The Relationship of Nurses' Knowledge with Implementation of Centralized Medication in Inpatient Room of Otanaha Regional Public Hospital, Gorontalo City

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ABSTRACT

Introduction: Centralized medicine is medicine that will be given to patients where the management of the medicine is completely handed over to the nurse so that the use of medicine can be controlled. This study aimed to determine nurses' knowledge about the implementation of drug centralization in inpatient rooms P1 and P2. Exploratory descriptive method, the population in this study was all 106 nurses, a sample of 51 respondents using a purposive sampling technique. Data collection used a questionnaire sheet. This research was conducted at the Otanaha Regional General Hospital, Gorontalo City, with the research period from May to July 2023. The highest level of good knowledge was that 35 respondents (58.6%) had understood the application of drug centralization. The results of research regarding the relationship between nurses' knowledge and the application of drug centralization had a level of 95% confidence and up Chi-Square obtained a p-value of 0.000 which is smaller (p < 0.05) which means there is a relationship between nurses' knowledge of the application of drug centralization. So it can be concluded that nurses' knowledge of the application of drug centralization is stated to have a significant level which means there is a relationship between the two variables.

INTRODUCTION

Health services are a good activity in hospitals, which can be seen from the regulation of pharmaceutical service standards that are oriented towards patient safety, such as protecting patients from irrational drug use. One form of appropriate and efficient pharmaceutical regulation is the implementation of centralized standard operating procedures (SOP) for medicines in hospitals.

The drug centralization process includes developing techniques for preparing drug centers, preparing the necessary tools, creating technical guidelines for organizing drug centers, and documenting the results of implementation are part of the process. (Nursalam, 2015).

Centralization of medicines is the management of medicines that will be given to patients where the management of these medicines is completely handed over to nurses. Controlling the use and consumption of drugs, as one of the roles of nurses, needs to be carried out in a systematic pattern or flow so that the use of...
drugs can truly be controlled by nurses so that the risk of loss, both material and non-material, can be minimized.

Implementing a centralized SOP for medicines handed over entirely to nurses can improve nurse performance and provide satisfaction to patients and families. The drug centralization used includes creating drug management strategies, drug centralization flow, preparing the required resources, creating technical guidelines for implementing drug centralization and recording implementation results. (Nursalam, 2015).

Patient safety is the most important indicator in the health service system which is expected to reduce patient accidents and become a reference for providing good quality health services. In the nursing care and service system, patient safety depends on the level of knowledge and skills possessed by the nurse.

This research is supported by data from the Indonesian National Nurses Association, in 2010 - 2015 it is estimated that there were around 485 cases of malpractice in the nursing profession in Indonesia, consisting of 357 cases of administrative malpractice, 82 cases of civil malpractice, and 46 cases of criminal malpractice with elements of negligence. Apart from that, there was a case of abuse of a patient by a nurse at a hospital in Surabaya, and another case that occurred at a hospital in Sidoarjo where a nurse gave an injection to a patient who had died due to the lack of quick treatment (Afton Feriadi 2020). To implement centralized medicine in hospitals, nurses must have sufficient knowledge and understand the flow of centralization so that the implementation of centralized medicine in rooms is carried out well.

Initial observations carried out by researchers in inpatient rooms P1 and P2 at Otanaha Regional Hospital, Gorontalo City, found that 14 of the 51 nurses had D3 education and 37 were nurses. The results of the interview regarding the flow of implementation of drug centralization were found to be by the SOP, where the centralized drug management technique in the room was given responsibility for all drugs that would be distributed to patients, both oral and injection drugs, completely handed over to the nurses. In drug management it is divided into several parts; receiving drugs, distributing drugs, adding new drugs, special drugs, and returning drugs. There are problems in implementing drug centralization on drug return items. Where some fluids are no longer needed by the patient, the staff will not give them to the patient. Therefore, one of the implementations of centralized drug management techniques has not been fulfilled.

Monitoring medication intake is part of the nursing staff's duties. The accumulation of drug residue can be one of the reasons for achieving the target of optimizing the implementation of drug centralization. Therefore, a systematic way is needed to control the use of medicines effectively by nurses and patients/families and avoid the risk of material and immaterial losses.

METHOD
This research is a non-experimental quantitative research. Researchers use this type of research because researchers want to see objective phenomena and study them using numbers, statistical processing, and structure and in this research, no intervention was carried out. The research method chosen is the exploratory descriptive method, where the research method is aimed at describing existing phenomena that are taking place at present or in the past so that it can describe a situation and describe the situation in the stages of its development.

Data collection technique
1. Primary data
   Primary data is data collected by researchers. Primary data in this research is data obtained directly from respondents by filling in a questionnaire sheet consisting of several statements for responses. When conducting observations, the researcher brought a questionnaire sheet instrument.

2. Secondary data
   Secondary data is data obtained from survey results in the field and data collected from the work area of the research site. Secondary data in this research is data obtained from the staff of the Otanaha Regional General Hospital, Gorontalo City.

Data analysis technique
   Univariate analysis is a data processing procedure by describes and summarizes scientifically in the form of tables or graphs (Nursalam, 2016).

   Bivariate analysis is an analysis carried out on two variables that are thought to be related or correlated. (Nursalam, 2016). To prove the hypothesis through the Chi-Square test, assisted by the SPSS program to determine the magnitude of the relationship or influence of the two independent and dependent variables. This cross-table analysis uses a significance level $\alpha$ of 5% ($p < 0.05$). If the p-value $<0.05$, then the null hypothesis is rejected so that the two variables analyzed have a meaningful relationship or influence, conversely, if the p-
value is > 0.05 then the null hypothesis is accepted so that the two variables analyzed do not have a meaningful relationship or influence.

RESULT

Respondent Age Diagram

Based on the results of the diagram above on age data, it is known that the majority of respondents are in the early adulthood age category (25 to 35 years), namely 38 respondents (74.5%), and the fewest are in the elderly category (over 45 years) only 2 respondents (3.9%).

Respondent Gender Diagram

Based on the results of the diagram above, the gender category data shows that it is more dominant, namely female, 39 respondents (76.5%), with a few male, 12 respondents (23.4%).

Respondent Education Data Diagram

Based on the results of the data diagram, the highest education was a nurse education, 37 respondents (72.5%) and the least education was a D3, numbering 14 respondents (27.5%).

Data Diagram of Respondents' Length of Work

Based on the results of the data diagram, the length of work obtained was mostly (1 to 10 years), namely, 39 respondents (76.5%), and the least (0 to 1 year) was 5 respondents (9.8%).
Respondent Knowledge Diagram

Based on the results of the distribution diagram of the level of knowledge of nurses in rooms P1 and P2, there were 51 respondents, the majority of whom had a good level of knowledge, namely 35 respondents (68.6%) and those classified in the quite good category were 16 respondents (31.4%).

Drug Centralization Implementation Diagram

Based on the results of the univariate analysis diagram on the variable implementation of drug centralization as shown in diagram 7, it is known that most of the applications that dominate in the category are carried out by 35 respondents (68.6%) and those classified as not carried out are 16 respondents (31.4%).

Table of the Relationship between Knowledge and Drug Centralization

<table>
<thead>
<tr>
<th>Pergantuan</th>
<th>Pencetakan Sertifikat/Hut</th>
<th>χ²</th>
<th>Prob</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahasa</td>
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<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cilop Halli</td>
<td>0</td>
<td>1</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>Jumlah</td>
<td>35</td>
<td>16</td>
<td>31.4</td>
<td>51</td>
</tr>
</tbody>
</table>

The research results presented in Table 3 show that the p-value resulting from the Chi-Square test has a value of 0.00 or less than 0.05, which means that nurses’ knowledge has a close relationship with the implementation of drug centralization in the P1 inpatient room and P2 Otanaha Hospital. The relationship that is formed is a positive linear relationship, where the higher the level of knowledge of nurses, the higher the level of centralized application of medicine. It is known that there were 35 respondents (68.6%) with a good level of knowledge of implementing drug centralization, and only 16 respondents (31.4%) who had a fairly good level of knowledge did not implement all drug centralization implementation.

DISCUSSION

1. Nursing Knowledge

Based on research results from 51 respondents in inpatient rooms P1 and P2 at the hospital, Otanaha. The highest knowledge of nurses is that respondents with good knowledge were 35 people (65.6%) and 16 respondents were still in the sufficient knowledge category, due to educational factors which were still D3 and some were also due to not having worked long, especially in the drug centralization section, so they had to further improve their knowledge and experience regarding drug centralization. Hospital care to fulfill patient satisfaction is dependent on inpatient services. It is hoped that the drug centralization system implemented by nurses will offer solutions to existing problems. Specifically by involving nurses in supervising the distribution of drugs to patients, pharmacies, while continuing to collaborate with doctors and pharmacists. One strategy to improve the quality of nursing services is optimal centralized management.
2. Implementation of Drug Centralization

Based on research results from 51 respondents in inpatient rooms P1 and P2 at the hospital, Otanaha, regarding the application of centralization of medicines, was the highest, namely 35 respondents (65.6%). Other respondents could not directly say that it was good because in the technique of returning the patient's remaining medicines, in this case, infusion fluids, the reason why in centralizing medications there are more intravenous fluids is because of the remaining The patient or the patient's family had not taken the IV fluids and there were also those who refused to take the remaining IV medication and there were also family members and the patient who was not in the room to be given the remaining IV fluids. Therefore, one of the implementations of centralized drug management techniques has not been fulfilled. This is by theory (Nursalam, 2015). The centralized drug management technique is that the management of all drugs given to patients, both oral drugs and injection drugs, is completely handed over to the nurses. The person in charge of drug management is the head of the room who can be operationally delegated to appointed staff. The management and distribution of drugs is carried out by nurses where the patient or family is obliged to know and participate in controlling the use of the drugs themselves. Medicine management is divided into several parts, namely receiving medicines, distributing medicines, adding new medicines, special medicines, and returning medicines.

3. Relationship between nurses' knowledge and the implementation of centralized medicine in the inpatient room at Otanaha Hospital, Gorontalo City

The results of the research regarding the relationship between nurses' knowledge and the application of drug centralization have a confidence level of 95% and the Chi-Square test obtained a p-value = 0.000 <α = 0.05, which means there is a relationship between nurses' knowledge and the application of drug centralization. Most of the nurses' knowledge level was good and the implementation of drug centralization was carried out optimally in inpatient rooms P1 and P2. The relationship is close because the higher the knowledge, the more optimal the performance of the nurse. Moreover, regarding the implementation of centralization, the role of nurses should be to ensure the quality of medicines by paying more attention to the implementation of centralization by the flow of implementation. Optimal centralized management is an effort to improve the quality of care services. Monitoring drug use and consumption, which is one of the caregiver's responsibilities, must be carried out through a systematic plan or process so that drug use can be controlled, and regulated effectively and avoid the risk of material and immaterial losses. Other things depend on and follow the rules that apply within the hospital itself (Nursalam, 2014). This research is in line with research (Aprilia, 2018) entitled Accuracy of drug administration related to Centralization of drugs in Sidoarjo District Hospital where the results of the Binary Logistic Regression Test on Nurses' knowledge were obtained. "S with accuracy of drug administration (P = 0.243) shows the level of significance between drug centralization and knowledge. It can be concluded that knowledge has a relationship with drug centralization. This research is supported by research (Dewi, 2018) entitled The relationship between Nurses' knowledge about patient safety and the Application of medication administration in Hospitals" correctly. Meanwhile, among nurses with a low level of knowledge, there were 8 people (17.8%) who administered medication to patients correctly. The results of the study prove that there is a relationship between nurses' knowledge of patient safety and the application of medication administration (P=0.029)

CONCLUSION

1. Knowledge of nurses in inpatient rooms P1 and P2 of the hospital. The highest number of Otanaha respondents was 35 people with good knowledge (65.6%). This is because the average nurse already understands the application of centralized drug management techniques both in terms of receiving drugs, distributing drugs, adding new and special drugs, and returning drugs.

2. Research related to the implementation of centralization of medicines in inpatient rooms P1 and P2 of the hospital. The highest Otanaha was 35 respondents (65.6%). And there were at least 16 respondents (31.4%).

3. Nurses' knowledge of the application of drug centralization is stated to have a significant level, which means there is a relationship between knowledge and the application of drug centralization.
REFERENCES


