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The Effect of Empowerment Education on Prevention of Incontinence Associated Dermatitis in Immobility Patients

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Abstract:***Incontinence can cause serious complications such as skin damage in the perineum. Incontinence Associated Dermatitis (IAD) is skin damage caused by exposure to urine or faces. Health education is sometimes not optimal because of its inaccurate purpose and lack of patients' involvement and empowerment. Patient or nurse empowerment-based-health education or educational empowerment is a reciprocal relation between professional health care providers and patients in which patients develop their skill, knowledge, and self-confidence to determine the focus on health care. The study aimed to find out the effect of empowerment education on preventing the incident of IAD in immobility patients. The study was quasi-experimental with two groups pre-test and post-test. Thirty-six were sample divided into two groups (control and intervention) and collected by purposive sampling. Data were analyzed by using paired t-test and an independent t-test. The results showed that there was a difference between pre and post-intervention so that there was the effect of empowerment education on prevention of the incident of IAD in immobility patients.***

Keywords*:*Empowerment education, Immobility, Incident of IAD

1. INTRODUCTION

Incontinence Associated Dermatitis (IAD) is skin damage caused by exposure to urine orfeces. This is one of several types of skin damage related to humidity or Moisture-Associated Skin Damage (MASD) caused by prolonged contact with body secretions. If this damage is not treated, it can lead to pressure injury and an increase in nosocomial infections [1]. IAD occurs not only in all parts of the perineum and perinatal region but may extend to the inner thigh and gluteal regions and the posterior and may cause extensive skin damage. This condition often occurs in patients with immobilization and the elderly, patients with chronic diseases, and patients with incontinence of urine and feces [2].

Patient or nurse empowerment-based health education, also known as empowerment education, is a reciprocal relationship between health professionals and patients where patients develop skills, knowledge, and confidence to determine the focus of health care [3]. Research by Chaghari, et al states that empowerment education is applied education, is participation-oriented, facilitates work functions, and is based on exploration [4].

Many pieces of research related to empowerment education in nursing services have been carried out. Laschinger, et al stated that the integrated model of nurse / patient empowerment can be used as a guide to creating a high-quality nursing practice work environment that produces positive outcomes for both nurses and patients [5]. Research by Amiri, Khademian, and Nikandis, this study was conducted at the ICU of Namazi hospital, Shiraz, Iran, this study aims to determine the effect of empowering nurses and nurse supervisors through educational programs on patient safety culture in the ICU room. The empowerment education program was carried out through workshops for two days (8 hours). The results of the

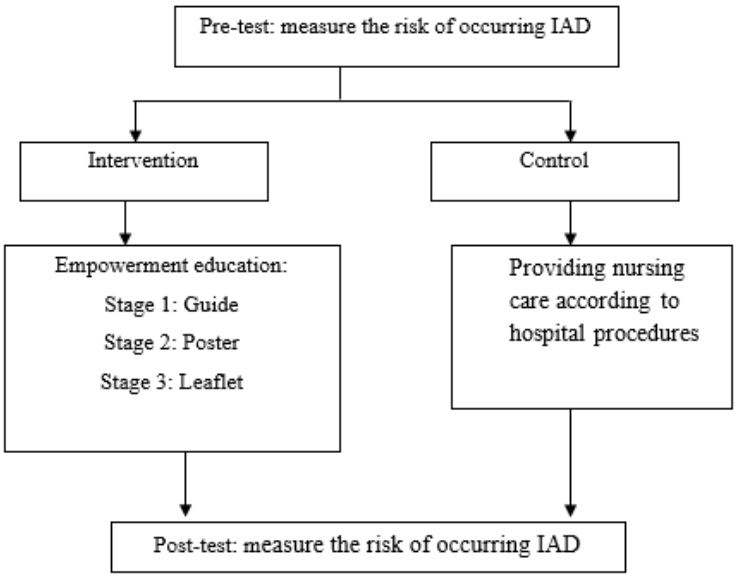
research were that the empowerment of nurses and nurse supervisors through the empowerment education program could improve the overall patient safety culture [6].

Research by Yeh, Wu, and Tung, this study aims to evaluate the relationship between patient education, patient empowerment, and patient satisfaction. The study was conducted on inpatients at four teaching hospitals in northern Taiwan. The results showed that patient education through empowerment was positively related to patient satisfaction [7].Low understanding of disease conditions and lack of empowerment or patient involvement in self-management can have a negative impact on patient health progress where patients with IAD disease get the best educational approach is education that empowers patients [3].

2. METHODS

The study was quasi-experimental with two groups pre-test and post-test. The study was conducted in RSUD ArifinAchmadPekanbaru from February 17 to March 27, 2020. Thirty-sex participants were involved in this study, 18 participants were each group with control and intervention groups. The sample was selected by purposive sampling with criteria inclusion, namely: 1) patients with urinary and/or fecal incontinence; 2) immobilization (unable to tilt left and right independently); 3) undergo inpatient care at the hospital for at least 3 days; 4) cooperative patients and 5) willing to be a respondent. Exclusion criteria, namely: 1) the patient is in a non-cooperative condition; 2) Oedema (+) in the lower extremities; 3) the patient is with decubitus, and 4) the patient is not willing to be the respondent.

The IADSeverity instrument is an instrument used to measure IAD.This observation or questionnaire format has 13 questions that describe the locations of skin that are prone to irritation due to incontinence of urine and/or stools. This measuring instrument has 5 answers including if there is redness, none (0), pink (1), red (2) if there is a rash (3) if there is skin loss (4). Using the cut-off point formula 75% of the total score (52), resulting in a value <39 is no risk of IAD, and≥39 is the risk of IAD. Data were analyzed using by paired t-test and an independent t-test.



Scheme1. Research Implementation

3. RESULTS

Based on table 1, data on the characteristics of patients who experienced immobilization, for the treatment group, the majority who experienced immobilization were 61.1% female, the majority were 30-40 years old, 55.6%, and had a second day of care 44.4%, and the majority

of causes of IAD patients due to urinary incontinence 50.0%. For the control group, the majority who experienced immobilization were female, 61.1%, the majority were aged 41-50 years 38.9%, had the second day of care 38.9%, and the cause of IAD was mainly due to urinary incontinence 55.5%.

Table 1: Frequency Distribution Characteristics of Immobilized Patients

Characteristics	Intervention		Control	
	n=18		n=18	
	n	%	n	%
Gender				
Male	7	38.9	7	38.9
Female	11	61.1	11	61.1
Age				
30-40 years	10	55.6	6	33.3
41-50 years	8	44.4	7	38.9
50-60 years	0	0	5	27.8
Daycare to				
1	8	44.4	5	27.8
2	8	44.4	7	38.9
3	2	11.1	6	33.3
Risk factors of IAD				
Urine incontinence	9	50.0	10	55.5
Faces incontinence	6	33.3	6	33.3
Urine and faces incontinence	3	16.6	2	11.1

Based on table 2, it can be explained that before the treatment of IAD scores in immobilized patients the majority had IAD scores <39 in the treatment group 61.1%, and IAD scores ≥39 in the control group were 55.6%. After treatment, the IAD score in immobilized patients the majority had IAD score decreased to 100%, had a score of ≥39 in the category of not having IAD risk in the treatment group while the control group experienced an increase in IAD risk score ≥39 were 72.2%.

Table 2: Frequency Distribution of IAD Empowerment Education in the Intervention (N=18) and the Control (N=18)

Group	Before		After	
	f	%	f	%
Intervention				
IAD score<39	11	61.1	18	100
IAD score ≥39	7	38.9	0	0
Control				
IAD score <39	8	44,4	5	27.8
IAD score ≥39	10	55.6	13	72.2

Based on table 3, it can be explained that in the intervention group, a decrease in the mean value before intervention was 25.17 and after 12.78 with a p-value of 0.0001. Based on the p-value it can be concluded that there was a difference before and after in the intervention group, so there was an effect on the intervention group. While in the control group an increase in the mean value before treatment was 6.25 and after 25.11 with a p-value of 0.331. Based on the p-value it can be concluded that there was no difference before and after in the control group, so there was no effect on the control group.

Table 3: Analysis of the Effect of Empowerment Education on Prevention of IAD in Immobilized Patients

	Mean	Min-Max	Std. Deviation	p-value
Intervention group				
Risk of IAD incident				
Before	25.17	21-30	2.526	0.001
After	12.78	8-16	2.157	

Control group				
Risk of IAD incident				
Before	25.06	20-35	3.369	0.331
After	25.11	20-35	3.394	

The difference in IAD scoring values in the intervention and control group in an immobilized, pre-test and post-test patients was analyzed using the Independent t-test statistical test, the results of the study obtained a p-value of 0.001, so it can be concluded that there were differences in the intervention and control group. (Table 4)

Table 4: Analysis of Differences in Empowerment Education on Prevention of IAD in Immobilized Patients

IAD incident	Intervention group (N= 18)		Control group (N= 18)		p-value
	Mean	Mean	Mean	Std. Deviation	
	12.78	25.11	25.11	2.157	0.001

4. DISCUSSION

Based on the results, the analysis of the research on the effect of before and after Empowerment Education on the Prevention of IAD in Immobilization Patients in the intervention group, it was found that the p-value for IAD was 0.001<0.005, so it can be concluded that there were significant differences in IAD at the time before and after the intervention.This is also following the research of Yeh, Wu & Tung, that there is a relationship between patient education, patient empowerment, and patient satisfaction which has a positive relationship [7]. It is also in line with the opinion of Notoadmojo by empowering clients to have the confidence to make decisions and manage their disease, including family, in this case, to overcome the prevention of IAD with interventions that have been carried out by researchers, namely empowerment education with several strategies, namely leaflets and posters which is conveyed by the researcher to immobilized patients and families [8].

The education provided to patients and families consists of first using a guide that was initially explained to the patient and family, then, using posters and leaflets. So, researchers maximize learning using audio and visuals. This is consistent with research conducted by Schafer et al. regarding the use of audiovisual media for education and self-management of patients with Chronic Obstructive Pulmonary Disease, that the results have a positive relationship including identifying exacerbations in patients [9].This is by research from Nuariand Kartikasarithat there is an effect of self-empowerment on the quality of life of type 2 DM patients. Just like self-empowerment in preventing IAD, type 2 diabetes mellitus is expected that patients can be independent. Nurses to further improve health promotion programs by implementing empowerment strategies in providing health education to DM patients by increasing patient involvement, providing follow-up to problems experienced by counseling participants so that they can improve patient self-empowerment in managing their disease and improving their quality of life [10]. Empowerment can build the patient's capacity to meet their needs independently, reduce feelings of sadness, increasing patient self-confidence [11]. In the study conducted by Ekaputrion the effect of empowerment-based education on increasing self-care for patients with chronic obstructive pulmonary disease (COPD) at the West Sumatra Lung Hospital, empowerment-based educational interventions affect increasing self-care for patients with COPD [12].

According to Notoatmojo, changing a person's behavior can be done by providing health education. The education provided is a process of developing abilities, skills, and increasing knowledge. One way to support the implementation of education requires the use of health education media such as booklets which are useful to stimulate interest in educational targets, overcome the limitations of time, place, language, and senses and overcome the passive

attitude of respondents, which can stimulate experiences and cause the same perception. This can support patient involvement in healing their disease, including for IAD, nurses will stimulate patient and family involvement in the prevention of IAD in patients with immobility [8].

Based on the results, the analysis of the research on the effect of before and after Empowerment Education on the prevention of IAD in immobilized patients in the control group, there was no significant difference in the prevention of IAD in the control group. The researchers assumed that in this group of control patients, no action was taken except for the usual nursing care. The families of patients who were immobilized in this control group did not receive education regarding the prevention of IAD, according to the monitoring of the patient's family researchers did not pay attention to the humidity of the pampers, did not pay attention to the rashes that occurred on the patient's skin, did not know when to replace the appropriate pampers, nutrition and food preventing IAD and not knowing other actions that can prevent IAD, thereby increasing the risk factors for IAD in patients, so that the control group increased to 13 respondents who experienced an increase in IAD. However, some patients experience improvement because of the care from the patient's family who keeps the patient's genital area clean.This is by Razor et al, IAD often occurs in immobilized and elderly patients, patients with chronic disease, and patients with urinary and fecal incontinence[2].

5. CONCLUSIONS

Based on the results of the research conducted, after the intervention, in the intervention group, there was an effect of empowerment education on the prevention of IAD, while in the control group it was no effect on immobility patients.

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