The Effectiveness of Patient Safety Training in Cikupa Hospitals: Study Quasi Experiment

Haekal Mahargias, Wekadigunawan, and Kemala Rita Wahidi

ABSTRACT

Patient safety is the absence of danger that can threaten the patient during treatment. In RS X Cikupa Tangerang found the highest incidence was KNC 338 (44%), KPC 306 (40%), KTC 104 (13.5%) and KTD 20 (2.5%) incidents. This is due to the lack of training for nurses. To analyze differences in nurse compliance in the application of patient safety goals before and after Patient Safety Goals training. The type of research is quantitative with a quasi-experimental design using the group pretest-posttest design with the Wilcoxon test. The data taken came from primary data collection, with questionnaires and nurse compliance observation sheets. From a population of 102 people with a total sample of 62 people. The results showed that there were differences in nurse compliance in the application of patient safety goals before and after training, p-value <0.05 with a percentage increase of 27.4% SKP 1, 33.9% SKP 2 and 17.7% SKP 5, in addition, there were an increase in the percentage of knowledge by 24.2%, attitude 16.2%, and behavior 1.6% towards SKP 1, SKP 2 and SKP 5 after being given training. There are differences in the compliance, knowledge, attitudes, and behavior of nurses on the implementation of Identification Process 1 (SKP 1), Implementation of Effective Communication (SKP 2), and Implementation of Hand Hygiene (SKP 5) before and after training.

Keywords: Attitude, Behavior, Compliance, Knowledge, Patient Safety.

Submitted: August 26, 2022
Published: November 15, 2022
ISSN: 2507-1076
DOI: 10.24018/ejbmr.2022.7.6.1646

I. INTRODUCTIONS

Safety is one of the global issues in the health care environment, hospitals as one of the health care institutions, it is very important to carry out patient safety assurance by implementing Patient Safety appropriately and is a basic principle of health care (WHO). Patient safety is also a major commitment worldwide in improving the quality and accountability of health services. For 2400 years ago Hippocrates started the history of Patient Safety by making the statement Prium, non nocere (First, do no harm) which has become a principle in all healthcare settings to date. By implementing a patient safety system in hospitals, it is hoped that this can make patients safer. (WHO 2017).

Based on data on the implementation of patient safety goals in the world, the National Institute for Patient Safety in the UK reported 236 near-miss events related to the loss of identity bracelets from November 2015 to July 2019, and in research conducted in 11 hospitals from 5 countries there were 52 patient safety incidents, namely Hong Kong 31%, Australia 25%, India 23%, America 12% and Canada 10%. Based on the above data, Joint Commission International (JCI) and WHO jointly promote six International Patient Safety Goals (IPSG) or Patient Safety Goals (SKP) to improve the implementation of patient safety culture and reduce various incidents of sentinel events that should be prevented (WHO, 2017).

In Indonesia alone, patient safety incident reports by the province in 2016 were found in West Java 33.33%, Banten and Central Java 20%, DKI 16.67%, Bali 6.67%, and East Java 3.33%. Based on the hospital health team, nurses reported carrying out safety incidents of 4.55% (KKP-RS, 2016). Whereas in Tangerang Regency itself, it showed an increase in the number of incident reports from 2016 to 2018. The number of KTD occurrences increased three times in a row: 315, 498, and 578. KNC also experienced an increase over three years: 216, 415, and 464 (Dinkes Tangerang Regency, 2018).

So as an effort to improve patient safety goals in Indonesia, the Indonesian Hospital Association (PERSI) took the initiative to form a Hospital Patient Safety Committee (KKPRS) in 2005, then the Minister of Health ratified the Hospital Patient Safety Committee (KKPRS) with a Decree of the Minister of Health of the Republic of Indonesia. No. 251 of 2012, this has been regulated in the Law of the Republic of Indonesia No. 44 of 2009 and Regulation of the Minister of Health No. 1691/2011 and amended in the Regulation of the Minister of Health No. 11/2017 concerning Hospital Patient...
Safety by implementing six patient safety goals consisting of, correctly identifying patients, improving effective communication, increasing the safety of medicines. The drugs to watch out for are ensuring the correct surgical location, correct procedure, correct patient surgery, reducing the risk of infection due to health care, and reducing the risk of patient injury due to falls, this regulation is a major milestone in the operationalization of the Implementation of Patient Safety Standards in hospitals throughout Indonesia. (KEMENKES, 2017).

RS X Cikupa Tangerang has implemented a comprehensive patient safety culture since the hospital’s accreditation in 2008. This is evidenced by the existence of the Quality and Risk Department which is responsible for building and developing a patient safety culture in hospitals. (QR MHCP, 2018).

In 2019 there were 431 incidents consisting of KTC as many as 234 incidents (54%), KNC 164 incidents (38%), KPC as many as 22 incidents (5%), and KTD as many as 11 incidents (3%). (QR MHCP, 2019) In 2020 the awareness of staff at RS X Cikupa Tangerang to report patient safety incidents increased, the number of reported incidents from January to September 2020 was 768 incidents or an increase of 56% compared to reporting incidents in 2019. (QR MHCP, 2020).

The phenomenon that occurs at Hospital X Cikupa Tangerang shows that the level of nurse compliance in implementing patient safety goals has not been consistent. According to Quality and Risk data from the audit results, the level of nurse compliance in implementing SKP 1 (Patient Identification Accuracy) throughout 2020 ranged from 84% to 87%, the achievement of compliance in implementing SKP 2 (Improvement of Effective Communication) was 89% to 91%, the achievement of compliance in implementing SKP 3 (Improvement of drug safety that needs to be watched out for) by 98% to 100%, achieving compliance in implementing SKP 4 (Certainty on the right location, right procedure and right operation) by 100%, achieving compliance in implementing SKP 5 (Reducing infection risk related to health services) by 95% to 96% and the achievement of compliance in implementing SKP 6 (Reducing the risk of falling patients) by 98% to 100%. (QR MHCP 2020).

Based on the data and phenomena above, we conducted a study entitled “The Effectiveness of Patient Safety Training in Cikupa Hospitals: Study Quasi Experiment”, that we also wanted to analyze differences in knowledge, attitudes, and behavior of nurses, in implementing patient safety goals before and after training on patient safety targets at Hospital X Cikupa Tangerang so that appropriate interventions can be carried out to build a patient safety culture and ensure service quality in accordance with the Vision and Mission and service policies of RS X Cikupa Tangerang (QR MHCP, 2020).

II. THEORETICAL FRAMEWORK

According to Lawrence Green's (1980) theory, what underlying the emergence of behavior can be grouped into 3 factors, namely: a) Predisposing factors, which are manifested in education, knowledge, attitudes, beliefs, beliefs, values, and so on. b) Enabling factors, which include the physical environment, and the availability or unavailability of health facilities or facilities. c) Pushing or reinforcing factors manifested in the attitudes and behavior of health workers or other officers.

III. RESEARCH METHODOLOGY

A. Research Approach and Analysis

This study is a quantitative study with a Quasi Experimental research design made using a One group pretest-posttest design where a group is measured and observed before and after the treatment is given. This study was to examine the SKP training intervention on the respondents with the aim of assessing its effect on nurses’ compliance in implementing SKP. The study was conducted from September 2021 to June 2022 at RS X Cikupa Tangerang with a total population of 102 and a sample of 62 respondents. The design of this research is described in Table I.

<table>
<thead>
<tr>
<th>Kelompok</th>
<th>Pre-Test</th>
<th>Perlakuan</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervensi</td>
<td>O1</td>
<td>X</td>
<td>O2</td>
</tr>
</tbody>
</table>

Scheme 3.1: SKP Intervention Group Research Design.

1) Information

O1: The level of nurse compliance in the implementation of patient identification, effective communication and hand hygiene before being given SKP training, in the intervention group.

O2: The level of nurse compliance in the implementation of patient identification, effective communication and hand hygiene after being given SKP training, in the intervention group.

X: Intervention

O1-O2: The difference in the results of the level of adherence before and after being given the SKP training intervention in the intervention group.

IV. DATA COLLECTION AND ANALYSIS TECHNIQUES

This study is a quasi-experimental study made using the One group pretest-posttest design with the Wilcoxon test. This study was to examine the SKP training intervention on respondents and their impact on nurse compliance in carrying out the patient identification process, effective communication, and hand hygiene. The data collection procedure was derived from primary data collection, with questionnaires filled in by respondents and nurse compliance observation sheets filled in by the head nurse in each unit before and after treatment.

Before the questionnaire is given to the respondents, it is necessary to test the validity, test reliability, and test normality of the data.

The respondents of this study were nurses on duty at RS X Cikupa Tangerang with a population of 102 and a sample of 62...
respondents. In this study, the sampling method used was the proportionate stratified random sampling method, is the sample size of each stratum in this technique was proportional to the size of the strata population when viewed against the entire population.

V. RESULT AND DISCUSSION

A. Instrument Validity Test Results

The number of samples of respondents in this validity test is 35 samples with an R table value of 0.335. Based on the data result of knowledge an R value 0.482 – 0.688, attitude an R-value 0.555 – 0.872, and behavior an R value 0.400 – 0.751 it can be explained that all items of questionnaire questions are declared valid because the calculated r value is greater than r table so that the instrument has construct validity that can accurately measure the variables to be measured.

B. Reliability Test Results

An instrument is said to be reliable if the Cronbach alpha value > 0.6. The results of knowledge Cronbach alpha value 0.848, attitude Cronbach alpha value 0.906, behavior Cronbach alpha value 0.849. From that variables show that the Cronbach Alpha value is greater than the baseline value of 0.6. With these results prove.

C. Normality Test Results

The distribution of data is said to be normal if the results of the Kolmogorov-Smirnov test > 0.05. Based on the Kolmogorov-Smirnov data normality test from knowledge, attitude, behavior, the obedience of patient safety number 1, 2, and 5 before and after training a significance value of 0.00 <0.05 was obtained for all data on the dependent variable and confounding variables, both pre and post-training. So it can be concluded that H1 is accepted, meaning that the data is not normally distributed.

D. Characteristics of Research Respondents

In this study, 62 questionnaires were distributed and all 62 questionnaires were returned (100%). Based on the respondents’ answers obtained from the questionnaire, it can be seen that the distribution of respondents’ characteristics is shown in Table I.

<table>
<thead>
<tr>
<th>TABLE I: WILCOXON TEST RESULTS DIFFERENCE IN PATIENT IDENTIFICATION, EFFECTIVE COMMUNICATION, HAND HYGIENE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymp. Sig. 2 tailed (p Value)</td>
</tr>
<tr>
<td>Patient Identification Compliance</td>
</tr>
<tr>
<td>Effective Communication Compliance</td>
</tr>
<tr>
<td>Hand Hygiene Compliance</td>
</tr>
</tbody>
</table>

Source: processed primary data 2022

Based on the results of the hypothesis test on the data above, it is known that the average value for the distribution of respondents from the variable Compliance with the Patient Identification Process before training with an index value of 16.7 which is included in the category of compliance, while the average value for the distribution of respondents from the variable Compliance with the Process Patient identification after training with an index value of 25.5 is also included in the obedient category. This condition states that the level of nurse compliance with the implementation of SKP 1 is in the obedient category, before or after SKP training.

There was an increase in the average value of the SKP 1 Compliance variable index before and after training by 8.8 points. And based on the percentage distribution of nurse compliance in implementing SKP 1 (patient identification process) it was found an increase of 27.4% before and after training.

While the average value for the distribution of respondents from the variable Compliance with Effective Communication before training found an index value of 25.3 which is included in the obedient category, while the average value for the distribution of respondents from the variable Compliance with Effective Communication after training with an index value of 29.9 also included in the obedient category, this condition states that the level of nurse compliance with the implementation of SKP 2 is in the obedient category, before and after the SKP training. There was an increase in the average value of the SKP 2 Compliance variable index before and after training by 4.6 points. And based on the percentage distribution of nurses’ compliance in implementing SKP 2 (Effective Communication) it was found an increase of 33.9% before and after training.

And the average value for the distribution of respondents from the variable Compliance with the Hand Hygiene Process before the training was found an index value of 25.9 which was included in the obedient category, while the average value for the distribution of respondents from the variable Compliance with the Hand Hygiene Process after training with an index value of 29.7 is also included in the obedient category. This condition states that the level of nurse compliance with the implementation of SKP 5 is in the obedient category, before or after SKP training. There was an increase in the average value of the Compliance variable index to SKP 2 before and after training by 3.8 points. And based on the percentage distribution of nurses’ compliance in implementing SKP 5 (Hand Hygiene) it was found an increase of 17.7% before and after training. In addition, based on the results of the Wilcoxon test, it was found that the p-value <0.05 on nurses’ compliance with applying SKP 1, SKP 2, and SKP 5 before and after training on patient safety targets.

The above is in accordance with Perry and Potter's theory that nurse compliance is a nurse’s behavior toward an action, procedure, or regulation that must be carried out or obeyed. (Perry & Potter, 2018). It is also supported by previous research on training has a positive and significant effect on employee performance at the Balaraja Hospital. This is indicated by p < 0.05. This shows that there is an increase in compliance after training, but this figure still needs to be increased again so that nurse compliance in implementing patient safety goals reaches the 100% target so that the zero accident goal of implementing patient safety can be achieved.
Based on the data, it is known that the distribution of respondents from the Knowledge variable to Patient Safety Goals before training has an average index value of 51.45 which is included in the good category, while the average value for the distribution of respondents from the Knowledge variable to Patient Safety Goals after training with the index value of 56.45 is also included in the good category. This condition states that the level of knowledge of nurses on the implementation of SKP 1, 2 and 5 is in a good category, before or after SKP training. There was an increase in the average value of the Knowledge variable index on Patient Safety Goals after training by 5 points. And based on the percentage of nurses' knowledge distribution in the application of SKP 1, SKP 2, and SKP 5 before and after the safety target training, an increase of 24.2% was found. Based on the data, it was found that the average value for the distribution of respondents from the Attitude to Patient Safety Goals variable before training with an index value of 43.72 which is included in the good category, while the average value for the distribution of respondents from the Attitude to Patient Safety Goals variable after training with an index value 45.52 is also included in the good category. The results above show that nurses' attitudes towards the implementation of SKP 1, 2 and 5 are in a good category, before or after SKP training. There was an increase in the average value of the attitude variable index towards Patient Safety Goals after training by 1.8 points. And based on the percentage distribution of nurses’ attitudes in the application of SKP 1, SKP 2, and SKP 5 before and after the safety target training, an increase of 16.2% was found.

Based on the data, it is known that the average value for the distribution of respondents from the Behavioral variable towards Patient Safety Goals before training with an index value of 43.46 which is included in the good category, while the average value for the distribution of respondents from the Behavioral variable towards Patient Safety Goals after training with a value index 47.70 is also included in the good category. This condition states that the level of nurse behavior towards the implementation of SKP 1, 2 and 5 is in the good category, before or after SKP training.

There was an increase in the average value of the nurse behavior variable index on Patient Safety Goals after training by 4.24 points. And based on the percentage distribution of nurses' behavior in the application of SKP 1, SKP 2, and SKP 5 before and after the safety target training, an increase of 1.6% was found.

This shows that there are differences in the knowledge, attitudes and behavior of nurses in implementing patient safety goals before and after training. These results are supported by the theory of Dessler (1942) which defines, Training is the act of increasing the knowledge and skills of an employee for performing the job assigned to him. Training is the act of increasing the knowledge and skills of an employee to perform the work assigned to him.

In addition, it is also supported by previous research conducted by Hassanudin University on the effect of training on knowledge about the application of interprofessional collaboration patient safety goals at UNHAS Hospital. The results of the statistical test showed a value of p = 0.008 (p < 0.05) which indicated that there was a difference in the mean knowledge of collaboration before and after treatment in the module trial group.

Based on another study conducted by the University of Sam Ratulangi Manado on factors related to the knowledge of nurses in implementing patient safety at Prof Kandouw Hospital, Manado, research results were found that contradicted the results of the researchers' test. Where the research shows that there is no relationship between education and training with nurses' knowledge. A significant relationship was found between the experience and knowledge of nurses in implementing patient safety goals, p value = 0.001.

Another theory that supports research related to differences in nurses' attitudes in implementing patient safety goals before and after training is Baker's theory which states that attitudes are a convenient and efficient way of explaining consistent patterns of behavior. Often successful in summarizing, explaining, and predicting behavior (Baker, 1992). Research that supports the results of this study is research conducted by Widyatama University regarding the effect of Neonatal Resuscitation training on work attitudes, attitudes towards change, and nurse performance. The results of the study provide evidence of a positive relationship between work attitudes and attitudes towards change which is shown in increasing patient safety (job performance). Thus, training for nurses is able to increase performance if there is an increase in the value of work attitudes and attitudes towards changes by Perina room nurses. Another study conducted by STIKES Guna Bangsa Yogyakarta with the topic “Factors Affecting Nurse Attitudes in the Implementation of Patient Safety in the KMB and Children's Inpatient Room at RSUD Sleman” showed that the factors of gender, age, education, years of service, and sources of information did not affect the attitude of nurses in implementing Patient Safety in the KMB inpatient room and children at the Sleman Hospital. It is the knowledge of nurses whose attitudes in implementing Patient Safety in the KMB and children's rooms at the Sleman Hospital with a p value = 0.01.

In addition, related to differences in the behavior of nurses in implementing patient safety goals before and after training, Skinner's theory (1996) formulates that behavior is a person's response or reaction to external stimuli or stimuli. Because this behavior occurs through the process of a stimulus to the

**TABLE II: WILCOXON TEST RESULTS DIFFERENCE IN KNOWLEDGE, ATTITUDE AND BEHAVIOR**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Asympt. Sig. 2 tailed (p Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of Nursing</td>
<td>0.000</td>
</tr>
<tr>
<td>Attitude of Nursing</td>
<td>0.000</td>
</tr>
<tr>
<td>Behavior of Nursing</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source: processed primary data 2022

Based on the results of the hypothesis test on the knowledge, attitudes, and behavior of nurses in implementing patient safety goals, it was found that the p-value <0.05.
VI. Conclusion

This study provides empirical evidence that there are differences in nurse compliance with patient safety goals before and after training. This study also measured the knowledge, attitudes, and behavior of nurses before and after being given patient safety target training. This shows that the training is quite effective in changing compliance, knowledge, attitudes and behavior in the application of patient safety goals.

A. Implication

1) Theoretical Implications

The research model developed in this study is proven to strengthen theoretical concepts such as the compliance theory according to Potter (2017), the factors that underlie behavior according to Green (1980), the patient safety goal theory according to Donaldson (2009), the goal training theory patient safety on knowledge according to Dessler (1942), attitude theory according to Bakker (1992), seven steps towards compliance with the application of patient safety goals according to Vincent (2008) and provide empirical support for previous research.

This research is expected beneficiary to the development of science.

2) Managerial Implications

Providing training on Patient Safety Goals for all relevant staff is not only carried out when staff join the hospital, but refreshes the SKP training periodically every year to maintain staff consistency in implementing SKP.

Implementing laws and regulations related to the technical implementation of patient safety goals in accordance with the Regulation of the Minister of Health of the Republic of Indonesia No. 11/Menkes/Per/III/2017.

3) Suggestion

Based on the conclusions of the research results and the implications of this study which have been described previously, in improving nurse compliance in implementing SKP 1, 2, and 5 at RS X Cikupa Tangerang, the following suggestions can be submitted:

a. SKP training is given to all new employees and refreshed once a year.

b. Increase the level of formal education of D3 nurses to become nurses, because a good level of knowledge affects the ability of nurses to receive information during training.

c. Give priority to nursing graduates when recruiting new nurses to support hospital programs.

References


Baker (1992). Educational Psychology. 3rd edition. Houghton Mifflin Company. All rights reserved.


and Behavioral Sciences, 172, 88–95.