

Article

The use of web-based digital media to enhance admission orientation for patients in the hospital

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Abstract

Introduction: Newly hospitalized patients often face some situations that have not been recognized or faced previously. Meanwhile, admission orientation can help inpatients to adapt and reduce their anxiety, but it has not been carried out optimally in some hospitals in Indonesia. Therefore, innovative media is needed to improve the efficiency and increase the willingness of nurses in carrying out admission orientation.

Objective: This study aims to identify the effect of implementing website-based digital media about admission orientation on nurses' compliance with the procedure for new patient admissions.

Design and Method: This is a quantitative study with a pre-experimental one-group pretest-posttest design. The sample population consists of nurses in the inpatient ward, and a total of 21 samples were then selected using the total sampling method. Subsequently, statistical analysis was carried out on the data obtained using the paired t-test.

Results: The results showed that the p-value was 0.001 (< 0.05), indicating there was a significant difference between the nurse compliance level before and after implementing the web-based digital media. Furthermore, the average pretest score was 90, while the average posttest score was 94.6.

Conclusions: Based on the results, there was an increase in the level of nurse compliance after the intervention.

Introduction

Patients that are hospitalized for the first time usually experience anxiety because the hospital is different from their regular environment.^{1,2} They can also experience stress-inducing situations during treatment.³ Furthermore, a survey by the Agency for Health Research and Quality (AHRQ) on 100 new patients reported that 75% experienced acute stress in the first 24-48 hours of hospitalization, while 25% adapted to the condition.¹ Inpatient often face many unknown and complicated procedures, which causes mild level to severe anxiety and fear.³ It was then assumed that these problems occurred due to a lack of proper orientation by the nurses.⁴

Admission orientation has not been optimally carried out in some hospitals in Indonesia. Moreover, a study conducted at a hospital in the Bandung regency, Indonesia reported that 54.11% of the respondents conducted patient orientation, which did not meet the Standard Operational Procedure (SOP).⁵ Another study conducted at a hospital in Riau Province, Indonesia also stated that 21.4% of nurses did not orient the patient on how to use the bell, and more than 50% did not perform orientation about the rules, facilities, rights, and obligations.⁶ Furthermore, the interviews with the head of the ward, where this study was conducted revealed that they already have a standard procedure for new patient admissions. However, the implementation is not optimal because many nurses do not follow the procedure completely. This causes an information gap with the patients because they did not receive the complete information.⁷

Lack of proper orientation causes various problems, such as lack of knowledge about the nurses in charge,⁸ and the function of the ward facilities.⁹ It also causes a slow adjustment to new conditions and the patient's family/friends can interfere with their safety⁵ and health care service process.^{5,10} Media can be used to simplify, explain in detail, and shorten the time for orientation by nurses.¹¹ Therefore, this study aims to identify the effect of implementing website-based digital orientation media on nurse compliance with the SOP for new patient admissions.

Design and Methods

This is a quantitative study with a pre-experimental one-group pretest-posttest design, which was conducted for approximately 1 month in July 2021 at Panti Waluya Sawahan Hospital, Malang City, East Java, Indonesia. The sample population consists of nurses in the inpatient ward of the Placida pavilion ward. Furthermore, a total of 21 respondents were selected using the total sampling technique.

The orientation of patient admission was usually performed using the verbal method without the media, but this study used a website-based method. At the beginning of the intervention, respondents were socialized about the procedure for implementing the ori-

Significance for public health

Inpatients often experience acute stress in the first 24-48 hours of hospitalization. Meanwhile, admission orientation has not been optimally carried out in some hospitals. A lack of proper orientation causes various problems, such as a lack of knowledge about the healthcare workers and the function of ward facilities. It also causes a slow adjustment by the patient to the new conditions, which affects their comfort and environmental safety. The loitering of family members also interferes with the health service process. Therefore, the web-based digital media for patient admission orientation was studied in this research. The result showed that it can simplify, explain in detail, and shorten the nurses' orientation time.

entation using digital media. Subsequently, when there is a new admission, the nurse provides a website link to the patient and family, which they can access with their smartphone or the hospital property accompanied by a worker. The nurse then orients the patient and family about the healthcare workers, facilities, services, and rules.

The nurses' pretest and posttest compliance level was obtained with a questionnaire, which was adapted from previous study and has been modified in accordance with the applicable SOP at the study hospitals. Furthermore, the questionnaire had a validity test score of 0.93 and a reliability score of 0.76. It was then measured using a Likert scale with answer option that always have a score of 5, often with a score of 4, sometimes with a score of 3, rarely with a score of 2, and never with a score of 1. Subsequently, the total score was converted to a value of 1-100 and then interpreted into three levels, namely good compliance level when the value is 76-100, the moderate category when the value is 51-75, and the category is less when the value is less than 50.

Table 1. Patient admission orientation instrument.

	Always 5	Often 4	Sometimes 3	Rarely 2	Never 1
Orientation of Persons					
1 Implementation of orientation regarding the Doctor in Charge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Implementation of orientation regarding the Nurse in Charge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Implementation of orientation regarding other Health Workers in Charge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orientation of Places					
4 Implementation of orientation regarding the location of the Nurse Station	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Implementation of orientation regarding the room map	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Implementation of orientation regarding the use of bells, air conditioners or fans, televisions, bathrooms, and water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Implementation of orientation regarding evacuation directions in the event of a disaster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orientation of Facilities					
8 Implementation of orientation regarding the unit's daily activities (controlling nurse, administering medication, monitoring vital sign, eating, bathing, wound care, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Implementation of orientation regarding procedures for filing complaints, doctor visiting hours, and how to meet doctors to inquire about the latest medical conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Implementation of orientation regarding information on treatment costs, costs of supporting examinations, drug costs, operating costs, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orientation of Rules and Education					
11 Implementation of orientation regarding the visiting hours (not being allowed to receive patient visitors during the pandemic)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Implementation of orientation regarding the number of patient companion (the antigen swab result must be negative during the pandemic and it is mandatory to wear a mask)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Implementation of orientation regarding not being allowed to roll out mats, carrying pillows, and not being allowed to sit on the patient's bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 Implementation of orientation regarding not being allowed to make noise and smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 Implementation of orientation regarding to look after luggage (the loss of patient's personal belongings is not the responsibility of the hospital)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 Implementation of orientation on how to dispose of medical and non-medical waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17 Implementation of orientation regarding hand washing using 6 steps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18 Implementation of orientation regarding fall risk prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19 Implementation of orientation on pain management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20 Implementation of orientation regarding effective cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Results and Discussion

Measurement of demographic data showed that 95.2% of the respondents were female, and 61.9% were 20-30 years old. Furthermore, a total of 19 respondents (90.5%) had the latest diploma of nursing education, while 38.1% had worked in hospitals for >10 years. Table 1 shows the demographic data of the respondents. The results revealed that there were 18 respondents (85.8%) with a good pretest compliance level, while 3 respondents (14.2%) had a moderate level. However, the posttest compliance level of all nurses (100%) increased after the intervention, as shown in Table 2.

The analysis results using the Paired T-test showed a p-value of 0.001 (< 0.05), which indicates that there was a significant difference in the compliance level after the web-based digital media was implemented (Table 3 and 4). Furthermore, it shows that the average pretest score was 90, which increased to a post-test score of 94.6.

The results showed that there was an increase in nurse compliance in orienting new patients after intervention in all aspects, namely orientation of the inpatients about places, facilities, and rules. These results are consistent with another study that reported a 76.2%

increase in compliance.⁶ Furthermore, providing information about the use of facilities, procedures, and health workers are useful because most of the patients lack the knowledge.¹²⁻¹⁴ Procedures for using facilities, such as the bell can also increase the response time of nurses in providing direct care to the patients.^{15,16} Orientation of discipline is also important because medical activities in hospitals are regulated by different rules.^{17,18} The responsibilities of both the hospital management, personnel, doctors, nurses as well as other matters related to health services have specific guidelines.¹⁹ Therefore, it is important to inform visitors about the orientation of places, facilities, and rules to ensure their knowledge and compliance, which helps to maintain a comfortable hospital environment.

The demographic data results showed that 19 nurses (90.5%) had the latest D3 nursing education while the other 2 (9.5%) had the last education and 38.1% had worked in hospitals for >10 years. Furthermore, the post-test result revealed that most of the respondents had a Diploma education. It also showed that there was a 100% increase in compliance level with an average post-test score of 94.62. This finding is in line with a study by Tutik at Purbalingga Hospital where the majority of nurses have a diploma education and there was a 74% increase in adherence to SOPs.²⁰ Another study also reported that 66.9% of the respondents carried out facility orientation properly.²¹ Meanwhile, Notoatmodjo stated that the factors affecting compliance and knowledge include the level of education, experience, environment, and the mass media.²² Bloom also believes that behavior based on knowledge lasts longer than that without knowledge.²³ The nurses' knowledge positively correlated with their compliance, which indicates the higher the nurses' knowledge, the

higher the level of compliance.²⁴ This is consistent with a statement that the ability to carry out services in accordance with standards, adequate knowledge, abilities, and skills are needed.²⁵ Additionally, the level of knowledge affects the attitudes and behavior toward participation.²⁶ The higher the level of knowledge, the higher the awareness to participate. The limitation of this study is that this study used a limited sample and was only applied to one ward in the hospital. It is hoped that further research can be carried out on a wider scope so that more generalizable research results can be obtained.

Conclusions

The nurses' post-test level of compliance in carrying out the orientation of new patients after the Web-based digital media intervention was higher than that of the pretest. Therefore, inpatients must be oriented after admission about the healthcare workers, places, facilities, and rules. The analysis result using the Paired T-test obtained a significant value, which indicates that there was an increase in the compliance level after the intervention.

Table 2. Characteristics of respondents.

Characteristics of Respondant	(N=21)	
	n	%
Sex		
Male	1	4.8%
Female	20	95.2%
Age		
20-30	13	61.9%
31-40	6	28.6%
40-50	2	9.5%
Education background		
Bachelor in nursing	2	9.5%
Diploma	19	90.5%
Work experience		
< 5 years	7	33.3%
5-10 years	6	28.6%
>10 years	8	38.1%

Table 3. Pretest and posttest score of the nurse compliance level in the procedure of admission orientation.

	(N=21)		
	Poor n (%)	Moderate n (%)	Good n (%)
Pretest	0 (0%)	3 (14.2%)	18 (85.8%)
Posttest	0 (0%)	0 (0%)	21 (100%)

Table 4. The differences of the nurse compliance level in the procedure of admission orientation.

	(N=21)	
	Mean	P value
Pretest	90	0.001
Posttest	94.6	

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