findings of this quasi-systematic review, both organizational and individual factors significantly impact nurse job satisfaction and retention. The findings reflect global patterns, and for the recommendations, the recommendations herein are specifically contextualized to Hong Kong's healthcare system within the Hospital Authority where the author practices as a nurse. These recommendations draw from the study's key findings and also from the practical experience of the author working in a public hospital, which faces challenges such as chronic understaffing, heavy workloads and nurse dissatisfaction.

The Hospital Authority need to invest resources into leadership development initiatives to nurture support-focused leadership management teams. Leaders who exhibit empathy, foster inclusivity, and provide emotional support create environments where nurses feel valued and motivated (Gillet et al., 2018; Robson and Robson, 2016; Andresen et al., 2016; Heinen et al.,

[Redacted]

feelings of belonging that nurses need to maintain their morale while also keeping them engaged in their work. The leadership development initiatives should integrate mentorship programs by matching experienced leaders with novice nurse leaders. Through this practice, organizations create an environment where employees can learn continuously while pursuing

[Redacted]

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[Redacted]

The literature clearly shows that high workload and inadequate staffing ratios are among the leading causes of burnout and turnover (Wong et al., 2024; Fasbender et al., 2018; Heinen et al., 2012; Flinkman and Salanterä, 2014; Bruyneel et al., 2022). These problems are particularly acute in Hong Kong, where the ageing population and workforce shortages have significantly strained healthcare services (Health Bureau, 2023). The HA should reevaluate its

[Redacted]

[Redacted]

[Redacted]

[Redacted]

health support units that offer counselling, peer support groups, and confidential helplines.

The Hospital Authority Academy established by the Hospital Authority (HA) provides training opportunities for different healthcare professions to nurture more talents. The Nursing Cluster General Manager should encourage nurses to invest time in continuous professional development because it will help them to improve their clinical performance while providing them with career advancement options. Research conducted by Gillet et al. (2018), Van et al. (2012), Choi et al. (2012), and Flinkman and Salanterä (2014) demonstrated that access to

areas their nursing staff absolutely need. Tailoring educational curricula to meet these identified needs will ensure that training is relevant and impactful to the organization. This could include specialized courses in emerging healthcare technologies, evidence-based practice, and advanced clinical skills, which enhance competencies and also boost confidence among nurses. Furthermore, organizations should explore various formats for delivering continuous professional development opportunities including physical, online courses, and virtual simulations. Flexible learning options accommodate different learning styles and schedules

allowing nurses to continue their professional development comfortably without affecting their personal or professional commitments.

As discussed in Chapter Four, future studies should prioritize identifying effective leadership styles that enhance nurse retention, as leadership significantly influences job satisfaction and engagement. As some studies suggested, when nurses feel empowered and have control over their work, they are more likely to be satisfied, engaged, and committed to their roles, which, in turn, leads to improved patient care. Also, examining specific work-life balance policies across different healthcare contexts will help identify effective strategies to reduce turnover.

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Component 3: Data Summary Sheet

Paper 1:

CASP Checklist:

For Descriptive/Cross-Sectional Studies

Reviewer Name:	
Paper Title:	<div></div> <div></div>
Author:	<div></div>
Web Link:	<div></div>
Appraisal Date:	02.03.2025

Section A: Are the results valid?

1. Did the study address a clearly focused issue?

☐ Yes ☐ No ☐ Can't Tell

Yes: The study clearly defined its population (Norwegian nurses), risk factors (job satisfaction, quality of life, intention to change jobs), and outcomes (comparisons with non-nurses)

CONSIDER:

A question can be 'focused' in terms of

- the population studied
- the risk factors studied
- is it clear whether the study tried to detect a beneficial or harmful effect
- the outcomes considered

<p>2. Did the authors use an appropriate method to answer their question?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell</p> <p>Yes:</p> <ul style="list-style-type: none"> • A cross-sectional design appropriately captures associations between job satisfaction, quality of life, and intention to change jobs. • The sample included 498 nurses compared to a control group of 3,714 non-nurses with similar educational backgrounds. • Used Satisfaction with Life Scale to measure life satisfaction, single-item rating for job satisfaction, and a question about intention to change jobs. • Bivariate and multivariate statistical analyses were conducted using socio-demographic and work-related variables.
<p>CONSIDER:</p> <ul style="list-style-type: none"> • <i>Is a descriptive/cross-sectional study an appropriate way of answering the question</i> • <i>did it address the study question</i> 	
<p>3. Were the subjects recruited in an acceptable way?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell</p> <p>Yes: Recruitment from a large, nationally representative dataset reduces selection bias and enhances generalizability.</p>
<p>CONSIDER:</p> <p><i>We are looking for selection bias which might compromise the generalisability of the findings:</i></p> <ul style="list-style-type: none"> • <i>Was the sample representative of a defined population</i> • <i>Was everybody included who should have been included</i> 	
<p>4. Were the measures accurately measured to reduce bias?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell</p> <p>Yes: Validated instruments (SWLS) and clearly defined scales for job satisfaction and intention metrics reduce measurement bias.</p>
<p>CONSIDER:</p> <p><i>Look for measurement or classification bias:</i></p> <ul style="list-style-type: none"> • <i>did they use subjective or objective measurements</i> 	

<ul style="list-style-type: none"> do the measurements truly reflect what you want them to (have they been validated) 	
5. Were the data collected in a way that addressed the research issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: Clear and justified methods (validated self-report questionnaires) effectively addressed research questions and were explicitly described.
CONSIDER: <ul style="list-style-type: none"> if the setting for data collection was justified if it is clear how data were collected (e.g., interview, questionnaire, chart review) if the researcher has justified the methods chosen if the researcher has made the methods explicit (e.g. for the interview method, is there an indication of how interviews were conducted?) 	
6. Did the study have enough participants to minimise the play of chance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: A large sample size (498 nurses, and 3,714 non-nurses) provided adequate statistical power, reducing random error.
CONSIDER: <ul style="list-style-type: none"> if the result is precise enough to make a decision if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest. 	
7. How are the results presented and what is the main result?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: <ul style="list-style-type: none"> Results were presented clearly using mean differences and proportions. The size of the results is significant enough to indicate practical relevance, particularly highlighting meaningful differences in job satisfaction and quality of life. Bottom-line result: Nurses experience higher job and life satisfaction than non-nurses, though younger age, temporary positions, and workplace challenges significantly influence intentions to leave the job

CONSIDER:

- *if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards*
- *how large this size of result is and how meaningful it is*
- *how you would sum up the bottom-line result of the trial in one sentence*

8. Was the data analysis sufficiently rigorous?

☐ Yes ☐ No ☐ Can't Tell

Yes: Thorough analysis (both bivariate and multivariate) described in detail with sufficient data to support findings.

CONSIDER:

- *if there is an in-depth description of the analysis process*
- *if sufficient data are presented to support the findings*

9. Is there a clear statement of findings?

☐ Yes ☐ No ☐ Can't Tell

Yes:

- Nurses reported significantly higher satisfaction with life (SwL) and job satisfaction (SwJ) than non-nurses.
- Higher SwL in nurses was associated with younger age, higher job satisfaction, and greater autonomy at work.
- Higher SwJ was significantly associated with the intention to remain in the current job, greater job autonomy, supportive leadership, less monotonous tasks, and lower stress levels at work.
- Intention to change jobs (IchJ) was significantly associated with younger age, temporary job positions, nagging colleagues, and lower job satisfaction.

CONSIDER:

- *if the findings are explicit*
- *if there is adequate discussion of the evidence both for and against the researchers' arguments*
- *if the researchers have discussed the credibility of their findings*
- *if the findings are discussed in relation to the original research questions*

10. Can the results be applied to the local population?

☐ Yes ☐ No ☐ Can't Tell

Yes: Participants' characteristics and healthcare context are clearly similar to other Norwegian and potentially comparable international healthcare settings.

CONSIDER:

- *The subjects covered in the study could be sufficiently different from your population to cause concern.*
- *your local setting is likely to differ much from that of the study*

11. How valuable is the research?

☐ Yes ☐ No ☐ Can't Tell

Yes: *The study significantly contributes to existing knowledge on nurse job satisfaction and provides actionable recommendations for healthcare leadership and policy.*

Reserved

CONSIDER:

- *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision-making*
- *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*
- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	Negative/Relatively poor methodology	Unknowns
<ul style="list-style-type: none"> • Nurses demonstrate relatively high life and job satisfaction compared to similar professions. • Leaders should prioritize offering permanent positions, reducing workplace stress, minimizing disturbances from coworkers, and fostering job satisfaction to reduce 	<p>Self-reported data may introduce bias.</p>	

turnover intentions among nurses.

- The study clearly defined its target population, exposures, and outcomes, enabling a focused investigation.
- The use of a nationally representative dataset enhances generalizability and credibility.
- Validated and reliable tools (SWLS and job satisfaction items) strengthen measurement accuracy, though the intention to leave was assessed using a single question.
- The sample size was robust, though the paper did not report a formal power calculation.
- Data were collected systematically and analyzed using appropriate statistical methods; however, no discussion on handling missing data was provided.
- Results are consistent with international literature and provide practical implications for workforce

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management nursing.	in		
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Paper 2:

CASP Checklist:

For Descriptive/Cross-Sectional Studies

Reviewer Name:	
Paper Title:	
Author:	
Web Link:	
Appraisal Date:	03.03.2025

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Section A: Are the results valid?

12. Did the study address a clearly focused issue?

☐ Yes ☐ No ☐ Can't Tell

Yes. The study addressed a focused issue: assessing the association between burnout, intention to leave the profession, and ICU work environment among Belgian nurses post-COVID-19. The population (ICU nurses), exposures (burnout and work environment), and outcomes (intention to leave) were clearly defined. However, the study did not explicitly state whether it was assessing a harmful or beneficial effect, which limits complete transparency.

CONSIDER:

A question can be 'focused' in terms of

- the population studied
- the risk factors studied
- is it clear whether the study tried to detect a beneficial or harmful effect
- the outcomes considered

13. Did the authors use an appropriate method to answer their question?

☐ Yes ☐ No ☐ Can't Tell

Yes. A cross-sectional design was appropriate for assessing prevalence and associations at a single point in time. The study addressed its central question using a validated questionnaire across a large sample.

CONSIDER:

- Is a descriptive/cross-sectional study an appropriate way of answering the question
- did it address the study question

14. Were the subjects recruited in an acceptable way?

☐ Yes ☐ No ☐ Can't Tell

Yes. Participants were recruited nationally across ICUs in Belgium. Although the sampling method wasn't fully random, it was broad and comprehensive enough to minimize selection bias and improve generalizability.

CONSIDER:

We are looking for selection bias which might compromise the generalisability of the findings:

- Was the sample representative of a defined population

<ul style="list-style-type: none"> Was everybody included who should have been included 	
15. Were the measures accurately measured to reduce bias?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: Burnout was measured using the validated Maslach Burnout Inventory (MBI), and the work environment was assessed using a recognized scale. Intention to leave was captured with a clearly defined item. These are established tools that reduce measurement bias.
CONSIDER: Look for measurement or classification bias: <ul style="list-style-type: none"> did they use subjective or objective measurements do the measurements truly reflect what you want them to (have they been validated) 	
16. Were the data collected in a way that addressed the research issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Data were collected through a secure, anonymous online platform (Check Market) using a structured questionnaire. The process ensured standardization and the collection method was well-explained and justified.
CONSIDER: <ul style="list-style-type: none"> if the setting for data collection was justified if it is clear how data were collected (e.g., interview, questionnaire, chart review) if the researcher has justified the methods chosen if the researcher has made the methods explicit (e.g. for the interview method, is there an indication of how interviews were conducted?) 	
17. Did the study have enough participants to minimise the play of chance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study involved 2,321 ICU nurses, a large and diverse sample sufficient for statistical power. However, no explicit power calculation was reported to confirm adequacy.
CONSIDER: <ul style="list-style-type: none"> if the result is precise enough to make a decision if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest. 	

18. How are the results presented and what is the main result?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Results were presented using descriptive statistics and multivariable logistic regression, including odds ratios and 95% confidence intervals. The findings showed strong associations between poor work environment factors and increased burnout and intention to leave. Bottom-line result: Negative ICU work conditions—particularly staffing and leadership issues—are significantly associated with burnout and turnover intentions among Belgian ICU nurses.
CONSIDER: <ul style="list-style-type: none"> • if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards • how large this size of result is and how meaningful it is • how you would sum up the bottom-line result of the trial in one sentence 	
19. Was the data analysis sufficiently rigorous?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The use of multiple logistic regression to test the dependent and independent variables allowed control of confounding variables. Results were statistically analyzed and appropriately interpreted. However, the paper did not detail how missing data were handled, which affects transparency.
CONSIDER: <ul style="list-style-type: none"> • if there is an in-depth description of the analysis process • if sufficient data are presented to support the findings 	
20. Is there a clear statement of findings?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Findings were explicitly stated with supporting tables and figures. The authors discussed their results in relation to previous studies and acknowledged key limitations.
CONSIDER: <ul style="list-style-type: none"> • if the findings are explicit • if there is adequate discussion of the evidence both for and against the researchers' arguments • if the researchers have discussed the credibility of their findings • if the findings are discussed in relation to the original research questions 	
21. Can the results be applied to the local population?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The context and challenges described are common to ICUs globally, especially post-pandemic. Therefore, the

	results are broadly applicable to similar healthcare settings despite system-specific variations.
CONSIDER: <ul style="list-style-type: none"> <i>The subjects covered in the study could be sufficiently different from your population to cause concern.</i> <i>your local setting is likely to differ much from that of the study</i> 	
22. How valuable is the research?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. This study provides strong evidence of the impact of the work environment on ICU nurse burnout and retention. While not prescriptive for clinical practice alone, it contributes essential insight for policy and workforce management.
CONSIDER: <ul style="list-style-type: none"> <i>one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision-making</i> <i>if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)</i> <i>if the researchers have discussed whether or how the findings can be transferred to other populations</i> 	

APPRAISAL SUMMARY: List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.		
Positive/Methodologically sound	Negative/Relatively poor methodology	Unknowns
<ul style="list-style-type: none"> The study addresses a clearly defined and relevant issue on the association between work environment and burnout/turnover in ICU nurses. The recruitment strategy was transparent, inclusive 		

of a national ICU sample, and reduced selection bias by using defined inclusion/exclusion criteria and anonymized QR-code access.

- Measurement tools were appropriate and validated; however, reliance on a single-item measure for intention to leave limits depth.
- The large sample size supports robust analysis, but the absence of a power calculation and unclear handling of missing data weakens statistical confidence.
- Data analysis was rigorous and controlled for confounding variables, increasing reliability. Findings were clearly stated, statistically supported, and aligned with existing literature.
- The applicability of findings extends beyond Belgium to similar high-stress ICU environments, offering valuable

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insights for retention-focused interventions.		
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Paper 3:

CASP Checklist:

For Descriptive/Cross-Sectional Studies

Reviewer Name:	
Paper Title:	
Author:	
Web Link:	
Appraisal Date:	04.03.2025

Section A: Are the results valid?

23. Did the study address a clearly focused issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study clearly defined the population (nurses in a Turkish university hospital), the exposures (job satisfaction, organisational and professional commitment), and outcomes (intent to leave the unit, organisation, and profession). The aim was to identify predictors of nurses' turnover intentions across different levels of employment, which is well-focused and relevant.
CONSIDER: A question can be 'focused' in terms of <ul style="list-style-type: none"> • the population studied • the risk factors studied • is it clear whether the study tried to detect a beneficial or harmful effect • the outcomes considered 	
24. Did the authors use an appropriate method to answer their question?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: A descriptive cross-sectional design is appropriate for identifying associations between psychosocial variables and turnover intentions at one point in time. The choice of method aligns with the research objective.
CONSIDER: <ul style="list-style-type: none"> • Is a descriptive/cross-sectional study an appropriate way of answering the question • did it address the study question 	
25. Were the subjects recruited in an acceptable way?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes: The study included 335 nurses out of 455 eligible inpatient nurses working in one university hospital, with an 83.9% response rate. Nurses were approached in person, and data were collected via sealed envelopes, reducing the likelihood of response bias. Inclusion criteria were clear and appropriately applied.
CONSIDER: We are looking for selection bias which might compromise the generalisability of the findings: <ul style="list-style-type: none"> • Was the sample representative of a defined population • Was everybody included who should have been included 	
26. Were the measures accurately measured to reduce bias?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Validated instruments were used: the Turkish versions of Meyer et al.'s

	organisational and professional commitment scales, and a single-item 4-point Likert scale for overall job satisfaction. Reliability statistics (Cronbach's alpha) for all subscales were reported and acceptable.
CONSIDER: Look for measurement or classification bias: <ul style="list-style-type: none"> • <i>did they use subjective or objective measurements</i> • <i>do the measurements truly reflect what you want them to (have they been validated)</i> 	
27. Were the data collected in a way that addressed the research issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Questionnaires were distributed and returned in sealed envelopes, enhancing confidentiality. Unit managers were informed, and ethical approval was obtained. The data collection setting and process were appropriate for minimizing bias and addressing the research questions.
CONSIDER: <ul style="list-style-type: none"> • <i>if the setting for data collection was justified</i> • <i>if it is clear how data were collected (e.g., interview, questionnaire, chart review)</i> • <i>if the researcher has justified the methods chosen</i> • <i>if the researcher has made the methods explicit (e.g. for the interview method, is there an indication of how interviews were conducted?)</i> 	
28. Did the study have enough participants to minimise the play of chance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. A post hoc power analysis confirmed a statistical power of 99% based on 335 participants and 8 predictors, supporting adequate sample size for regression analysis.
CONSIDER: <ul style="list-style-type: none"> • <i>if the result is precise enough to make a decision</i> • <i>if there is a power calculation. This will estimate how many subjects are needed to produce a reliable estimate of the measure(s) of interest.</i> 	
29. How are the results presented and what is the main result?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Results were clearly presented using descriptive statistics and multiple regression analyses. Beta coefficients, p-values, and model fit (R^2 , Adjusted R^2) were provided. Bottom-line result: Job satisfaction and

	organisational/professional commitment variables are significant predictors of nurses' intention to leave the unit, organisation, and profession, with different predictors being more influential at each level.
CONSIDER: <ul style="list-style-type: none"> • if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards • how large this size of result is and how meaningful it is • how you would sum up the bottom-line result of the trial in one sentence 	
30. Was the data analysis sufficiently rigorous?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Data were analysed using backward multiple regression. Confirmatory factor analyses supported the validity of commitment scales. Multicollinearity was checked, and model assumptions were addressed.
CONSIDER: <ul style="list-style-type: none"> • if there is an in-depth description of the analysis process • if sufficient data are presented to support the findings 	
31. Is there a clear statement of findings?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The findings were thoroughly discussed and supported by quantitative results. The authors compared findings with relevant literature and addressed cultural influences.
CONSIDER: <ul style="list-style-type: none"> • if the findings are explicit • if there is adequate discussion of the evidence both for and against the researchers' arguments • if the researchers have discussed the credibility of their findings • if the findings are discussed in relation to the original research questions 	
32. Can the results be applied to the local population?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. While the study was limited to a single institution in Turkey, the predictors of nurse turnover identified are consistent with broader international findings, making the results relevant to similar hospital settings.
CONSIDER: <ul style="list-style-type: none"> • The subjects covered in the study could be sufficiently different from your population to cause concern. • your local setting is likely to differ much from that of the study 	
33. How valuable is the research?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study provides detailed insights into the psychological and organizational

	<i>factors influencing nurse retention. It offers practical implications for managers and policymakers focused on preventing nursing turnover at multiple organizational levels.</i>
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CONSIDER:

- *one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision-making*
- *if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?)*
- *if the researchers have discussed whether or how the findings can be transferred to other populations*

APPRAISAL SUMMARY: *List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.*

Positive/Methodologically sound	Negative/Relatively poor methodology	Unknowns
<ul style="list-style-type: none"> • The study clearly identified the research question and targeted population, addressing nurse retention at three levels: unit, organisation, and profession. • The cross-sectional design was suitable for detecting associations between job satisfaction/commitment and intention to leave, although it cannot determine causality. • Recruitment was transparent and achieved a high response rate (83.9%), 		

<p>supporting internal validity.</p> <ul style="list-style-type: none"> • The use of validated commitment scales and reliability testing strengthens measurement accuracy, though the job satisfaction variable was measured using a single item. • A post hoc power analysis demonstrated sufficient statistical power, but the study did not explain the handling of non-responses or missing data. • Results were statistically significant and clearly presented, offering actionable insights tailored to each level of departure. • While generalizability is limited by the single-site context, findings align with international literature and are transferable to similar hospital settings. 		
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Paper 12:

CASP Checklist:

For Descriptive/Cross-Sectional Studies

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Section A: Are the results valid?

34. Did the study address a clearly focused issue?

☐ Yes ☐ No ☐ Can't Tell

Yes. The study focused on registered nurses in Hong Kong public hospitals, examined job demands, burnout, and turnover intention, and explored pay level satisfaction's moderating role.

CONSIDER:

A question can be 'focused' in terms of

- the population studied
- the risk factors studied
- is it clear whether the study tried to detect a beneficial or harmful effect
- the outcomes considered

35. Did the authors use an appropriate method to answer their question?

☐ Yes ☐ No ☐ Can't Tell

Yes. A cross-sectional design using a validated online survey is appropriate for examining associations among psychological factors.

CONSIDER:

- Is a descriptive/cross-sectional study an appropriate way of answering the question
- did it address the study question

36. Were the subjects recruited in an acceptable way?

☐ Yes ☐ No ☐ Can't Tell

Yes. Nurses were recruited through administrative units in 13 public hospitals across all seven clusters of the Hong Kong Hospital Authority. Inclusion criteria were clearly stated, and the process ensured that all participants were eligible and actively working in nursing roles. The sampling procedure supports internal validity, though response bias cannot be fully excluded due to the voluntary nature of the survey.

CONSIDER:

We are looking for selection bias which might compromise the generalisability of the findings:

- Was the sample representative of a defined population
- Was everybody included who should have been included

37. Were the measures accurately measured to reduce bias?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study used well-established and validated instruments: The role Overload Scale (Reilly), the Maslach Burnout Inventory, and the Turnover Intention Scale. Cronbach's alpha values for each subscale exceeded 0.8, indicating good reliability. However, as with all self-reported data, some response bias may be present.
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CONSIDER:

Look for measurement or classification bias:

- *did they use subjective or objective measurements*
- *do the measurements truly reflect what you want them to (have they been validated)*

38. Were the data collected in a way that addressed the research issue?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Data were collected using anonymous online surveys, which helped reduce social desirability bias. Ethical approval was obtained, and the methodology was clearly justified. The structured data collection process using validated tools supports the appropriateness of the method.
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CONSIDER:

- *if the setting for data collection was justified*
- *if it is clear how data were collected (e.g., interview, questionnaire, chart review)*
- *if the researcher has justified the methods chosen*
- *if the researcher has made the methods explicit (e.g. for the interview method, is there an indication of how interviews were conducted?)*

39. Did the study have enough participants to minimise the play of chance?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The final sample size was 502 registered nurses. The sample was large enough for regression analysis and moderated mediation testing using PROCESS macro. Reported effect sizes and p-values suggest sufficient statistical power.
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CONSIDER:

- *if the result is precise enough to make a decision*
- *if there is a power calculation. This will estimate how many subjects are needed to produce a*

<i>reliable estimate of the measure(s) of interest.</i>	
40. How are the results presented and what is the main result?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. Results are presented using path diagrams, regression tables, and mediation models. Statistical outputs included beta coefficients, 95% confidence intervals, and p-values. The main findings were: (1) job demands positively predicted turnover intention, (2) burnout significantly mediated this relationship, and (3) pay level satisfaction did not moderate the effect of burnout on turnover intention.
CONSIDER: <ul style="list-style-type: none"> • <i>if, for example, the results are presented as a proportion of people experiencing an outcome, such as risks, or as a measurement, such as mean or median differences, or as survival curves and hazards</i> • <i>how large this size of result is and how meaningful it is</i> • <i>how you would sum up the bottom-line result of the trial in one sentence</i> 	
41. Was the data analysis sufficiently rigorous?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The authors used Hayes' PROCESS macro for SPSS to test the mediation and moderation models. Bootstrapping with 5000 samples enhanced the robustness of the mediation test. The stepwise analysis was clearly described and justified. Assumptions were checked and the model fit was appropriate.
CONSIDER: <ul style="list-style-type: none"> • <i>if there is an in-depth description of the analysis process</i> • <i>if sufficient data are presented to support the findings</i> 	
42. Is there a clear statement of findings?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study clearly states the support for the mediation hypothesis and the lack of support for the moderation hypothesis. Findings were discussed in relation to the initial research questions, with reference to existing theories (e.g., job demands-resources model). Limitations such as cross-sectional design and self-report bias were acknowledged.
CONSIDER: <ul style="list-style-type: none"> • <i>if the findings are explicit</i> • <i>if there is adequate discussion of the evidence both for and against the researchers' arguments</i> • <i>if the researchers have discussed the credibility of their findings</i> • <i>if the findings are discussed in relation to the original research questions</i> 	
43. Can the results be applied to the local population?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. The study specifically addressed nurses in Hong Kong's public hospital system. The job stress and burnout

	dynamics are comparable across healthcare systems, making the findings reasonably transferable to similar urban hospital settings.
CONSIDER: <ul style="list-style-type: none"> the subjects covered in the study could be sufficiently different from your population to cause concern. your local setting is likely to differ much from that of the study 	
44. How valuable is the research?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't Tell Yes. This study contributes to existing literature by highlighting burnout as a mediator in turnover among nurses, emphasizing the need to manage job demands. The rejection of pay level satisfaction as a moderator also adds nuance. It provides evidence that could inform staff management and policy reforms, particularly in resource-constrained environments.
CONSIDER: <ul style="list-style-type: none"> one descriptive/cross-sectional study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision-making if the researcher discusses the contribution the study makes to existing knowledge (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature?) if the researchers have discussed whether or how the findings can be transferred to other populations 	

APPRAISAL SUMMARY: List key points from your critical appraisal that need to be considered when assessing the validity of the results and their usefulness in decision-making.		
Positive/Methodologically sound <ul style="list-style-type: none"> Clear, focused research objective Use of validated instruments with strong internal consistency Appropriate sample size and statistical 	Negative/Relatively poor methodology <p>Self-reported data may introduce social desirability or recall bias.</p>	Unknowns

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

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