THE EFFECT OF CLINICAL SUPERVISION TRAINING ON INCREASING COMPLIANCE WITH THE FIVE MOMENTS OF HAND HYGIENE

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ABSTRACT
Hand hygiene aims to minimize and eliminate microorganisms from the palms of the hands and prevent the risk of infection due to health services so that patient safety can be guaranteed. Research purposes/ Objective: To determine the effect of clinical supervision training on compliance with the five moments of hand hygiene among health workers at Marzoeki Mahdi Hospital. Method: Design research with a quasi-experimental design, one group pretest – posttest design. Population: All Nurse at Marzoeki Mahdi Hospital . The samples in this study were executive nurses, room heads, nursing team leaders and Infection Prevention Control Link Nurse (IPCLN) at Marzoeki Mahdi Hospital Bogor. The sampling technique uses Stratified Random Sampling. Data collection techniques use research instruments consisting of observation sheets and questionnaires. A validity test with a value of 0.700 is said to be valid because it is > 0.297. Meanwhile, the reliability test analysis with a total Cornbach Alpha value of 0.736 is said to be reliable because it is reliable if the Cronbach Alpha value is >0.60. Data were analyzed using Univariate, Bivariate Analysis. With the Wilcoxon Non-Parametric Test. And Multivariate Analysis uses the Simultaneous F Test (Anova). Results: The significance value for pretest and posttest is 0.000 (<0.05). Conclusions : There is an Effect of Clinical Supervision Training on Increasing Five Moment Hand Hygiene Compliance

Keywords: clinical; five momets; hand higiene; supervision; training

INTRODUCTION
Infectious diseases caused by health services or Healthcare Associated Infections (HAIs) are a health problem in various countries in the world, including Indonesia. WHO noted that around 8.70% of 55 hospitals in 14 countries in Europe, the Middle East, Southeast Asia and the Pacific had HAIs. The prevalence of HAIs is highest in the Eastern Mediterranean at 11.80% and Southeast Asia at 10%, while in Europe and the West Pacific it is 7.70% and 9% respectively (Almaidah & Ambarwati, 2022). Non-compliance with hand hygiene according to Tan and Olio (2015), Huis Et al, (2013) and Rois & Aguilero (2015) is caused by a lack of knowledge from officers, bad attitudes, beliefs and values held, low education. , lack of leadership involvement and attention in allocating role models or hand hygiene ambassadors for health workers, infrastructure located far from patients and treatment areas, antiseptic irritants on the skin, reasons for being busy, low awareness of responsibility for patient safety and minimal research activities.

According to CDC and HICPAC (2007) Hand hygiene is the main pillar of standard precautions which aims to minimize and eliminate microorganisms from the palms of the hands and prevent the risk of infection due to health services so that patient safety can be guaranteed. Hospitals in improving the quality of their services are required by the Indonesian Ministry of Health to implement patient safety standards, namely preventing infection and paying attention to reducing the risk of infection related to health services. In the elements of patient safety standards, especially the 5th element, health services/hospitals are obliged to prevent and control infections in hospitals, including hand hygiene, which is one of the important components where infections can be prevented as an indicator of the quality of services in hospitals (Novita, 2019). The importance of an Infection Prevention Control Link Nurse (IPCLN) as the spearhead of implementing infection prevention and control activities in the room, should be given the ability to carry out clinical supervision actions for implementing nurses in the room.

They as daily nurses/liaisons for implementing infection prevention are tasked with providing motivation, monitoring compliance in implementing standard precautions and providing education to patients, families and staff. Supervision in nursing is not just control, but more than that, supervision activities include determining the personal and material conditions or requirements necessary to achieve the goals of nursing care effectively and efficiently (Dalam & Asuhan, 2023). The academic model of clinical supervision, popularized by Farington (1995), consists of three activities, namely educative, supportive and managerial. This model is widely chosen and recommended because it has high flexibility for all professions in all services, both in terms of timing and supervision materials, Marzoeki Mahdi Hospital as a national mental health referral center is obliged to implement a patient safety program through infection prevention and control efforts. Spearheaded by the PPI P Committee. National Mental Health Center Marzoeki Mahdi Hospital has carried out HAIs surveillance and obtained data that the incidence of phlebitis 0.11‰ UTI, SSI 0.92%, HAP 0.002 ‰ found Stapillococcus Aureus bacteria in blood culture, it is possible that the incident was caused by non-compliance with hand hygiene.

The main pillar of infection prevention and control, namely hand hygiene, must continue to be improved. A hospital is said to have good quality if HAIs do not occur. Efforts to improve have been made in the form of outreach activities to all officers, compliance audits, establishing hand hygiene ambassadors, distributing leaflets and Patient Safety Pitstop activities, however, the Hand Hygiene Compliance Level for Officers has only been able to reach a compliance figure of 83.5% from the standard set at 85%. This achievement is not yet up to standard, based on the results of distributing a questionnaire on January 6 2023 to IPCLN interviews with implementing health officers, this may be due to a neglectful attitude and considering it has no direct effect on the incidence of infection and because the infrastructure is incomplete and far from the patient's room.Objective : To determine the effect of clinical supervision training on compliance with the five moments of hand hygiene among health workers at Marzoeki Mahdi Hospital Bogor.

METHOD
This research uses a quantitative design with a quasi-experimental design, one group pretest – posttest design. Research site Marzoeki Mahdi Hospital. The time of the research was January - Desember 2023. The population in this study were all nurses from Marzoeki Mahdi Hospital. The samples in this study were executive nurses, room heads, nursing team leaders and IPCLN at Marzoeki Mahdi Hospital Bogor. The inclusion criteria were nurses with the positions of room head, team leader, UPCLN, willing to be respondents. The exclusion

criteria in the study were nurses who were on external service/not at the research location. The sampling technique uses Stratified Random Sampling. Data collection techniques use research instruments consisting of observation sheets and questionnaires (Google Form). A questionnaire is a data collection method that is carried out by giving or asking a set of questions or written questions to respondents (Vivi, 2019). The questionnaire used in this research consisted of two questionnaires, namely a demographic questionnaire and a nursing clinical supervision questionnaire. The validity test of the questionnaire for 44 non-sample respondents using the SPSS program was declared valid if r count was positive and r count > r table, and invalid if r count was negative and r count < r table (Ghozali, 2019).

The questionnaire items consisting of 13 questions are not all valid. There are several questions that show invalid results, namely questions number 1,2,3 and 6. Invalid items can occur because there are no differences in answers from respondents and the calculated r value < r table is 0.297, therefore invalid items are not used as data for further research. A questionnaire is said to be reliable if a person's answers to the questions are consistent or stable. To find out the reliability of a question, this can be done with the help of SPSS software and you can also use the Cronbach's Alpha formula. Based on the results of the reliability test analysis, there are 9 question items that can be used to measure the level of knowledge of nurses with a total Cronbach Alpha value of 0.736 from 9 questions to measure the relationship between clinical supervision and compliance with a total Cornbach Alpha value of 0.736 which is said to be reliable, because the variable is said to be reliable if the Cronbach value Alpha >0.60 (Ghozali, 2019).

The data that has been collected is analyzed, namely univariate analysis, bivariate and multivariate analysis. Univariate analysis to obtain an overview of the frequency distribution or proportion size based on the variables studied, the characteristics of the respondents. Bivariate analysis to analyze differences in nursing clinical supervision training and hand hygiene compliance. In this analysis, the Wilcoxon Non-Parametric Test was carried out with (p value) 0.000 (<0.05). Multivariate analysis is used to determine the influence of several variables, nursing clinical supervision training, compliance. By using the Simultaneous F Test (Anova) with this analysis technique, we can analyze the influence of several variables on other variables at the same time.

RESULTS

Description of Research Location: The intervention group research location was at. Marzoeki Mahdi hospital. The type of government hospital under the Ministry of Health is Type A, specializing in mental health services. Marzokei Mahdi Hospital Bogor has 484 inpatients and a BOR of 66.35% in 2035. National Mental Health Center Marzoeki Mahdi Hospital, Bogor has been accredited to Plenary in 2022.

Table 1.
Respondent Characteristics

Characteristics	f	%	Valid Percent	Cumulative Percent
Age				
30-35	3	7.9	7.9	7.9
36-40	8	21.1	21.1	28.9
41-45	16	42.1	42.1	71.1
46-50	5	13.2	13.2	84.2
51-55	3	7.9	7.9	92.1
56-60	3	7.9	7.9	100
Gender				
Male	13	24,5	34,2	34,2
Female	25	47,2	65,8	100,0

Characteristics	f	%	Valid Percent	Cumulative Percent
Level Education				
Diploma in nursing	23	43,4	60,5	60,5
Ners	15	28,3	39,5	100,0
Clinical supervision training				
Unable	18	47.4	47.4	47.4
Capable enough	4	10.5	10.5	57.9
Capable	16	42.1	42.1	100
Pre Clinical Supervision Training				
Unable	18	47.4	47.4	47.4
Capable Enough	4	10.5	10.5	57.9
Capable	16	42.1	42.1	100
Post Clinical Supervision Training				
Unable	7	18.4	18.4	18.4
Capable enough	1	2.6	2.6	21.1
Capable	30	78.9	78.9	100

Table 2.

Bivariate analysis table for pair difference tests

	N	Range	Minimum	Maximum	Mean	Median	Std. Deviation	95% Confidence Interval for Mean	
								Lower	Upper
Pre Test	38	7	0.00	7	4.68	5.00	1.802	4.09	5.28
Post test	38	8	0.00	8	5.71	6.00	1.558	5.2	6.22

Tabel 3.

Uji Normalitas

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Pretest	.412	38	.000	.668	38	.000
Posttest 1	.284	38	.000	.669	38	.000

Non-Parametric Wilcoxon paired test (Wilcoxon Matched-pairs Test)

According to the results of the normality assumption test, it is known that the pretest and posttest1 score data are not normally distributed so that non-parametric analysis is used to analyze the pretest and posttest data. The test used to test whether there is an average difference between the pretest and posttest1 scores is the Wilcoxon Matched-Pairs Test.

Tabel 4.

Uji Wilcoxon Matched Pairs

	Posttest - Pretest
Z	-3.799[b]
Asymp. Sig. (2-tailed)	.000
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

Table 5.

F test before and after training

ANOVA[a]						
		Sum of Squares	df	Mean Square	F	Sig
Pre Test	regression	*2.257*	3	*0.752*	0.808	.498[b]
Post test	regression	*3.196*	3	*1.065*	1.822	.162[b]

DISCUSSION

Based on table 1, the age characteristics of respondents in the table show that the most respondents were between 41-45 years old, 16 people with a percentage of 42.1%. This research is different from previous research, namely the age range is more than 35 years according to Ulfa et al, (2015) that The majority show a middle-aged adult age range, and are ambitious to reach the peak of their career so they will have a tendency to work optimally. Nursing Clinical Supervision carried out by nurses who are more mature than their colleagues will have a psychological influence in the form of being shy, respectful and can be used as a model to lead care in carrying out all procedures at work.The gender of the nurse respondents who took part in the training was mostly female, namely 25 people (65.8%). Many nurses are female, this shows that the gender is dominated by women as the nursing profession is most sought after by women because nursing is synonymous with compassion. According to Robbins (2013), gender influences performance, wages and competence, but there are no differences between men and women in problem-solving abilities, analytical skills, competitive drive, motivation, socialization abilities or learning abilities.

Education is a learning process, which means that in education there is a process of growth, development or change towards a better, more mature and mature individual, group or society (Notoatmodjo, 2012). Research by Sumaningrum (2014) states that there is a determining relationship between educational factors and compliance with hand hygiene by the nursing profession. The results of the regression test carried out showed that nurses with D3 education were 24 times less compliant compared to nurses with S1 education. The researcher's opinion is that the majority of nurse respondents in the intervention group had a diploma in nursing or what is called a vocation. This can be a consideration for the hospital so that it can see the resources of implementing nurses in improving educational knowledge through further studies, because as the level of individual education increases, the wider the knowledge that the implementing nurses will gain.

The most influencing risk factors compliance with hand washing behavior health (nakes) during the pandemic

Covid-19 based on systematic results review is knowledge, gender, age, and attitude/attitude of health workers.

Followed by training factors, profession, supervisor support, hand washing facilities, patient capacity or workload and social support or co-workers as well several other factors (Wahyuni & Kurniawidjaja, 2022). \Based on the result, it can be seen that of the 38 total respondents who were unable, 18 respondents or 47.4%, 4 respondents were quite capable or 10.5% and 16 respondents were capable or 42.1%. The majority before the training were mostly unable, namely 18 or 47.4%. Based on the table above, it can be seen that of the 38 total respondents who were unable, there were 7 respondents or 18.4%, 1 respondent was quite capable, or 2.6%, and 30 respondents or 78.9% were capable respondents. The majority before the training were mostly capable, namely 30 or 78.9%. %. Based on Table 2 above, the data shows that the pretest score has an average of 4.68 and the posttest score has an average of 5.71. In other words, there is an increase in knowledge. However, statistical testing still needs to be carried out through a paired t-test to validate it. In parametric testing with a paired t-test, the data used must have a normal distribution in order to obtain valid conclusions. Therefore, the respondent's pretest and posttest score data must first be checked for data distribution. The following are the results of testing the distribution of respondents' pretest and posttest data. To increase nurse compliance, it is necessary to provide training on personal hygiene for nurses in hospitals (Yunita Sari Thirayo, et al., 2023). There is a significant relationship between supervision and nurse compliance in implementing hand hygiene (p-value < 0.05). It

is hoped that there will be a policy regarding monitoring evaluation, firmness for nurses, and a policy regarding rewards and punishment or consequences (Engstrom et al., 2022).

Based on table 3 above, it shows the results of testing the distribution of respondents' pretest and posttest data using Kolmogorov-Smirnov and Shapiro-Wilk test statistics. Based on the test results, it can be seen that the significance value (p-value) from both the Kolmogorov-Smirnov and Shapiro-Wilk tests on the pretest data has a significance value of > 0.05 so that the assumption of normality is met. However, testing on the posttest data showed a significance value of <0.05 so that the assumption of normality was not fulfilled in the posttest data. Thus, the parametric paired t test cannot be carried out on pretest and posttest data. Based on table 4 of the Wilcoxon Matched-Pairs Test in the table above, it is known that the significance value (p-value) for pretest and posttest1 data is 0.000 (<0.05). Which means there is an influence of Nursing Clinical Supervision Training on Five Moment Hand Hygiene Compliance. Thus it can be said that there is an increase in compliance. Increased hand hygiene compliance occurred at 14 weeks post-training, Based on table 5, the F table value is 2.87. So it can be seen that Fcount $<$ Ftable ($1.822 < 2.87$). This shows that there is a significant linear relationship between all variables simultaneously after p

CONCLUSION
Characteristics of the nurse respondents involved in this research were 76 people, most of whom were female, 63.8%, with the most education being a D3 in nursing, totaling 60.5%, and the most aged over 40 years, namely 55.3%. Based on the Wilcoxon Matched-Pairs test, it is known that the significance value (p-value) for pretest and posttest1 data is 0.000 (<0.05). Thus it can be said that there is an increase in compliance. Increased hand hygiene compliance occurred at 14 weeks post-training. There is an Effect of Clinical Supervision Training on Increasing Five Moment Hand Hygiene Compliance. There is a difference in the Five Moment Hand Hygiene Compliance Level before training and after training. Based on the Simultaneous F Test, the variables Gender, Age and Education before and after training showed that there was a significant linear relationship between all variables simultaneously after the Interactive Model Nursing Clinical Supervision Training. Suggestion: Based on the results of this research, the researcher provides the following recommendations: : Nursing clinical supervision training can be carried out on a scheduled basis for all Heads of Rooms, Team Leaders at the Inpatient and Outpatient Installations at Marzoeki Mahdi Hospital Bogor. The results of this research can provide evidence to the head of the room to implement Nursing Supervision in stages to improve the quality of care

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