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Web-based learning media the skills of suturing rupture perineum of midwifery students

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ABSTRACT

Objective: This research aims to determine the influence of Web-based learning media on improving perineum rupture stitching skills for D-III Midwifery students.
Method: This study uses a Research and Development (R&D) research design with the Borg & Gall development model to test the use of this product. The Quasi-Experimental research with a non-equivalent control group design was conducted in January–February 2020 at AKBID Pelamonia Makassar. The sample in this study was the second semester of the Midwifery Academy Pelamonia VII Wirabuana Makassar, totaling 64 people who were divided into two groups of intervention and control. The intervention group I (WEB media giving) amounted to 32 people and control 32 people. The sampling technique used is purposive sampling. At the end of the meeting, a post-test was conducted. The statistical test used was the paired sample *t*-test and Wilcoxon test.
Results: The percentage of application assessment using the Technology Acceptance Model (TAM) questionnaire to assess the application's usability level is a very good category and can be interpreted that students accept WEB-based learning media. Statistical tests showed differences in the results of measurement I and measurement II in the removal of grade II perineum rupture in the control group ($p < 0.05$) and contributed 15.6%. In the intervention group I (WEB-based learning media), there were differences in skills before and after media giving ($p < 0.05$) and contributed 89.8% in improving the skills of the second semester Midwifery DIII students regarding the sewing of second-degree perineum rupture.
Conclusion: The use of Web-Based Learning Media facilitates and enhances students in performing second-degree perineum rupture sewing skills.

Introduction

Web-based media is one part of the internet that utilizes media sites as tremendous potential in the development of learning with online systems as a means of interactive learning media that can improve the quality of education in the learning process. One of the advantages of web-based learning media is that lecturers create learning content to increase interest and develop students' independent learning abilities.[1,2]

In the laboratory, learning is very supportive of the teaching and learning process but is not only interpreted as a place for teaching and learning activities that check and match the truth of the theory that has been taught in class. However, one of the factors influencing the success of laboratory activities is the limited materials and laboratory equipment, technicians, and laboratory assistants who are always ready to carry out laboratory activities. Besides, it is also challenging to demonstrate techniques due to the small class sizes so that students gather. However, this readiness is undoubtedly not all that can be held in every tertiary institution because of limited resources and the difficulty of doing direct experiments.[3–6]

The competency of a midwife has a significant influence on the quality of midwifery services provided at midwifery education institutions. The structure of the midwifery education program contains 40% theory and 60% practice. Practical learning aims to make students gain learning experience in terms of applying theory as training material and preparation for clinical practice application, bringing students to the formation of attitudes, skills, ability to work together, and creativity in receiving knowledge.[7,8]

At the Pelamonia Makassar AKBID in 2018, out of 106 students who did the practice of suturing perineum degree II, about 42 people graduated purely by performing work procedures perfectly, and 64 people did not graduate (OSCA results of Pelamonia Makassar midwifery students in 2018).

Several related studies have been carried out that the effectiveness of learning is influenced by the media used by educators, compared to learning that only involves text presentation. Media assistance such as videos to gain knowledge and skills are more easily obtained and studied to solve the problems presented more quickly. From the background described above, researchers are interested in conducting research entitled "The Effect of Web-Based

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Table 1
Frequency distribution of characteristics.

Characteristics	Control $n = 32$ (%)	Application $n = 32$ (%)
GPA		
Less	1 (2.5)	3 (9.4)
Well	31 (96.9)	29 (90.6)
Age		
≤19 years old	25 (78.1)	27 (84.4)
>19 years old	7 (21.9)	5 (15.6)

Learning Media on the Penitentiary Rupture Perineum Degree II Skills of Midwifery DIII Students

Method

Research sites

This research was conducted in January–February 2020 and was conducted on the recommendation of ethical approval with recommendation number 25/UN4.64.5.31/PP36/2020. This research was conducted at AKBID Pelamonia Makassar. This study has two groups, namely groups without treatment and groups providing web-based learning media.

Data collection technique

The data obtained were collected using a checklist as an observation sheet when performing second-degree perineal rupture stitching skills such as name, number, class, and grades when performing the second-grade perineum rupture stitching. Analyzing the data using the normality test using the Kolmogorov Smirnov test because the results The normality test that was found was abnormal distribution, so the researcher used the homogeneity of variance test to analyze the characteristics of the respondents, and the Wilcoxon signed ranks test to analyze the differences in the pretest and post-test skills.

Results

Table 1 shows the characteristics of respondents, including GPA and age. Student GPA between groups is not homogeneous, with the tendency of students to have a GPA > 3.00. However, by age shows homogeneous load between groups and the tendency of respondents aged <19 years.

Table 2 of the statistical test results obtained differences in the results of measurement I and measurement II of perineal rupture suturing in the control group ($p < 0.05$) and contributed 15.6%. There were differences in skills before and after learning through web-based applications ($p < 0.05$) and application giving contributed 89.8% in improving second-degree perineum rupture stitching skills in the application group.

Discussion

The web learning media application group significantly influences the students' skills in sewing second-degree perineum rupture. Web-based learning media meet the elements of education and meet the scope of learning content, including material objectives, materials, discussion forums, and reducing operational costs incurred by students to participate in learning. In addition, web-based learning media builds the enthusiasm of students to learn on their own and whenever and wherever they are, as well as assisting lecturers in transferring material that they want to be taught to students.[9,10]

Web-based learning media has certain advantages because learning time is free and can be done anywhere, and learning media that have animations or videos will improve students' practical abilities, increasing teaching and learning interactions.[11–13] This research is following the results conducted by [14,15] that the learning process using animation or video tutorials is better than non-technology learning media.

The learning process in the world of health, especially midwifery, is theoretical and practical. Therefore, lecturers' role is needed, so students become skilled when they go to the field. So lecturers need learning media to help increase student interest in improving student skills, especially the sewing of second-degree perineum rupture. In this WEB-based learning media, video or animation is used to attract interest, attention, and a means to provide understanding to students.[16–20]

So it can be concluded that the increase in skills in students who are given a WEB-based learning media application that contains videos and animations for the second-degree perineum rupture stitching.

Table 2
Differences score before and after the intervention.

Variables/ subvariables	Pre–post test results	Control $n = 32$	Application $n = 32$
Skill stitching degree II perineum rupture	*p value*[*]	<0.001	<0.001
	Difference in mean	5.313	27.125
	Contribution	15.6%	89.8%

[*] Paired sample *t*-test test.

Conclusion

The results of this study indicate an influence on the provision of web-based learning media that has a more significant contribution to the improvement of second-degree perineum rupture sewing skills.

Conflicts of interest

The authors declare no conflict of interest.

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