

Original article:

The Correlation of Education about Cough Etiquette and the Knowledge of Security Officers and Cleaning Service Officers

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Abstract

Background: Nosocomial infection is an infection that patients get when they are hospitalized. To minimize the risk of infection in hospitals, it is necessary to apply standard precautions. One of which is to follow the conduct of cough etiquette. **Objective:** This research is aimed to analyze the effectiveness of education of cough etiquette module to increase the knowledge about cough etiquette on security and cleaning service officers in hospital. **Material and method:** This study is a quasi-experiments with pretest and posttest control group design. The samples of this study were taken by using purposive sampling with 24 respondents in the experiment group and 27 respondents in the control group. The data was analyzed by using Wilcoxon and Independent sample T test. Meanwhile, the data was collected by using a questionnaire. **Results:** The result in this study shows that in the control group, the value of knowledge is $p = 0.074$ ($p > 0.05$). In experiment group, the value of knowledge is $p = 0.357$ ($p > 0.05$). The result of the control group and the group is $p = 0.051$ ($p > 0.05$). The result shows that in the experiment group and in the control group, the comparison between the control and experiment group does not show a significant difference. **Conclusion:** The conclusion of this study is that there is no correlation between knowledge of cough etiquette before and after education.

Keywords: Education of cough etiquette, knowledge, security and cleaning service.

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Introduction:

Nosocomial infection is an infection that affect patients when the patient is hospitalized. An infection is said to be acquired in a hospital if it meets the following five criteria. First, when the patient is admitted to the hospital there is no clinical sign of the infection. Second, at the time the patient admitted to the hospital is not in the incubation period of the infection. Third, clinical signs of such infection arise at least after 2 x 24 hours from the start of treatment. Fourth, the infection is not a residual of the previous infection. Fifth, when the hospitalization starts, there is already a sign of infection and it is proven that the patient had been treated at the same hospital in the past, and has never been reported as a nosocomial infection¹.

To minimize the risk of infection in hospitals and other healthcare facilities, the prevention and control of infection should be established, including activities that comprising planning,

implementation, development, education and training, and monitoring and evaluation². The concrete manifestation of such efforts is with the application of standard precautions. The application of standard precautions is expected to reduce the risk of pathogen transmission from known and unknown sources.

Standard precautions are efforts to reduce the risk of transmitting pathogenic microorganisms from known and unknown sources. Among the components of standard precautions are hand hygiene, use of personal protective equipment (PPE), cough etiquette, environmental hygiene, linen management, and waste management³.

Cough etiquette or respiratory hygiene is one component of standard precautions aimed at preventing the spread or transmission of infectious respiratory tract microorganisms at all levels of healthcare⁴. When a person is exposed to a respiratory tract, coughing or sneezing, it releases droplet-shaped disease particles containing

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viruses or microorganisms that, when entered into the respiratory tract of others, will cause infection as well⁵.

In addition, knowledge is the impression of the human mind as a result of the use of its five senses. Knowledge is the result of remembering things, including recalling the events experienced either intentionally or unintentionally and this occurs after people make contact or observation of a particular object. Knowledge-based behavior is more lasting than the behavior that is not based on knowledge. Before people adopt new behaviors, there are consecutive processes in the person: awareness, interest, evaluation, trial⁶.

Furthermore, the purpose of this study is to determine the relationship the education about cough etiquette and the knowledge of cough etiquette in security officers and hospital cleaning officers.

Materials and Method

This research is an experimental quasi-research with pre-posttest design control group design⁷. The material or the instrument used in this research is the questionnaire about cough etiquette with the respondents are security officers and hospital cleaning officers. The samples were taken by using purposive sampling with 24 respondents in the experimental group and 27 respondents in the control group. The data analysis used was Wilcoxon and Independent sample T-test.

Results

Table 1: Respondents' Level of Education

Variables	Control Group	Experiment Group
	%	%
Elementary School	1 (3.7)	-
Junior High School	10(37)	10 (41.7)
Senior High School	15 (55.6)	14 (58.3)
Diploma	1 (3.7)	-

Table 2: Respondents' Age

Variables	Control Group (%)	Experiment group (%)
< 20	2(7.4)	1 (4.2)
20 – 30 years old	14 (51.85)	10 (42)
30 – 40 years old	9 (33.33)	10 (42)
> 40 years old	2 (7.4)	3 (12.5)

Table 3: Working Duration

Variables	Control Group (%)	Experiment group (%)
< 1	6 (22.2)	7 (29.17)
1 – 5 years	20 (74.07)	16 (66.7)
> 5 years	1 (3.7)	1 (4.17)

Table 4: The Differences of Knowledge between Control Group and Experiment group

Variables	Control Group			Experiment group			P
	n	Mean	SD	n	Mean	SD	
Knowledge of cough etiquette before treatment	27	5.44	1.37	24	5.54	1.35	0.511
Knowledge of cough etiquette after treatment	27	6.04	2.29	24	5.79	1.22	
P	0.074			0.357			

From Table 4, it is found that in the control group p=0.074 which means there is no difference between pre-test and post-test in the control group. Meanwhile, in the experiment group, it is obtained p=0.357 which means there is no significant difference between pre-test and post-test in the experiment group. In the difference of delta in the control group with the experiment group, it is also obtained p = 0.0511 that also means that there is no significant difference in the knowledge of cough etiquette in the control group and the experiment group.

Discussion:

The result of statistical analysis of the difference of knowledge about cough etiquette after education between the control group and the experiment

group is not significant. Therefore, it can be concluded that there is no difference of knowledge about cough etiquette before and after education. Influenza disease has the ability to easily spread microorganisms by air carried by droplets. The application of cough etiquette will help control the spread of infectious microorganisms of respiratory disease⁸.

Conclusion:

There is no significant relationship between education about cough etiquette before and after education.

Ethical Approval:

This research proposal was accepted by the Ethics Committee of Faculty of Medicine and

Health Science, Universitas Muhammadiyah, Yogyakarta, Indonesia

Conflict of interest: None declared

Author Contributions:

Conception and Design: Kusbaryanto, Ekorini
Analysis and interpretation of the data: Ekorini, Kusbaryanto

Drafting of the article: Kusbaryanto, Yuni Muriana
Critical Revision of the article for important intellectual content: Kusbaryanto

Final approval of the article: Kusbaryanto, Yuni Muriana

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