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Uterus Model as Learning Media to Improve Skill in Handling Post Partum Haemorrhage

Dwi Purwanti^{1(CA)}, Sriami², Titi Maharrani³

^{1(CA)}Health Polytechnic of Surabaya; Indonesia; dwipurwanti4488@gmail.com

²Health Polytechnic of Surabaya; Indonesia; sriami.amik@yahoo.co.id

³Health Polytechnic of Surabaya; Indonesia; titimaharrani@gmail.com

ABSTRACT

One of midwifery student's competences is can handle postpartum haemorrhage. Thus, it is needed learning of ideal laboratory practice through learning media of uterus model, which it resembles the real uterus organ. Meanwhile, the available learning media of uterus model is still less sufficient, hence, it needs to be conducted a research regarding learning media of uterus model that resembles its original uterus organ so that it will be easier to be understood by the students. Moreover, this research aimed at conducting evaluation of the available uterus model, arranging learning development through uterus model media, and conducting field experiment I. Design of this research was experimental research, which the research was conducted through experiment of making learning media in form of uterus model. Afterwards, it was analyzed by utilizing Test. The result showed evaluation against available uterus model, which most of them were not appropriate with uterus structure (73.16%). Development of learning media resulted uterus model product, which afterwards, it was conducted field experiment I and it showed that there was a significant difference of understanding between available uterus model and developed uterus model (p-value = 0.000). Therefore, it was suggested to conduct further research in stage II that involved test against uterus model function of development result and to recommend the development result to users and professionals.

Keywords: Learning media, Uterus model, postpartum haemorrhage

INTRODUCTION

Midwife is one of health workers that has role in reducing mortality of maternal and infant rate. Therefore, it is needed professional and quality midwife. In order to realize professional and quality midwife, it must be began from education process. Several efforts are conducted by education institution such as improving human resources of lecturer, instructure workers, facilities and infrastructures including laboratory tools, sufficient media/ model/ phantom. However, midwives' authority in Permenkes (Regulation in Health Minister) Number 28 in 2017 stated that "Bidan dalam memberikan pelayanan berwenang untuk penanganan kegawatdaruratan, dilanjutkan dengan perujukan" in English it meant that midwife in providing health service had authority to handle emergency, and it was continued with reference⁽¹⁾. In order to obtain maternal emergency treatment, particularly for handling postpartum haemorrhage, it was needed a media in real model, thus, the students had an illustration in real. Learning media was physical facility in order to communicate the content/ material of learning, such as : book, film, video, and many more⁽²⁾.

Seels & Richey (1994) formulated learning source involved all sources (data, person, tools, and goods) that could be used by students either separately or in group, and usually in informal situation, it was in order to provide learning facility. Moreover, learning source involved message, person, material, tools, technique, and layout. Media and learning sources were stated as having good quality if: a. could create significant learning experience; b. could facilitate interaction process between student and lecturer/ teacher, student and other students, and students and relevant science experts, and environment around them: c. media/ learning sources could improve student's learning experience; d. through media/ learning sources, it could change learning situation from passive students with lecturer as the only knowledge center to be active students in discussion⁽³⁾.

Model based on the experts was a reference that could be become an example for valuing a certain system. In Kamus Besar Bahasa Indonesia (Indonesian dictionary) was also stated that model meant pattern (variety, reference, and many more) from a thing that wanted to be made or resulted⁽⁴⁾. Therefore, this model was the best example and could represent an object. The model here was uterus model and its placenta. However, the use of this model was to make easier for midwifery students to obtain illustration appropriately with its original organ.

METHODS

This research was an experimental research, which was a conducted research through experiment in making learning media of uterus model. Method of Implementation (Observed / Measured Change) through several steps as followed: 1) Conducting research and collecting preliminary information (preliminary research). 2) Implementing design (formulating ability, formulating certain goal for determining the sequence of material and experiment in small scale). 3) Developing the format of beginning product (developing the format of beginning product or beginning draft). 4) Conducting preliminary experiment/ material test (it was conducted against program format that was developed whether it was appropriate or not with particular goal, analysis result of preliminary experiment as an input material for conducting revision of beginning product). 5) Conducting product revision (it was conducted based on preliminary experiment result, product that had been revised that afterwards, it would be conducted experiment). 6) Conducting field experiment (utilizing control group, thus, the obtained data was for conducting further product revision). 7) Conducting product revision (it was conducted based on result of field experiment). 8) Conducting field test (after the product was revised, it was conducted field test in order to prove that the product was more eligible and sufficient). The result of field test was used as a revision of final product. 9) Conducting revision of final product (revision that was conducted based on larger field test). 10) Dissemination and implementation (stage of communicating the result of product development) to the users and professionals through meeting forum.

Several steps which were used in this research was research in stage I and it was appropriate with the purpose of this research, including: 1) Evaluating available uterus model to midwifery students. 2) Arranging learning development with uterus model media. 3) Conducting field experiment I.

This research was conducted in Department of Midwifery, Health Polytechnic of Surabaya Ministry of Health, which was consisted of 3 locations: Department of Midwifery Diploma (D3) of Sutomo, Bangkalan, and Magetan, and also D4 of Midwifery. Samples in this research were some midwifery students who were in Semester V (fifth) at Department of Midwifery, Health Polytechnic of Surabaya Ministry of Health in academic year of 2017/2018. The students were 139 students. Data analysis in this research utilized analysis with Paired T-Test with $\alpha < 0.05$.

RESULTS

Evaluation Result of Available Uterus Model

Table 1. Result of respondent's assessment against learning media of available uterus model at Department of Midwifery, Health Polytechnic of Surabaya Ministry of Health in 2017

Option	Assessment											
	No		Less		Almost		Clear		Very Clear		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
Uterus model resembled uterus shape	2	5.26	$\frac{2}{2}$	57.89	8	21.05	6	15.80	0	0	38	100.00
Inside part in uterus model that could be seen	30	78.94	7	18.42	1	2.63	0	0	0	0	38	100.00
Shape of uterus model after birthing	14	36.84	$\frac{2}{0}$	52.64	2	5.26	2	5.26	0	0	38	100.00
Seemed a pressure on anterior fornix	30	78.94	7	18.43	1	2.63	0	0	0	0	38	100.00
Uterus model that could be folded	24	63.16	9	23.69	2	5.26	3	7.89	0	0	38	100.00
Seen a change of hand from obstetric shape into fist shape	27	71.05	9	23.69	0	0	2	5.26	0	0	38	100.00
In uterus model, it was seen placenta	31	81.58	5	13.16	2	5.26	0	0	0	0	38	100.00
Seemed bleeding out from vaginal introitus	33	86.84	3	7.89	0	0	2	5.27	0	0	38	100.00
Seemed hand-sweeping in uterus while manual placenta	31	81.58	6	15.79	0	0	1	2.63	0	0	38	100.00
Seemed releasing placenta while manual placenta	30	78.95	5	13.16	0	0	3	7.89	0	0	38	100.00

According to table 1. it was obtained that more than half respondents (57.89 %) answered that uterus models resembled less from the original uterus. Most of inside part in the uterus models (78.94%) did not resemble / could not be seen the inside part of the uterus. Besides, most of the uterus models (52.64%) less resembled the

uterus shape after birthing, most of the uterus models (78.94%) did not resemble / did not seem the pressure of anterior fornix, most of the uterus models (63.16%) did not resemble / could not be folded, most of the uterus models (71.05%) were not seen the change of hand from obstetric shape into fist shape, most of the uterus models (81.58%) were not seen the placenta in the uterus, most of the uterus models (86.84%) were not seen the bleeding out from vaginal introitus, most of the uterus models (81.58%) were not seen the hand-sweeping in the uterus while manual placenta, and most of the uterus models (78.95%) were not seen the release of placenta while manual placenta. However, the average value of evaluation result against available uterus models was most of the uterus models (73.16%) were not appropriate with uterus structure.

Development in Learning Media of Uterus Model

Development in learning media of uterus model was conducted through several steps as followed: 1) Formulating ability, 2) Formulating particular goal, 3) Developing format of preliminary product (such as developing design of preliminary product or preliminary draft)

According to questionnaire result against the assessment of available uterus model and in order to improve skill in handling postpartum haemorrhage, it needed to be developed sufficient uterus model with characteristics: 1) Resembling original uterus shape, 2) Transparent, 3) Elastic consistency, 4) Material was easy to be obtained, 3) Placenta in the inside of uterus seemed from the outside, 5) New product (it was not an imitation from the existing model)

Conducting preliminary experiment/ material test (it was conducted against developed program format whether it was appropriate or not with the particular goal, analysis result of preliminary experiment as an input material for doing revision of beginning product).

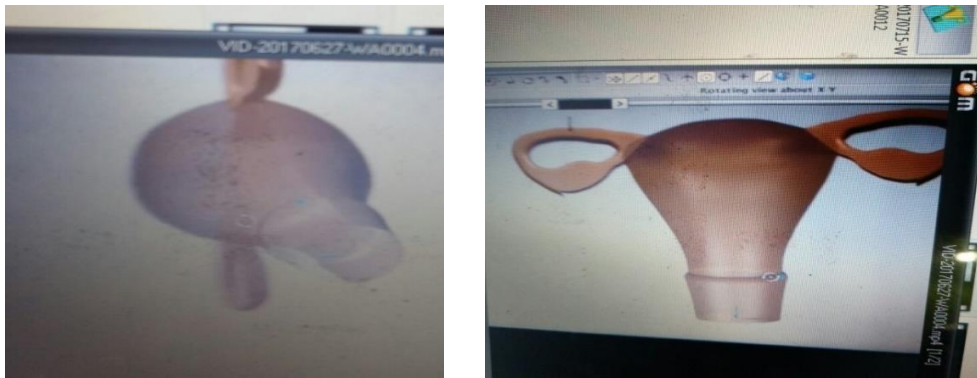


Figure 1. Design of Uterus Product in 3D (3 Dimension) before Revision

Result of Focus Group Discussion (FGD)

Table 2. Result of Focus Group Discussion (FGD)

Issue Strategy	Possible Cause	Result of Focus Group Discussion (FGD)	Research Analysis
It still had not been optimal regarding practical learning in handling postpartum haemorrhage for students in Midwifery Department	It was less sufficient regarding learning media of uterus model as an effort for improving skill in handling postpartum haemorrhage There was still no uterus model product that was appropriate with exact learning goal.	There was sufficient uterus media for learning in handling postpartum haemorrhage due to uterine atony with bimanual compression and retention of placenta with manual placenta. It needed an innovation of development in uterus media that was conducted by lecturer through conducting research.	Midwifery education institution still utilized available uterus media and it had not illustrated uterus that was appropriate with the exact learning goal. Midwifery students while learning in handling postpartum haemorrhage due to uterine atony and retention of placenta did not seem from the conducted steps.
Midwifery students had not understood well regarding the action in bimanual compression and manual placenta after obtaining practical learning.	Parts of uterus did not seem when the action was conducted. During the action of internal bimanual compression, which the hand pressed, the anterior fornix was not seen. The movement of hand and part of placenta did not seem.	It was needed transparent learning media of uterus and it was seen its inside parts and hand movement while doing an action.	The practical learning through sufficient media helped midwifery students to ease in understanding against action procedures and improving skill in handling postpartum haemorrhage due to uterine atony and retention of placenta.

DISCUSSION

Result of this research was obtained that the assessment of learning media against the structure of available uterus model and developed uterus model for handling postpartum haemorrhage due to uterine atony with internal compression and handling postpartum haemorrhage due to retention of placenta with manual placenta showed that there was a significant difference of understanding between by utilizing available uterus model and another uterus model of development result (by utilizing paired T-Test and it was obtained P value was 0.000 or less than 0.05). Learning media through uterus model of development result showed greater understanding level rather than through available uterus model. According to Seels & Richey (1994)⁽³⁾, they formulated that learning sources, including all sources (data, person, tools, and goods) could be used by the students either separately or in group, usually in informal situation, it was for providing learning facility. Learning media was all of sources which were used for communicating the message, stimulating thought, feeling, attention, and student's will. Thus, it could support for learning. However, media and learning sources could be stated having good quality if: 1) could create significant learning experience, 2) could facilitate interaction process between student and lecturer/teacher, student and other students, student and relevant science experts, and also environment around them, 3) media/ learning sources could improve student's learning experience, 4) by media/ learning sources, it could change learning situation from passive students with the teacher as the only knowledge center to be active students in discussion and media was stated effective if it could create significant learning experience, could facilitate interaction process between student-lecturer/teacher, student-student, student-competent person, student-environment, could improve learning experience, could change learning situation from passive student with teacher as the only knowledge center in learning to be active students in discussion and exploration in searching information, experience through several sources and things. In a learning, one of certain teaching methods would influence types of appropriate teaching media although there were still several other aspects that must be noticed more in selecting media, such as teaching goals, types of duty and response which were expected for the students to be understood after teaching process, and learning context, including student's characteristic. Nevertheless, it could be stated that one of main functions of teaching media was as a teaching tool that influenced learning climate, condition, and learning environment that was managed and created by the teacher/lecturer. Hence, selecting exact learning media would achieve its learning goal because the use of learning media in teaching and learning process were: 1) could clarify the presenting message and information, thus, it could expedite and improve process and learning result, 2) could improve and direct students' attention, hence, it could cause learning motivation, more direct interaction between students and their environment, and possibility for the student to learn by self based on his/ her interest and ability, 3) could overcome the limitation of sense, space, and time, 4) could give similarity of experience to the students.

CONCLUSION

Conclusion the uterus model that has been obtained have many incompatible with uterus structure, while the development uterus model have structure more easily to understood. It is recommended to produce an uterus model according to the learning objective. It is necessary to conduct a research test on the function of the uterus development model.

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