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The Effect of Health Education on Infusion of Patients on Maintenance of Infusion Drops at Citama Hospital in 2021

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Abstract

This study aims to identify the characteristics of patients who are infusions, before and after infusion health education is carried out on patients for the maintenance of infusion drops at Citama Hospital in 2021. This study uses a Quasi Experimental method with the research design "Pre and post test control group design" the conclusion of this study was obtained by comparing the effect of treatment on the group of subjects who were given the treatment. The research data was obtained based on a survey using a questionnaire to the sample at Citama Hospital. Based on the results of data analysis, there were 4 people (26.7%) who maintained the infusion drip before being given good health education and after being given the infusion health education, it showed an increase in the maintenance of the infusion drip, namely 12 people (80%). And maintenance of infusion drops before being given infusion health education was not good for 11 people (73.3%) and after being given infusion health education showed a decrease in infusion drip maintenance, namely 3 people (20%), where the analysis used a t-dependent test with the average result (0.533), standard deviation is 0.516 and p value 0.001 where $p < 0.05$, so it can be concluded that the health education of infusion in patients has a significant influence on the maintenance of infusion drops.

Keywords: Patient Characteristics; Health Education; Infusion Installation; Infusion Droplet Maintenance

Introduction

Nurses are health workers who must be professional and have the ability, responsibility and authority to carry out nursing care services at various levels of nursing Hamid. Nurses take action in accordance with established standards to prevent unwanted things from happening, such as infection. One of the actions that can prevent this from happening is nurses can provide health education to patients.

Health education is an activity or effort to convey health messages to the community, groups or individuals, with the hope that with the message, the community, group or individual can gain knowledge about better health and in the end this knowledge is expected to influence behavior. .

Health education is one of the nursing actions that has an important role in

providing practical knowledge to the community, group or individual. One of the health educations can also be given to patients who will be given nursing actions with infusion or venous therapy in order to create good cooperation between nurses and patients so that these nursing actions can be carried out properly.

Infusion is used to treat various conditions of patients in all treatment environments in hospitals and is one of the main therapies. As many as 60% of patients who were hospitalized received intravenous fluid therapy. This therapy system allows therapy to have a direct effect, is faster, more effective, can be carried out continuously and the patient feels more comfortable when compared to other methods.

Infusion is an invasive procedure and is a procedure that is often performed in hospitals. However, this is a high risk of infection which will increase the high cost of treatment and treatment time. The infusion installation action will be of high quality if in its implementation it always refers to the standards that have been set.

Intravenous therapy is carried out based on doctor's orders and nurses are responsible for maintaining the therapy carried out. The selection of intravenous therapy is based on several factors, namely the purpose and duration of therapy, patient diagnosis, age, medical history and condition of the patient's veins. If the administration of intravenous therapy is required and programmed by the doctor, the nurse must identify the correct solution, equipment and procedures needed and set up and maintain the system.

While one of the infections that are often found in hospitals is nosocomial infection. Nosocomial infections are caused by diagnostic procedures that often arise, including phlebitis. The success of controlling nosocomial infections in infusions is not determined by the sophistication of existing equipment, but is determined by the behavior of officers in carrying out client care correctly.

Professional nurses in charge of providing health services cannot be separated from the compliance of nurses' behavior in every invasive procedural action such as infusion. Infusion is done by each nurse. All nurses are required to have the ability and skills regarding infusion installation according to standard operating procedures (SOP).

Infusion is an invasive procedure and is a procedure that is often performed in hospitals. However, this is a high risk of infection which will increase the high cost of treatment and treatment time. The infusion installation action will be of high quality if in its implementation it always refers to the standards that have been set. Infusion is an invasive procedure and is a frequently performed procedure in hospitals. However, this is a high risk of infection which will increase the high cost of treatment and treatment time.

Based on the results of previous studies, it was shown that nurses paid less attention to wound sterility during infusion. Nurses usually put the infusion directly without regard to the availability of materials needed in the procedure, handscoen is not available, sterile gauze, alcohol, repeated use of non-sterile infusion tubes.

Researchers obtained data related to infusion installations in inpatient rooms at Citama Hospital in the last 6 months, namely July - December 2020 as many as 441 and based on observations that researchers will conduct in March 2021 as many as 15 patients who were infusions.

This study aims to identify the characteristics of patients who are

infusions, before and after health education for infusions is given to patients on the maintenance of infusion drops at Citama Hospital in 2021.

Method

This study uses a quasi-experimental research design is "Pre and post test control group design". The conclusions of this study were obtained by comparing the effect of treatment on the group of subjects who were given treatment. The research data was obtained based on a survey using a questionnaire to the sample at Citama Hospital. Furthermore, the data was used as the basis for describing the characteristics and estimating the influence between variables in the population based on the data obtained from the sample.

The independent variable (independent) in this study was Health Education infusion of patients. The dependent variable in this study was the maintenance of the infusion prior to the infusion health education and the maintenance of the infusion after the infusion health education.

The population in this study were patients who were treated and given intravenous infusion at the Citama Hospital in 2021. The researchers conducted in 1 month, namely March 2021, the samples taken were 15 patients who had intravenous injections.

The data collected are primary data and secondary data. Secondary data was obtained from records and reports at the Citama Hospital, while in primary data collection the researchers obtained it by using the observation sheet or questionnaire method. Data analysis used univariate analysis and bivariate analysis to determine the effect of health education on patients with infusion in the Citama Hospital. The data that had been collected was then tested using the Mean Wilcoxon test to determine the effect of health education on patients with infusions at Citama Hospital.

Result and Data Analysis

Univariate Data Analysis

1. Characteristics of respondents by age group

Table 1 Distribution of Respondents by Age Group at the Citrama Hospital in 2021 (n=15)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14 - 20 years	1	6,7	6,7	6,7
	21 - 27 years	1	6,7	6,7	13,3
	28 - 41 > years	13	86,7	86,7	100,0
	Total	15	100,0	100,0	

Based on the table above, the distribution for each age level is the most respondents aged (14-20 years) namely 1 respondent with a percentage of 6.7%, in respondents aged (21-27) that is 1 respondent with a percentage of 6.7%, in respondents aged (28-41 years) namely 13 respondents with a percentage of 86.7%.

2. Characteristics of respondents by gender

Table 2 Distribution of Respondents by Gender Group at Citama Hospital in 2021 (n=15)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	6	40,0	40,0	40,0
	Woman	9	60,0	60,0	100,0
	Total	15	100,0	100,0	

Based on the results of the analysis, it was found that the number of male respondents was 6 respondents with a percentage of 40.0% while women amounted to 9 respondents with a percentage of 60.0%.

3. Characteristics of respondents by education

Table 3 Distribution of Respondents by Education Group in Citrama Hospitals in 2021 (n=15)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Elementary School	2	13,3	13,3	13,3
	Junior High School	7	46,7	46,7	60,0
	Senior High School	5	33,3	33,3	93,3
	3-Year Diploma	1	6,7	6,7	100,0
	Total	15	100,0	100,0	

Based on the results of the analysis, it was found that the number of elementary school respondents was 2 respondents with a percentage of 13.3%, junior high school was 7 respondents with a percentage of 46.7%, high school was 5 respondents where the percentage was 33.3% while D3 was 1 respondent with a percentage of 6.7%.

4. Maintenance of infusion drops prior to infusion of infusion health education on patients

Table 4 Distribution of Respondents Prior to health education, intravenous infusion at citrama hospital in 2021 (n=15)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Good	11	73,3	73,3	73,3
	Good	4	26,7	26,7	100,0
	Total	15	100,0	100,0	

Based on the table above, it can be seen that the respondents whose infusion drip maintenance was good prior to the infusion installation health education were 4 with a percentage of 26.7%. Meanwhile, 11 respondents whose infusion drip maintenance was not good prior to health education were infusion where the percentage was 73.3%.

5. Maintenance of infusion drops after the patient is given Health Education Installation of Infusions

Table 5 Distribution of Respondents After health education infusion at the citrama in 2021 (n=15)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Good	3	20,0	20,0	20,0
	Good	12	80,0	80,0	100,0
	Total	15	100,0	100,0	

Based on the table above, it can be seen that 12 respondents whose infusion drip maintenance was good after health education were infusion with a percentage of 80%. Meanwhile, 3 respondents whose infusion drip maintenance was not good after health

education were infusion with a percentage of 20%.

Bivariate Data Analysis

Table 6 Distribution of maintenance of infusion drops given health education on infusion at the Citama Hospital in 2021 (n=15)

Infusion Drip Maintenance	Before Health Education		After Health Education		Mean	SD	*P value*
	n	%	n	%			
Good	4	26,7	12	80,0	0,533	0,516	0,001
Not Good	11	73,3	3	20,0			

Based on the table above, it can be seen that the effect of health education on infusion in patients on the maintenance of good infusion drops is 4 (26.7%) to be increased by 12 (80.0%) and that is not good to be 11 (73.3%) to be reduced 3. (20.0%). From the results of the calculation of the average maintenance of the patient's infusion drops, the change after being given health education became 0.533 so that there was a good increase in the maintenance of infusion drops with p value = 0.001 (p <α) It can be concluded based on statistical results using the dependent t test that health education infusion has a significant effect on the maintenance of infusion drops.

Discussion

1. Age Characteristics

Based on the results of the research, it is known that the age distribution of the respondents who underwent infusion at the Citama Hospital consisted of 15 respondents, of which the respondents aged 28-41 years were more dominant. This is in accordance with the concept that age is one of the main characteristics that have a relationship with the level of exposure and the nature of resistance. In addition to this, age can also change behavior, although in general the aim of health education is to change unhealthy behavior into healthy behavior, but this behavior turns out to cover a wide range of things, so it is necessary to fundamentally categorize these behaviors.

Based on this, age also affects the increase in mental development processes so that it is not as fast as when they were in their teens, thus it can be concluded that increasing age affects a person's level of knowledge which will peak at certain ages and will decrease the ability to accept or remember things as age increases. Furthermore, this is supported by the existence of a low level of education.

2. Gender

Based on the research results obtained according to health education based on the gender of the patient, it is dominated by respondents with female sex, namely 9 people with a percentage of 60% while for respondents with male sex, 6 people with a percentage of 40%.

The results of this study are in accordance with the concept that women have a high level of concern for treatment in hospitals so that complaints or symptoms experienced due to unfavorable health conditions are easy to take advantage of health facilities immediately, this is in accordance with RI Law No. 38 of 2014 in practice. In nursing, patients are obliged to provide correct, clear, and honest information about their health problems and female patients easily receive advice from nurses for their treatment.

3. Education

Based on the results of the study, the patient education was dominated by respondents with junior high school education, namely 7 people with a

presentation of 46.7%. The above is in accordance with the statement that the level of patient education can increase compliance, as long as the education is an active education that is obtained independently, through certain stages.

The results of the study are in accordance with the concept of health education is the application or application of education in the health sector. Operationally, health education is all activities to provide and improve the knowledge, attitudes, practices of individuals, groups or communities in maintaining and improving their own health.

4. Maintenance of infusions before health education installation of infusions

Based on the results of the study obtained on the maintenance of infusion drops before the infusion installation health education in patients with fluid deficiency at Citama Hospital whose infusion maintenance was not good, namely 4 people (26.7%) and maintenance of infusion drops that were not good, namely 11 people (73.3 %).

The results of this study are in accordance with the opinion which states that a person's knowledge is a very important factor in interpreting the stimulus obtained and knowledge is influenced by intensity and perception. Knowledge is a very important factor in interpreting the stimulus obtained in this case is the level of knowledge in infusion stimulation in patients. In addition, patients are taught about how to observe the condition of the infusion that is installed whether the infusion is open or loose, the value of the response to fluid therapy whether there is an allergy or phlebitis occurs and the amount of fluid and the rate of drip.

5. Maintenance of infusion after health education installation of infusion

Based on the results of the study obtained on the maintenance of infusion drops after infusion health education was carried out in patients at Citama Hospital whose infusion drip maintenance was not good, namely 3 people (20%) and good infusion drip maintenance, 12 people (80%).

The results of this study are in accordance with the concept that infusion drops that enter the patient's body using manual or gravity models always experience changes in the number of drops due to manipulation factors, high and low infusion poles, viscosity and temperature of the infusion fluid. This concludes that the infusion drops that we enter the first time will not always be the same until the end so that it affects the amount of fluid that enters the patient's body. Therefore, the importance of health education for infusions to patients because patients are people who have physical or mental weaknesses, surrender their supervision and care, receive and follow the treatment prescribed by health workers or medical professionals who are treated in hospitals.

6. The Effect of Health Education on Patient Infusion on Maintenance of Infusion Drops in the Hospital. The Year 2021

Based on the results of data analysis that the maintenance of infusion drops before being given good health education for infusion installation was 4 people (26.7%) and after being given infusion health education showed an increase in infusion drip maintenance, namely 12 people (80%). And maintenance of infusion drops before being given infusion health education was not good for 11 people (73.3%) and after being given infusion health education showed a decrease in infusion drip maintenance, namely 3 people (20%). Where the analysis uses a dependent t test with an average result (0.533), a standard deviation of 0.516 and a p value of 0.001 where $p < 0.05$, so it can be concluded

that the health education of infusion in patients has a significant influence on the maintenance of infusion drops.

This is in accordance with the cognitive domain in the application, which is defined as the ability to use the material that has been studied in real (actual) situations or conditions. For example: being able to use statistical formulas in calculating research results, being able to use the principles of a problem solving cycle in solving health problems from a given case. Knowledge is also the result of remembering something, including recalling events that have been experienced either intentionally or unintentionally and this occurs after people make contact or observation of a certain object. Besides, it is important for educators to have the ability to examine the strengths and impacts of nursing interventions on the behavior of subjects that can enrich, provide information and complement the desired behavior of the subject.

This is also in accordance with the concept conveyed that, during the infusion process, it is necessary to pay attention to things to prevent complications so that the maintenance of infusion drops can run properly. Avoid placing infusions in infected areas, damaged veins, veins in the flexion area and unstable veins, regulate flow accuracy and infusion regulation appropriately. Therefore, it is very important to convey infusion health education to patients to improve infusion drip maintenance for the better.

Summary

There is a significant effect between infusion installation health education on the maintenance of infusion drops where H0 is rejected and Ha is accepted. Maintenance of infusion drops before health education on infusion in patients was dominated by poor as many as 11 people (73.3%) and maintenance of infusion drops after health education in infusion in patients was dominated by good as many as 12 people (80.0%). Statistical test results obtained P value = 0.001 where the P value is smaller than the alpha value of 0.005, it can be concluded that there is a significant effect of infusion installation health education on the maintenance of infusion drops at Citama Hospital in 2021.

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