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THE EFFECTIVENESS OF THE APPLICATION OF *BEDSIDE TEACHING* METHOD THAN THE METHODS OF SIMULATION IN IMPROVING WOUND CARE SKILLS IN NURSING STUDENTS OF HEALTH POLYTECHNIC OF JAMBI

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ABSTRACT

The learning process at the Nursing Department of Health Polytechnic of Jambi has never actual patients involved in the learning process. The method that has been applied is a simulation method. This is one of the causes of the low average student's practice in the last wound care. This study is intended to • determine the effectiveness of the application of bedside teaching methods rather than simulation methods in improving the skills of students caring for wounds. This research is Quasi-Experiment, involving all second semester students of the Department of Nursing Health Polytechnic of Jambi, 2014/2015 academic year as many as 68 participants, as subjects. The instrument used is a test of care skills and a Locus of Control test. The data were analyzed using Independent T Test and Mancova Test. The results showed that the use of the Bedside teaching learning method was better than the Simulation method in shaping students ' skills in wound care after controlling the students ' internal factors (p value of 0.003).

KEYWORDS: *Bedside-teaching method*, simulation, wound care skills.

A. BACKGROUND

One of the competencies that must be owned by the student in the nursing education program is a procedural action competency of wound care. The implementation of the procedural action wound care should be implemented in a professional manner because of the unprofessional actions can lead to the patient's healing process lately.[1] According to Navanandan (2017), wound care on the patient's post-operative children using laser is an effort that is important.[2] Generally taught the skills and knowledge to learners in an institution, generally using methods or certain methods. In connection with this Surakhmad (Suryosubroto, 2009) confirms that the learning methods are ways of implementing the learning process associated with technical educators in providing a learning materials to learners.[3] There are many different methods of learning used in Jambi Nursing School educators to help students in learning. However, during this unprecedented educators involve real patients in the process of learning, especially in the study of wound care. This is likely to be one of the causes of the low average value of practice student in procedural action wound care during the last 3 years. According to Wee (2007) which cites the opinion of Osler, an expert in the field of health education, learning will not occur in the absence of the patient and the best learning is learning through a patient's own.

Learning methods that are used in the learning process at Nursing School of Jambi to train the skills of wound care is with simulation method. As a method of teaching, simulasi interpreted as a way of presenting experiential learning using a mock situation to understand the concepts, principles, or skills specific.[5] On learning methods of simulation, students have been given the opportunity to conduct nursing practice exercises, but in the execution of the simulation do not involve real patients.

According to experts, involving patients in the study gives a lot of advantages, both for students, educators, and patients themselves, that can affect students ' attitudes, increases respect for the patient, the opportunity to learning in the context of real, and other advantages. Learning methods that could involve the patients directly in the process of learning is a method of *Bedside teaching*.[4]

Bedside teaching is the method taught to learners, who his activity done at the bedside of the client and include the activities of studying the conditions of the client and

the client's required nursing care.[6] *Bedside teaching* is a method of learning that takes place in the context of the corresponding clinical teaching basic competence with regard to medical science.[7] The effectiveness of the methods of *bedside teaching* in enhancing the competence of prospective student health workers has been proven by some researchers. Wukurz and Kelly in the Wee (2007) mentions that through *Bedside teaching* learners can access the knowledge and experience of the patient, increasing self-confidence, improve skills, enhance the sense of appreciating against the patients, and implementing a learning in the context of real.[4] Meanwhile, according to Doshi and Brown (2005), method *Bedside teaching* can enhance students' professional way of thinking and can integrate clinical skills, the skills of communicating, problem solving, and decision making.[8] In addition, according to Cooper et al (1983) through his research on medical students showed that the skills of physical examination and the anamnesis (associated with gastrointestinal Pathology) which practiced with real patients, resulting in a score that significantly better at the time of the test is structured.[9]

Bedside teaching has many benefits as mentioned by Mookherjee and Sharpe (2013) are, among others: learners benefit from direct demonstration activities regarding professionalism in taking care of patients including strategies to communicate with patients and families, the Act of physical examination can be demonstrated and interpreted in the context of clinical decisions, and patient safety is assured. According to Grassi and Usury (2012), the benefits of *Bedside teaching* is presenting a wide range of opportunities to learn how to overcome the challenges of communication.[10]

Student Skills in the practice of nursing is not only influenced by the methods of learning. This is certainly also influenced by internal elements of the students themselves, i.e., *locus of control*. Robbins and Judge (2008) States that human behavior in organizations can be explained by the theory of *locus of control.*[11] According to Decy and Ryan (1985) *locus of control* refers to the condition if someone is convinced that all that is produced is under control.[12] According to Rotter (Decy and Ryan, 1985) *locus of control* internal refers to those who believe that the results, success and failure are the result of their actions and their own efforts. Individuals who have trend *locus of control* are internal individuals who have the confidence to be able to control all the events and consequences of the impact on their lives giving.[12]

According to Rotter (Decy and Ryan, 1985) *locus of control* external refers to the belief that chance, fate, Manager, supervisor, organizational and other things can be more powerful to make decisions about the life and the result of an individual. Individuals who have trend *locus of control* of the external is the individual who has the belief that performance is a result of events outside their direct control.[12] According to Ferrari, Johnson, and McCown (1995), *locus of control* have causal relationships and contributes to a person's success or failure in carrying out specific tasks.[13] Shillinger in Bastable (2002) suggests that different learning strategies are needed for groups of internal and external *locus of control*. By knowing the type of *locus of control* each student, educators are expected to determine the appropriate method of learning.[14]

Still the low average value of student of Nursing School, especially wound care skill that can harm patients, and the existence of external and internal control locus, as well as its usefulness in learning, attracting researchers to research with the title of the effectiveness of the application of the methods of *Bedside teaching* compared Simulated method in improving skill of wound care on Students of Nursing School of Health Polytechnic of Jambi. The purpose of this research is proving that the methods of *Bedside teaching* is better than method Simulation in improving wound care skills by controlling factor of internal students (*Locus of Control*).

B. Method

This type of research is Quasi-experiments with Non-equivalent *Pre-order posttest with control group* on the subject of students of Nursing School, the second year period of 2014/2015 as 64 participants (class A II as many as 32 students, and class B II as many as 32 students). The subjects in the group into two group by random or selected without random placement procedure.[15] i.e. the Group of *Bedside Teaching* methods (X_1) and group Simulation methods (X_2). The assignment of subjects to experimental groups X 1 and X 2 are performed using the draw against an existing class. Subjects that are in class II. A as a group X_1 (methods of *bedside teaching*) as much as 34 people and subjects that are in class II. B as Group X_2 (simulation methods) as much as 34 people.

Variable research is the application of methods of *bedside teaching* (X 1) and simulation methods (X_2) as free variables and wound care skills as a variable. As for the gaming variable is the internal condition of the students (*Locus of Control*).[16]

Instruments used to measure students ' skills are skills that wound instrument is composed by a team of teachers of Nursing School (0.9660 realiabilitas). To measure the internal condition of the students (*Locus of Control)* used instrument *locus of control* which consists of 30 items (adaptation of "Locus of Control Scale" by Dr. Margaret Launius, realiabilitas test 0.8945). This research was carried out at the provincial hospital of Raden Mattaher Jambi for 2 months (28 March until May 24, 2015. The Data were analyzed using *independent* T test and Mancova Test with a significant level of 0.05. This research got the approval of the Commission of ethics of health research, Faculty of medicine and health sciences, University of Jambi.

C. RESULTS

The majority of respondents are women, both at the experimental group and the control group, i.e. of 55.56% and 62.5% while their average age ranged from 19 to 21 years of age.

Measurement of the results of the treatment (student skills) measured 2 (two) times, i.e. before treatment (Pretest) and 2 (two) months after treatment (*Posttest).* The results show that the value of the initial skills (*pretest)* relatively equally between group X 1 (*Bedside teaching*) and X 2 (Simulation methods) but the value of skills after treatment (*Posttest)* occur the value between the two treatment groups. At the end of the measurement (posttest) to see that the value of the skills group treatment X 1 (Bedside *teaching* method) is higher than with the intervention group X 2 (method of simulation). More information can be seen in table 1.

Table 1: The value of the skills the respondent before and after Treatment.

Treatment	*Pretest*		*Posttest*	
	The average value	**Deviation standard**	**The average value**	**Deviation standard**
Bedside Teaching Methods (X 1)	62.738	16.52	90.778	6.09
Simulation Methods (X 2)	62.034	15.43	81.475	9.72

To find out if the difference value of skills between the two groups the treatment (X 1 and X 2) means, then performed testing with *Independent* T Test against the difference between the value of skills *pretest* and *posttest* on two groups. But before the test is done, the data difference value of skills *(Pre-posttest*) in the two groups tested the normality of data with Kolmogorov-Smirnov test, significant level of 0.05. Normality test results data indicate that data skills derived from a population that Gaussian (p value > 0.05 or 0.471). Thus, the difference in skills data revealed normal and can proceed with a test of *the Independent T test* with a significant level of 0.05.

Test results show that there is a meaningful difference between the value of the difference between the skills of the *Bedside teaching* methods with Simulation with a p value 0.05 0.007 or <. More information can be seen in table 2.

Table 2: Difference value of Skills on a group of x 1 and X 2 as well as the results of the Test T Test.

Treatment	The value of the difference in Skills (*Pre-posttest*)		p. value
	The value	Deviation Standard	
Bedside teaching methods (X 1)	28.041	14.03	0.007*)
Simulation Methods (X 2)	19.441	10.36	

a. Independent T Test
*) Level of 0.05 significant

To find out whether there is any meaningful difference between the skills the students value on both the treatment (X 1 and X 2) after considering internal factor or *Locus of Control* (LoC), then do the measurements of LoC first. *Football scores and Locus of Control* students on Group X 1 (***Bedside teaching***) is slightly higher than the rest of the Group X 2 (method of simulation). More information see table 3. Further testing done *Mancova Test* on the value of skills taking into account the value of the LoC as a variant. More results can be seen in table 4.

Table 3: *Football scores and Locus of Control* on the Group of *Bedside Teaching* and simulation.

Group Treatment	*Football scores and Locus of Control* (LoC)	
	Mean	**St Deviation**
B edside teaching (X 1 = 32 org)	17.09	4.16
Metode simulation (X 2 = 32 org)	16.28	4.64

Table 4: Skills of respondents on the treatment of *Bedside Teaching* and simulation considering the *Locus of Control* as *Co-variance.*

Treatment	The Value Of Skills Before Treatment (Pretest)		The Value Of Skills After Treatment (Posttest)		The Difference In The Value Of The Pre-wedding Posttest Skills	
	The average value	Deviation standard	The average value	Deviation standard	The average value	Deviation standard
Bedside Teaching (n = 32)	62.738	16,520	90.778	6,098	28.041	14,030
Simulation (n = 32)	62.034	15,430	81.475	9,721	19.441	10,365
p. value	0,829*)		0,000*)		0,003*)	

a. Mancova Test
*) Level of 0.05 significant

Taking into account the score of gaming variable LoC (co-variant) to see that the value of the skills in the treatment of *Bedside teaching* remains better than any group of Simulation methods (p value of 0.003).

D. DISCUSSION

On exposure to the results, note that treatment with *bedside teaching* shows results (skills wound care) significantly better than the control group on simulation methods i.e., taking into account the conditions of the locus (internal and external). These results are in line with research results of Mookherjee & Sharpe (2013) and Grassi & Riba (2012).[7] [10] On the learning method of *bedside teaching* students are given the opportunity to study through the analysis of cases, direct interaction with the patient, and the practice of directly on a patient while a student on the class simulation students just got learning opportunities via discussions, interaction with educators, and practice using the phantom.

Conceptually, the methods of *bedside teaching* are more effective in improving professional skills, including skills in wound care. As stated Mookherjee and Sharpe (2013), *Bedside teaching* is a method of learning that takes place in the context of the corresponding clinical teaching basic competence with regard to medical science. This is in accordance with the results of Lestari, Susilaningsih, and Rahayu (2009) concluded that *bedside teaching* method is very effective for improving psychomotor students.[17] Even research Aristithes (2015) shows that the method of *Bedside teaching* not only supports on skills but also supports their knowledge at both the Junior medical student or senior medical student.[18] Grassi and Riba (2012) also confirms that *bedside teaching* presents a variety of opportunities to learn how to overcome the challenges of communication.[10] Terms of communication between the *leaners* and *patients*, Ahmed and Bagir (2002) in his research also suggested that *bedside teaching* gives opportunity *trainees* to learn professionally and understand principles of communication with *real patients.*[19]

Expressed by the experts that are summarized by a Bokken, et al. (2008) that learning with real patients may increase the motivation of learners, teach the learners "things that cannot be learned from books", increasing confidence the students to interview patients, improve feelings of empathy and responsibility of learners towards patients, as well as build skills are integrated to clinical reasoning, communication, anamnesis, physical examination and.[20] In addition to the benefits related to principles of communication, learning, *bedside teaching* also gives advantages in ease of managing students. The existence of a sensitive feedback from patients pushes management more effective. In the end it will minimize the occurrence of errors committed students in patients.[21]

Further results are values wound care skills in methods of *Bedside teaching* remains better than the Simulation methods taking into account the factor of internal students. These findings fit with some of the research results of Rahim, Kadir, and Nontji (2013), namely that there is a meaningful relationship between the *locus of control* with performance of nurses.[22] Despite the different characteristics of the subject, these findings are also consistent with the results of the research Achmintarto (2012) that uses a subject employee. The results show that the *locus of control to* the positive and significant effect on performance of employees at the University of Dian Nuswantoro Semarang. Menezes (2008) is also applying its research on the subject of internal auditors. The results showed that the internal auditor has an internal *locus of control* have higher performance than internal auditors who have an external *locus of control.*[23] Nathalie (1998) also proves the difference between exertion/power on mothers who do *ergometer cycling and treadmill running* between the external and internal features.[24]

Overall this research proves that the use of appropriate learning methods (in this case it is the *Bedside teaching)* can increase student skills in wound care.

E. CONCLUSION

The use of learning methods *Bedside teaching* is more effective than the method of simulation in improving students ' skills with the controlling factor of internal students (*Locus of Control)*. The result of this research is the right solution for the problem of nursing skills in Nursing Department cuts as found in Health Polytechnic of Jambi.

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