BIBLIOMETRIC ANALYSIS OF RESEARCH ON FACTORS AFFECTING SERVICE QUALITY AND PHYSICIAN PERFORMANCE

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ABSTRACT

The advent of digitalization in the healthcare sector has significantly underscored the importance of Electronic Medical Records (EMR) in primary health services. EMRs serve as a critical tool for storing, accessing, and analyzing patient data efficiently and accurately, which is essential for enhancing the quality of healthcare services. This study aims to conduct a comprehensive bibliometric analysis to identify and understand the various factors affecting the performance and completeness of EMRs in primary health services. Utilizing the Publish or Perish application and relevant keywords such as "Quality of service," "performance," "doctors," "factors," "facilities and infrastructure," "income," "competence," and "communication," a thorough examination of literature from Google Scholar was performed. The analysis focused on fifty top-ranked journals published between 2018 and 2024, classified by publication year, type, citation count, and researcher country. VOSviewer was employed to execute a detailed bibliometric analysis, using occurrence parameters of 4 and term parameters of 16. The findings revealed significant research trends, influential factors, and essential clusters related to the performance and completeness of EMRs. Key insights include that India, Indonesia, and Nigeria are at the forefront of research output in this field, with substantial contributions from prominent publishers such as Springer and Emerald. Critical factors identified include the competence of healthcare providers, the quality of patient care, and effective communication skills. This in-depth analysis offers valuable insights for researchers, practitioners, and policymakers, providing a foundation for optimizing EMR utilization and improving primary healthcare services. Future research should delve into less-explored areas, such as communication skills and patient experiences, to further enhance the effectiveness of EMRs in primary health services.

Keywords: EMR, Performance, Healthcare Quality, Bibliometric Analysis, Primary Health Services

INTRODUCTION

Health is one of the basic human needs in addition to food and shelter, without a healthy life, human life becomes meaningless, because in a state of illness it is impossible for humans to carry out their daily activities properly. In addition, people who are sick (patients) who cannot cure their own illness, have no other choice but to ask for help from health workers who can cure their illness and these health workers will do what is known as health efforts by providing health services.

Healthcare quality and physician performance are two crucial aspects of the healthcare system. Good service quality can increase patient satisfaction, strengthen public trust in health institutions, and ultimately, improve overall health outcomes. Meanwhile, optimal physician performance is essential to ensure that the health services provided are effective, efficient, and in accordance with high professional standards.

Various factors can influence the quality of care and performance of doctors, including facilities and infrastructure, income, competence, and communication between doctors and patients. These factors are interrelated and can contribute significantly to patient experience and outcomes.

Doctors are one element of human resources in hospital services. This can be understood because almost all people who visit hospitals always want to meet with doctors in an effort to find healing or consultation about their illnesses, so the performance of doctors will greatly affect the quality of health services (Ministry of Health RI, 2014).

This study aims to conduct a bibliometric analysis of existing research on the influence of factors on service quality and physician performance. Bibliometric analysis is a method used to measure and analyze scientific publications with the aim of understanding research trends, author distribution, collaboration between institutions, and topics that are frequently discussed in the scientific literature.

This research is important not only from an academic perspective but also has significant practical implications. A better understanding of the factors that influence service quality and physician performance can assist policy makers and managers of health institutions in formulating more effective strategies to improve health services. In addition, the results of this study are expected to serve as a reference for other researchers who are interested in conducting further studies in this area.

An important part of a health service is the availability and adherence to standards, because quality health services are when these services are carried out in accordance with existing standards. Generally, officers encounter many variations in the implementation of health services. In health service quality assurance, standards are used to keep variations to a minimum.

LITERATURE REVIEW

The quality of health services is important and a concern at all levels of health services globally. This is in accordance with one of the world's commitments to achieve universal health coverage (UHC) by 2030 (WHO, 2018 in Amila, R 2023). Indonesia continues to strive to improve access and quality of basic and referral health services (Kemenkes RI, 2016 in Amira R, 2023). Efforts to strengthen primary health care is one of the main pillars in the national health system transformation agenda through the Puskesmas accreditation system (Kemenkes RI, 2023 in Amira, R, 2023). One indicator of service quality is increased patient satisfaction. Patient satisfaction is the result of an assessment in the form of an emotional response (feeling happy and satisfied) of the patient due to the fulfillment of expectations or desires in using and receiving health worker services (Salasim, et al, 2021). According to Pohan (2015), the assessment of the quality of health services can be viewed from the side of users of health services (patients / community), health service providers, funders or insurance, owners of health facilities and for health service administrators.

Ishak et al. (2017) state that individual employee performance is a major factor in maximizing organizational performance. There is a

close relationship between individual performance and organizational performance. If employee performance is good, it is likely that the company's performance is also good and vice versa if employee performance is poor, it is likely that the company's performance will also be poor. Based on the results of several studies, it is known that many factors affect a person's performance, namely individual factors, psychological factors, and organizational factors, in this case organizational culture. Organizational culture factors affect employee performance and satisfaction. Creating a strong, flexible, and unique culture can make it possible to increase and improve organizational performance.4 According to Sutrisno, organizational culture is an invisible social force that encourages organizational members to carry out work activities.

Organizational culture consists of ideologies, philosophies, values, assumptions, beliefs, expectations, and norms that bind a community. Organizational characteristics, teamwork, leaders, and proper administrative procedures are some of the factors that determine organizational culture. Having a productive culture can help the organization become stronger and can achieve company goals. Organizational culture consists of habits that occur at the top levels of the organization and are the standards of behavior followed by the members of the organization. Organizational culture is defined by norms, values, philosophies, rules and employee work climate. Organizational culture is the values and norms adopted and carried out by an organization related to the environment in which the organization carries out its activities (Sawitri, 2018).

Therefore, organizational culture affects employee performance, the stronger the organizational culture, the better the employee performance. This means that the organizational culture

applied to a hospital organization has an important role in improving or reducing the performance of doctors. The application of an inappropriate organizational culture will have an impact on reducing employee job satisfaction which in turn will have an influence on employee performance. This in turn will certainly harm the organization because it cannot realize the goals that have been set previously. Organizational culture can influence members to achieve organizational goals. This can affect a person and their performance in their workplace. Organizational behavior shows the relationship between organizational culture and employee or member performance. If employees behave in a way that is in line with their organizational culture then they will feel satisfied and may receive rewards directly or indirectly.

Quality health services are one of the important aspects in an effort to improve public health. Doctors as health professionals have a strategic role in providing effective and efficient health services. However, in recent years, health services in Indonesia have experienced several challenges, such as shortages of doctors, lack of facilities, and lack of resources. Doctors are one of the professions that have an important role in hospital services, they always interact directly with patients to provide medical care so that it shows how important the role of doctors in the success of the organization. Doctors in a hospital are responsible for every action given to patients so that the quality of medical services provided by the hospital is highly dependent on the quality of doctors who work there. In today's hospital organizations, the quality of doctors' services is an illustration of the quality of hospital services as a whole. By managing medical human resources, especially doctors properly, hospitals are expected to improve the quality of service.

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The results of the study (Krisnawanto, 2016) show that there is a positive relationship between the work environment and the performance of health workers, namely the better the work environment, the performance of health workers is also good, otherwise the lower the work environment, the performance of health workers decreases. The results of research (Sawitri, 2018) Employee performance is influenced by organizational culture factors, where improving and improving organizational performance can be done by forming a strong, adaptive, and unique organizational culture. Research results (Fakhrurrazi, 2012) Work discipline has a real influence on work results, if work discipline is not improved, it will directly have an impact on reducing employee performance so that the ultimate goal of the organization is not achieved. These five factors are factors that relate to and influence the good and bad performance of health workers.

Work discipline is an effort made to create conditions in an orderly, efficient and successful work environment through an appropriate regulatory system. Another definition of work discipline is a tool used by managers to communicate with employees so that they are willing to change a behavior and as an effort to increase a person's awareness and willingness to obey all company regulations, and applicable social norms (Rivai, 2010) in (Syari, 2012). Recognition or appreciation of the organization's leadership towards employees is a boost to morale. Awards in an organization are not only in material form, but in non-material forms such as letters of appreciation, verbal praise, visits from superiors to subordinates formally, and so on (Djewarut, 2017).

The results of research by Putra, Angga Yulizar (2020) state that performance allowances and the work environment have a significant effect on service quality at the Pringsewu Health Center. Based on research from Rusniati, R, et al., 2023 that there is a relationship between incentives, workload, and work environment on employee performance. In addition, the quality of doctor services is also influenced by human resources, namely the adequacy of doctor personnel. The results of research by Akbar et al., 2017 state that the shortage of general practitioners at the puskesmas has an impact on the workload of general practitioners who have to serve a large number of patients so that the services provided are not optimal and have an impact on the excess working hours of general practitioners at the puskesmas. Services that are not optimal indicate that there is still a lack of general practitioners available so that health centers still need additional general practitioners (Ali, 2022).

In addition, service quality is also influenced by competence. The results of research by Ratna Miasih, et. al 2012 state that HR competence affects job satisfaction and service quality, as evidenced by the expertise, nature and motivation of good doctors and nurses, the quality of service provided to patients is better. Likewise, the results of research from Navis Darwin, et.al, 2020 state that competence has a positive and significant effect on service quality. In addition, the quality of service is also influenced by communication. The results of research from Riyadi, MH, et. al, 2020 state that there is an effect of doctor-patient interpersonal communication and service quality on patient satisfaction at the Polyclinic of Dr. Moch. Anshari Saleh Banjarmasin Hospital.

Likewise, research from Sunaryo, Aris, et.al, 2020 states that there is a significant relationship between effective communication between doctors and patients and the quality of health services with patient satisfaction.... For this reason, between patients and doctors there must be

sufficient time to communicate about health problems in order to create good communication so that there is no misunderstanding or misinterpretation of messages by patients about what the doctor says.

RESEARCH METHODS

This research is a bibliometric study designed to review and analyze research that addresses the influence of various factors on service quality and physician performance. To conduct this study, we utilized the Publish or Perish (PoP) application with a focus on the title "Bibliometric Analysis of Research on the Influence of Factors on Service Quality and Physician Performance". The initial stage of the research involved searching the relevant literature using the keywords: "quality of service", "performance", "doctors", "factors", "facilities and infrastructure", "income", "competence", and "communication". The search was conducted on the Google Scholar database, which is renowned for its broad and inclusive coverage of the literature. We filtered the results to find the 50 highest-ranked journals that fit our criteria from 2018 to 2024.

After collecting the data, the next step was to classify the journals. This classification is based on several key dimensions:

a. Distribution of Journals by Year of Publication: This analysis aims to identify temporal trends in research on this topic. We looked at how the volume of publications changed from year to year, as well as shifts in research focus over the period.

b. Journal Type: We identified the categories and disciplines of the journals to understand the scientific and academic context in which the research was most frequently published.

c. Citation Count: A citation count is conducted to evaluate the impact and relevance of each publication. Journals with high citation counts are considered to have significant influence in the field.

d. Researcher's Country of Origin: By recording the country of origin of researchers, we can understand the geographical distribution of research and identify regions that are active in studies on service quality and physician performance.

For further analysis, the collected data was then analyzed using the VOSviewer application. This application allows us to build and visualize complex bibliometric networks. In VOSviewer, we set the parameters of occurance at least 4 and term at least 16. This means that only terms that appear at least four times and are related to sixteen other terms will be analyzed. The results of this analysis produced several types of visual maps:

a. Networking Map: This map shows the relationships and interactions between the various factors under study. Through this map, we can identify clusters or groups of terms that frequently co-occur, showing the interconnectedness between different research topics.

b. Overlay Map: The overlay map provides a temporal overview of the evolution of research in this topic. The map shows how the research focus has evolved over time, helping to identify the latest research trends.

c. Visual Density Map: This map helps identify areas with a high concentration of research as well as areas that remain under-researched. The visual density map is useful for revealing the distribution of research intensity across subtopics.

Interpretation of these visualizations was done to understand the interrelationships between various factors affecting service quality and physician performance. This analysis also aims to identify research gaps that still exist. These gaps can be a focus for future research, thus helping in formulating a

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more focused and useful research agenda.

This comprehensive research method is expected to provide in-depth insights into how various factors affect service quality and physician performance. In addition, the results of this study are expected to encourage further improvement in the quality and quantity of research in this area, as well as provide practical guidance for stakeholders in optimizing health services. With this bibliometric approach, we not only provide a comprehensive overview of current research trends and patterns, but also offer strategic guidance for researchers to explore under-explored areas that have the potential to contribute significantly to knowledge in the field of healthcare.

RESULTS RESEARCH AND DISCUSSION

After conducting a bibliometric analysis using the Publish or Perish and VOSviewer applications, we obtained various findings that provide deep insights into research on the influence of various factors on the quality of service and performance of doctors. In this section, we will present these findings, which include analyzing the distribution of journals by year of publication, journal type, number of citations, and country of origin. In addition, we will also discuss the results of visualization of networking maps, overlays, and visual density that reveal the relationships and interrelationships between the various factors studied.

These findings not only provide an overview of current research trends and patterns, but also identify areas that require further attention. Through in-depth discussions, we will evaluate how various factors such as facilities and infrastructure, income, competency, and communication affect the quality of care and physician performance. We will also interpret the resulting visual maps to understand the dynamics of research and identify gaps that still exist in the literature.

This section aims to provide a critical and comprehensive analysis of the data that has been collected and analyzed, and offer insights that can be used by other researchers in directing future research. Through this discussion, we hope to make a meaningful contribution to improving healthcare quality and physician performance through a better understanding of the factors that influence it.
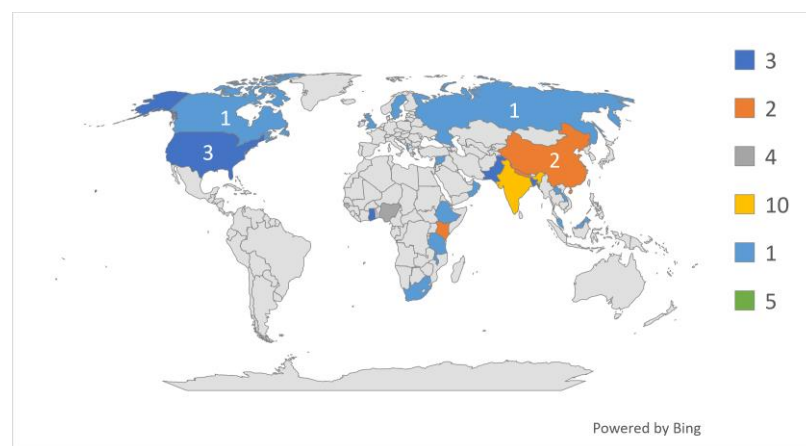

Figure 1. Distribution Of Countries That Publish Related Research

Based on the publication data collected, there is a significant variation in the number of publications related to research on the influence of various

factors on service quality and physician performance from different countries. India tops the list with the highest number of publications, with 10 publications. This suggests that India has a strong interest in research in this area, likely driven by efforts to improve the country's healthcare system.
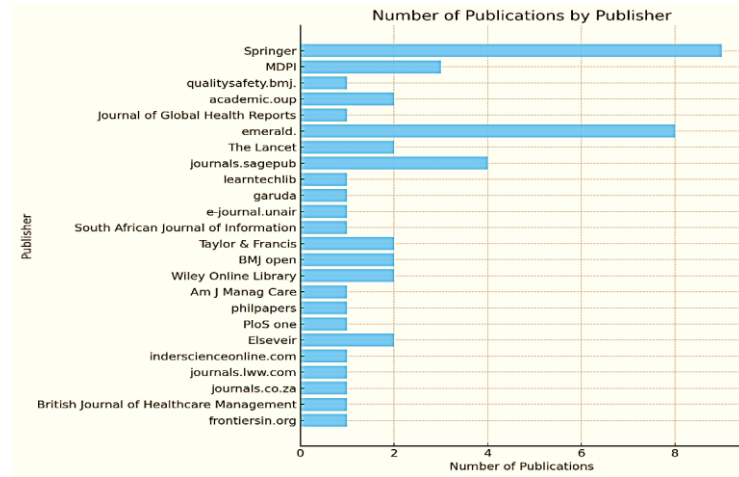

Figure 2. Distribution Of Publishers That Publish Related Research

Here is a bar graph depicting the number of publications by publisher in English. It clearly shows that Springer has the highest number of publications with 9 publications, followed by Emerald with 8 publications, and journals.sagepub with 4 publications. Other publishers also contribute, albeit with a smaller number of publications
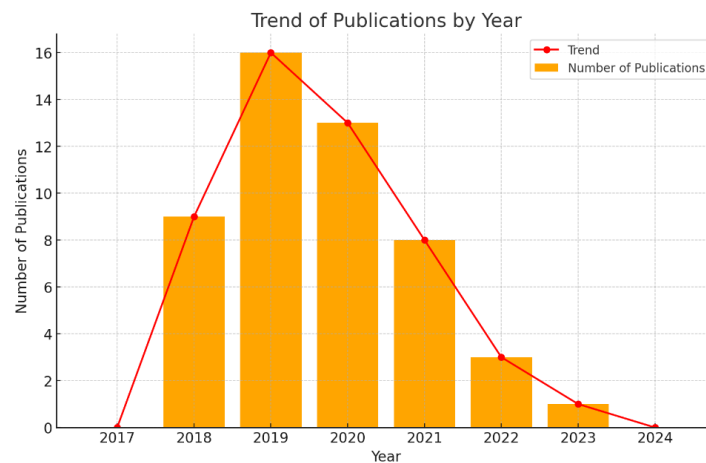

Figure 3. Trend Of Publications By Year

Based on the data obtained regarding the number of publications by year of publication, there is a significant fluctuation in the number of publications from 2017 to 2024. In 2017, there were no publications listed, suggesting that there may not have been significant interest or attention to this topic in that year.

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Table 1. Discussion of Publication Trends by Citation

No.	Author	Title	Citation	Year
1	M Usak, M Kubiatko, MS Shabbir	Health care service delivery based on the Internet of things: A systematic and comprehensive study	249	2020
2	S Sayed, W Cherniak, M Lawler, SY Tan, W El Sadr	Improving pathology and laboratory medicine in low-income and middle-income countries: a roadmap to solutions	188	2018
3	MJ Umoke, PCI Umoke, IO Nwimo	Patients' satisfaction with quality of care in general hospitals in Ebonyi State, Nigeria, using SERVQUAL theory	141	2020
4	I Fatima, A Humayun, U Iqbal	Dimensions of service quality in healthcare: a systematic review of literature	139	2019
5	E Dassah, H Aldersey, MA McColl	Factors affecting access to primary health care services for persons with disabilities in rural areas: a "best-fit" framework synthesis	126	2018
6	G Adhikary, MSR Shawon, MW Ali, M Shamsuzzaman	Factors influencing patients' satisfaction at different levels of health facilities in Bangladesh: Results from patient exit interviews	124	2018
7	DJ Onyeajam, S Xirasagar, MM Khan, JW Hardin	Antenatal care satisfaction in a developing country: a cross-sectional study from Nigeria	110	2018
8	A Hussain, MS Sial, SM Usman, J Hwang	What Factors Affect Patient Satisfaction in Public Sector Hospitals: Evidence from an Emerging Economy	105	2019
9	KO Kwateng, R Lumor	Service quality in public and private hospitals: A comparative study on patient satisfaction	93	2019
10	EK Macarayan, AD Gage, SV Doubova	Assessment of quality of primary care with facility surveys: a descriptive analysis in ten low-income and middle-income countries	87	2018

Based on the citation analysis, it can be seen that several publications on service quality and physician performance received significant attention in the academic community. The publication with the highest citations is "Health care service delivery based on the Internet of things: A systematic and comprehensive study" by M Usak and colleagues, which shows great interest in the use of IoT technology in healthcare. Another study that stood out was "Improving pathology and laboratory medicine in low-income

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and middle-income countries: a roadmap to solutions" by S Sayed et al, which highlighted the importance of improving pathology and laboratory systems in developing countries.
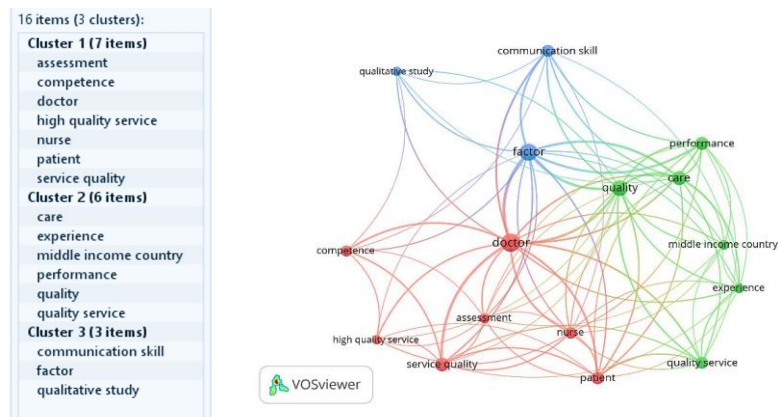

Figure 4. Network Visualization Overview Publications

VOSviewer Network Visualization Publication Overview

Based on network visualization using VOSviewer, research on factors affecting service quality and physician performance can be grouped into three main clusters. The first cluster, consisting of seven items, included terms such as "assessment," "competence," "doctor," "high quality service," "nurse," "patient," and "service quality." This cluster focuses on the aspects of assessment, competence of medical personnel, and the quality of service received by patients. This suggests that research in this cluster tends to emphasize the importance of evaluating and improving the competence of medical personnel to achieve high service quality.
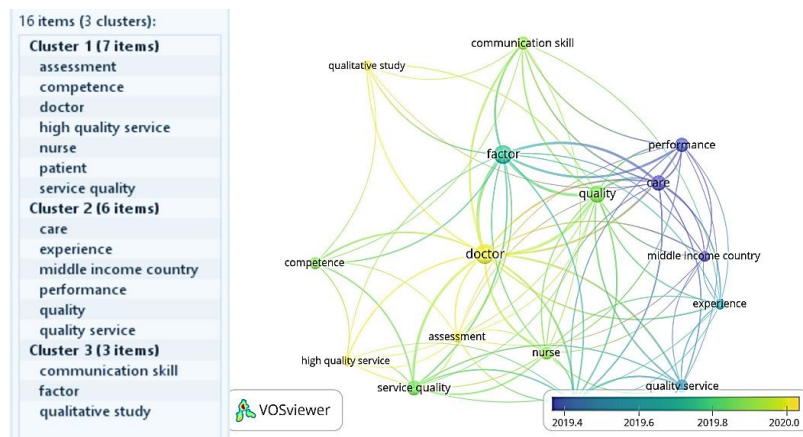

Figure 5. Overlay Visualization Overview Publications

Based on an overlay visualization using VOSviewer, research on factors affecting quality of care and physician performance shows a close relationship and interesting temporal distribution between various key terms from 2019 to 2020. This visualization uses color to indicate the year in which the terms appear, with blue representing newer terms and yellow for older terms.
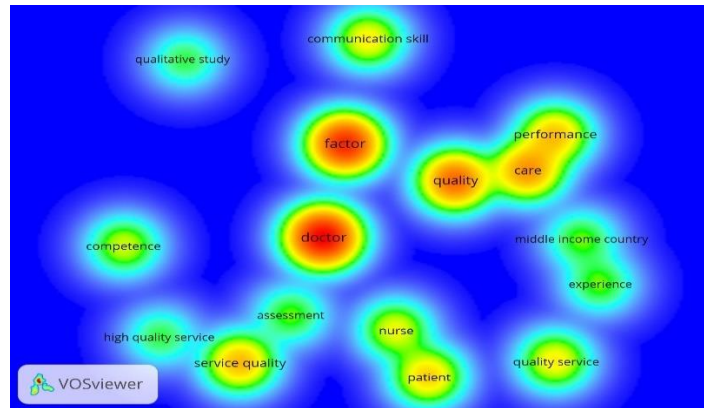
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Figure 6. Density Visualization Overview Publications

DISCUSSION
VOSviewer Density Visualization Publication Overview

Based on the density visualization using VOSviewer, research on factors affecting service quality and physician performance can be seen from the density of key terms used in publications. This visualization depicts areas with high concentration of research (in red) to areas with lower concentration (in blue).

The terms "doctor," "factor," and "quality" emerged as the highest density areas, indicating that these topics are the main focus of many studies. The high density of the term "doctor" indicates the great attention paid to the role and performance of doctors in the context of healthcare. "Factor" and "quality" reflect efforts to understand the various factors that influence healthcare quality.

Terms such as "performance," "care," and "service quality" also have a high density, indicating that performance and quality of care are highly relevant and widely discussed research topics. This indicates a significant focus on evaluating and improving healthcare performance to ensure optimal quality of care.

Medium-density areas include terms such as "communication skills," "competence," and "assessment." This suggests that aspects of communication skills, health worker competence, and service assessment are also important areas of research, although not as intensively as the main topics.

Terms such as "qualitative study," "high quality service," and "nurse" appear in the lower density areas, suggesting that although these topics are relevant, they have not been the main focus of existing research. However, the presence of these terms indicates an interest in understanding the role of nurses, the use of qualitative research methods, and the achievement of high-quality services.

Overall, this density visualization provides a clear picture of the research focus in the areas of service quality and physician performance. The density of terms indicates areas that have been extensively researched and recognized as important, while areas with lower density indicate opportunities for further research. Thus, this visualization helps in identifying current research trends and directing focus on areas that may require greater attention in the future.

Publications By Country Of Publication

Based on the publication data collected, there is a significant variation in the number of publications related to research on the influence of various factors on service quality and physician performance from different countries. India tops the list with the highest

number of publications, with 10 publications. This suggests that India has a strong interest in research in this area, likely driven by efforts to improve the country's healthcare system.

Indonesia followed in second place with 5 publications, which also reflects the strong commitment of Indonesian researchers in exploring and improving the quality of healthcare. Countries such as Nigeria, Pakistan, USA, Bangladesh, and Ghana have 3 publications each, indicating that this issue is also receiving significant attention in these countries. Nepal, China, and Kenya have 2 publications each, while countries such as the UK, Laos, Syria, Malawi, South Africa, Canada, Ethiopia, Sweden, Oman, Tanzania, Malaysia, Russia, and Albania have 1 publication each. This variation indicates that there is different interest and attention to research on quality of care and physician performance in different countries.

Countries with fewer publications may face various challenges, such as limited resources or lack of research support, which affect their contribution to the global literature. However, the presence of publications from diverse countries indicates a global awareness of the importance of this research, which will hopefully encourage international collaboration and quality improvement in healthcare worldwide.

Publication Based on publisher

Here is a bar graph depicting the number of publications by publisher in English. It clearly shows that Springer has the highest number of publications with 9 publications, followed by Emerald with 8 publications, and journals.sagepub with 4 publications. Other publishers also contribute, albeit with a smaller number of publications

Based on publication data collected from various publishers, there is significant variation in the number of publications related to research on the influence of various factors on service quality and physician performance. Springer publishers took the top spot with 9 publications, indicating that Springer has a major contribution to this area of research. Emerald. followed with 8 publications, demonstrating its important role in the dissemination of knowledge and research related to healthcare quality. Publisher journals.sagepub has 4 publications, demonstrating their commitment in providing a platform for health research.

Several other publishers such as MDPI with 3 publications, as well as academic.oup, The Lancet, Taylor & Francis, BMJ open, Wiley Online Library, and Elsevier each had 2 publications, reflecting significant contributions in supporting research in this area. Other publishers such as qualitysafety.bmj, Journal of Global Health Reports, learntechlib, garuda, e-journal.unair, South African Journal of Information, Am J Manag Care, philpapers, PloS one, inderscienceonline.com, journals.lww.com, journals.co.za, British Journal of Healthcare Management, and frontiersin.org had 1 publication each. Despite their smaller number of publications, their presence in the literature shows that research on service quality and physician performance is a relevant topic and of interest to various publishing platforms.

Overall, the distribution of publications from these different publishers indicates a broad and diverse interest in research on factors affecting quality of care and physician performance. The dominance of some key publishers such as Springer and Emerald. also reflects the importance of these platforms in disseminating high-quality research that can contribute to the improvement of healthcare globally.

Publication Trends by Year

Based on the data obtained regarding the number of publications by

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year of publication, there is a significant fluctuation in the number of publications from 2017 to 2024. In 2017, there were no publications listed, suggesting that there may not have been significant interest or attention to this topic in that year.

Below is a bar graph accompanied by a line graph illustrating publication trends by year of publication, with the bars colored orange. This graph shows the number of publications from 2017 to 2024, with the peak of publications occurring in 2019. After reaching the peak, there is a significant decline in the number of publications until 2024. This graph provides a clear visualization of how the number of publications changed over the analyzed period. However, in 2018 there was a spike with 9 publications, indicating increased interest and research in this area. The peak occurred in 2019 with 16 publications, indicating that it was a very productive period for research into the influence of factors on quality of care and physician performance.

In 2020, the number of publications decreased slightly to 13, but this figure still indicates a high interest in research. 2021 saw a further decline with 8 publications, which may be due to various factors such as a change in research focus or other constraints. The year 2022 showed a significant decline with only 3 publications, and this trend continued into 2023 with only 1 publication. In 2024, no publications were listed, which could be an early indication that the data for that year is incomplete or that interest in this topic has moved on to other areas. Overall, these trends suggest that there are certain peaks in research occurring in 2019 and 2020, with interest then declining in subsequent years. Further analysis is required to understand the factors influencing these fluctuations and to identify potential gaps in research that could be explored in the future.

Discussion of Publication Trends by Citation

Based on the citation analysis, it can be seen that several publications on service quality and physician performance received significant attention in the academic community. The publication with the highest citations is "Health care service delivery based on the Internet of things: A systematic and comprehensive study" by M Usak and colleagues, which shows great interest in the use of IoT technology in healthcare. Another study that stood out was "Improving pathology and laboratory medicine in low-income and middle-income countries: a roadmap to solutions" by S Sayed et al, which highlighted the importance of improving pathology and laboratory systems in developing countries.

Patient satisfaction in hospitals in developing countries is also an important focus, as seen in the studies of MJ Umoke in Nigeria and G Adhikary in Bangladesh, which received many citations. In addition, a comprehensive literature review on dimensions of healthcare quality by I Fatima as well as an analysis of primary healthcare access by E Dassah showed great relevance and impact in this area.

In general, studies published in reputable international journals, such as The Lancet and Plos One, tend to get more citations, reflecting the importance of publishing platforms in increasing the visibility and impact of research. This trend indicates that topics related to technology, improving laboratory systems, and patient satisfaction in developing countries are highly relevant areas that are attracting widespread attention in efforts to improve the quality of global healthcare.

VOSviewer Network Visualization Publication Overview

Based on network visualization using VOSviewer, research on factors affecting service quality and physician

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performance can be grouped into three main clusters. The first cluster, consisting of seven items, included terms such as "assessment," "competence," "doctor," "high quality service," "nurse," "patient," and "service quality." This cluster focuses on the aspects of assessment, competence of medical personnel, and the quality of service received by patients. This suggests that research in this cluster tends to emphasize the importance of evaluating and improving the competence of medical personnel to achieve high service quality.

The second cluster, consisting of six items, includes terms such as "care," "experience," "middle income country," "performance," "quality," and "quality service." Research in this cluster focuses more on patient experience and service quality in middle-income countries. These terms indicate that the research in this cluster seeks to understand how various factors influence healthcare experience and performance in countries with more limited resources.

The third cluster, consisting of three items, includes the terms "communication skills," "factors," and "qualitative study." This cluster highlights the importance of communication skills in the context of healthcare, as well as the use of qualitative studies to explore factors that influence service quality. This suggests that the communication aspect between medical personnel and patients is considered a key element in achieving quality healthcare.

This network visualization analysis showed the close relationships between the terms in the clusters, illustrating the complexity and interconnectivity of factors affecting healthcare quality and physician performance. The visualization also reveals potential research gaps that can be further explored, particularly in the context of communication skills and patient experience across different healthcare settings. By understanding these interconnections, researchers can design more comprehensive and effective studies in improving healthcare quality globally.

VOSviewer Overlay Visualization Publication Overview

Based on an overlay visualization using VOSviewer, research on factors affecting quality of care and physician performance shows a close relationship and interesting temporal distribution between various key terms from 2019 to 2020. This visualization uses color to indicate the year in which the terms appear, with blue representing newer terms and yellow for older terms.

Terms such as "performance," "care," and "quality" appearing in the blue cluster indicate that research on healthcare performance, care, and quality has become a major focus in more recent times, particularly in late 2019 to 2020. This reflects increased attention towards evaluating and improving the quality of care in the healthcare sector, which may be driven by global challenges such as the COVID-19 pandemic that emphasize the importance of quality healthcare.

On the other hand, clusters that include terms such as "competence," "assessment," and "high quality service" that appear earlier (colored green to yellow) indicate that these issues have been the topic of previous research. The focus on competence of health workers, assessment of services, and achieving high quality services reflects ongoing efforts to improve healthcare standards in different countries (Yarmak, 2022).

Terms such as "communication skills" and "qualitative study" in the green cluster signify consistent attention to communication skills and the use of qualitative research methods to understand factors that influence service quality. Communication skills between doctors and patients and qualitative approaches remain important elements in improving

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patient experience and service effectiveness (Luo, 2022).

This overlay visualization analysis shows that research topics on service quality and physician performance continue to evolve. The focus of research shifts from fundamental issues such as competence and assessment to more specific and applicable issues such as performance and quality of care. The color changes in the visualization also show how certain topics become more relevant and receive greater attention from the academic community at certain times. This visualization helps to understand how the temporal distribution of research is related, as well as identifying trends and research foci that can form the basis for future follow-up studies.

VOSviewer Density Visualization Publication Overview

Based on the density visualization using VOSviewer, research on factors affecting service quality and physician performance can be seen from the density of key terms used in publications. This visualization depicts areas with high concentration of research (in red) to areas with lower concentration (in blue).

The terms "doctor," "factor," and "quality" emerged as the highest density areas, indicating that these topics are the main focus of many studies. The high density of the term "doctor" indicates the great attention paid to the role and performance of doctors in the context of healthcare. "Factor" and "quality" reflect efforts to understand the various factors that influence healthcare quality.

Terms such as "performance," "care," and "service quality" also have a high density, indicating that performance and quality of care are highly relevant and widely discussed research topics. This indicates a significant focus on evaluating and improving healthcare performance to ensure optimal quality of care.

Medium-density areas include terms such as "communication skills," "competence," and "assessment." This suggests that aspects of communication skills, health worker competence, and service assessment are also important areas of research, although not as intensively as the main topics.

Terms such as "qualitative study," "high quality service," and "nurse" appear in the lower density areas, suggesting that although these topics are relevant, they have not been the main focus of existing research. However, the presence of these terms indicates an interest in understanding the role of nurses, the use of qualitative research methods, and the achievement of high-quality services.

Overall, this density visualization provides a clear picture of the research focus in the areas of service quality and physician performance. The density of terms indicates areas that have been extensively researched and recognized as important, while areas with lower density indicate opportunities for further research. Thus, this visualization helps in identifying current research trends and directing focus on areas that may require greater attention in the future.

CONCLUSIONS

This study aims to analyze the various factors that influence the performance and completeness of electronic medical records (EMR) in primary health care through a bibliometric approach. Using the Publish or Perish and VOSviewer applications, as well as keywords such as "Quality of service," "performance," "doctors," "factors," "facilities and infrastructure," "income," "competence," and "communication," this study identified trends and patterns in scientific publications from 2018 to 2024. From the analysis conducted, it was found that India has the highest number of publications, followed by Indonesia,

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Nigeria, Pakistan, and the United States. Publishers such as Springer, Emerald, and Sage Journals play an important role in the dissemination of research in this field.

The publications with the highest number of citations show that research combining technology with healthcare, such as the use of the Internet of Things (IoT), and the improvement of pathology and laboratory systems in low- and middle-income countries, is highly valued by the academic community. Network visualization analysis identified three main clusters: health worker assessment and competence, experience and quality of care in middle-income countries, and communication skills and qualitative studies. The overlay visualization showed temporal trends with the focus of research shifting from foundational issues to more applied issues, reflecting adaptation to current challenges.

The density visualization highlights areas with the highest concentration of research, such as the role of physicians, factors affecting quality of care, and service performance. In conclusion, this study provides a comprehensive overview of research trends and patterns related to EMRs in primary healthcare, showing that the topic is attracting widespread attention with a varied yet interrelated focus on improving healthcare quality. The findings provide useful insights for researchers, practitioners, and policymakers in optimizing EMR use and improving healthcare quality, and open opportunities for further exploration in under-researched areas.

LITERATURE

Agus L, Nurhardjo B, Syaharudin M, (2016). The influence of organizational culture and motivation on the performance of an employee (nurse) at Wijaya Kusuma's Hospital in District of Lumajang. University of Jember Student Scientific Article.

Ali, J., Jusoh, A., Idris, N., Qureshi, N. A., Shah, S. A., & Abbas, A. F. (2022). Combining Mobile Technologies, Healthcare & Service Quality. A Bibliometric Analysis. *Int. J. Interact. Mob. Technol., 16*(13), 140-159.

Amila, R., (2023). Quality Analysis of Health Services Talu Health Center West Pasaman Regency in 2023 (Doctoral dissertation, Andalas University).

Bustami, Health Service Quality Assurance and Acceptability, (Jakarta: Erlangga, 2011). p. 21.

Djewarut, Y. (2017). Factors Associated with Work Motivation of Voluntary Health Workers at the Reo Health Center, Manggarai Regency. Nusa Cendana University.

Fakhrurrazi. (2012). Factors Related to Work Discipline of Health Workers of Mesjid Raya Health Center, Mesjid Raya District, Aceh Besar Regency in 2012. Poltekkes Kemenkes Aceh.

Ishak D, Maolani DY, Engkus E. (2017) The concept of performance in public organization studies. JISPO Journal of Social and Political Sciences. 2017;7(2):101-20

Krisnawanto, D. A. (2016). Relationship between Work Environment and Work Motivation of Took Indomaret Employees. University of Muhammadiyah Surakarta.

Luo, X., Wu, Y., Niu, L., & Huang, L. (2022). Bibliometric analysis of health technology research: 1990~ 2020. *International Journal of Environmental Res*

Rivai, V. (2014). Human Resources Management. Rajawali Press Publisher.

TAHUN 2024

[MANUJU: MALAHAYATI NURSING JOURNAL, ISSN CETAK: 2655-2728 ISSN ONLINE: 2655-4712, VOLUME 6 NOMOR 9 TAHUN 2024] HAL 3679-3694

Robbins SP, Judge TA. (2016). Organizational behavior. 16th edition. New Jersey: Pearson Prentice Hall (R&D); 2016. 5.

Salasim, N.S., Sirait, R.W. and Sinaga, M., 2021. The Relationship between Service Quality and the Satisfaction Level of Inpatients at Pasir Panjang Health Center, Kupang City. Public Health Media, 3(1), pp.44-51.

Sathiadas G. (2018). Challenges and strategies in implementing workplace-based assessments in the sri lankan medical education system. J Postgraduate Institute Med. 2018;5(2):1-9. 11.

Sawitri, E. (2018). Relationship between Organizational Culture and Nurses' Performance at the Public Inpatient Installation (Non Intensive) of Abdul Wahab Sjahranie Samarinda Regional General Hospital. Muhammadiyah University of East Kalimantan.

Setyorini T. (2018) Development of an obsgyn specialist performance assessment instrument model through performance analysis at Rumah Sehat Ibu dan Anak Budi Kemuliaan. J Hospital Administration Indones. 2018;2(2):162-71

Sintiya M. (2021). The influence of organizational culture, work environment and work appraisal on employee performance at the Petarukan Pemalang District Office. Thesis. Tegal: Pancasakti University Tegal; 2021.

Sutrisno, H. E. (2016). Human Resource Management. Jakarta:: Kencana. 6.

Syari, W. (2012). Factors Related to Work Discipline of Non-Medical Employees of Karya Bhakti Hospital in 2012. University of Indonesia.

Wila Chandrawila Supriadi (2011). Medical Law, CV Mandar Maju, Bandung,

Yarmak, V., & Rollnik-Sadowska, E. (2022). Research themes on the quality of public services exemplified by healthcare services—a bibliometric analysis. *Engineering Management in Production and Services*, *14*(2), 82-94.