



RELATIONSHIP ANALYST OF SORT, SET IN ORDER, SHINE, STANDARDIZE, AND SUSTAIN (5S) METHOD WITH QUALITY NURSING SERVICES

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Abstrak

The application of the sort, set in order, shine, standardise, and sustain (5S) method has the potential to improve the quality of nursing services by improving the efficiency and regularity of the work environment in hospitals. This study aimed to analyse the relationship between the 5S method and the quality of nursing services. This cross-sectional study included 50 patients selected using purposive sampling. Questionnaires on the application of the 5S method and quality of nursing services were administered, and relationship analysis was performed using Spearman's correlation test. Correlation analysis showed a significant positive relationship with the strength of correlation between the application of the 5S method and the quality of protection services ($r = 0.684$; $p = 0.045$). The application of the 5S method contributes to improving the quality of nursing services by improving work efficiency, environmental orderliness, and patient safety. Therefore, the 5S method can be recommended as an effective quality management strategy for improving the quality of nursing services in hospitals.

Kata Kunci: *5S Method, Quality, Nursing Services, Quality Management, Hospitals.*

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INTRODUCTION

The quality of nursing services is the main indicator in assessing the quality of hospital services because nurses play a direct and continuous role in providing care to patients (Ali et al., 2025; Nuryati et al., 2024). However, various problems in nursing services are still often found in hospitals, including a poorly organized work environment, inefficient nurse workflows, relatively long service times, and increased patient safety risks (Liu et al., 2025; Moisoglou et al., 2025). Conditions can have an impact on decreased patient satisfaction and overall service quality (Poudel et al., 2020). The application of the concise, neat, clean, careful, and diligent (5R) method as an adaptation of the Lean Management concept is expected to be able to create an orderly, efficient, and safe work environment so that it can optimize the quality of nursing services (Agung & Dety, 2023). The application of 5R has been widely carried out in various health care facilities, scientific studies that specifically analyze the relationship between the application of the 5R method and the quality of nursing services are still limited (Kanabar et al., 2024). Therefore, research is needed that analyzes the relationship between the 5R method and the quality of nursing services as a basis for strengthening service quality management in hospitals.

At the global level, the implementation of 5Rs in healthcare has been proven to improve efficiency and patient safety. Kanamori et al., (2016) reported an increase in efficiency of up to 45% in hospital pharmacy units, a 52% reduction in post-operative infections, and a 33% reduction in stillbirths in Sri Lanka. In addition, the implementation of 5R also has a positive impact on employees, including: increasing staff motivation and service quality, increasing staff satisfaction, increasing understanding of 5R concepts among staff members and changing staff knowledge, attitudes and behaviors (Kanabar et al., 2024). In Indonesia, the implementation of the 5Rs is still focused on the industrial sector, while its implementation in hospitals is still not a culture because it is often constrained by staff resistance and a lack of management commitment. Research conducted at RSIA

Grand Family Jakarta shows the implementation of *lean* which was carried out succeeded in reducing the cost of inventory to an average of IDR 331,555,768 per month in the three months after the lean implementation, from IDR 381,140,031 per month in the previous three months before the implementation *lean* (Iswanto & Koesoemo, 2019). This shows the need for a 5R model combined with Kaizen to ensure sustainable change.

The 5R method is a method that was originally developed in the Japanese manufacturing industry and implemented by Toyota in the early 20th century to reduce the use of resources that do not provide added value and are also used to handle and maintain organization and efficiency in the workplace (Obulam & Rybkowski, 2021). A good implementation of 5Rs has the potential to improve the quality of health services in hospitals. The 5R method can be recommended as a strategic option for improving the quality of health services. In addition, patients felt an improvement in attitudes from healthcare staff members after the 5R intervention (Kanamori, Castro, et al., 2016). The implementation and effectiveness of the 5R is highly dependent on the awareness and motivation of staff and management at every level even though it is actually feasible to implement it (Preś & Dudek, 2018). Nurses' attitudes towards the implementation of the 5R method vary depending on the number of staff, managerial support, and accessible resources including infrastructure (Shatrov et al., 2021). Nurses who apply the 5R method, can improve optimal performance, reduce unwanted events, build a good reputation, and advance careers. In addition, the 5R method can also increase productivity and service efficiency, reduce time and costs in the workplace, reduce service provider turnover and help create a safe climate for patients and service providers (Young, 2014).

The Concise, Neat, Clean, Careful, and Diligent (5R) method is a quality management approach that focuses on the formation of systematic work behavior and the creation of an efficient, safe, and standardized service environment (Akdere et al., 2018). The application of the 5R method is believed to be able to improve the workflow of nurses, increase discipline and responsibility, and

create a work environment that supports quality service. This study aims to analyze the relationship between the application of the 5R method and the quality of nursing services, so that it is expected to provide empirical evidence and become a basis for hospital management in optimizing the implementation of 5R as a strategy to improve the quality of nursing services in a sustainable manner.

METHOD

This study uses a cross-sectional design to analyze the relationship between independent variables, namely the application of the Concise, Neat, Clean, Careful, and Diligence (5R) method, with the dependent

variable in the form of the quality of nursing services. The population in this study is patients who receive nursing services in hospitals, with a sample of 50 respondents selected using purposive sampling techniques. The research instruments used consisted of a questionnaire on the application of the 5R method and a questionnaire on the quality of nursing services. The data obtained was analyzed using the Spearman correlation test to determine the relationship between the application of the 5R method and the quality of nursing services. This research has passed the ethical feasibility in hospitals with the number: 400.14.5.4/3990/424.072.01/2024.

Table 1. Respondent Characteristics

Demographics	Categories	f	%
Age	18-25 years old	7	14.0
	26-35 years old	10	20.0
	36-45 years old	14	28.0
	46-55 years old	18	36.0
	56-65 years old	1	2.0
Gender	Male	11	22.0
	Women	39	78.0
Education	SD	9	18.0
	Junior High School	18	36.0
	High School	21	42.0
	D3	1	2.0
Long Treatment	S1	1	2.0
	1-2 days	18	36.0
	3-4 days	20	40.0
	5-6 days	12	24.0

Table 2. Analysis of the Relationship of the 5Rs with the Quality of Nursing Services

5R Method	Quality of Service						Total		Spearman Rank
	Good		Enough		Less		f	%	
Good	f	%	f	%	f	%	f	%	r=0.684
Enough	30	60%	5	10,0	0	0	35	70,0	p=0.045
	9	18%	6	12,0	0	0	15	30,0	

RESULT AND DISCUSSION

The results of the study include demographic data and relationship analysis. The characteristics of the respondents showed that the most dominant age group was 46–55 years old as many as 18 people (36.0%). Based on gender, most of the respondents were women as many as 39 people (78.0%). The education level of the most respondents was high school, which was 21 people (42.0%). Based on the length of treatment, the majority of respondents underwent treatment for 3–4 days as many as 20 people (40.0%) (table 1).

The results of the correlation analysis showed that there was a significant relationship between the application of the Concise, Neat, Clean, Careful, and Diligent (5R) methods with the quality of nursing services. The Pearson correlation test yielded a correlation coefficient value of $r = 0.684$ with a significance value of $p = 0.045$ ($p < 0.05$). These findings indicate a positive association with strong correlation strength, suggesting that the better the application of the 5R method, the higher the quality of nursing services (Table 2).

Discussion

The Concise, Neat, Clean, Careful, and Diligent (5R) method with the quality of nursing services, can be used a conceptual approach that is in line with the 5S method (Seiri, Seiton, Seiso, Seiketsu, Shitsuke). Both methods focus on structuring the work environment and improving service efficiency (Hammami et al., 2022). The application of the 5R method is able to significantly improve the workplace organization, thereby creating a more organized, clean, and efficient work environment (Praditya et al., 2025). Improvements include the reduction of unnecessary items, improved spatial orderlines, and clarity of labeling and directions, which overall support the smooth workflow of health workers.

In the context of health services, the application of the Concise, Neat, Clean, Careful, and Diligent (5R) method contributes to improving service quality through improving work efficiency, patient safety, and strengthening patient-centered service orientation (Sarkar, 2006). Empirical evidence from the application of the 5S method in resource-constrained countries, such as Senegal, shows that the structuring of the work environment and standardization of processes can improve the quality of health services and the motivation of staff despite the limitations of facilities (Kanamori et al., 2015). The findings reinforce the assumption that the 5R method, as an adaptation of 5S, has similar potential in improving the quality of nursing services through optimization of the work environment and support for the professional performance of nurses.

In addition to having an impact on service quality, the application of the 5R principle also affects patient satisfaction and nursing staff satisfaction (Yagłowski, 2024). The increase in patient satisfaction occurs in line with the improvement of the perception of punctuality, convenience, and reliability of nursing services. Meanwhile, for nurses, an organized and standardized work environment can increase work comfort, reduce non-value-added activities, and strengthen coordination and teamwork. This condition is very relevant to the characteristics of nursing services that demand a high level of precision, responsiveness, and collaboration in the provision of care.

Another important aspect of the 5R method is the emphasis on standardization and sustainability as a cornerstone of long-term quality improvement (Ernita & Mahawati, 2024). Standardization of work processes allows for consistency in the delivery of nursing services, while continuous implementation ensures that quality improvements can be maintained and continuously improved. The successful implementation of the 5S method in various healthcare facilities, including in environments with limited resources, shows that this approach is adaptive and feasible in various hospital contexts (Yunita & Irawati, 2021). Thus, the findings provide a strong theoretical and empirical basis for analyzing and strengthening the relationship between the application of the 5R method and the quality of nursing services.

CONCLUSION

The application of the Concise, Neat, Clean, Careful, and Diligent (5R) method has a significant and positive relationship with the quality of nursing services. The better the application of the 5R method, the higher the quality of nursing services perceived by patients. The 5R method contributes to creating an organized, efficient, and safe work environment, thereby supporting improved nurse performance, patient safety, and service satisfaction. Therefore, the 5R method can be recommended as an effective and sustainable quality management strategy in an effort to improve the quality of nursing services in hospitals.

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