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Research article

Effectiveness of Audiovisual Animation Education as an Effort to Increase Knowledge to Prevent the Risk of Falling Patients in Hospital

Aprin Rusmawati[1]*, Putri Kristyaningsih[2], Alfian Fawzi[1]

[1]Institute of Health Science STRADA Indonesia, Kediri, Indonesia
[2]Institute of Health Science Bhakti Wiyata Kediri, Indonesia
*Corresponden Author: Aprin Rusmawati (akbaraprin@gmail.com)

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ABSTRACT

Background: The risk of falling is one aspect that needs to be studied in patient safety, especially for patients who have a risk of falling due to weakness or the effects of therapy. It can cause injury, increasing the patient's long of stay, and patient's treatment fees. The other effects of this are physical injury including scratch, torn, bruised even it can cause fracture, bleeding and head injury. The purpose of this study was to determine the effectiveness of providing audiovisual animation education as an increase in knowledge of efforts to prevent falls in patients in hospitals**.**
Methods: This study uses a quasi-experimental research design with a one group pretest posttest approach without a control group. The research was conducted at Gambiran Hospital. The sampling technique used a purposive sample technique, namely by determining certain criteria. Data were collected using a questionnaire sheet, bivariate analysis using the Paired Sample T-Test with the help of SPSS.
Results: Based on the results of statistical tests, it is known that the value of sig. (2-tailed) of 0.000 <0.05, meaning that H1 is accepted, it can be concluded that audiovisual animation education is effective as an effort to prevent the risk of falling in patients in the hospital.
Conclusion: Animated audiovisual education is very effective to increase respondent's knowledge in preventing patient fall. With the guaranteed patient safety it will affect patient's recovery. The guaranteed patient safety can not be separated from the hospital monitoring and family caring to avoid from various risks than can be occured, one of this risk is risk of patient fall. This audiovisual methods is a good method to increase knowledge, because this method involve more sense in learning process, both sense of sight and sense of hearing.

I. Introduction

Patient Safety is a system that makes patient care safer, including risk assessment, patient risk identification and management, incident reporting and analysis, the ability to learn from incidents and their follow-up, as well as implementing solutions to minimize risks and prevent injuries caused by mistakes. as a result of carrying out an action or not taking the action that should have been taken (Kemenkes RI, 2017).

Fall risk is an increased susceptibility to falls that can cause physical harm. A fall is an event/event that results in a person suddenly lying down or accidentally lying on the floor or a lower place (Manalu, 2018). Based on the incidence of patient falls each year in all hospitals in the United States, it is reported that 700,000 to 1,000,000 people experience falls every year in hospitals. pi. In Indonesia, data related to the incidence of patient falls based on the results of a patient safety incident survey conducted by the

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Hospital Patient Safety Committee in Indonesia in January-April (2011) reported cases of unexpected events (KTD) and near-injury events (KNC). caused by patients falling by (5.15%) (KKPRS, 2015).

Based on the report of the XII congress of the Indonesian Hospital Association (PERSI, 2012) shows that the incidence of patients falling is included in the top three hospital medical incidents and ranks second after medicine errors. Data from the report shows that as many as 34 cases or equivalent (14%) of falls occurred in hospitals in Indonesia. Prevention of patients at risk of falling is part of the six hospital patient safety goals as stipulated in the Minister of Health Regulation no. 11 of 2017 concerning Patient Safety. This regulation is the basis for every hospital in standard patient safety procedures. Each hospital develops an approach to reduce the patient's risk of injury from falls.

There are some research in patient fall, Novilalita on 2020 already analised the cause of patient fall in internal ward and pavilion ward, RSUP Dr. M. Djamil Padang. Other research are done by Yuniarsi (2021). This research studying the effect of patient fall prevention education on family practice in preventing falling patient in inpatient room, RSUD Kabupaten Batang. The research about how to improve the knowledge about the patient fall prevention are needed.

Based on the results of observations made to 10 outpatients at the Gambiran Hospital, Kediri City on June 8, 2022, the results were that there were still many cases of patients falling from children to the elderly. This occurs due to various factors such as a history of previous falls, decreased visual acuity, walking behavior and attitude, musculoskeletal system, mental status, acute illness and chronic disease. Considering this condition, the increasing of knowledge in preventing the patient fall is need to be done. This can be done by giving the health education.

Health education can be given by utilise various kinds of media. Audiovisual is one of education media that effectively proven in increasing knowledge. The use of this media will stimulate sense of sight and sense of hearing to accept the information (Danielsen, et al., 2016). Thereby increasing the interest, so it will increase the curious, after that the information processing will be happen. Animated video is an example of audiovisual media (Ejupi, 2014). Providing education with audiovisual animation as an effort to prevent the risk of patients falling in the hospital is very necessary. Because with audiovisual animation, patients will not feel bored quickly and one of the new things in delivering education is usually done with the lecture method.

The purpose of this study was to determine the effectiveness of providing audiovisual animation education as an effort to increase knowledge of preventing falls in patients in hospitals

II. METHODS

This study uses a quasi-experimental research design with a one group pretest posttest approach without a control group. The research was conducted at Gambiran Hospital. The sampling technique that was used in this research is purposive technique. We use the certain criterias to determine the respondents. There are 45 respondents in this research. Pretest and posttest were collected by using questionnaire sheet. To analyze the effectiveness of this research we used the SPSS, it is Paired T-Test. As the ethical consideration, the researcher use the informed consent, anonymity principle and confidentiality principle.

III. RESULTS

Characteristics of Respondents

The majority of respondents in this study were aged 21-44 years 25 people (55.6%). With the female gender as many as 23 people (51.1%). Most of the respondents as housewives are as many as 16 people (35.6%) and the least occupation is a farmer as many as 1 person (2.2%). The most recent education of respondents is high school with 30 people (66.7%), elementary school 4 people (8.9%), junior high school 6 people (13.3%), bachelor degree 3 people (6.7%), and at least Diploma namely as many as 2 people (4.4%).

Variable Characteristics

Table 1. Characteristics of Pre and Post Knowledge Variables

Category	Pre		Post	
	Frequency	Percent	Frequency	Percent
Not enough	18	40 %	1	2,2 %
Enough	24	53,3 %	16	35,6 %
Well	3	6,7 %	28	62,2 %
Total	45	100 %	45	100 %

Based on the table above, it is known that most of the respondents before being given education had sufficient knowledge about preventing the risk of falling as many as 24 people (53.3%). After being given education, most of the respondents had good knowledge about preventing the risk of falling after being given education, as many as 28 people (62.2%).

Statistical Test Results

Table 2. Statistical Test of Paired Sample T-Test

Variabel		Mean	Mean Difference	Sig. (2-tailed)
Patient knowledge about prevention of fall risk	Pre Test	5,7556	-1,97778	0,000
	Post Test	7,7333		

Based on the table above, it is known that the difference in the average pre-test value of 5.7556 and post-test of 7.7333 is -197778 with a sig value. (2-tailed) of 0.000 < 0.05, it can be concluded that there is a significant difference between the knowledge of outpatients at Gambiran Hospital about preventing the risk of falling before and after being given education. So that the provision of effective audiovisual animation education as an effort to increase knowledge on preventing the risk of falling in patients in hospitals is effectively carried out.

IV. DISCUSSION

Patient Knowledge Before Providing Audiovisual Animation Education as an Effort to Prevent Fall Risk in Hospital Patients.

Based on the research results obtained during the study, it is known that the total number of outpatients at Gambiran Hospital, Kediri City, which was used as research respondents was 45 people. The level of knowledge of respondents or outpatients at Gambiran Hospital before the audiovisual education intervention on fall risk prevention had sufficient knowledge about fall risk prevention as many as 24 people (53.3%), 18 people (40%) had less knowledge about risk prevention falls, and the remaining 3 people (6.7%) already have good knowledge about efforts to prevent the risk of falling.

Based on cross tabulation data from 24 respondents who had sufficient knowledge of fall risk prevention prior to intervention 14 people (58.3%) of whom had an age range of 21-44 years and of 24 respondents who had sufficient knowledge of fall risk prevention prior to intervention 13 people (54.2%) of them are female. Meanwhile, of the 24 respondents who had sufficient knowledge of fall risk prevention before intervention, 12 people (50%) were housewives, and of the 24 respondents who had sufficient knowledge of fall risk prevention prior to intervention, 16 people (66.7%) of them have a high school education level.

This is the same as the research conducted by Desliana Manalu (2018) which showed the level of patient knowledge in an effort to prevent the risk of falling is still more than 50% of patients still have poor knowledge, in Desiana's study, patients with poor knowledge were 16 people (53, 3%).

Knowledge can be influenced by several factors, one of which is age. Based on the results of demographic data obtained for the age of the respondents who were given health education about patient prevention about the risk of falling using audio-visual media (video) as much as 22.2% had an age in the range > 60% years, as many as 22.2% had an age in the range 45 -59 years, and as many as 55.6% have an age in the range of 21-44 years. In this study, most respondents have sufficient knowledge in the age range of 21-44 years, namely as many as 14 people.

Age can affect one's knowledge, because the older one gets, the more one's grasping power and mindset develop so that the knowledge gained is getting better. However, there is a decrease in grasping power in the elderly which is influenced by physiological factors so that the level of knowledge they have also decreases (Greenberg, et al., 2016). This also happened in a study conducted by Desliana Manulu which showed differences in the level of knowledge based on age level, respondents with an age range of 26-35 years and 36-45 years had sufficient knowledge.

A fall is a patient experience that is not planned for a fall, an accidental event in a person at rest that can be seen or felt or a fall that cannot be seen due to a disease condition such as stroke, fainting, and others (Howcroft, et al., 2013). Lack of knowledge in caring for patients about preventing the risk of falling will worsen the illness, patient safety is very important and needs proper treatment. Patient safety is a system established by the hospital that makes patient care safer (Saputro, 2016). The system includes patient risk assessment, incident reporting and analysis, the ability to learn from incidents and their follow-up and implementation of solutions to minimize risks (Callis, 2016).

The respondent's lack of knowledge prior to education about the risk of falling is due to a lack of understanding of what causes the patient to experience the risk of falling. Lack of knowledge includes not knowing that degenerative diseases are at risk for falling, a history of previous falls can be a risk factor for falling, mental status is a risk factor for falling, loss of focus during activities is a risk factor for falling, side effects of taking medication can cause the risk of falling (Kim, 2013).

Based on the research that has been done, there are several statement items in the category of lack of knowledge, namely the average respondent still does not understand the statement that mental status is one of the risk factors for falling and side effects of taking medication can cause the risk of falling. Some respondents only know that the drug is healing, in fact some drugs themselves have side effects that cause drowsiness and this can trigger the patient's risk of falling.

Patient Knowledge After Providing Audiovisual Animation Education as an Effort to Prevent Fall Risk in Hospital Patients.

Based on the results of the study after the audiovisual animation educational intervention was carried out as an effort to prevent the risk of falling in patients, it was found that some respondents had good knowledge about preventing the risk of falling after being given education, namely 28 people (62.2%), with sufficient knowledge of 16 people (35.6%) and 1 person (2.2%) who still has less knowledge about fall risk prevention.

Based on cross tabulation data from 28 respondents who have good knowledge of fall risk prevention after intervention 16 people (57.1%) of whom have an age range of 21-44 years. And of the 28 respondents who had good knowledge of fall risk prevention after the intervention, 14 people (50%) were male and 14 (50%) were female. Meanwhile, of the 28 respondents who have good knowledge of fall risk prevention after intervention, 10 people (35.7%) are private employees. And of the 28 respondents who have good knowledge of fall risk prevention after intervention, 20 people (71.4%) of them have a high school education level.

The same research conducted by Aan Nurhasanah (2020) showed changes in the level of knowledge after being given education. This is evidenced from the results of the study that after the intervention was given there was a significant difference in the knowledge score of fall prevention in the family before and after the educational intervention ($p = 0.001$) as well as the skill aspect. The results of the analysis showed that respondents before education showed 49,200, after education there was an increase of 50,360. by a difference of 1100. This means that there is a significant difference in the fall risk prevention skill scores in families before and after the educational intervention ($p = 0.035$) with an average difference in the increase in behavioral scores = 1.100.

According to Kholid and Notoatmojo this level of knowledge starts from the individual knowing or knowing or observing something then understanding or being able to explain about the object he knows then increasing in practice or application followed by analysis, namely an ability to explain then connect parts of a whole or synthesize and finally evaluate. to evaluate an object.

Good knowledge will ensure patient safety and minimize the risk of falling so as not to worsen the patient's illness (Nur, 2017). The provision of audiovisual animation education is very effective in increasing knowledge about preventing falls in outpatients. Audiovisual media is media that has sound and image elements. This type of media has better expertise, because it includes both auditive (hearing) and visual (seeing) media types. Audiovisual media is an audiovisual aid which means materials or tools used in learning situations to assist written and spoken words in imparting knowledge, attitudes and ideas.

After being given audiovisual animation education as an effort to prevent the risk of falling, the level of knowledge of respondents increased from before, most of the respondents with less knowledge after being given education the level of knowledge became good and there was only one respondent who had less knowledge. Lack of knowledge caused by respondents still difficult to understand about mental status can cause the risk of falling and side effects of taking medication (Zarah, 2022). For this reason, it is necessary to provide education in stages so that respondents can understand well. Through this media message can be delivered by verbal and nonverbal. Audiovisual animation can stimulate interest and motivation to learning, clarify the abstract things and give more realistic description. It is also very good to explain a process and skill (Munadi, 2018)

The Effectiveness of Providing Audiovisual Animation Education as an Effort to Increase Knowledge of Falling Risk Prevention in Hospital Patients.

The results of the research carried out obtained data analysis using the Paired Sample T-Test test, namely the significance value or p-value on blood pressure of 0.000 with a significance level of 5% or

= 0.05. Because the significance value or p-value < = 0.05, H0 is rejected and H1 is accepted, which means that there is an increase in knowledge of outpatients at Gambiran Hospital about preventing the risk of falling before and after being given education. In the research that has been carried out, it is found that the level of knowledge shows the difference in the average increase in knowledge between the mean value before 5.7556 and the mean after education 7.7333.

The results of the tabulation between knowledge before and after being given education about preventing patients at risk of falling showed an increase in knowledge that 10 people (55.6%) before being given education had less knowledge about prevention of fall risk and after being given education there was an increase in having good knowledge about prevention risk of falling.

This is in line with research conducted by D. Manulu (2018) with the title Audio-visual media application for health education: prevention of fall risk patients at the University Hospital of North Sumatra which showed that there were significant differences in the provision of education on family knowledge and skills in preventing falls in children. elderly is evidenced by there is a significant difference in the knowledge score of fall prevention in the elderly before and after the educational intervention. In Aan Nurhasanah's research (2020) showing the results of the research presented in the previous chapter, it can be concluded that in the application of audiovisual media, the authors found that audiovisual media is a good medium for health education and can increase patient knowledge about preventing patients at risk of falling in university hospitals. North Sumatra. Changes in the knowledge of patients who became respondents before being given health education and after being given health counseling, there was an increase of 33.3% of respondents who had increased knowledge to the good category. Audio-visual media is a type of media used in learning activities by involving hearing and sight at the same time in one process or activity.

Knowledge or knowledge is the result of human sensing or the result of knowing someone about an object through their five senses. The five human senses for sensing objects are sight, hearing, smell, taste and touch. At the time of sensing to produce knowledge is influenced by the intensity of attention and perception of the object. A person's knowledge is mostly obtained through the sense of hearing and the sense of sight (Pfortmueller, et al., 2014)

Audiovisual animation education was intervened to outpatients after filling out the pre-test questionnaire. From the implementation of education, satisfactory results were obtained because there was an increase in knowledge of inpatients (Phelan, 2015). Increased knowledge through audiovisual animation education can be an effort to increase patient knowledge in an effort to prevent the risk of falling. The patient's understanding of the material presented is faster due to the addition of insight.

Animated audiovisual education is very effective to increase respondent's knowledge in preventing patient fall (Zakaria, 2015). With the guaranteed patient safety it will affect patient's recovery. The guaranteed patient safety can not be separated from the hospital monitoring and family caring to avoid from various risks than can be occured, one of this risk is risk of patient fall. This audiovisual methods is a good method to increase knowledge, because this method involve more sense in learning process, both sense of sight and sense of hearing.

V. CONCLUSION

Based on research conducted at Gambiran Hospital, this research can be concluded as follows, the level of knowledge of respondents before the audiovisual education intervention on fall risk prevention had sufficient knowledge about fall risk prevention as many as 24 people (53.3%), 18 people (40%) had less knowledge about fall risk prevention, and the remaining 3 people (6.7%) already have good knowledge about efforts to prevent the risk of falling.

The results of the study after the intervention showed that some respondents had good knowledge about preventing the risk of falling after being given education, namely 28 people (62.2%), with sufficient knowledge as many as 16 people (35.6%) and 1 person (2 ,2%) who still have less knowledge about fall risk prevention.

The results of data analysis using the Paired Sample T-Test test, namely the significance value or p value on the knowledge of 0.000 < = 0.05, meaning that H1 is accepted, it can be concluded that audiovisual animation education is effective as an effort to prevent the risk of falling in patients in the hospital.

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