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Health Science

THE IMPACT OF HAND HYGIENE KNOWLEDGE AND ATTITUDE TOWARDS COMPLIANCE OF HEALTH WORKERS IN EMERGENCY DEPARTMENT

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ABSTRACT

BACKGROUND: Nosocomial infection is the main cause of mortality and morbidity by 22,4-52,4%. Hand hygiene compliance can reduce the development of nosocomial infection. A high level of knowledge and a good attitude will provide the advantage of hand hygiene implementation. An emergency situation can be considered as the critical condition of hand hygiene compliance. This research aims to analyze the influence of hand hygiene knowledge and attitude toward the hand hygiene compliance of health workers in the emergency department.

SUBJECT AND METHOD: The cross-sectional research method has been held in a private hospital. The sample is consists of nurses and doctors who work in the emergency department. The instrument of the research is a questionnaire, observational study, and interview. The data analysis used is Pearson correlational test.

RESULT: health workers in the emergency department have an average knowledge of hand hygiene (73,44%), an average attitude of hand hygiene (64,6%) and low hand hygiene compliance (42%). There were almost nonexistent and statistically non-significant correlations between knowledge (p=0.703>0,05) and attitude (p=0.686>0,05) with hand hygiene compliance.

CONCLUSION: there is no influence of hand hygiene knowledge and attitude toward hand hygiene compliance of health workers in the emergency department that caused by the inhibitor factors which are a crowded condition, emergency condition, and less of hand hygiene awareness from the health workers.

KEYWORDS : Knowledge, Attitude, Compliance, Hand Hygiene

INTRODUCTION

Nosocomial infection or known by Health-care Associated Infections (HAIs) is the main cause of mortality and morbidity by 22,4-52,4% of patients in hospitals [1]. The infection incident in hospitals is considered as a serious problem because it can threaten the health workers and endanger the patient [2]. The percentage of WHO surveillance data shows that nosocomial infection in the worldwide hospital reach 9% or more of 1,4 million patients, while nosocomial infection in Indonesia is 2,3%-18,3%[3]. In 2007, WHO Collaborating Center for Patient safety officially released the "Nine Life Saving Patient safety Solutions" which began arranged since 2005 by identifying and study various patient safety issues. One of the solutions to patient safety issues is increasing hand hygiene to prevent nosocomial infection [4]. Hand hygiene compliance can reduce the 20% risk of developing nosocomial infection [5]. Hand hygiene also reduces the incidence of HAIs up to 84% proved by research that the number of the incident from 13,1% decreased to 2,1% after hand hygiene implementation[6]. Hand hygiene is mandatory to every health worker in all departments in hospitals or health facilities including the emergency room [7]. There is a lot of research shows that hand hygiene compliance of health workers is generally low [7]. In research that studies the knowledge, attitude, compliance, and reasons to disobey the hand hygiene instruction show that the hand hygiene compliance of health workers is still low [8]. The cause is there are several obstacles, including workload, too much clinical procedure and skin condition [9]. Emergency situations in an emergency department can be considered as the critical condition of hand hygiene compliance by the factors of crowded, workload, time limit, and often staff shortage in the emergency department [10]. In 22 study reviews about HAIs control in the emergency department, hand hygiene compliance is around 7,7% to 89,7% [1]. Based on the background, the researcher interested to analyze the influence of hand hygiene knowledge and attitude of health workers in the emergency department in a private hospital in Surakarta.

RESEARCH METHOD

The type of this research is an analytic observational cross-sectional study. The research method was used Mix Method Explanatory Sequential Study, which the quantitative research has done first then qualitative. The research held in the emergency department in a private hospital in Surakarta, Central Java, around February-April 2019. Total sampling was used which all the population as the sample so that the sample is 50 health workers in the emergency department. Quantitative research has done by questionnaire. The hand hygiene knowledge questionnaire used by WHO in which the validity and reliability have been proved by the previous researchers. The hand hygiene attitude questionnaire has been adapted from the previous study, such as Sreejith and Mahadeo in 2014. The research qualitative has done by interview. 50 respondents have been observed hand hygiene compliance every there is a chance and 1 respondent will be observed 5 times. The interview held by infection prevention and control in the hospital, head of the emergency department and the health workers of the emergency department which asking about the implementation and obstacle of hand hygiene in the hospital. Data analysis of uni-variate Shapiro Wilk used to test the data normality, Pearson correlational test used to test the bivariate statistic and multiple linear regression used to test the multivariate statistic.

RESULT AND DISCUSSION

• THE CHARACTERISTIC OF RESEARCH RESPONDENTS

The majority of the gender is female which 30 respondents (60%) with the age average of 31 – 60 years old. The majority of respondents' educational background is bachelor student which is 29 respondents (58%), doctor 25 respondents (25%) and nurse 25 respondents (50%). 32 respondents (64%) have been working for 5 years in the hospital. All 50 respondents (100%) had hand hygiene training.

• INTERVIEW INFORMANTS

The majority of the informant in this research is female which 8 informants (89%) there are 3 informants (56%) in 26-35 years old. The majority of informants' educational background is a nurse which is 6 informants (67%), and associate degree 5 informants (56%). All 9 informants (100%) have been working in the hospital for more than 5 years.

• UNIVARIATE ANALYSIS

The variable of hand hygiene compliance has sig value 0.392, variable of hand hygiene knowledge have sig value 0,323 and variable of hand hygiene attitude have sig value 0,350. If the variable has sig value > 0,05 it means that all three variables have normal data distribution or data normally distributed.

There are 22 respondents (44%) with value 19-25 (≥75%) have good knowledge of hand hygiene, 31 respondents (56%) with value 13-18 (50-74%) have a moderate knowledge of hand hygiene, and 0 respondent with value 0-12 (≤50%) have less of knowledge about hand hygiene. On average, hand hygiene knowledge of health workers in the emergency department is 73,44% which is considered moderate.

There are 23 respondents (46%) with value 7-10 (≥70%) have good attitude of hand hygiene, 22 respondents (44%) with value 5-6 (50-69%) have a moderate attitude of hand hygiene and 5 respondents

(10%) with value 0-4 (<50%) have less attitude of hand hygiene. Hand hygiene attitudes of health workers in the emergency department have an average of 64,6% which means the hand hygiene attitude of health workers in the emergency department is moderate.

The information about hand hygiene compliance of health workers in the emergency department. There are 6 respondents (12%) with value 9-10 (≥85%) have good compliance of hand hygiene, there is 1 respondent (2%) with value 8 (75%-84%) have a moderate compliance of hand hygiene and there are 43 respondents (86%) with value 0-7 (≤74%) have less of hand hygiene compliance. An average of hand hygiene compliance of health workers in the emergency department is 42% which means that the hand hygiene compliance of health workers in the emergency department is still low.

The result of Pearson correlation test in 22 (100%) respondents which have good hand hygiene knowledge, there are 2 respondents (9.1%) have good hand hygiene compliance, 0 respondent (0%) have a moderate hand hygiene compliance and 20 respondents (90.9%) have less of hand hygiene compliance. In 28 respondents (100%) which have a moderate of hand hygiene knowledge, there are 4 respondents (14,3%) have a good hand hygiene compliance, 1 respondent (3.6%) have a moderate value of hand hygiene compliance and there are 23 respondents (82.1%) have less of hand hygiene compliance. There are no respondents (0%) who have a less of hand hygiene knowledge with good hand hygiene compliance (0%), moderate hand hygiene compliance (0%) and less of hand hygiene compliance (0%).

According to Pearson correlation test there is P-value 0,703 (P>0,05) which means considered as that there is no significant influence between hand hygiene knowledge and hand hygiene compliance. The behavior is formed by the knowledge and other factors such as trust, attitude, belief, physical environment, and the availability of facilities [11]. In another research, the researcher found that the health workers realize that there is a recommendation to do hand hygiene but education and knowledge of hand hygiene cannot motivate them to implement hand hygiene and it causes the less of hand hygiene compliance [12]. On the other side, WHO stated that the less of hand hygiene knowledge is one of the obstacles to do hand hygiene according to the recommendation [7]. Theoretically, good knowledge will form a good attitude, but in this research, the result is otherwise. This research explains that there are several factors associated with an attitude such as supporting factors and reinforcing factors [13].

The multi linear statistic test shows that the sig value of the influence of hand hygiene knowledge toward the hand hygiene compliance is 0,831 > 0,05 and t value -0,215 < t table 2,01174 which means that there is no influence of hand hygiene knowledge and hand hygiene compliance. Sig value of the influence of hand hygiene attitude is 0,801 > 0,05 and t value -0,254 < t table 2,01174, which means that there is no influence of hand hygiene attitude and hand hygiene compliance. The following is the regression formula of this analysis:

Y= 5,416 + (-0,044) X1 + (-0,062)X2

Hand hygiene compliance can be improved by concerning those several factors such as age, education, working time, knowledge, attitude, surveillance, policy, labor, facilities, and intention. Randle stated that knowledge is very influential toward hand hygiene implementation, up to that point hand hygiene socialization or training is expected to improve hand hygiene knowledge and compliance of health workers [14].

CONCLUSIONS

The research result shows that there is no influence of hand hygiene knowledge and attitude toward the hand hygiene compliance of health workers in the emergency department. Overall the implementation of hand hygiene of health workers in the emergency department of a private hospital in Surakarta has had a policy and regulation. The hospital has had a standard operational procedure of hand hygiene which is by WHO, have adequate hand hygiene facilities, hand hygiene socialization to the health workers and conduct a regular and periodic assessment, but the implementation of hand hygiene in the emergency department is not enough and it has to be improved. Several inhibitor factors influence the implementation of hand hygiene in the emergency department such as the crowded situation in the emergency department because of there are a lot of patients, there is an emergency patient that cause the health workers more focusing on the safety and the less of awareness of health workers to do the hand hygiene.

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