

Analysis Of External And Internal Factors Of Nurse Turnover: A Systematic Review

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ABSTRACT

Introduction: The nurse's intention to leave the hospital was the settling problem in the hospital, because nurse turnover intention always occurs every year and may continue to increase if not handled. The reason for turnover was to a great extent slanted to the degree of occupation fulfillment, organizational factors, and threatening the workplace, bringing about an absence of inspiration to remain. **Objective:** to analyze external and internal factors of nurse turnover. **Methods:** Systematic review method used in this study on 15 scientific articles with limitations of publication time in 2016-2021. Four databases were included in this review such as Scopus, Ebsco, Pubmed, and ScienceDirect. Journals were selected based on predetermined criteria and a critical appraisal process was carried out. The Joanna Briggs Institute (JBI) Critical Appraisal tools were used to assess the bias study. **Results:** The results of the analysis of scientific articles were known that internal factors of nurse intention to leave were nurse age, education level, and job stress factors. While, an external factors that affect nurse intention to leave the hospital were work environment, job satisfaction, the relationship between nurse and manager, social support and organizational commitment. **Conclusion:** In conclusion, the factors that influence the turnover intention of nurses based on the results of a systematic review are job dissatisfaction and organizational factors.

ABSTRAK

Latar belakang: Keinginan perawat untuk mreneinggalkan rumah sakit merupakan salah satu masalah yang menetap di rumah sakit. Alasan tingginya turnover diantaranya tingkat pemenuhan pekerjaan, faktor organisasi, ancaman di tempat kerja, menyebabkan keinginan berpindah meningkat. **Tujuan:** Studi ini bertujuan untuk menganalisis faktor eksternal dan internal turnover perawat. **Metode:** Metode sistematik review digunakan dalam studi ini pada 15 artikel ilmiah yang dipublikasikan pada tahun 2016-2021. Database yang digunakan dalam studi ini diantaranya Scopus, Ebsco, Pubmed, dan Science Direct. Artikel dipilih berdasarkan kriteria yang telah ditentukan dengan proses critical appraisal. The Joanna Briggs Institute (JBI) Critical Appraisal tools digunakan untuk menilai bias. **Hasil:** Hasil analisis menunjukkan bahwa faktor internal yang mempengaruhi keinginan perawat meninggalkan rumah sakit diantaranya usia, tingkat pendidikan dan stress kerja perawat. Faktor eksternal yang mempengaruhi keinginan perawat keluar dari rumah sakit diantaranya lingkungan kerja, kepuasan kerja, hubungan perawat dengan manajer, dukungan sosial, dan komitmen organisasi. **Kesimpulan:** Turnover intention perawat berdasarkan analisis paling tinggi disebabkan karena ketidakpuasan kerja dan faktor organisasi.

Submission : 12-07-2021

Revised : 15-09-2021

Accepted : 28-09-2021

Kata Kunci : Rumah Sakit, Perawat, Turnover Intention

Keywords : Hospital, Nurses, Turnover Intention

DOI : 10.36858/jkds.v9i2.312

Introduction:

The nursing staff is the largest and most important medical professional in every hospital institution. However, at this time every day, the hospital faces a big problem that is the change of nurses significantly with a number that is not small and has difficulty maintaining staff nurses (Yeun & Kim, 2015). The result of a study show that most health workers have a high desire to leave their organization (Worku et al., 2019). Nurses must should provide nursing care and increase the quality of patients life, but the quality of life and welfare of nurses is often ignored, this can increase work stress and intention to leave (Hardjanti et al., 2017). Therefore, minimize nurse's turnover intention needs to be done to increase the effective and efficient productivity of nursing services in a hospital institution (Song & Woo, 2015).

The results of the survey in several hospitals in Indonesia showed a nurse turnover intention rate of 20% until 35% (Dewi et al., 2020). While the standard rate of nurse turnover was 5-10% per year (Gillies, 1994). Based on the results of a study states that the intention of nurses to leave the organization is among those who have a strong intention (19%), weak (62%), and very weak (19%) (Yang et al., 2017). One hospital in Malang had a relatively high turnover intention (39%) among nurses and midwives (Hardjanti et al., 2017). The average turnover rate of nurses working in private hospitals in Indonesia was 32,88% (Rindu et al., 2020). Hospitals need appropriate strategies to reduce the high nurse turnover

The high level of nurse turnover intention was influenced by several factors, including age, work stress, workload, and work commitment (Yang et al., 2017). Work pattern was one of the important factors that influence employees in making decisions to leave the workplace (Kilańska et al., 2020). The high nurse turnover intention will cause a decrease in the quality of nursing services and fulfillment of basic needs for patients (Kaddourah et al., 2018). The neglected

quality of life and welfare of nurses and an increase in nurse work stress were also factors that trigger the high level of nurse turnover intention (Hardjanti et al., 2017)

Nurses are one of the important human resources in the hospital. Human resources are the most important factor in health services. Good human resources will affect performance, work success, the achievement of organizational goals, and affect the organizational climate (Nojehdehi et al., 2015). The climatic conditions of the organization providing services will have an impact on the work pattern of staff employees (Kilańska et al., 2020).

Objective: Aimed of this study was to analyze external and internal factors of nurse turnover

Methods:

Search Strategy

The Cochrane Library was used as a step to identify the keywords used in the initial search. Forming systematic reviews of various journals based on *PRISMA (Preferred Reporting Items for Systematic Review and Meta Analyze)*. *PICO (Population, Intervention/Exposure, Comparison/Control, Outcome)* structured question was used to search terms. Five groups of search terms were used and then combined using the Boolean operators AND and OR including (factor*) AND (internal or external) AND (influence or influencing) AND (nursing or nurs*) (intention or leave* or turnover). All keywords were used in each database. Articles or journals there were included in the inclusion criteria were limited by year and language used according to the inclusion criteria. Online databases searched included *Scopus, Ebsco, Pubmed, and Science Direct*. Duplicate articles and journals are removed and research is filtered according to inclusion and exclusion criteria, based on abstracts and titles. Full text for all articles and journals include, was scrutinized by the researcher using a screening tool to prove that the article met the study inclusion criteria.

Inclusion Criteria

The articles and journals analyzed must meet the following criteria such as articles and journals published in the English language between 2016 until 2021. Articles and journals were included in the study if it discusses factors influencing nurse turnover intention, with crosssectional design. Journal extraction was not appropriate is done by taking into account the inclusion criteria of the study to be discussed. Studies that fall under the inclusion criteria are seen from the year of publication, research design used, participants, outcome measures. After removing inappropriate articles and journals and conducting analysis, the main points and

findings of the research were discussed by three authors to construct a structure for the synthesis of research findings.

Risk of Bias

The Joanna Briggs Institute (JBI) Critical Appraisal tools were used in this study to assess the quality of research methodologies and determined the possibility of bias (JBI, 2020). JBI consisted of 8 specific questions for crosssectional design. The questions assessed related to the criteria, subject, factor confounding, validity and reliability, and statistical analysis. The results of this appraisal can be used to synthesize and interpret the results study.

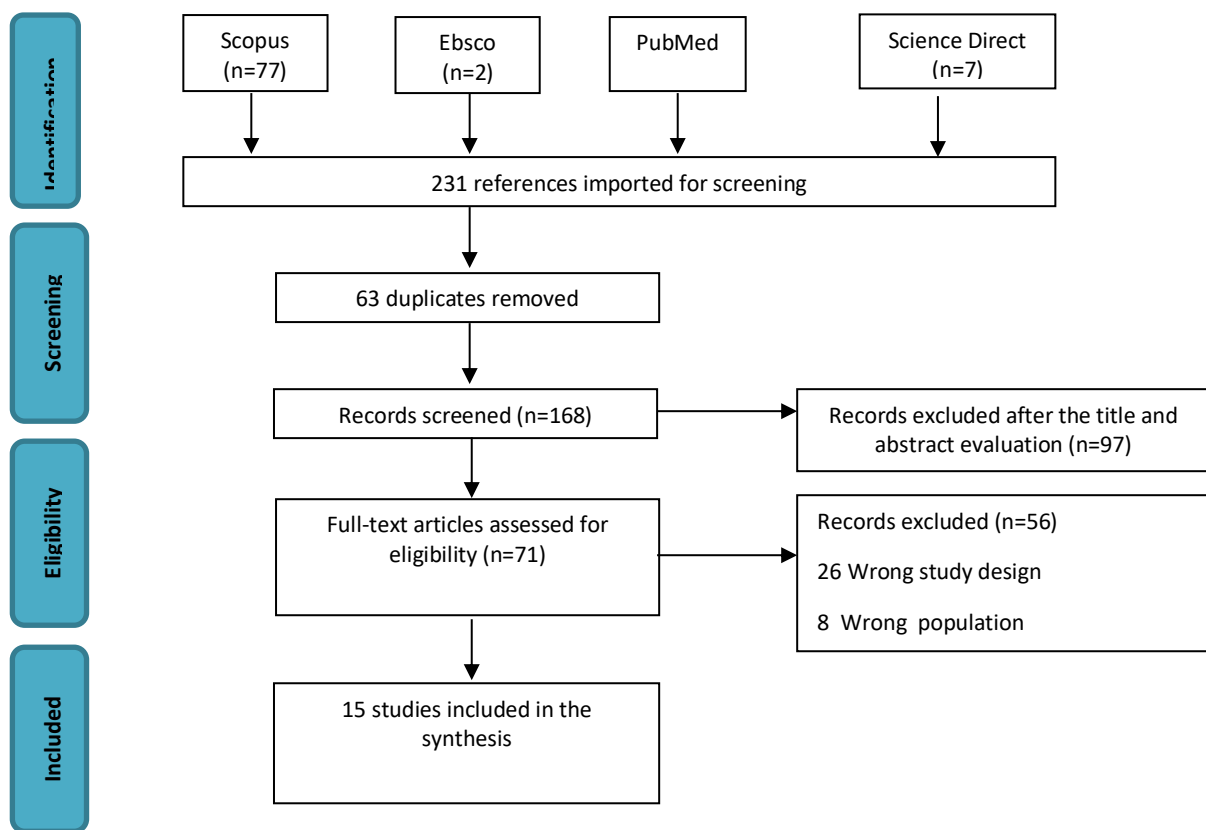


Figure 1. Flow chart of the study identification process

Table 1. Quality Assessment using JBI Score

No	Study	JBI Critical Appraisal								Total (%)	Quality Rating
		Number of items									
		1	2	3	4	5	6	7	8		
1	(Nantsupawat et al., 2017)	Y	Y	Y	Y	N	N	Y	Y	75	High
2	(Christopher et al., 2018)	Y	Y	Y	Y	N	N	Y	Y	75	High
3	(Chen et al., 2018a)	Y	Y	Y	Y	N	N	Y	Y	75	High
4	(Labrague, Gloe, et al., 2018)	Y	Y	Y	Y	N	N	Y	Y	75	High
5	(Labrague, McEnroe – Petite, et al., 2018)	Y	Y	Y	Y	N	N	Y	Y	75	High
6	(Chang et al., 2019)	Y	Y	Y	Y	N	N	Y	Y	75	High
7	(Dols et al., 2019)	Y	Y	Y	Y	N	N	Y	N	62,5	Moderate
8	(Park et al., 2019)	Y	Y	Y	Y	N	N	Y	Y	75	High
9	(Zhang et al., 2019)	Y	Y	Y	Y	N	N	Y	Y	75	High
10	(Alshareef et al., 2020)	Y	Y	N	Y	N	N	Y	Y	62,5	Moderate
11	(Labrague & de los Santos, 2020)	Y	Y	Y	Y	N	N	Y	Y	75	High
12	(Labrague et al., 2020)	Y	Y	Y	Y	N	N	Y	Y	75	High
13	(Li et al., 2020)	Y	Y	Y	Y	Y	Y	Y	Y	100	High
14	(Xu et al., 2020)	Y	Y	Y	Y	Y	Y	Y	Y	100	High
15	(Chiao et al., 2021)	Y	Y	Y	Y	N	N	Y	Y	75	High

The scores : high => 75%, moderate = 50-74%, low = 50%;

N= 0; UN = 0; Y = 1; NA=0 N = no;

UN = Unclear; Y = Yes; NA = Not Applicable

Table 1 showed that there were several studies ranged from moderate and high quality. JBI tool indicated the most of

the studies have good quality (13 studies) and only 2 studies have a moderate bias.

Tabel 2. Summary of the included studies (n=15)

Author, year	Participant	Design	Instrument	Key Findings
(Nantsupawat et al., 2017)	1351 nurses working in 43 inpatient units in five university hospital	Cross-sectional study	The Practice Environment Scale of The Nursing Work Index, The Maslach	Better nurse work environment had significantly effect to less job dissatisfaction, nurse intention to leave and burnout. The

	across Thailand		Burnout Inventory, and measures of job dissatisfaction and intention to leave	result showed that nurse work environment had effect to nurse to intention to leave or nurse turnover
(Christopher et al., 2018)	208 registered nurse was include Generation X (was born between 1965-1980) in health facilities a cross Australia	Cross-sectional	The Mueller McCloskey Satisfaction Scale, The Work Environment Scale, The Organizational Commitment Scale, The Condition for Work Effectiveness Questionnaire, Turnover Intention Scale	Generation X nurses turnover intention was associated with the work place such as opportunities for professional interactions, interpersonal relationship between colleagues and managerial support.
(Chen et al., 2018a)	1978 nurses was conducted at 48 hospitals in 14 key cities throughout Jiangsu Province in China	A Cross-sectional Survey	The Scale of intent to leave the profession, The Practice Environment Scale	Nurse intent to leave was associated with involvement hospitals affairs, resources adequacy, age, professional tittle, year(s) working, employment type, an education level.
(Labrague, Gloe, et al., 2018)	166 nurses hospitals in Philipines	Cross-sectional Approach	Job Satisfaction Scale, Job Stress Scale, Turnover Intention Inventory Scale	Turnover intention in Filipinos nurses were strongly linked with their age, job satisfiorn and job stress
(Labrague, McEnroe – Petite, et al., 2018)	166 nurses from 9 rural hospitals in Central Philipines	A Cross-sectional research design	The Organizational Commitment Questionnaire, The Six-item Turnover Intention Inventory Scale	Nurse age and education correlated significantly with nurse turnover intention, and organizational commitment had correlated negatively with nurse turnover intention
(Chang et al., 2019)	696 nurses in three comparable teaching hospitals in	Cross-sectional study	Employee’s Turnover Intention and Job Destination Choices Scale, The Professional	Workplace violence have higher associated with nurse turnover and could be serious crisis in

	Taiwan		Commitment Scale, The Work Excitement Scale, The Violence Prevention Climate Scale	hospitals.
(Dols et al., 2019)	309 registered nurses in United States	Crossectional study	The Career Survey for Nurses, The Nursing Leadership Preferences Survey, The Nursing Work Index Revised	Nurse Gen X turnover intention was related with nurse satisfied with their current position, were pay, staffing and nursing leadership support
(Park et al., 2019)	951 staff nurses working three shifts in the hospitals in Korea	Cross-sectional study	Work environment scale, Pay level satisfaction, Benefit satisfaction scale, nurses turnover intention scale developed by Mobley (1982) and Becker (1992)	Hospitals with a high nurse turnover rate because of fundamental reward and basic working condition in nurse environment
(Zhang et al., 2019)	207 clinical nurses working at a tertiary university hospital in China	Cross-sectional	Spiritual climate scale, turnover intention scale, Minnesota job satisfaction scale	Different departments have different spiritual climates. Spiritual climates could indirectly impact nurse turnover.
(Alshareef et al., 2020)	502 nurses in Saudi Arabia	A Cross-sectional study design	The organizational commitment questionnaire, the social support scale, and the job autonomy scale, the anticipated turnover scale	Nurse turnover significant influenced with discrimination, social support form immediate supervisor, organizational commitment and autonomy.
(Labrague & de los Santos, 2020)	261 frontline nurses in Philippines	Cross-sectional study	The fear of COVID-19 Scale, The Job Scale Stress, The Job Satisfaction Index, used two single item measures of turnover intention to asses organizational and profesione turnover intention.	An increased level of nurse fear of COVID-19 was associated with decreased job satisfaction, increased psychological distress, and increased organizational and professional turnover
(Labrague et al., 2020)	770 registered nurses from	Cross-sectional	The Toxic Leadership Behaviors of Nurse Managers Scale, The	Tranformational leadership has associated with job

15 hospitals in Central Philipines	Study	7-item Gopal Transformational Leadership, Job Satisfaction Index, Perceived Stress Scale, Two single-item measures developed by O-Driscolland Beehr (1944) to measured turnover intention, and absenteeism was assessed using a researcher-design single-item question after an extensive of literature.	contentment and turnover intention. Nurses who work for a manager exhibiting toxic leadership behavior demonstrated lower job contentment, higher stress level, frequent absenteeism, and higher intent to leave the nursing profession.
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Author, year	Participant	Design	Instrument	Key Findings
(Li et al., 2020)	1313 nurses from 18 hospitals in six provinces in China	Cross-sectional study	Turnover Intention Scale, Perceived Person Environment Fit Scale, The 10-item Proactive Personality Scale, The Multidimensional Scale of Perceived Support	Nurse turnover influenced by work area, level education, negative workplace/life event and person-organization fit
(Xu et al., 2020)	547 nurse from the children tertiary hospitals nationwide China	Cross-sectional study	Farh and his colleagues' four-item turnover intention scale, Calling scale by Dobrow and Tosti-Kharas (2011), The Chinese Nurse Job Satisfaction Scale wich was developed by Tao and colleagues	Job Satisfaction had mediate relationship between calling and nurse turnover intention. Calling had strongest influential factor of turnover intention.
(Chiao et al., 2021)	729 nurses in northern areas of Taiwan	A cross-sectional design	The questionnaire design was based on the six level of Maslow's Hierarchy of Needs.	Self-actualization needs, beyond self-actualization needs, and medical humanities education-relevant needs was very associated with nurse turnover.

Results

Literature search strategy by including keywords factor internal or external influence nurse turnover found 231 articles consist of Scopus= 77 articles, Ebsco= 2 articles, Pubmed= 145 articles, and Science direct= 7 articles, then disaggregated according to articles was duplicate removed, title and abstract were fulfill inclusion criteria consist of 71 articles, then number text retrieved and assessed for eligibility and include in the review was 15 articles (Table 1). Table 1 also showed that the articles were published between 2016 and 2020, with the most of the articles published in 2020 (33,3%). In this review, 4 relevant studies which focused on factors internal influencing nurse turnover intention, 6 relevant studies which focused on external factors of nurse turnover intention and 5 relevant studies which focused on internal and external factors of nurse turnover intention were identified, reviewed and synthesized.

Discussion

Nurse turnover intention was influenced by internal and external factors, such as nurse age, stress, workload, and career commitment (Yang et al., 2017). A nurse's health status is also an important factor affecting turnover intention. The perceived health status of nurses is a major factor that can reduce the turnover rate (Song & Woo, 2015).

Internal factors were factors from within nurses that can affect the level of turnover intention. Based on the results of our analysis, we found that the factors from within the nurse that can affect the level of nurse turnover intention include nurse age, education level, and job stress:

Age

This study founded that new nurses tend to change workplaces frequently because they may not have an emotional attachment to the organization compared to more senior nurses. Additionally, new nurses in the hospital face several problems

such as below-standard salaries, more workloads, and inappropriate promotions in staffing status. These factors could decrease motivation, satisfaction, thus making nurses have the desire to leave the hospital (Labrague, McEnroe – Petite, et al., 2018). Younger nurses were most likely to have higher turnover intention. It could be younger nurses compared their current organization to older ones (Labrague, Gloe, et al., 2018). Based on the result of the study showed that older nurses also experienced a lower level of turnover intention, because older nurses already have an emotional bond with the organization and have a commitment to organization (Labrague, McEnroe – Petite, et al., 2018).

Education Level

The result of this study was nurse turnover could be influenced by the education level of nurse (Li et al., 2020). Education level was associated with nurse turnover because nurse associates may not get as many opportunities as a nurse with bachelor's or master's degrees in the hospital and nurse associated accepted low salaries than the other with different level education (Labrague, McEnroe – Petite, et al., 2018). The high turnover rate was influenced by education level, because based on research result show that nurses with professional degrees affect the placement of nurses in good positions and higher salaries than those with lower degrees. Another reason higher nurse turnover intention in nurse associates, they have different training compared to nurse with bachelor degrees (Chen et al., 2018b).

Job Stress

Job stress has a major influence on nurses' intention to leave the hospital. The nurse who experienced a higher levels of stress with their job tended to decide to leave their organization (Labrague, Gloe, et al., 2018). Nurse fear to COVID-19 could be increased job stress and psychological distress of nurse because fear could be decreased nurse convenience in work, if

they were not comforted it could be originator of stress in their job (Labrague & de los Santos, 2020). Job stress was not only occurred in nurses who handled COVID-19, but also occurred rural health workers (RHWs). RHWs also felt job stress due to the high workload and negative emotions (Liu et al., 2019).

External factors were factor that could influence the decision to leave the organization. Based on the result of the analysis, it was found that external factors that affect turnover intention include job satisfaction, work environment, nurse leadership, social support, organizational commitment:

Job Satisfaction

Job satisfaction strongly predicted nurse turnover (Labrague, Gloe, et al., 2018). Work interaction between nurses was found to be a source of job satisfaction for nurses (Christopher et al., 2018). In addition, satisfaction with salaries and promotion satisfaction has a significant relationship with nurse turnover intention (Dewi et al., 2020). Nurse job satisfaction has an influence level of nurses turnover, thus also proportional to calling of nurses which affect the level of job satisfaction nurse and turnover intention (Xu et al., 2020). The high turnover intention of rural health workers was strongly influenced by job satisfaction. Job satisfaction in question includes job satisfaction, organizational management, and reward satisfaction (Liu et al., 2019).

Work Environment

Work environment had effect to nurse turnover intention (Nantsupawat et al., 2017). Hospitals with a high nurse turnover rate because of working condition in nurse environment (Park et al., 2019). Nurses were dissatisfied with the work environment (especially with doctor-nurse collaboration, resources and involvement in hospitals affairs) could increase nurse turnover intention in the hospital (Chen et al., 2018b).

Among the other factor influenced nurse turnover, the work environment was the most influential factor (Li et al., 2020). Many negative caused work environment become most influential, such as bullying and violence in the workplace could increase higher nurse turnover intention (Chang et al., 2019). The work environment of nurse has influences nurse turnover was spiritual climate in the nurse environment. Spiritual climates could indirectly impact nurse burnout and turnover intention. When the spiritual climate was poor, communication with other nurse was limited, thus contributing to a low spiritual climate and high nurses working stress (Zhang et al., 2019).

Nurse Leadership

Negative leadership described as someone who employs non-constructive behavior, lack of tolerance, and prefer to promote themselves (Labrague et al., 2020). Negative nurse leadership could be decreased job satisfaction and increase the nurse's desire to leave the hospital (Labrague et al., 2020). Another studies convenience that good nurse managers can decrease nurse intent to leave the organization (Alshareef et al., 2020).

Social Support

Nurse turnover rate was also influenced by social support. Social support that can affect nurse turnover was support from family and support outside the nurse's family such as form managers and colleagues (Li et al., 2020). A study showed results that social support from supervisors or managers could be reduced nurse's intention to leave the organization. It was influenced nurses in deciding to leave their organization (Alshareef et al., 2020).

Organizational Commitment

Organizational commitment was the emotional link between employee and their organization (Christopher et al., 2018). A study founded that organizational commitment was associated with nurse turnover intention. If organizational

commitment was low, committed nurses to tend to be dissatisfied and would want to leave their organization (Labrague, McEnroe – Petite, et al., 2018).

Conclusion

Journal analysis that had been carried out by the researcher showed the result that internal factors include nurse age, education level and job stress factors. While, work environment, nurse's job satisfaction, the relationship between nurse and supervisor (nurse leadership), low social support and low organizational commitment were external factors that could increase nurse intention to leave the organization (hospital). These factors could be utilized by nurses and organizations to minimize the nurse's intention to leave the organization, so the quality of nursing care can be improved.

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