



THE RELATIONSHIP OF SUPERVISION WITH NURSES' HAND HYGIENE COMPLIANCE

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ABSTRACT

One of the places with high occupational risks and threatening the safety and health of human resources within it is a hospital, which is not only a place of treatment but can be a source of infection for patients, visitors, and staff. Hand hygiene is one of the efforts that can be made to prevent diseases, especially those transmitted through the hands. Hand hygiene is carried out to remove dirt or kill microorganisms on the skin by washing hands in 6 steps and 5 moments. The research was conducted to determine the relationship between supervision and hand hygiene compliance by nurses in the inpatient room at KH Daud Arif Kuala Tungkal Hospital. This research is a quantitative study with a cross-sectional design. Results: The research shows a significant relationship between supervision and compliance of implementing nurses in carrying out hand hygiene in the inpatient room at KH Daud Arif Kuala Tungkal Regional Hospital with a p-value of 0.024. It is hoped that the hospital will continue to consistently carry out supervision to increase the compliance of implementing nurses in carrying out hand hygiene.

Keywords: compliance; hand hygiene; supervision

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INTRODUCTION

The hospital, which is a place of treatment, also turns out to be a place that is a source of infection for patients, visitors, and staff (Sari & Hastuti, 2019). One of the most common types of infections found in hospitals is Health Care-Associated Infections (HAI) (WHO, 2016). Some HAIs that can occur in hospitals include ventilator-associated pneumonia (VAP), phlebitis, urinary tract infection (UTI), surgical site infection (SSI), and catheter-associated urinary tract infection (CAUTI). (Regulation of the Minister of Health of the Republic of Indonesia No. 27 of 2019, nd). Based on data from the World Health Organization out of 100 hospitalized patients, some of whom are in developing countries, will experience at least one infection due to hospital care. (WHO, 2016). Data from the Indonesian Ministry of Health shows that the number of HAIs in government hospitals reached 160,417 or 55.1% of 1,527 at-risk patients. Meanwhile, the incidence of HAIs at KH Daud Arif Hospital Kuala Tungkal in the first quarter of 2023 is known to be 3.68%, and the type of HAIs found in the form of phlebitis is 2.74%, higher than the standard SPM $\leq 1\%$ and the incidence of SSI (surgical area infection) 0.84% (standard SPM $\leq 1\%$) (Infection Prevention and Control Committee (PPI) KH Daud Arif Regional Hospital, 2023). Hand hygiene or washing hands is a form of implementing standard precautions which is one of the Infection Prevention and Control programs (Regulation of the Minister of Health of the Republic of Indonesia No. 27 of 2019, nd). It is known that healthcare-related infections can be reduced significantly if there is

compliance in carrying out hand hygiene by health workers (Mph et al., 2020).

One of the factors underlying the formation of compliance behavior is supervision (Wahyuni & Kurniawidjaja, 2022). A nurse will be given training, one of which is about hand hygiene, during the orientation period when new to working at the hospital. Therefore, to ensure nurses' compliance with hand washing, supervision is needed so that this behavior can continue to be maintained (Irawati et al., 2022). (Parwa et al., 2019) research, on the relationship between supervision and motivation with nurses' hand-washing compliance shows that the supervision carried out by the head of the room has a significant relationship quite strong with nurses' compliance in washing hands ($p=0.014$). This is in line with research conducted by Ananda (2021) which also produces the result that there significant relationship between supervision and nurse compliance in implementing hand hygiene ($p < 0.05$). Previous research conducted by (Parwa et al., 2019) and (Ananda, 2021) Both of them first conducted a preliminary study to strengthen confidence in the problem under study. The data obtained by the two in this preliminary study is very different.

Preliminary studies conducted by et al (2019) found that when supervision activities were not carried out optimally and there was no structured documentation, nurses' compliance in carrying out hand hygiene was low. If supervision is carried out well enough, it is found that the majority of nurses can apply hand hygiene correctly and precisely. However, different results were shown by Jama & Yuliana (2020) in their research who found that supervision carried out by the head of the room had no impact on nurses' compliance in carrying out hand hygiene. The differences in data in the results of the preliminary study regarding the relationship between supervision carried out and nurses' compliance in implementing hand hygiene made researchers interested in conducting research again with the same variables but in different places to see whether the results of this study would be the same as the results of research that showed a significant relationship or not. on the contrary, it shows that there is no significant relationship between the two variables studied.

The absence of adequate preliminary study data regarding the variables to be studied from KH Daud Arif Kuala Tungkal Regional Hospital and the absence of previous research on the relationship between supervision and nurses' hand hygiene compliance conducted at KH Daud Arif Kuala Tungkal Regional Hospital also made researchers interested in conducting this research. This research aims to determine "The relationship between supervision and nurse hand hygiene compliance at KH Daud Arif Hospital Kuala Tungkal".

METHOD

This research is a quantitative study with a cross-sectional design. Quantitative research was used to determine the relationship between supervision and nurses' hand hygiene compliance and data was taken simultaneously at a certain time (cross-sectional). (Notoadmojo, 2018). The research was conducted in the Surgical, Internal, Pediatric, and VIP inpatient rooms at KH Daud Arif Hospital Kuala Tungkal on 6 May – 30 June 2024. The population in this study were all nurses who served in the inpatient rooms at KH Daud Arif Hospital Kuala Tungkal, totaling 52 nurses. The sampling technique used was total sampling, so the total research sample was 52 respondents. The inclusion criteria in this study consisted of an executive Nurse who served in the inpatient room at KH Regional Hospital. Daud Arif Kuala Tungkal, physically and mentally healthy, was willing to be a respondent and follow the research process to the end by signing an informed consent. The exclusion criteria in this study are: the nurse who was on leave from work, resigned. The data collection technique in this research is

primary data collection, where data is obtained directly from sources using a questionnaire. This research questionnaire adopts previous research questionnaires, namely research Syamsulastri (2017), This questionnaire has been tested for validity and reliability in the IGD, ICU, and IBS at Ade Muhammad Djoen Sintang Hospital. Based on the results of the validity test of the compliance questionnaire, it is known that the R table of 20 respondents at 5% significance is 0.263 and is smaller than the calculated R-value, namely 0.492, 0.372, 0.477, 0.265, 0.317, 0.580, 0.266, 0.366, 0.361, 0.362, 0.435, 0.289, 0.322 and declared valid, as well as the results of the validity test of the supervision questionnaire where the R table value of 20 respondents at 5% significance is 0.263 and is smaller than the calculated R-value, namely 0.763, 0.399, 0.315, 0.315, 0.664, 0.687, 0.277, 0.399, 0.810, 0.735 and declared valid. The reliable test results of the compliance questionnaire are Cronbach's alpha 0.661 > 0.60 and supervision Cronbach's alpha 0.693 > 0.60, so the questionnaire is declared reliable. The research questionnaire grid is as follows:

Table 1.
Hand hygiene questionnaire grid

Indicator	Questionnaire Number	Number of Questions
Supervision	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	10
Hand hygiene compliance	6, 7, 8, 9, 10, 11	13
Wash your hands 6 steps	1, 2, 3, 4, 5	
5 moments	12, 13	

RESULTS

Table 1.
Frequency distribution of respondent characteristics

Characteristics	f	%
Age		
Early Adulthood (26-35)	41	78.8
Late Adulthood (36 - 45)	11	21.2
Gender		
Woman	39	75
Man	13	25

The results of the analysis in Table 1.2 above show that the majority of nursing staff in the inpatient wards at Daud Arif Kuala Tungkal Hospital are early adults (26-35 years), namely 41 (78.8 and the majority are female, namely 39 (75%).

Table 2.
Frequency distribution of supervision

Supervision	f	%
Good	50	96.2
Not good	2	3.8

The results of the analysis in Table 2.3 above show that the majority of implementing nurses stated that supervision was carried out well, namely 50 (96.2%).

Table 3.
Frequency distribution of compliance

Obedience	f	%
Obedient	37	71.2
Not good	15	28.8

The results of the analysis in Table 2.4 above show that the majority of implementing nurses are compliant in carrying out hand hygiene, namely 37 (71.2%).

Table 4.
The relationship between supervision and nurses' compliance with hand hygiene

Variable	Category	Obedience			P-Value
		Obedient	Not obey	Total	
<i>Supervision</i>	Good	37	13	50	0.024
	Not good	0	2	2	
Total		37	15	52	

The results of the analysis in Table 3.5 above show that of the 50 implementing nurses who said that supervision was carried out well, there were 37 nurses were compliant in carrying out hand hygiene in the inpatient room and only 13 nurses who were not compliant. Meanwhile, 2 executive nurses said that supervision was not done well, and 2 executive nurses were not compliant in carrying out hand hygiene. Based on the results of statistical tests using chi-square, a p-value of $0.024 < 0.05$ was obtained. So H_0 is rejected and H_a is accepted, so it can be concluded that there is a significant relationship between supervision and nurses' compliance with hand hygiene in the inpatient room at Daud Arif Kuala Tungkal Hospital.

DISCUSSION

Overview of Supervision

Nursing supervision in the inpatient ward of RSUD Daud Arif Kuala Tungkal is often carried out or is good. This is shown by the research results that the majority of implementing nurses stated that supervision was carried out well, namely 50 (96.2%). Supported by research results Awfikah (2023) in his research entitled factors related to hand hygiene compliance of inpatient nurses at the Haji Hospital, South Sulawesi Province, the results of the research showed that the majority of respondents said that the head of the room and PPI routinely supervised five moments of hand hygiene at the Haji Hospital, South Sulawesi Province, namely 102 respondents with a percentage 93.8%. In line with Researching et al (2022) with the title The Relationship between Motivation and Supervision and Nurses' compliance with Hand Hygiene in hospital inpatient wards in Indramayu Regency, the results of the study were good for 62 nurses (59.6%). Supervision is the process of planning, directing, and improving employees so that they can carry out their work optimally. Nursing supervision is a form of nursing management activity that aims to provide and improve services to clients and families and focuses on the needs, skills, and abilities of nurses in carrying out their duties. (Nursalam, 2020). Supported by the theory of Suarli (2015) which states that inspections carried out by room managers must be carried out objectively for training purposes. Supervision is not only about ensuring that nurses carry out hand hygiene properly and correctly according to the principles and procedures of supervision but also direct and regular observation so that immediate assistance is provided if problems are found (Jama, 2020).

Based on this description, it is known that supervision regarding hand hygiene is routinely carried out at Daud Arif Regional Hospital. Therefore, to increase and maintain the level of compliance of implementing nurses washing hands, the supervision activities carried out by the Head of the Room and the PPI Committee need to be increased. (Mangkunegara, 2017) states that the control carried out has certain aims and objectives to be achieved. Supervision aims to use efficient and economical methods. According to researchers, supervision that is carried out well can improve the directing and supervision function carried out by the hospital thereby increasing the motivation of implementing nurses to carry out infection prevention measures well, one of which is through implementing hand hygiene (Irawati et al., 2022).

Compliance Overview

The research results showed that the majority of implementing nurses were compliant in carrying out hand hygiene, namely 37 (71.2%). This means that as many as 37 nurses in the inpatient room at Daud Arif Regional Hospital are obedient in carrying out hand hygiene according to procedures. Supported by the results of the analysis of questionnaire answers during the research where the implementing nurse in the Daud Arif Hospital inpatient room carried out hand hygiene according to the SOP. The compliance actions of implementing nurses in carrying out hand hygiene were assessed based on the answers to 15 statements in the research questionnaire. These results are in line with the research results of Anugrahwati & Hakim (2019) in their research entitled Factors that Influence Nurses' Compliance in Carrying out hand hygiene five moments at Hermina Jatinegara Hospital, the results of the research illustrate that the majority of respondents were compliant in carrying out hand hygiene five moments at Hermina Jatinegara Hospital, namely 59 respondents with a percentage of 73.8%. In line with Sunarni's research (2020) with the title Nurses' Knowledge of Five Moments for Hand Hygiene Compliance Behavior at RSUD dr. Soehadi Prijonegoro Sragen, the research results showed that the majority of respondents had obedient behavior, with 41 respondents with a percentage of 77.4%.

Based on this description, it is known that the majority of research respondents have obedient behavior in washing their hands. This compliance can be seen from the answers to the questionnaire where at least 37 implementing nurses answered "Yes" to each compliance questionnaire statement. Complying with hand hygiene means that the respondent washes their hands hygienically 6 steps before contact with the patient, before carrying out aseptic procedures, after being exposed to the patient's body fluids, after contact with the patient, and after contact with the patient's environment (Anugrahwati & Hakim, 2019). There were 15 (28.8%) nurses who did not comply with washing their hands. 5 nurses did not do it before acting, 4 nurses did not wash their hands after changing the IV fluid, measuring vital signs, and giving medication to the patient and 6 nurses who washed their hands at any time only missed the steps for washing their hands or do not comply with the SOP. The problem of non-compliance is that nurses often fail to wash their hands because they do not wash their hands consistently according to the five-moment rule (Budianto et al., 2021). Respondents who did not follow hand washing were caused by several factors, for example. Nurses often forget their obligation to carry out hand hygiene before and after treatment when there is no supervision and when the room manager is not in the room or the hospital supervision is lacking, therefore many nurses do not carry out hand hygiene because there is no one to be reprimanded by the supervisor. or hospitals and even punish nurses who do not practice hand hygiene. Other factors include a shortage of health workers, excess patients (overcrowding), and workload (Lotu, 2023).

Therefore, to increase and maintain the level of compliance of implementing nurses washing hands, the Head of the room and the PPI Committee need to carry out outreach and supervision as well as provide sanctions/punishment for nurses who do not comply with washing hands in the Daud Arif Hospital inpatient room. Activities to improve IPCLN capabilities can be carried out in the form of in-house training to improve the clinical implementation of surveillance and infection prevention and control management programs in hospitals (Rahmadiana et al., 2019). Through coordinated and sustained efforts, it is hoped that higher levels of compliance can be achieved, which in turn will reduce the risk of nosocomial infections and improve the safety of patients and health workers (Accreditation & Health, 2024).

The Relationship between Supervision and Nurse Compliance with Hand Hygiene

The results of the chi-square correlation test showed a significant relationship between supervision and compliance by implementing nurses in carrying out hand hygiene in the inpatient room at Daud Arif Kuala Tungkal Regional Hospital with a p-value of 0.024. This shows that the head of the room and the PPI of RSUD Daud Arif carry out good supervision in supervising the implementing nurse carrying out hand hygiene to prevent exposure to HAIs. These results are in line with the research conducted Awfikah (2023) in the inpatient hospital at Haji Hospital, South Sulawesi Province, where the results of the research showed that there was a significant relationship between supervision and nurses' compliance with hand hygiene with a p-value of 0.004. Backed by research area et al (2019) Regarding the relationship between supervision and motivation with nurses' hand washing compliance in RSUD, the results of the study showed that there was a fairly strong relationship between the supervision of the head of the room and nurses' hand washing compliance with a p-value of 0.004.

Likewise, research by Pratiwi and Khotimah H (2020) shows there is an influence of academic-based supervision on hand washing compliance with a p-value of 0.000. Academic-based supervision is providing guidance teaching, and support, to health workers in washing their hands according to procedures, so that it can increase the knowledge and compliance of health workers in washing their hands. The results of this study are not in line with research Jama (2020) which was carried out in the Surgical and Internal Rooms at Labuang Baji Hospital, Makassar, the results of the study showed that there was no relationship between the supervision of the head of the room and compliance in carrying out the 6 steps for washing hands (p=0.229). Backed research by Mulyati et al (2023) conducted at DR H. Soemarno Sosroatmodjo Tanjung Selor Hospital, the results of the study showed that there was no relationship between supervision of the head of the room and compliance with a p-value of 0.377, even though the majority of nurses, namely 124 implementing nurses (90.5%) said that supervision of the head of the room was carried out well. Likewise in the research carried out Aeni et al (2022) In the Indramayu Regency hospital inpatient room, 62 respondents (59.6%) said that supervision was carried out well, but 98 respondents (94.2%) did not comply with hand hygiene. There is a fairly strong positive relationship between room manager leadership and nurse handwashing compliance and a fairly strong positive relationship between nurse motivation and nurse handwashing compliance. (Parwa et al., 2019).

Although the chi-square test results show a significant relationship between supervision with compliance by implementing nurses in carrying out hand hygiene in the inpatient room at Daud Arif Hospital, Tanjung Jabung Barat, there were still nurses who were not compliant even though supervision was good. Data shows that of the 50 implementing nurses who said that supervision was carried out well, 37 nurses were compliant in carrying out hand hygiene and 15 nurses were not compliant in carrying out hand hygiene. Researchers assume that this non-compliance can occur due to the influence of the personal characteristics of the implementing nurse, as well as the information provided during supervision that the nurse cannot maintain for a long time because of the many nursing care activities that must be carried out. The results of the analysis of the answers of 15 nurses who did not comply with the questionnaire sheet showed that nurses' non-compliance was found in hand hygiene actions before carrying out nursing actions and hand hygiene after carrying out nursing actions.

This can happen because nurses feel that there is no supervision and the head of the room is not supervising so many nurses do not carry out hand hygiene before and after nursing care because no one reprimands them from the leadership or the hospital or even gives sanctions to nurses. who do not practice hand hygiene (Aeni et al., 2022). Additionally, according to Parwa et al (2019) Supervision factors are not able to influence hand hygiene compliance forever, awareness efforts to comply with hand hygiene provided through team leadership, in this case through the supervision model, are only able to influence for 6 months. Therefore, to increase and maintain the compliance of implementing nurses in carrying out hand hygiene, the head of the room can make a supervision plan every day or 3 times a week, while the PPI carries out supervision at least 2 times in 6 months. Another thing that can be done with Training in a spiritual leadership style based on vision, hope, and altruistic love is important to provide space for leaders. Through training, room managers can explore the values of caring for managers and staff, loving and serving others like themselves, putting the interests of others before their interests, loyalty, and focusing on motivation to help others and work sincerely, the performance of nurses. and the quality of services provided to patients can be further improved. The influence of spiritual leadership is increased activity, increased professional reputation; increased commitment to work; increased nursing assessment compliance; improved quality of patient care; increased nurses' work motivation; decreased emotional exhaustion, escapism, and displacement (Lesomar&Asnet Leo Bunga, 2024).

CONCLUSION

Based on the research results and discussion about the relationship between supervision and nurse hand hygiene compliance, it can be concluded that the characteristics of the respondents in this study were categorized into two, namely based on age where 78.8% of respondents were in the early adulthood age category (26-35) and the gender of the majority of respondents. are women, namely 75% of respondents. Based on the results of the description of nurses' compliance with hand hygiene at KH Daud Arif Hospital, Kuala Tungkal Regency, it is known that 71.2% are categorized as compliant and the results of the description of hand hygiene supervision show that the majority (96.2%) are categorized as good. The results of the research are related to the relationship between supervision and nurses' compliance with hand hygiene in the inpatient room at Daud Arif Kuala Tungkal Hospital, it was found that there was a significant relationship.

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