

BIBLIOMETRIC ANALYSIS OF INFLUENCING FACTORS ON NURSE PERFORMANCE

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ABSTRACT

Nurse performance is a key factor in determining the success of patient recovery and patient satisfaction with the services provided. This article provides a bibliometric analysis of nurse performance by analysing publication trends, geographical contributions, journal types and research topic networks. Data were collected using the Publish or Perish (PoP) application and visualised using VOSViewer. The results showed that the publication trend related to nurse performance has increased with research topics including nursing, workload, hospital, stress and performance quality. The United States, Iran, China, Australia and Brazil were identified as the main contributors to these publications. This analysis provides a visual overview of research topics related to nurse performance, as well as identifying potential areas for further research.

Keywords: Nurse, Workload, Hospital, Stress, Quality, Work Environment, Nurse Performance

INTRODUCTION

In the context of health services, nurse performance is one of the crucial elements that play a role in determining the quality of services provided to patients. Nurses' performance is not only influenced by clinical skills and knowledge, but also by a number of external factors such as workload, motivation, leadership, and compensation Rakhmawati D (2023). A deeper understanding of the relationship between these factors may provide more comprehensive insights into efforts to improve nurse performance, particularly in high-complexity inpatient units.

A number of studies have been conducted to explore the

relationship between workload, motivation, leadership, and compensation on nurse performance. For example, a study by Kimalaha N et al (2019) found that high workload significantly reduces nurses' performance, but this effect can be offset by high motivation and supportive leadership. Another study by Rakhmawati D (2023) showed that effective leadership can improve nurse performance, especially when accompanied by adequate compensation. In addition, a study by Ramdhi R et al (2021) revealed that fair and competitive compensation is a key factor in improving nurses' motivation and performance.

This research aims to build on existing research and add another perspective by drawing on data from Scopus and Google Scholar. Bibliometric analysis was used in this study to be able to analyse the topic of factors affecting nurses' performance and explore trends and provide direction of hot topics and future research trends. The purpose of this study is to analyse the development of nurse performance topics to find solutions to various problems in nurse performance in hospitals and the risks that can be caused if nurse performance is low.

LITERATURE REVIEW

The role of nurses in health care cannot be separated from efforts to improve the quality of health services. As the frontline in medical services, nurses have a great responsibility in providing care to patients, especially in inpatient units in hospitals. Nurse performance is a key factor in determining the success of patient healing and patient satisfaction with the services provided (Rakhmawati D, 2023). Therefore, it is important to understand the factors that influence nurses' performance, especially in complex and challenging work environments such as inpatient units.

Nurses' workload is one of the factors that greatly affects their performance. High workload often results in stress, fatigue, and decreased performance (Sulistiyawati W et al, 2020). In an inpatient setting, where nurses have to deal with many patients with diverse needs, high workload can have a direct impact on the quality of care provided. Several studies have shown that excessive workload can reduce the quality of care, increase the risk of medical errors, and cause burn-out in nurses

(Nugroho, 2018). Therefore, effective workload management is crucial in maintaining optimal nurse performance.

In addition to workload, nurse motivation is also an important factor affecting performance. High motivation will encourage nurses to work with more enthusiasm and try to provide the best service to patients. Nurses' motivation can be influenced by various factors, such as the work environment, rewards, and interpersonal relationships in the workplace (Wahyuni et al 2021). Research by Sari (2017) shows that nurses who have high intrinsic and extrinsic motivation tend to have better performance compared to those with low motivation. Therefore, increasing work motivation should be a priority for hospital management to ensure that nurses can provide optimal service.

Leadership also plays an important role in determining nurse performance. An effective leadership style can create a positive and supportive work environment, which in turn improves nurses' performance. Good leadership is not only related to managerial skills, but also to the ability to inspire and motivate nurses (Fitriana WK, 2018). A study by Prima R, et al (2020) revealed that nurses working under leaders who are able to provide support and clear direction tend to have better performance. Conversely, ineffective leadership can lead to job dissatisfaction, lower motivation, and ultimately lower nurse performance.

Compensation is another factor that is no less important in influencing nurse performance. Fair and competitive compensation is a form of appreciation for nurses' hard work and dedication in providing health services (Ramdani, 2021). Compensation includes not only salaries, but also incentives,

allowances, and other facilities that can improve nurses' welfare. Research by Kimalaha N et al (2019) shows that nurses who feel financially rewarded tend to have better performance and higher levels of loyalty to the organisation. Thus, a good compensation system can be an effective motivational tool to improve nurses' performance.

However, there are still many hospitals that have not fully optimised these factors in nurse management. Many nurses still face heavy workloads without adequate motivational support, ineffective leadership, and inadequate compensation (Lestari, 2020). This is a challenge for hospital management to create a conducive work environment and support optimal nurse performance.

RESEARCH METHODOLOGY

The data used as a research source was taken from the Scopus database using the Publish or Perish application which can be downloaded for free on the website. The criteria used as data sources include articles in the form of original research or reviews, using the keyword nurse performance, and articles published from 2014-2024. The data obtained was then stored in .csv format and converted into .xls format. This was done to classify the authors with the most citations, the countries with the most documents,

the number of journals/publishers where they were published and the productivity of documents in each year.

The data obtained was analysed using the VOSviewer application. The application was applied to perform bibliometric analysis of this article. In addition, VOSviewer software was used to perform data exploration, mapping, and clustering of retrieved articles. Keywords and countries were marked with coloured circles. The size of the circle is positively correlated with the occurrence of the keyword or country in the title and abstract. Therefore, the size of the marks and circles of a topic is determined by the weight of the topic. The greater the weight of a topic, the larger the topic's label and circle.

RESULTS RESEARCH AND DISCUSSION

The results of this bibliometric analysis include several key aspects that provide a comprehensive overview of research related to nurse performance. Based on the search results through PoP through the Scopus database from 2014-2024, 200 articles were obtained and among them there were 101 documents that met the criteria. The following is the metric data of the document.

Table 1. Trend Of Publications

Metric Citation	
Year of Publication	2014-2023
Year of Citation	10 (2014-2024)
Article	101
Citation	2905
Citations/year	290.50
Citations/articles	28.76
Citation/author	2905.00

Article/author	101.00
Author/article	1.00
h-index	30

Based on the data in table 1, it can be seen that the trend of publications related to nurse

performance shows significant fluctuations in the articles published each year.

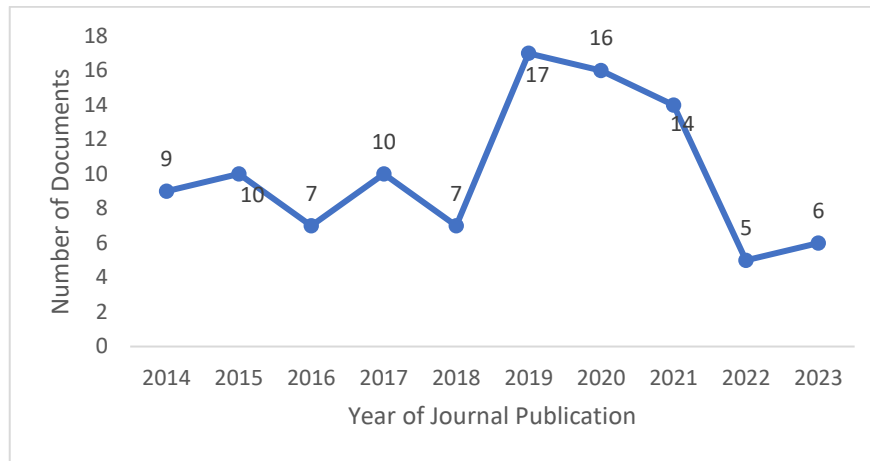


Figure 1. Research Trends on Nurse Performance

In 2019, the number of publications reached 17 publications, the increase in the number of publications was also influenced by the Covid-19 pandemic. In 2020 it decreased to 16 publications and in 2021 to 14 publications. Then in 2022 experienced a very significant decrease to 5 publications and in 2023 experienced a slight increase to

6 publications which may reflect fluctuations in research interest or changing trends.

With so many studies on the topic of nurse performance, other topics related to the main topic in this study emerged. It can be seen from Figure 2 which provides an overview of the relationship between topics according to their respective clusters.

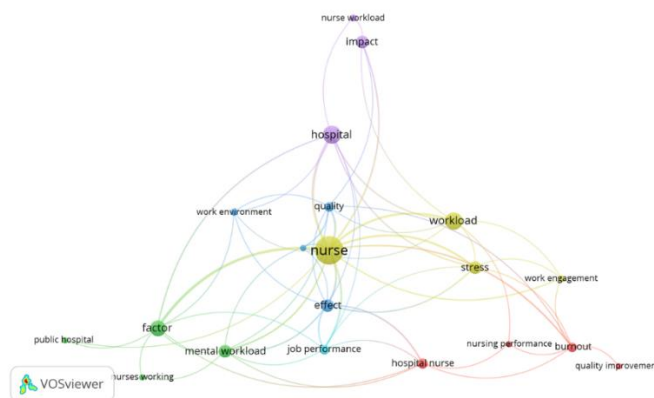


Figure 2. Topics Related To Nurse Performance

Based on the results of the analysis using VosViewer presented in Figure 2, research topics related

to nurse performance can be mapped. The mapping can be seen in Figure 3.

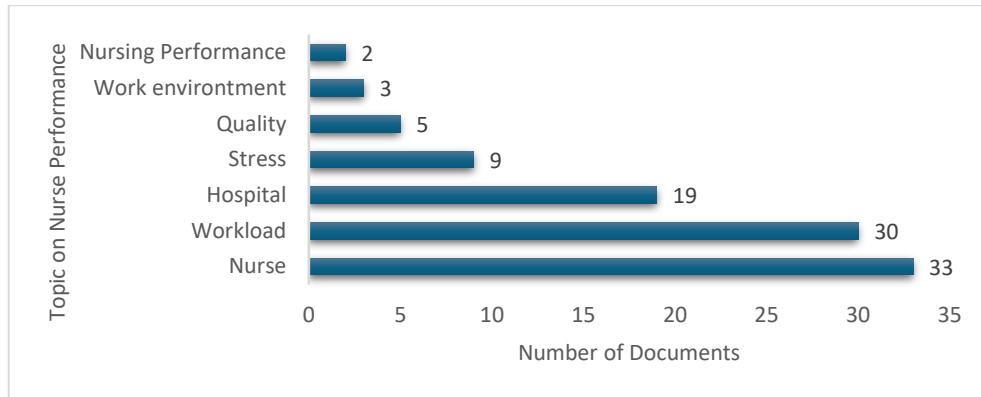


Figure 3. Topics About Nurse Performance

Based on the results of the mapping of topics related to nurse performance, it can be seen that there are still many topics that can be developed such as nursing performance, and work environment. In addition to these topics, the topic of quality is also an interesting topic to examine, this is because the quality of health services is strongly influenced by various factors. The topic of workload and nurse is the most researched topic, because nurse performance is influenced by various

factors such as workload, work environment and stress. Good nurse performance is very important to achieve optimal health service quality.

Analysis using VosViewer also illustrates the density of research topics related to nurse performance. Figure 4 shows that areas with darker or deeper colours indicate a higher concentration of publications. Topics regarding nurses show a high density, this means that a lot of research has been conducted on the topic of nurses.

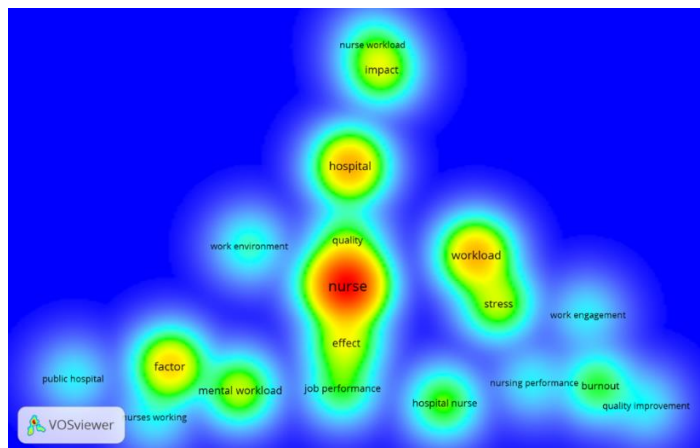


Figure 4. VoS Viewer Density Overview

In addition to mapping topics related to nurse performance, there is a mapping of countries with the most publications. In general, there

are 5 countries that contribute the most documents. It can be seen in Figure 5.

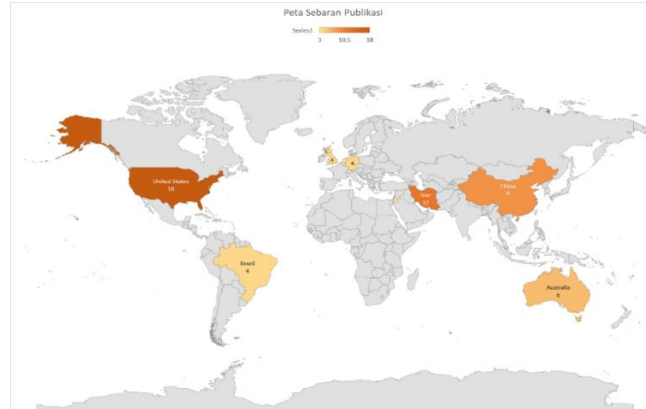


Figure 5. Mapping by Country of Publication

Figure 5 shows that many publications were made by countries in the United States, Iran, China, Australia, and Brazil. It is suspected that the United States is a major centre for research on nurse performance as well as a large investment in nursing research and a strong research infrastructure in the country. In addition to these five countries, countries such as Germany, Taiwan, the UK, Jordan, Korea and the Netherland help to

provide opportunities to enrich perspectives and improve the quality of research by identifying knowledge in the literature.

In addition to the country, through bibliometric analysis also obtained data on the 10 authors with the most citations related to research topics on nurse performance. It can be seen in table 2 which shows the authors with the most citations over the past 10 years.

Table 2. Literature Review

N o	Auth or . Nam e	Title	Cit ati on
1	Y. Wu	A Comparison of Burnout Frequency Among Oncology Physicians and Nurses Working on the Frontline and Usual Wards During the COVID-19 Epidemic in Wuhan, China	393
2	M. Leng	Mental distress and influencing factors in nurses caring for patients with COVID-19	134
3	Y. Gong	Prevalence of depressive symptoms and work-related risk factors among nurses in public hospitals in southern China: A cross-sectional study	88
4	K. Han	Factors associated with work-related fatigue and recovery in hospital nurses working 12-hour shifts	85

5	A.J. Daws	Nursing churn and turnover in Australian hospitals: Nurses' perceptions and suggestions for supportive strategies on	85
6	M. Zhan	Influence of perceived stress and workload on work engagement in front-line nurses during the COVID-19 pandemic	83
7	M. Di Muzio	Can nurses' shift work jeopardise patient safety? A systematic review	83
8	K. Sagharian	Fatigue, Work Schedules, and Perceived Performance in Bedside Care Nurses	78
9	L. Li	Moderating effects of coping on work stress and job performance for nurses in tertiary hospitals: A cross-sectional survey in China	73
10	A. Rhéaume	The impact of long work hours and shift work on cognitive errors in nurses	64

Another data obtained through bibliometric analysis is the publisher of the article that publishes the most scientific articles. Through a search using PoP,

5 publishers of articles that published the most documents were obtained. The data is presented in detail in Figure 6.

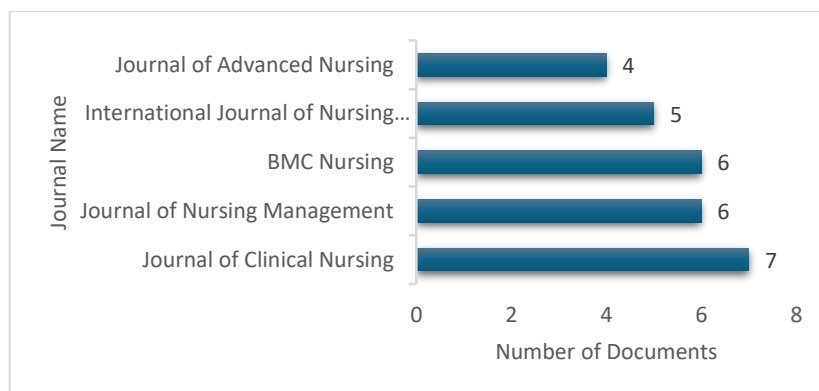


Figure 6. Distribution by Publisher

In Figure 6 it can be seen that the Journal of Clinical Nursing is the publisher that publishes research articles related to all areas of nursing such as community, geriatrics, mental health, and clinically focused paediatrics. In contrast, the Journal of Nursing Management, which focuses on the disciplines of nursing management and leadership, published the

second most articles, with a total of 6 documents.

Bibliometric analysis is a quantitative research method that can be used by researchers to get a broad picture of previous studies. This article describes the research and publication of the work performance of nurses in hospitals over the past ten years. And increasing in recent years. The United States is the largest

contributor of publications and there are 64 publications. Retrieval of bibliographic data via www.scopus and processed using the VOSviewer program.

VOSviewer integrates primary colors in the resulting visualizations. Density visualization is used to see the density level or the quantity of the topic under study (MCalisster, 2022). The more yellow a knot is, the more research is done. Conversely, the greener a node, the less research is done. This research shows that in the fields of patient safety, behavior, job stress, teamwork, education, nursing management, workload has the potential to become a future research topic related to the work performance of nurses in hospitals (Hastuti, 2023).

CONCLUSIONS

Results from bibliometric analyses on nurse performance show that research on this topic has increased significantly in recent years. The main focus of research often relates to factors that affect nurses' performance, including workload, well-being, work environment, and training and professional development. This analysis also highlights the importance of which hats are involved in improving nurses' performance. In addition, data was obtained on which authors, journals and countries contributed to the study. These findings confirm the need for a comprehensive strategy to support and optimise nurses' performance in order to improve overall healthcare outcomes...

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