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Factors associated with nurse thriving at work

A descriptive review

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Abstract

Background: Thriving refers to a process of growth and development, which can significantly decrease nurse absenteeism and turnover rates, facilitating continuous growth and well-being for nurses while promoting enhanced nursing quality and the vigorous development of the nursing profession. However, determining how to improve nurses' thriving remains a challenge. Consequently, it is essential to examine the factors associated with a nurse's thriving.

Aim: The aim of the review was to describe factors associated with nurse thriving at work.

Method: This article was a descriptive review. The authors summarized 12 quantitative articles from the past decade on factors influencing nurse thriving.

Results: This review studied nurse thriving at work and its associated factors, encompassing personal characteristics (e.g., prosocial motivation and psychological capital), unit contextual characteristics (e.g., decision-making discretion, broad information sharing, and a climate of trust and respect), relational resources (e.g., knowledge, positive meaning derived from work, positive affective experiences, and high-quality connections with colleagues), and other factors (e.g., shift work, salary, obtaining a new job, high workload, years of experience, and age). The analysis aimed to inform strategies for enhancing nurse thriving at work.

Conclusions: The nurses' thriving was related to many factors. National governments, medical institutions, nurses themselves, etc. can promote the thriving of nurses by improving these influencing factors.

Key words: Nurse, Thriving at work

摘要

背景：繁荣描述了一个成长和发展的过程，可以显著降低护士的缺勤率和离职率，可以不断实现护士的自我成长和身心健康，促进护理质量的提高和护理事业的蓬勃发展。但是如何提高护士的繁荣是一个挑战。因此，有必要研究哪些因素与护士的繁荣有关。

目的：本综述旨在描述护士在工作中繁荣的相关因素。

方法：本文是一篇描述性综述。作者总结了近十年来的 12 篇关于护士繁荣影响因素的定量文献。

结果：本综述分析了护士在工作中的繁荣及其相关因素，包括个人特征(如亲社会动机和心理资本)、单位背景特征(如决策自由裁量权、广泛的信息共享及信任和尊重的气氛)。关系资源(如知识、积极的情感资源(在工作中体验到的感受、快乐、希望)和关系资源(在工作中与他人的高质量联系或界限))，以及其他(如轮班工作、工资和申请新工作并获得了它、工作量大及工作太多、经验年限(工作年限)和年龄)类别来增强护士在工作中的繁荣。

结论：护士的繁荣与许多因素相关。国家政府、医疗机构、护士本身等等可以通过改善这些影响因素，促进护士的繁荣。

关键词：在工作中蓬勃发展，护士

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1. Introduction

1.1 Background

Thriving is described as a multidimensional concept that can be used to explore place-related well-being (Baxter et al., 2020). The concept of thriving has been developed from different perspectives and it can be described as a process of growth and development and an emotional state. From a growth and development perspective, thriving is understood as the process and outcome of successfully mastering a stressful or confrontational event. It means effectively mobilizing personal and social resources in the face of threats and leading to positive physical, psychological and/or social development (Carver, 1998). Current trends indicate a projected shortage of 5.7 million demand-based registered nurses by 2030 (WHO, 2020). A review study has shown that a serious nursing shortage is predicted, which will increase demand for those nurses remaining and intensify levels of staff burnout and intention to leave (Moloney et al., 2020). There was no doubt that nurses faced a series of challenges in all aspects of their work.

A review study showed that the issues with adversity encountered in these workplaces were related to many nurses leaving the healthcare system (Jackson et al., 2007). Many nurses tended to change their jobs or do not keep working in hospitals, this greatly affected the improvement of nursing quality and the vigorous development of nursing career. A review study has showed that nurses' ability to thrive at their work was critical to retain qualified nurses and met the needs of a constantly changing health environment (Zhu et al., 2021). The thriving at work of nurses could significantly reduce their absenteeism rate and turnover rate, and continuously realize the self-growth and physical and mental health of nurses (Battié, 2015). It played a very important role in improving nursing quality and optimizing the vigorous development of nursing career. Therefore, how to improve the thriving of nurses and

what factors could affect the thriving of nurses has become a problem that must be paid attention to.

1.2 Nurses' role

Nurses, as nursing professionals, their thriving directly affected the development of nursing career. Nurses' rights were included under human rights and should be upheld and protected (ICN, 2021). Likewise, the thriving of nurses should be valued accordingly. Nurses could participate in creating a positive and constructive practice environment only if they work under safe, socially and economically equitable working conditions, in an environment that provided safe, effective and timely health care, while practicing within their optimal scope (ICN, 2021). Thriving may have important implications for employee health and development. The model of thriving at work suggests that a type of positive spiral (Fredrickson, 2003) exists between agentic work behaviors and the resources created in the doing of work. The resources promoted by agentic work behaviors serve to further fuel the agentic work behaviors, and thus help to sustain thriving (Spreitzer et al., 2005).

1.3 Socially embedded model

A socially embedded model of thriving has developed that shows how unit contextual features and resources created in the doing of work cultivate a set of agentic working behaviors. These behaviors bolster the creation of different kinds of resources that further promote agentic working behaviors. The notion that unit contextual features, agentic behaviors, and resources produced in the doing of work jointly enable individuals to thrive enhances our understanding of how social contexts and human agency interact to promote positive functioning at work (Spreitzer et al., 2005).

The social embedded of thriving at work model (Spreitzer et al., 2005) provides a positive organizational scholarship approach to sustainability and organizational

effectiveness through developing healthy, high performing, and committed employees (Moloney et al., 2020).

1.4 Earlier review studies

According to a recent review, there were only a few factors that have been discussed on the effects of thriving at work (Battié, 2015; Baxter et al., 2020; Zhu et al., 2021). So far, no research has been published on the specific factors that affect nursing thriving at work, using a review approach. Therefore, the purpose of this study was to explore the factors associated with nurse thriving at work by summarizing articles on the topic.

1.5 Problem description

Although several published reviews have discussed the concept of thriving, only a few have specifically addressed the topic of nurses thriving in their work environment. Consequently, this study aims to fill this gap by providing a comprehensive synthesis of the factors influencing nurse thriving. By examining the various elements that contribute to nurses' thriving, this research seeks to deepen our understanding of the conditions that foster a thriving work environment for nurses and ultimately improve patient outcomes and healthcare quality.

1.6 Aim and research questions

Aim: The aim of the review was to describe factors associated with nurse thriving at work.

Research questions: What were the factors associated with nurse thriving at work?

2. Method

2.1 Design

This study was a descriptive review (Polit & Beck, 2016).

2.2 Search strategy

Articles were retrieved from Medline database via PubMed (Polit & Beck, 2016), restricted to English, published 2012-2022. As shown in Table 1, search terms used include “Thriving [All fields] OR thriving at work [MeSH]” AND “nurses [All fields] OR workers [All fields]” AND “factors [All fields] OR influence [All fields]”. When searching PubMed, all search terms were combined with Boolean operators AND and OR (Polit & Beck, 2016). Combined with the search terms, 208 possible articles were selected as the screening objects.

Table 1. Outcomes of database searches

Database	Limits and search date	Search terms	Number of hits	Possible articles (excluding doubles)
Medline via PubMed	2012-2022, English, 2022-5-26	“Thriving” [All fields]	14,090	
Medline via PubMed	2012-2022, English, 2022-5-26	“Nurs*” [All fields] AND “Work*” [All fields]	124,733	
Medline via PubMed	2012-2022, English, 2022-5-26	“Thriving” [All fields] AND “Nurs*” [All fields] AND “Work*” [All fields]	218	208
			Total	208

2.3 Selection criteria

Exclusion criteria were articles only concerned with physicians, students, or the general public's thriving and other review studies. The inclusion criteria included were quantitative studies relevant to the purpose of the study (i.e., factors that influence the nurse's thriving at work). The details were showed in the Table 2.

Table 2. Selection criteria for studies in the review

Criteria	Inclusion	Exclusion
Population	Registered Nurses and Enrolled Nurses, Nursers aides i.e., staff directly involved in patient care	Nurse managers, student nurses, physicians, and other personnel who are not directly involved in patient care
Exposure	Working in hospital, Nursing home, long-term care facility, primary care, exposed to the patient care	
Outcomes	Factors associated with thriving/ thriving	
Study design	quantitative studies	case studies, reviews, qualitative studies
Year of publication	2012-2022	

2.4 Selection process and outcome of potential articles

After reading the titles and abstracts of the selected articles, some articles were deleted that were unsuitable for the purpose or had little relevance. Finally, selected articles that could support the descriptive literature review. The selection process had been shown in a flow chart (Fig1. The selection process of articles). During the screening process, the title and abstract of the article had been scanned first in order to

outline whether they were likely to help answer the review research question. Later, we read the selected articles carefully to determine if they were relevant to our topic.

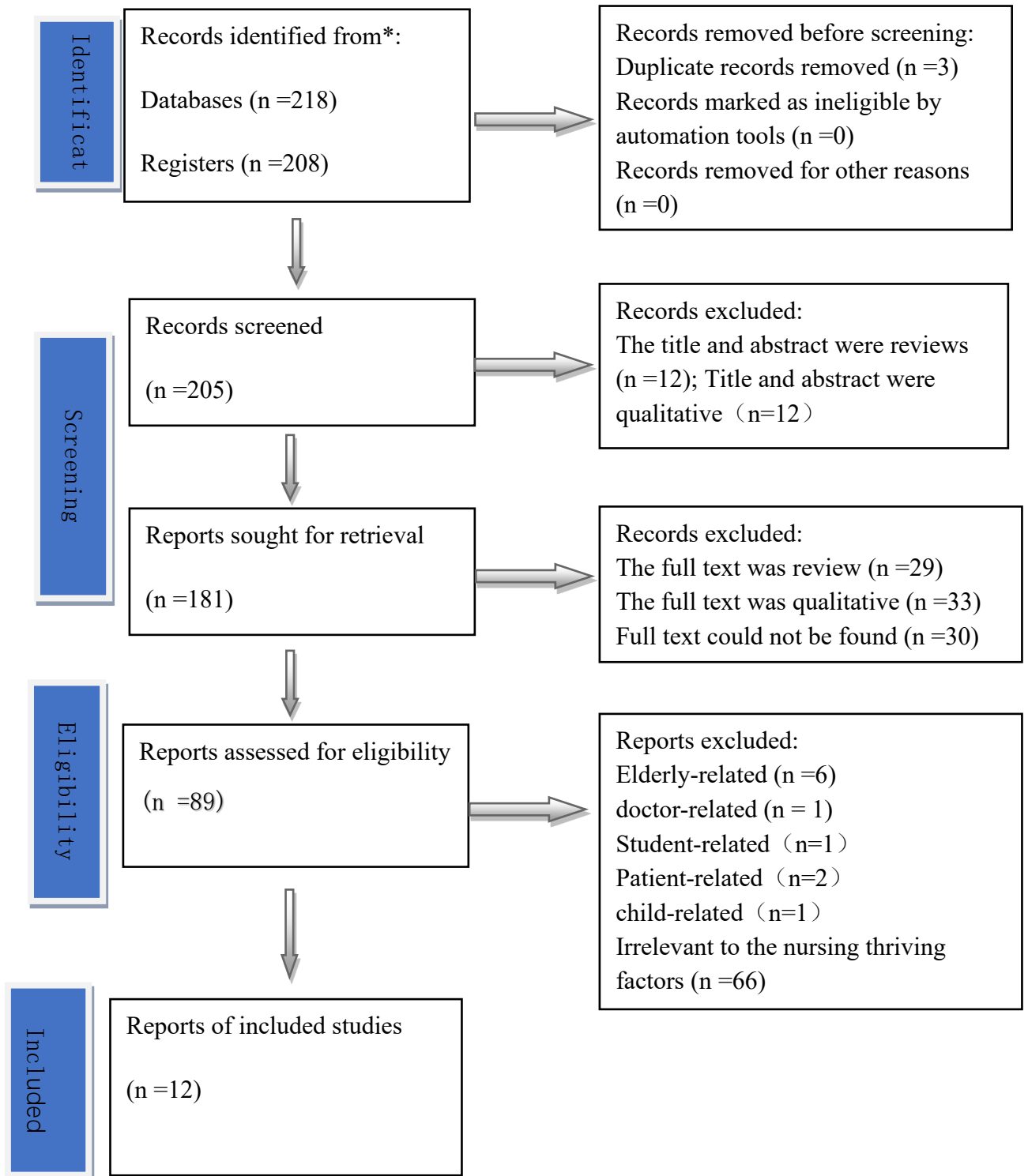


Fig1. The selection process of articles.

2.5 Data analysis

The authors had carefully read the selected articles. According to the purpose and research questions, the important contents of relevant literature were listed in Appendix 1 and Appendix 2 respectively. Appendix 1 included design/methodology, samples, data collection methods and data analysis methods, while Appendix 2 included objectives and main results. After comparing the similar parts of the main results of each included study, the authors had classified them according to different aspects of the influencing factors. Then the authors summarized the content in a more detailed way, dividing each category into different subcategories (Appendix 3).

2.6 Ethical considerations

The authors had read, summarized, and presented the included articles objectively and had not let personal views and attitudes affected the objectivity of reading (Polit & Beck, 2016). The study results had been presented as integrated and had not been modified according to the author's wishes (Polit & Beck, 2016). The degree project had not plagiarized any text.

3. Result

The results in a more detailed way have been summarized, dividing each category into different subcategories and more specific content in the subcategories (Appendix 3).

3.1 Summary of included articles characteristics

The twelve articles were published in seven countries: Pakistan(n = 2) (Afsar et al., 2020;Nawaz et al.,2022), the United States (n = 2) (Arnetz et al., 2019; Liu et al., 2013), Sweden (n = 3) (Engström et al., 2022;Kaltenbrunner et al.,2019;Silen et al., 2019), Denmark(n = 1) (Jensen et al.,2018), Belgium(n = 1) (Mortier et al., 2016),

Turkey(n = 1) (Şahin et al.,2020) and China(n = 2) (Zhu et al., 2021;Zhao et al., 2018).

Among the 5,029 participants, 541 were from Pakistan (26 males and 300 females, average age 25.6) (Afsar et al., 2020); 1,259 from the United States (86 males and 1,153 females, average age 44.56) (Arnetz et al., 2019; Liu et al., 2013); 768 from Sweden (75 males and 691 females, average ages 43.4, 50, and 46.7) (Engström et al., 2022; Kaltenbrunner et al., 2019; Silen et al., 2019); 114 from Denmark (no gender data, average ages 44 for evening-shift and 40 for night-shift) (Jensen et al., 2018); 360 from Belgium (60 males and 300 females, ages ranging 20 to 60+ years) (Mortier et al., 2016); 398 from Turkey (117 males and 281 females, average age 29.43) (Şahin et al., 2020); and 1,589 from China (120 males and 1,468 females, average ages 30.68 and 29.1) (Zhu et al., 2021; Zhao et al., 2018). One article did not specify gender or age details but had more female than male participants (Nawaz et al., 2022).

Eleven of them used one method, questionnaire survey (Afsar et al., 2020; Arnetz et al., 2019; Engström et al., 2022; Jensen et al.,2018; Kaltenbrunner et al.,2019; Mortier et al., 2016; Nawaz et al.,2022; Şahin et al.,2020.; Silen et al., 2019; Zhu et al., 2021; Zhao et al., 2018), one used a discussions and qualitative interviews (Liu et al., 2013).

Twelve quantitative articles which described the associated factors of nurse thriving were summarized and presented into four categories and thirteen sub-categories (Table 3) according to Spreitzer et al.'s (2005) model. The four categories were (1) Individual characteristic (2) Unit contextual features (3) Relational resources (4) Other. These are shown in detail in Table 3.

Table 3 The categories and sub-categories of result

Categories	Sub-categories
Individual characteristic	Prosocial motivation psychological capital
Unit contextual features	Decision making discretion
	Broad information sharing
	Climate of trust and respect
Relational resources	Knowledge
	Positive meaning (purpose and significance inherent in work)
	Positive affective resources (feelings experienced in doing the work, joy, hope)
	Relational resources (high quality connection or bounds with others at work)
Other	Shift work Salary and applied for a new job and got it Too much work with high workload Years of experience (working years) and age

3.2 Individual characteristic

Prosocial motivation and psychological capital positively influenced thriving (Nawaz et al.,2022; Zhu et al., 2021).

3.2.1 Prosocial motivation

Prosocial motivation, as a cognitive state of the individual, referred to the individual who feels happy to work for the benefit of others, without any personal benefit. The higher the prosocial motivation, the higher thriving of nurses (Nawaz et al.,2022).

3.2.2 Psychological capital

Psychological capital indicated that as an individual, he or she was more optimistic, more psychologically resilient, more self-aware, and focused, and better able to benefit from work. The higher the psychological capital of nurses, the higher the thriving in the work (Zhu et al., 2021).

3.3 Unit contextual features

Psychological security, access to resources, informal power, job autonomy and being treated like an important part of the team, empowerment (related to higher psychological empowerment) and higher person-centered climate, all of them positively influenced thriving (Arnetz et al., 2019; Engström et al., 2022; Liu et al., 2013; Silen et al., 2019).

3.3.1 Decision making discretion

Informal power established a network to promote work inside and outside the organization, under the control of other factors, increased the informal power of a unit could significantly improve the thriving of nurses in the workplace (Engström et al., 2022). Job autonomy and being treated like an important part of the team were helpful to explain that thriving was "having enough time to identify and meet the social and emotional needs of residents" (Liu et al., 2013). Higher structural empowerment was related to higher psychological empowerment, that was, nurses worked in a more person-centred manner, improved the person-centered climate, worked in this way and thrive in work, and improved employees' rating of thriving (Silen et al., 2019).

3.3.2 Broad information sharing

Access to resources, for example, the time and equipment required for the work to be completed were important to the welfare and efficiency of nurses and was also important to keep nurses thriving in this profession (Engström et al., 2022).

3.3.3 Climate of trust and respect

Psychological security was a measure of team trust and respect. It was negatively related to the withdrawal from work caused by bullying, which could better create a healthy working environment for nurses, in such an environment nurses could better achieve thrive (Arnetz et al., 2019). Being treated like an important part of the team by the boss, which had a unique contribution to increasing thriving (Liu et al., 2013). Nurses worked in a more person-centred manner, improved the person-centered climate, worked in this way and thrive in work, and improved employees' rating of thriving (Silen et al.,2019).

3.4 Relational resources

Transformational leadership, all co-worker interaction and organizational climate, Competence development (a measure of opportunities to develop skills and knowledge at work) , the increase of lean maturity, having enough time to identify and meet the social and emotional needs of residents; did not have to do things that others could do; clear what the social service role was, the perceived authentic leadership, high heedful relating, perceived organizational support, organizational justice, workplace mindfulness, job satisfaction and subjective well-being, all of them positively influenced thriving (Afsar et al., 2020; Arnetz, et al.2019; Kaltenbrunner et al.,2019; Liu et al., 2013; Mortier et al., 2016; Şahin et al.,2020; Zhu et al., 2021; Şahin et al.,2020; Zhao et al., 2018).

Management (top-down management, did not know the employees or their competences; did not ask the staff to help with problem-solving), workplace incivility, emotional exhaustion, all of them negatively influenced thriving (Engström et al., 2022; Nawaz et al.,2022

3.4.1 Knowledge

Competence development was the opportunity for professional development and application in work, which was a reverse factor related to job disengagement, and had a protective effect on nurses leaving the workplace due to bullying. This showed that development opportunities could help offset the negative impact of bullying on nurses' work engagement, this made it easier for nurses to thrive (Arnetz, et al.2019).

3.4.2 Positive meaning (purpose and significance inherent in work)

Transformational leaders foster trust and a healthy work environment, encouraging nurse participation and innovative work behavior, which positively influences nurse thriving (Afsar et al., 2020). Clear roles and sufficient time for addressing resident needs can enhance social service workers' sense of thriving (Liu et al.,2013).

Authentic leadership fosters empathy and positive work outcomes, including thriving among nurses (Mortier et al., 2016). High heedful relating, where individuals align their actions with system goals, can also increase thriving (Şahin et al.,2020).

Conversely, top-down management, characterized by lack of understanding and response to nurses' input, can hinder thriving and increase turnover (Engström et al., 2022). Deteriorating management skills similarly relate to nurse turnover and reduced thriving (Engström et al., 2022). Workplace incivility, such as poor communication and impolite behavior, negatively impacts thriving by causing exhaustion and hindering skill absorption (Nawaz et al.,2022).

3.4.3 Positive affective resources (feelings experienced in doing the work, joy, hope)

Mindfulness in the workplace bolsters nurses' psychological capital, aiding in stress management, fostering learning attitudes, enthusiasm, and efficiency, thereby enhancing thriving and performance (Zhu et al., 2021; Şahin et al.,2020). The maturity of lean practices improves nurses' job satisfaction and thriving via work resource adjustment (Kaltenbrunner et al.,2019). Conversely, emotional exhaustion impedes thriving (Nawaz et al.,2022), while high job satisfaction boosts professional commitment (Zhao et al., 2018). Subjective well-being serves as a buffer against workplace violence, reducing resource loss, turnover intention, and promoting thriving (Zhao et al., 2018).

3.4.4 Relational resources (high quality connection or bounds with others at work)

Poor trust, communication, and leadership contribute to workplace bullying, impacting nurses' engagement and thriving (Arnetz, et al.2019). Perceived organizational support, acting as an intermediary, is vital for thriving, as it fosters reciprocity and meets nurses' emotional and social needs (Zhu et al., 2021). Organizational justice directly influences nurses' thriving experience, while aggressive behavior from others hinders their ability to thrive (Zhu et al., 2021).

3.5 Other

Shift work and years of experience (working years) and age could positively influence the thriving (Jensen et al.,2018; Zhu et al., 2021).

While nurses have been found to be in shift work, such as evening and night shift work, with negative effected on their lives outside of work, such as family, leisure

time activities, sleep and health, they also thrived through shift work (Jensen et al.,2018).

Years of experience (working years) and age would have a positive impact on the thriving of nurses in their work. They were willing to invest more work and learning energy. The first ten years of nursing work were generally considered as the best time for nurses to acquire knowledge and develop skills. When nurses had stronger ability and better use of resources, their work vitality and learning ability would be enhanced (Zhu et al., 2021).

Too much work with high workload, low salary and applied for a new job and got it are the reasons for nurses to leave, which hindered the thriving development of nurses. and the intention to leave was negatively related to the thriving at work (Engström et al., 2022).

4. Discussion

4.1 Main results

This review aimed to describe the factors associated with nurses' thriving at work. Based on results from the 12 articles, the review found thriving associated with personal characteristics, unit contextual characteristics, relational resources, and other categories to enhance nurse thriving at work.

4.2 Results discussion

This review has found incompatibility between studies on whether individual characteristics were associated with nurse thriving. The individual characteristics identified included better prosocial motivation and psychological capital. For example, Nawaz et al. (2022) concluded that the prosocial motivation of nurses had a positive effect on their thriving. Similarly, Grant (2008a; Grant, 2008b; Grant and

Sonnentag, 2010; Grant and Berry, 2011) believed that high prosocial motivation would have a positive impact on employees' work experience and physical health, and would increase employees' positive emotions at work, which coincided with the findings of this study. However, Erickson and Ritter (2001) argued that higher prosocial motivation may lead to higher job burnout and lower retention (Erickson and Ritter, 2001). This was clearly not consistent with the findings of this study. This suggested that further research is warranted to explore the relationship between prosocial motivation and nurse thriving. The results could help nurses better understand and express prosocial motivation and provide better support for improving nurses' thriving.

The review also has found consistency between studies on the unit contextual features in which nurses work and whether relational resources were associated with nurse thriving. When nurses were working as individuals, they could achieve more autonomy in their work and work in an atmosphere of mutual trust and respect. In such unit contextual features, nurses' thriving could be better promoted (Arnetz, et al.2019; Liu et al., 2013; Silen et al.,2019). At the same time, positive and authentic management and leadership with leaders, friendly relationship resources in the working group, positive interaction culture among colleagues, etc. When nurses had enough of these resources, they would have higher job satisfaction and happiness, which would enhance the thriving of nurses (Afsar et al., 2020; Arnetz, et al.2019; Engstrom et al., 2022). ~~The conclusions of the above review are consistent with the findings of Jackson's (2002) qualitative interview research (Jackson, 2002).~~ In addition, Dill et al. 's study also showed that nurses who found intrinsic pleasure in their work tasks had lower burnout, lower physical symptoms and higher job commitment (Dill et al., 2016).

Finally, in addition to the above aspects, some other aspects were also found to have a certain impact on the thriving of nurses, such as shift work and tired night shift, which

some nurses believed had a negative impact on family, spare time activities, sleep and health, but they could still thrive on the job. (Jensen et al., 2018). However, Rosa et al. showed that shift work involved changes in psychophysiological homeostasis and decreased work performance. It was a barrier to social and family relationships and a risk factor for stress, sleep disturbances, metabolic disorders, diabetes, cardiovascular disease and breast cancer. They all agreed that shift work has a certain negative impact on the physical and mental health of nurses, and in this respect was definitely not conducive to the development of nurses' thriving. Agosti et al. (2015) proposed that increasing the influence of nurses on the scheduling schedule and creating a schedule suitable for individual nurses could balance the relationship between nurses' private life and work life (Agosti et al., 2015). At the same time, Bonde et al. (2012) suggested a maximum of two night-shifts at a time were scheduled to promote nurses' health (Bonde et al., 2012). Nurses may feel tired, dissatisfied and shaken by their current nursing work if they keep their work burden too high but keep their salary low and applied for a new job and got it (Zhu et al., 2021). At the same time, the age and working age of nurses would also have an impact on their thriving (Engstrom et al., 2022; Zhu et al., 2021). At the same time, the study of Dill et al. also showed that extrinsic rewards, such as salary, were conducive to reducing occupational exhaustion of nurses (Dill et al., 2016). Similarly, Jackson's research had shown that high workloads had a negative impact on nurses' work experience, as well as on their life outside of work, increasing burden and anxiety (Jackson, 2002). Therefore, these results may help nursing leaders address the following questions: Should we be concerned about shift work, excessive workloads, high salaries, and the impact of nurse prime time on nursing staff?

4.3 Methods discussion

This study was a descriptive literature review (Polit & Beck, 2016). All articles were retrieved from PubMed via Medline, with English language restrictions, were published between 2012 and 2022. The authors selected articles based on selection criteria, including inclusion criteria and exclusion criteria. By comparing and summarizing these contents, categories and subcategories are identified and applied to this review. The twelve articles used were quantitative studies that facilitated the discussion of factors associated with nursing thriving at work. The 12 articles cited in this descriptive review were all from the database PubMed via Medline, with high reliability. Because seven countries are mentioned, the results of this study can be used globally. 12 articles adopted quantitative form to make the content accurate.

However, this study has some limitations. First, the number of participants from seven different countries was uneven in each country. The influence of different cultures on the results may be due to this demographic structure. Second, this study did not include studies that had not yet been published, which may have some impact on the consolidated results. Thirdly, the research methods of literature inclusion are mainly cross-sectional studies, and the data collection methods were generally questionnaires. Therefore, it is relatively simple and cannot be specified to describe the factors that affect the thriving of nurses at work. In addition, few studies had explored differences in subjects' cultural background, gender, race, etc., which may affect the integration results.

4.4 Clinical implication for nursing

This review of nurse thriving at work and its associated factors underscores the significance of cultivating personal characteristics, nurturing a supportive work environment, enhancing relational resources, and addressing other influential factors

in promoting a thriving nursing workforce. By encouraging the development of prosocial motivation and psychological capital, providing decision-making discretion, promoting collaboration and knowledge sharing, and building a climate of trust and respect, nursing administrators and leaders can effectively support nurses in their professional growth. Additionally, considering the effects of factors such as shift work, salary, workload, years of experience, and age, it is crucial to develop tailored strategies that address the unique needs of each nursing professional. By creating a holistic environment that supports nurse thriving, organizations can expect improved job satisfaction, increased retention, better teamwork, and ultimately, enhanced patient care and outcomes.

4.5 Suggestions for future research

Based on the identified factors, future research could focus on the following suggestions to enhance nurses' thriving at work. For example, investigate the effectiveness of interventions targeting personal characteristics, such as programs aimed at fostering prosocial motivation and psychological capital in nursing professionals. Examine the impact of organizational interventions that promoted unit contextual characteristics, such as creating a supportive work environment with decision-making discretion, fostering a climate of trust and respect, and encouraging broad information sharing. By examining these factors, to provide valuable insights into the development of evidence-based strategies to promote nurses' thriving at work, ultimately enhancing the quality of patient care and the overall well-being of nursing professionals.

5. Conclusion

This review provided a comprehensive examination of factors associated with nurse thriving at work, including personal characteristics, unit contextual characteristics,

relational resources, and other factors. The findings suggested that a multifaceted approach addressing these factors was essential for promoting nurse thriving in the workplace. By implementing strategies that foster prosocial motivation, psychological capital, decision-making discretion, information sharing, and a supportive work environment, healthcare organizations could enhance the well-being of nursing professionals. In turn, this would contribute to improved patient care outcomes and a more sustainable nursing workforce.

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APPENDIX 1

Authors and year	Title	Design/approach	Sample /Participants	Data collection method	Method of data analysis	Study code
Afsar et al., (2020)	Does thriving and trust in the leader explain the link between transformational leadership and innovative work behavior? Cross-sectional survey	A Cross-sectional survey	N= 326 (the convenience sampling method, from among the nurses working at 21 public hospitals in Pakistan)	Multifactor Leadership Questionnaire (MLQ); a seven-item scale developed by Robinson (1996) to measure subordinates' trust; a 10-item scale developed by Porath et al. (2012) ; The 10-item scale for innovative work behavior (IWB).	Confirmatory factor analysis	A
Arnetz et al., (2019)	Organizational determinants of bullying and work disengagement among hospital nurses	A cross-sectional study	N = 331(all Registered Nurses in a regional healthcare system in the United States)	questionnaire : 41 items to measure workplace bullying, disengagement-worker interaction and organizational climate.	Bivariate analysis A three-step logistic regression analysis Hierarchical linear regression	B

Engström et al., (2022)	What relationships can be found between nurses' working life and turnover? A mixed-methods approach	A descriptive correlative design and took a mixed methods convergent parallel approach	N=296 (nurses, leaving the profession, n = 40; leaving unit but not profession, n = 256)	Questionnaires: The Spreitzer's empowerment scale; The Brief Index of Affective Job Satisfaction; The thriving scale; For structural empowerment, the Swedish version of the Conditions of Work Effectiveness Questionnaire Version II And interviews: which covered questions concerning thoughts on and expectations of the profession, thoughts of leaving the profession and situations crucial to the decision as well as what could have changed the decision.	Multivariate logistic regression analysis	C
Jensen et al.,2018	The impact of shift work on intensive care nurses' lives outside work: A cross-sectional study	A cross-sectional study	N=114 (ICU nurses who worked shifts either full time in the evening)	questionnaire originally developed and validated by the National Research Centre for the Working Environment, sleep questionnaire survey	Descriptive analyses and comparative analyses	D

Kaltenbrunner et al.,2019	Staff perception of Lean, caregiving, thriving and exhaustion: longitudinal study in primary care	A longitudinal and correlational design	N=260 (Staff who worked for at least 3 months before collecting data)	Questionnaire: Healthcare Questionnaire, Copenhagen Psychosocial Questionnaire II (COPSOQ II), Staff Satisfaction with Care (SSC) scale , 10-item thriving scale	Descriptive statistics multivariate analysis	E
Liu et al., (2013)	Nursing home social services directors who report thriving at work	A quantitative study	N = 928 (full-time nursing home social services directors)	Discussions and qualitative interviews: The survey contained 191 multiple choice questions and one open-ended question.	Multiple regression analysis	F
Mortier et al., (2016)	Authentic leadership and thriving among nurses: the mediating role of empathy	A cross-sectional design	N=360 (Nurses. 83.4% women. Age ranged from 20 to 60+ years, with 30.7% between 30 and 39 years old, followed by 28.5% between 20–29 years)	The questionnaire developed by Wong and Law (2002) on emotional intelligence; the 16-item Authentic Leadership Inventory (ALI); Nurses' thriving was measured using the 10-item scale of Porath et al. (2012)	The hierarchical regression analyses	G

Nawaz et al.,2022	Relation of Workplace Incivility, Prosocial Motivation and Emotional Exhaustion to Thriving of Nurses	A quantitative study	N=215 (nurses in public and private hospitals in Lahore, Pakistan. The respondents of private hospitals were 60% more than public hospitals, and the targeted population were mainly comprised of female genders)	Survey questionnaire scales: A ten items thriving scale developed by Porath et al, Grant and Sumanth developed the five items scale to measure prosocial motivation, Cortina et al. designed the workplace incivility scale consisting of seven items, a scale of four items by Maslach and Jackson to assess emotional exhaustion.	The Second Synthetic Grey Relational Analysis (SSGRA) and the Regression Analysis	H
Şahin et al.,2020	The mediating role of thriving: Mindfulness and contextual performance among Turkish nurses	A cross-sectional study	N=398(nurses from various hospitals in Turkish)	questionnaire : Mindful Attention Awareness Scale (MAAS) scale, the thriving scale developed by Porath et al. , altruism subscale from the scale developed by Goodman and Svyantek	Analysis of Moment Structures	I
Silen et al., (2019)	Relationships between structural and psychological empowerment, mediated by person-centred processes and thriving for nursing home staff	A cross-sectional study	N=212 (All staff Members who working in 12 nursing homes in Sweden)	The questionnaire : Conditions of Work Effectiveness Questionnaire II(CWEQ-II) ; Person centered Care Assessment Tool (P-CAT); Person-centered Climate Questionnaire Staff version (PCQ-S); The scale developed by Porath et al.; Spreitzer's empowerment scale	Pearson's correlation analysis	J

Zhao et al., (2018)	Impact of workplace violence against nurses' thriving at work, job satisfaction and turnover intention: A cross-sectional study	A cross-sectional online survey	N= 1,024 (Snowball sampling, nurses from 26 cities in China)	online questionnaires: a 7-item scale (Zhang et al., 2016) to measure Workplace violence (WPV); one question was used to measure nurses' job satisfaction: "In general, are you satisfied with your current work?"; a five-point scale (two dimensions including progress and vitality); Turnover intention was assessed by three items (Cole & Bruch, 2006); The Satisfaction With Life Scale	multiple linear hierarchical regression analyses	K
Zhu et al., (2021)	A causal model of thriving at work in Chinese nurses	A cross-sectional design	N=565 (nurses from five general hospitals in Dali city, Yunnan Province, People's Republic of country. Women (94.16%) with an average age of 30.68 years, married (70.09%), having a bachelor's degree or above (45.49%), having 1–10 years' nursing experience (72.92%), and working in medical (28.14%) and surgical units (23.01%))	Demographic data sheet; The Thriving at Work scale; The Psychological Capital Questionnaire; The Survey of Perceived Organizational Support; The Workplace Mindfulness Scale; The Authentic Leadership Questionnaire; The Workplace Violence Scale; Organizational Justice Scale	Spearman's Rank-order correlation analysis.	L

APPENDIX 2 Overview of selected articles' aims and results/findings.

Authors and year	Aim	results/findings	Study code
Afsar et al., (2020)	The purpose of this research was to examine the mediating effect of trust in leader and the moderating effect of thriving on the relationship between transformational leadership and nurses' innovative work behavior.	<ol style="list-style-type: none"> 1. Transformational leadership(P<0.001) is effective in enhancing nurses' innovation work behavior (IWB). 2. Thriving nurses exhibited a greater degree of innovative work behavior when they trusted their head nurses. 3. Thriving moderates the effect of trust in leader on nurse's IWB such that the relationship is strengthened when thriving is high rather than low. 	A
Arnetz, et al., (2019)	To identify organizational determinants of bullying and resulting work disengagement among hospital nurses.	<ol style="list-style-type: none"> 1. Psychological security(P<0.001) is a measure of team trust and respect, which is inversely proportional to individual bullying and witnessing bullying. 2. All co-worker interaction and organizational climate variables(P<0.001) were inversely correlated with disengagement due to bullying. <p>Personal psychological security and ability development are negatively related to bullying induced disengagement. Both psychological safety and competence development(P<0.05) have a protective effect on nurse disengagement from the workplace due to bullying.</p>	B

Engström et al., (2022)	This study aimed to describe why registered nurses decide to leave their work and to investigate relationships between registered nurses' working life and turnover (leaving the unit vs. leaving the profession).	<ol style="list-style-type: none"> 1. In the questionnaire analysis, among those who left the profession, the three most common reasons for leaving were 'too much work with high workload', 'low salary' and 'applied for a new job and got it'. The three most common reasons in the group 'left the unit' were also these three, but in a different order. 2. Among the categories of open-ended responses, the most common reason for leaving was management ($p = 0.05$), followed by retirement before age 65. 3. The empowering structures such as access to resources ($P=0.002$) and informal power ($P=0.003$) are important. 4. There were statistically significant relationships between turnover and the factors 'learning' and 'vitality'. An increase of one unit in vitality decreased the risk of leaving the profession, controlling for learning and age, whereas an increase of one unit in learning increased the risk of leaving the profession, controlling for vitality and age. 	C
Jensen et al.,(2018)	To examine how shift work affects intensive care nurses' lives outside work	<ol style="list-style-type: none"> 1. Shift work sometimes or often had an impact on family life. Shift work affects opportunities for spare time activities and sometimes leads to social isolation. 2. Night shift ($P=0.14$) workers have a higher proportion of physical and mental symptoms, of which emotional fluctuations and headache are the most common. Working evening and night shifts has an impact on family, spare time activities, sleep and health. Chronically eating at unusual circadian times creates a metabolic disturbance which may induce a health risk. 	D

Kaltenbrunner et al., (2019)	To examine the extent to which changes over time in Lean maturity are associated with changes over time in care-giving, thriving and exhaustion, as perceived by staff, with a particular emphasis on the extent to which job demands and job resources, as perceived by staff, have a moderated mediation effect.	<ol style="list-style-type: none"> 1. the increase of lean maturity is related to the increase of employee satisfaction and thriving in nursing($P=0.007$), which is regulated by the increased employment resources. 2. the increase of lean maturity is related to the decrease of employee fatigue, which is regulated by the decrease of work demand($P=0.002$). thriving can contribute to improved job performance and staff health. 	E
Liu et al., (2013)	this study to explore whether and how decision-making discretion, broad information sharing, climate of trust, and social work role enactment are related to nursing home social services directors' job thriving	<ol style="list-style-type: none"> 1. job autonomy and being treated like an important part of the team($P<0.001$) had a unique contribution in increasing thriving. Contributing to explaining thriving (holding constant the effects of the other variations in the equation) is "having enough time to identify and meet the social and emotional needs of residents," followed in importance by "being treated as an important part of the team by one's boss." " 2. Three variables that decreased job thriving include not having enough time to identify and meet residents' psychosocial needs($P<0.001$), having to do things that others could do($P<0.01$), and not clear what the social service role is($P<0.001$). 	F
Mortier et al., (2016)	To examine the relationship between perceived authentic leadership and two dimensions of thriving (learning and vitality) among nurses, and to study the mediating role of empathy in this relationship.	<ol style="list-style-type: none"> 1. The perceived authentic leadership($P<0.01$) was positively related to both thriving components (vitality and learning. Authentic leadership was related to empathy of the leader. 2. Full mediation of nurse managers' empathy in the relationship between authentic leadership and vitality. However, a positive association between authentic leadership and learning was not explained by empathy of the leader. 	G
Nawaz et al., (2022)	To investigate the impact of individual-level factor (prosocial motivation), negative contextual factor	<ol style="list-style-type: none"> 1. Workplace incivility and thriving are negatively associated, whereas prosocial motivation positively influenced thriving($P<0.01$). 	H

	<p>(workplace incivility), and personal resource (emotional exhaustion) on the thriving of nurses.</p>	<p>2. The moderating impact of emotional exhaustion on the associations of workplace incivility-thriving and prosocial motivation-thriving. Both SSGRA and Regression Analysis revealed that the impact of prosocial motivation on thriving is more significant than that of workplace incivility, and moderation can also be found significant.</p> <p>3. Emotional exhaustion hinders the relationship between workplace incivility and thriving. Emotional exhaustion enforces the association between prosocial motivation and thriving. Either high or low emotional exhaustion causes an increase in incivility and minimizes the thriving level, but the thriving rate is a little higher when the emotional exhaustion rate is low.</p>	
<p>Şahin et al.,2020</p>	<p>To examine the role of thriving in the relationship between mindfulness and contextual performance.</p>	<p>1. Mindfulness ($P < 0.01$) has a significant direct impact on thriving, and thriving had a significant direct impact on situational performance. Thriving is the intermediary between employee mindfulness and situational performance.</p> <p>2. Thriving is seen more when heedful relating is high. This is presumably because individuals observe, understand and evaluate the systems via heedful relating and adapt their behaviors based on the goals of the system. According to the socially embedded model, individuals autonomously adapt their own behaviors according to their interests and values that stimulate mindful experiences. The results of our study show that mindful nurses can better thrive in their work and engage in more extra-role behaviors (e.g., contextual performance).</p>	<p>I</p>

Silen et al.,2019	To test the relationship between structural empowerment and psychological empowerment, as mediated by nursing home staff members' self-ratings of working in a person-centered manner, the person-centered climate and thriving.	<ol style="list-style-type: none"> 1.Higher access to structural empowerment (P<0.01) was related to higher psychological empowerment mediated by staff working in a more person-centered manner, improved person-centered climate, and improved staff ratings of thriving. 2.Higher person-centered climate (P<0.01) was associated with more thriving. working in a person-centered manner is associated with learning and vitality, i.e., thriving at work. 	J
Zhao et al., (2018)	To investigate the interrelationships between workplace violence, thriving at work and turnover intention among Chinese nurses and to explore the action mechanism among these variables.	<ol style="list-style-type: none"> 1. Workplace violence significantly negatively influenced nurses' job satisfaction and thriving at work, and significantly positively influenced nurses' turnover intention. 2. Job satisfaction (P<0.01) significantly predicted thriving at work and turnover intention. Job satisfaction not only fully mediated the relationship between workplace violence and thriving at work, but also partially mediated the relationship between workplace violence and turnover intention. 3. Subjective well-being (P<0.01) moderated the relationship between workplace violence and job satisfaction and the relationship between workplace violence and nurses' turnover intention. 	K
Zhu et al., (2021)	This study's aim was to develop the Chinese Nursing Causal Model of Thriving at Work (hereafter named CNCMTW or the Model)	<ol style="list-style-type: none"> 1. Six predicting variables of workplace mindfulness, authentic leadership, workplace violence, organizational justice, years of experience and age had relationships with nurses' thriving. Two mediating variables of psychological capital and perceived organizational support were also related to nurses' thriving significantly(P<0.01). 2. Nurses' workplace mindfulness, nursing supervisors' authentic leadership, organizational justice, nurses' perception of organizational support, nurses' 	L

		<p>psychological capital and the increasing nursing experience and age positively affected nurses' thriving at work, while the workplace violence negatively affected nurses' thriving at work</p> <p>3. Workplace mindfulness had positive effects on nurses' psychological capital, while workplace violence affected nurses' psychological capital negatively.</p> <p>4. Three factors had effects on perceived organizational support: authentic leadership, workplace violence, and organizational justice. Authentic leadership and organizational justice have a positive impact on perceived organizational support, and workplace violence has a negative impact on it.</p>	
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APPENDIX 3 Results of this literature review

Categories	Main result/findings
<p>Individual characteristic</p>	<p>H1: Prosocial motivation (+) L2: Nurses' psychological capital (+)</p>
<p>Unit contextual features <i>Decision making discretion</i> <i>Broad information sharing</i> <i>Climate of trust and respect</i></p>	<p>B1: Psychological security (a measure of team trust and respect) (+) C4: Access to resources (+) C4: informal power (+) F1: Job autonomy and being treated like an important part of the team (+) J1: Empowerment (related to higher psychological empowerment) (+) J2: Higher person-centered climate (+)</p>

<p style="text-align: center;">Relational resources <i>Knowledge</i> <i>Positive meaning (purpose and significance inherent in work)</i> <i>Positive affective resources (feelings experienced in doing the work, joy, hope)</i> <i>Relational resources (high quality connection or bounds with others at work)</i></p>	<p>A1: Transformational leadership (+) B2: All co-worker interaction and organizational climate (+) B3: Competence development (a measure of opportunities to develop skills and knowledge at work) (+) C2: Management (top-down management, did not know the employees or their competences; did not ask the staff to help with problem-solving) (-) E1, E2: The increase of lean maturity (related to the increase of employee satisfaction and thriving in nursing; decrease of employee fatigue) (+) F2: Have enough time to identify and meet the social and emotional needs of residents; do not have to do things that others could do; clear what the social service role is (+) G1: The perceived authentic leadership (+) H1: Workplace incivility (-) H2: Emotional exhaustion (-) I2: High heedful relating (+) L1: Perceived organizational support (+) L1: Organizational justice (+) L1, I2: Workplace mindfulness (+) K2: Job satisfaction (+) K3: Subjective well-being (+)</p>
<p style="text-align: center;">Other</p>	<p>D1, D2: Shift work (has a negative impact on family, spare time activities, sleep, and health, despite the negative effects, the nurses generally thrived on working shifts) (+) C1: low salary and applied for a new job and got it (-) C1: Too much work with high workload (-) L1: Years of experience (working years) and age (+)</p>