



RESEARCH ARTICLE

IDENTIFICATION OF STUDENT'S PERCEPTIONS ABOUT MEDICAL SKILLS LEARNING SYSTEM OF URINE CATETER INSERTION AT MEDICAL FACULTY OF MATARAM UNIVERSITY

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ABSTRACT

Background: Mastery of students in medical skills is a very important aspect that will bridge the gap between clinical competence and knowledge of procedures. Based on the 2012 Indonesian Doctor Competency Standards, urinary catheter installation skills have 4A competencies, which means that a primary care doctor graduate must be able to do it independently. Students' perceptions of the learning system and learning environment will be the basis for maximizing and varying the learning system and environment. The Covid-19 pandemic is one of the obstacles for students in learning, especially in the field of medical skills. Where the learning system which was originally an offline method turned into online learning. Currently, the Faculty of Medicine, University of Mataram is also facing online learning skills. This study aims to determine student perceptions of the urinary catheter insertion skill learning system at the Faculty of Medicine, University of Mataram.

Methods: This research is a descriptive analytic study with a cross-sectional research design in the fifth and seventh semester students of the Medical Education Study Program, Faculty of Medicine, University of Mataram. Sample filling out a questionnaire about the perception of medical skills urinal insertion. Furthermore, the search for the relationship between the learning method with the results of the main exam and whether there are differences in perceptions with the student skills learning method.

Results: From 196 respondents consisting of men (34.7%) and women (65.3%), semester V (51%) and semester VII (49%) with an age range of 19-23 years. Good perception of medical skills in inserting a urinary catheter is seen from the percentage of motivational factors (96.9%), instructors (89.8%-100%), self-awareness (99%-100%), learning atmosphere (81.1%-100%). 96.9%, facilities and infrastructure (43.4%-89.3%), self-confidence (57.7%-99.5%), and clinical learning environment (89.8%). The bad perception is only found in the difference between learning on the mannequin and the patient (56.6%). The results of the bivariate study using the chi-square test found that there was no relationship between the learning method of urinary catheter insertion skills and the results of the main exam for students ($p > 0.05$), $p = 0.474$, and there was no significant difference between the level of perception and the skills learning method. student medical.

Conclusion: All students have a good perception of the medical skills learning system for urinary catheter insertion. There is no relationship between learning methods and students' main exam results. And there was no significant difference between the level of perception and the student's medical skills learning method.

Keyword: student perception, medical skills, urinary catheter insertion

INTRODUCTION

Insertion of a urinary catheter is an action performed by inserting a catheter into the bladder through the urethra which aims to help needs of elimination and as a collection of examination materials (1).

Based on the 2012 Indonesian Doctor Competency Standards, medical skills in urinating have competency 4A, which means that a primary care doctor graduate must be able to do it independently. In addition, doctors must also master all theories, principles, indications, contraindications, and complications that can arise from these medical skills (2).

Perception aspects in learning activities are currently starting to get attention with the objectives of learning activities. Students' perceptions of the learning system and learning environment will be the basis for maximizing and varying the learning system and environment (3).

Student perceptions have a relationship with student learning outcomes. According to research conducted by Ahmed et al, it is stated that students who have higher learning achievement show a more positive perception of their learning activities, while students who have low learning achievement show a negative perception of their learning activities (4).

Mastery of medical skills is a very important aspect that bridges between knowledge of procedures and clinical competence. Medical skills learning helps ensure that all students acquire the necessary mastery of the techniques and are judged

correctly before they are applied directly to real patients (5).

Currently, the Covid-19 pandemic is becoming one of the major health crises for every individual from all nations, continents, races, and socioeconomic groups. The responses needed, such as social isolation, advice to stay at home, in the community, and the closure of educational institutions suddenly changed the life of learning. Students are one of the individuals who have felt the impact of the Covid-19 pandemic. This pandemic has become one of the difficulties for students in their learning. Where the learning system that was originally face-to-face in a campus environment or practice area turned into online or daring learning, be it lectures or activities related to practice.

From some of these problems, researchers want to conduct research at the Faculty of Medicine, University of Mataram to develop a learning system for urinary catheter insertion techniques. The results of this study can be used as initial information to improve the effectiveness of the urinary catheterization skill learning system for the following year.

METHODS

The research method used in this research is descriptive analytic research with a cross-sectional research design, which was conducted on fifth semester students and seventh semester students of the Medical Education Study Program, Faculty of Medicine, University of Mataram. Sampling was carried out by total sampling technique, a sampling technique where the number of samples was the same as the affordable population, which

met the inclusion criteria and did not include the exclusion criteria.

Inclusion criteria in this study were fifth semester students and seventh semester students of the Mataram University Medical Education Study Program who were willing and still active in lectures, were or have taken part in urinary catheter insertion medical skills activities. The exclusion criteria for this study were students who were not present during the study or did not fill out the questionnaire completely, and stated that they had resigned in the midst of data collection activities. This research has received approval from the Health Research Ethics Commission of the University of Mataram.

The variables in this study were the medical skills learning system for urinary catheter insertion, the semester where the study was conducted, the student's perception level, and the student's test results in the medical skills exam for urinary catheter insertion. The data was obtained by using a questionnaire. Furthermore, the data will be analyzed descriptively, and the Chi-Square test is performed. Statistical data analysis in this study using SPSS software.

RESULTS

Characteristics of Research Respondents

Characteristics of respondents in this study include the sex of the semester, test results, and age.

Table I Characteristics of Research Respondents

Karakteristik	Jumlah(n)	Persentase (%)
Jenis Kelamin		
Laki-laki	68	34,7
Perempuan	128	65,3
Semester		
VII (offline)	96	49
V (online)	100	51
Hasil Ujian		
Lulus	186	94,9
Tidak Lulus	10	5,1
Usia		
19 tahun	11	5,6
20 tahun	78	39,8
21 tahun	93	47,4
22 tahun	11	5,6
23 tahun	3	1,5

Based on Table I, it was found that from 196 samples in this study, the number of male respondents was 68 students (34.7%) and female respondents were 128 students (65.3%). Respondents in semester VII were 96

people (49%) and semester V were 100 people (51%). The number of respondents who did not pass the main exam was 10 people (5.1%), while those who passed were 186 people (94.9%). With ages ranging from 19-23 years.

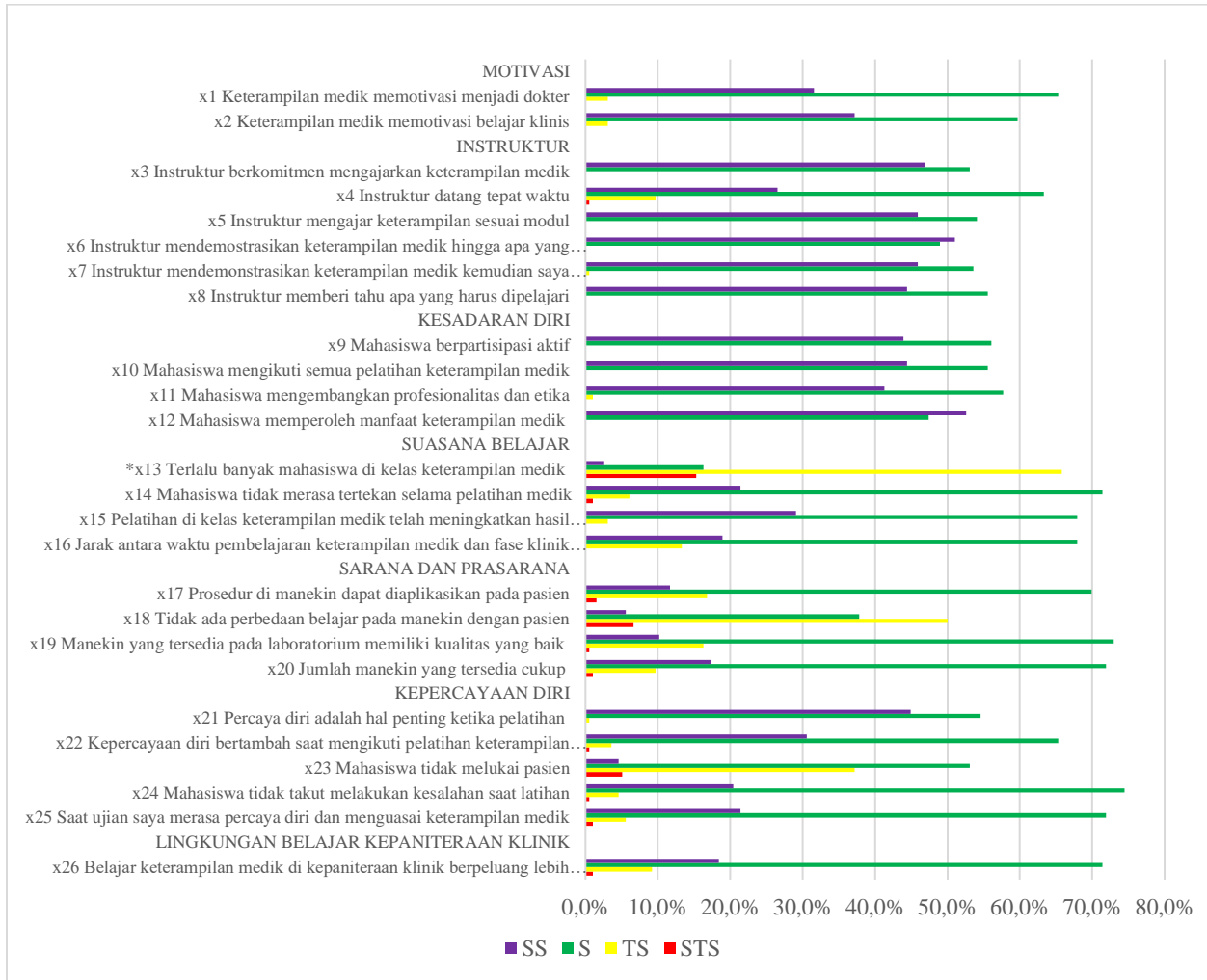


Figure 1 Level of Student Perception About Medical Skills Learning System Urinary Catheter Insertion

The motivation factor consists of 2 statement items. In statement number 1 regarding medical skills training for urinary catheter insertion motivating to become a doctor, respondents had a good perception of 96.9% and a bad perception of 3.1%. In statement number 2 regarding medical skills training for urinary catheter insertion motivating to study clinical courses,

respondents had a good perception of 96.9% and a bad perception of 3.1%.

The instructor factor consists of 6 statements in numbers 3 to 8. In statement number 3 about the instructor's commitment to teaching, all respondents have a good perception. In statement number 4 about the instructor coming on time, respondents have a



good perception of 89.8% and a bad perception of 10.2%. In statement number 5 about instructors teaching skills according to the module, all respondents have a good perception. In statement number 6 about the instructor demonstrating medical skills in inserting a urinary catheter until the students understand what I have to do, all respondents have a good perception. In statement 7 about the instructor demonstrating medical skills in inserting a urinary catheter before I did, the respondent had a good perception of 99.5% and a bad perception of 0.5%. In statement number 8 about the instructor telling what to learn, all respondents have a good perception.

The self-awareness factor consists of 4 items in statements number 9 to 12. In statement number 9 about respondents having to actively participate in medical skills classes, all respondents have a good perception. In statement number 10 about students participating in all training in medical skills in urinary catheter insertion, all respondents have a good perception. In statement number 11 about students developing an ethical professionalism approach in the medical skills class, respondents have a good perception of 99% and 1% have a bad perception. In statement number 12 regarding medical skills training for urinary catheter insertion is useful, all respondents have a good perception.

The learning atmosphere factor consists of 4 statements in statements number 13 to 16. In statement number 13 about the atmosphere in the class is not too crowded, respondents have a good perception of 81.1% and 18.9% have a bad perception. In statement number 14 about respondents not being depressed during the training, respondents have a good perception of 92.8% and 7.2% have a bad perception. In statement number 15 about training in medical skills class urinary

catheter insertion has increased self-study outcomes, respondents have a good perception of 96.9% and have a bad perception of 3.1%. In statement number 16 regarding the distance between the learning time and the clinical phase is correct, respondents have a good perception of 86.7% and a bad perception of 13.3%.

The facilities and infrastructure factor consists of 4 statement items in number 17 to 20. In statement number 17 regarding medical skills in inserting a urinary catheter that is learned with a mannequin can be applied directly to patients, respondents have a good perception 81.6% and a bad perception 18.4%. In statement number 18 about there is a difference between learning medical skills in placing a urinary catheter on a mannequin with patients, respondents have a good perception of 43.4% and 56.6% have a bad perception. In statement number 19 regarding the quality of the urinary catheter mannequin in the medical skills laboratory, it is good, respondents have a good perception of 83.2% and 16.8% have a bad perception. In statement number 20 regarding the number of urinary catheter mannequins in the medical skills laboratory, respondents have a good perception of 89.3% and 10.7% have a bad perception.

The self-confidence factor consists of 5 items in statements number 21 to 25. In statement number 21 about self-confidence is important when they perform medical skills in inserting a urinary catheter, respondents have a good perception of 99.5% and a bad perception of 0.5%. In statement number 22 regarding medical skills training for urinary catheter insertion, it increases their confidence, respondents have a good perception of 95.9% and 4.1% have a bad perception. In statement number 23 about not having to be afraid that they will hurt the

patient, respondents have a good perception of 57.7% and 42.3% have a bad perception. In statement number 24 about feeling not afraid if they make a mistake during medical skills training for urinary catheter insertion, respondents have a good perception of 94.9% and a bad perception of 5.1%. In the statement about the time of the exam they feel confident and master the medical skills of inserting a urinary catheter, respondents have a good

perception of 93.3% and 6.7% have a bad perception.

The clinical learning environment factor consists of 1 item in the statement number 26. In the statement number 26 about studying clinical clerkships it provides better opportunities to learn medical skills, respondents have a good perception of 89.8% and 10.2% have a bad perception.

Table 2 Relationship between learning methods and student main exam results

Metode/ sistem Pembelajaran	Ujian Utama		Nilai p
	Lulus	Tidak lulus	
Offline	90	6	0,474
Online	96	4	
Jumlah	186	10	

In this study also conducted a search for the relationship between the learning method of medical skills in inserting a urinary catheter with the results of the main student exam using the chi-square test, in this study there was no significant relationship because the p value was > 0.05 (0.474).

Table 3. Relationship between students' perception level and learning method

Tingkat persepsi	Metode/sistem Pembelajaran		Nilai p
	Offline	Online	
Baik	96	100	-
Tidak baik	-	-	
Jumlah	96	100	

Overall, there was a good perception of all respondents on each of the factors studied, so that with this there was no significant difference in the online and offline method of learning medical skills of urinary catheter insertion with the level of student perception in the study.

DISCUSSION

The results of this study indicate that students' perceptions of learning medical skills in urinary catheter insertion can be seen from several factors. These factors are motivation, instructor, self-awareness, learning atmosphere, facilities and infrastructure, self-confidence, and clinical clerkship learning environment.

Motivation has a relationship with the personality and positive attitudes of students in terms of perseverance, social intelligence, discipline and gratitude (6). Based on this research, the majority of respondents think that medical skills increase motivation to become a doctor and motivation to learn other clinical subjects. This is in line with previous research conducted by Hashim et al., which was conducted on 137 respondents (7). Strong motivation in the learning process of a



medical student is needed for academic success and self-improvement (6).

The instructor's ability to teach affects students' perceptions of learning medical skills. In this study, the majority of respondents had a good opinion of the instructor's ability. This ability includes the ability to demonstrate medical skill procedures correctly and a commitment to teaching responsibly, so that respondents feel they get a good picture and are able to carry out the procedures that have been exemplified. Research conducted by Erikson showed that the better the instructor's ability to teach, the better the respondent's perception of medical skills. A good instructor's teaching ability accelerates the absorption of material in a shorter time so that respondents' perceptions will be better and respondents will feel more benefit from learning medical skills (8).

In this study, respondents had good self-awareness such as following all medical skills, being professional, actively participating and considering medical skills useful for respondents. The research conducted by Flavian shows that stable self-awareness will be very useful in the progress and learning process of students in various aspects of life. Good self-awareness has an effect on increasing student academic achievement (9).

The learning atmosphere describes the quality of learning and affects student learning outcomes. A conducive learning atmosphere is characterized by comfortable instructor and student interactions so that it increases student enthusiasm and confidence in participating in lessons (10). In the study, a comfortable learning atmosphere was formed from good interactions between respondents and their medical skills group friends and instructors. This is in line with previous

research conducted by Saputra and Lisiswati that a conducive learning atmosphere will be created from the attitude and way the instructor delivers the material, the interaction between friends in the medical skills group and the enthusiasm of a medical skills group in learning these skills (11).

In this study, respondents believed that the procedures learned on mannequins could be applied directly to patients. This is in line with research conducted by Erikson that medical skills facilities and infrastructure affect perceptions of medical skills. The better the facilities and infrastructure provided, both here defined as both in terms of quality and quantity of the mannequins themselves, the more the benefits of medical skills training obtained by students will be maximized (8). However, in this study, respondents also thought that there was a difference between learning medical skills on mannequins and actual patients. This research is in line with previous research conducted by Lavanya and Kalpana, that mannequins should be more realistic. In addition, mannequin skin is different from human skin, it is not even possible to tell whether there is perforation or embolism (12).

Students who are more confident in their ability to apply more knowledge, skills and skills in taking on new challenges related to how to treat patients (13). In this study, respondents think that self-confidence is important in learning medical skills, namely to increase respondents' self-confidence. This is in line with research conducted by Erikson that the level of self-confidence affects the perception of medical skills, where respondents with high self-confidence will feel that medical skills have benefits for them and vice versa (8).



In this study, respondents thought that the clinical clerkship learning environment provided better opportunities to learn medical skills. This is in line with previous research conducted by Nielsen et al. stated that learning skills in clinical clerkships provides students with better opportunities when compared to medical skills laboratories (14). However, in this study, respondents also thought that learning medical skills was not enough if it was only done at the clinical clerkship. This is in line with previous research by Sandika that learning medical skills is needed at all levels of education so as to make it easier for students to master medical skills (15).

In this study, it was found that there was no relationship between the medical skills learning method and the student's main exam results. This is in accordance with previous research which states that there is no evidence that offline learning is better than online learning (16).

Another study also shows that student performance is better when learning online than when learning using offline methods. The same research also states that the best performance of students is using a blended learning learning system, where offline and online learning elements are combined in the teaching and learning activity system. Combining offline and online learning systems can be beneficial for students and instructors, because students and instructors can carry out efficient teaching and learning activities, while maintaining the effectiveness of learning outcomes (17).

CONCLUSION

There was no relationship between the learning method of medical skills of urinary catheter insertion and the results of the

examinations obtained by students, this also applies to the relationship between the semester of learning and the results of students' medical skills exams. In addition, there was no significant difference in the online and offline methods of learning medical skills with urinary catheter insertion and the level of student perception.

Respondents in the study mostly had good perceptions of the statement components such as motivation factors, instructors, self-awareness, learning atmosphere, facilities and infrastructure, self-confidence and clinical learning environment, both with online and offline learning methods. The perception is not good, which is only found in the factors of facilities and infrastructure, namely the difference in learning in mannequins and patients.

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