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Sim-Lab Versus Traditional Lab Training On Maternity Nursing Students' Satisfaction & Self-Confidence

Eman M., Ahmed andSabah M., Mohamed
Assistant professor in maternity & gynecological nursing department
Faculty of Nursing-Ain-Shams University.Egypt

Abstract:*Effective clinical teaching method should positively affects student satisfaction. This study aimed to evaluate the effect of sim-lab versus traditional lab training on maternity nursing students' satisfaction & self-confidence. A comparative quasi experimental study was utilized. The study conducted at clinical maternity laboratory skill at faculty of nursing Ain Shams University. A convenient sample of two hundred students included in the study, those students were divided into two equal groups (simulated and traditional). Using a high fidelity simulation, procedure was developed to teach student postpartum skills. Data were collected through two tools; Tool 1: self-administered questionnaire sheet to assess students' data &clinical lab preparedness.Tool II: Student's satisfaction & self-confidence assessment tool to evaluate student satisfactionwith teaching strategy & theirself-confidence, in addition to supportive material related to simulation. The study revealed that therewere significance differences between simulated group and traditional group in students' satisfaction related to clinical teaching method, and their self-confidence.The study concluded that sim-lab as a clinical teaching strategy is effective on enhancing students' satisfaction and level of confidence. The researchers recommended integrating sim-lab as a clinical teaching method in maternity student teaching curriculum; further researches are needed to evaluate the effect of sim-lab versus other types of clinicalteaching methods on student competency.*

Key wards:*sim-lab, satisfaction, self-confidence, clinical teaching*

I. Introduction

Nursing is a profession where practical and theoretical knowledge needs to be highly integrated, and clinical practice is significant for the professional development of undergraduate nursing students. The shift from traditional instructional methods toward student-centered teaching challenges nursing faculty to create learning experiences that will develop safe and competent graduates. Going out into the clinical field can be stressful for nursing students. They know that mistakes can seriously affect a patient's outcome. Therefore, failure is not an option. Students may end up being overly cautious and unsure of decisions or they might be disastrous Nursing faculties are always looking for more effective teaching methods that enhance student satisfaction and improve his development of self-confidence (1).

Demonstration as a traditional lab training refers to the visual presentation of the action and activities or practical work related to the facts and principles of a delivered lesson by the teacher in the classroom (2). Traditional teaching methods usually don't meet students' requirements to be active learner, as they don't allow time for independence, critical thinking, this require nursing educators to shift from a teacher centered to student – centered approach, which can foster independence in learning, creative problem- solving skills, a commitment to life- long learning and critical thinking(3).

Technological innovations are advancing practice across all domains of education and industry, and the same is true in nursing education. Sim-lab orSimulation is gaining popularity as a means to provide innovative learning experiences and foster a richer understanding of didactic content. Simulation activities involve controlled representations of actual clinical events. as a strategy –not a technology –to mirror, anticipate, or amplify real situations with guided experiences in a fully interactive way."(4).

Sim-lab or Simulations in health professional education take the forms of role play, videotaped interactions, case studies, demonstrations, computer-based learning modules, online activities, standardized patients, virtual reality applications, and mannequins or plastic body parts. Simulations are often discussed in terms of 'low fidelity' vs. 'high fidelity', a distinction that appears to be closely linked to the level of technological sophistication they demonstrate (5). High fidelity refers to sophisticated computerized simulation of whole patients ('patient simulators') or various anatomical parts (6).Fidelity is the term utilized in the simulation domain to describe the degree of accuracy of the system being used. The purpose of simulation is to be realistic in a manner adequate to convince the user that the scenario performed resembles real-life. High-fidelity simulation is a relatively new area in nursing education and utilizes high technology simulation monitors and computers. This technology offers new avenues for teaching student nurses scenarios as well as critical thinking and reflection on lived experience and practice(4)

The opportunity for students to deliver care in a safe manner in today's high-risk, complex health care environment is limited. Situations involving high-risk patients are not ideal for student learning experiences. Simulation allows students to practice skills and apply nursing knowledge in a safe environment (7). In the simulated environment, simulations using human patient simulators are student-centered and provide students with opportunities to practice decision making, problem solving, and team member skills in a non-threatening way (8).According to (9), simulation is useful for teaching and valuating specific clinical skills and provides a way to increase safety, decrease errors, and improve clinical judgment. Use of simulation can support students' competency development, moving them further along the continuum toward competent performance and the ability to evaluate and reflect on the activities in a non-threatening area these competencies will positively affect students' satisfaction and enhance their level of self-confidence(3).

Student satisfaction with learning is defined as the degree to which students believe they have opportunity to be involved in a learning activity and to receive feedback about their learning. Student Self-confidence is defined as "confidence in oneself and in one's powers and abilities". People with self-confidence believe themselves to have the ability

to handle a situation or deliver nursing care in a correct, appropriate and an effective way. This process occurs in an environment that respectfully challenges students as they participate in the learning experience, The role of the clinical teacher in enhancing student satisfaction is associated with "pacing the student to professional competency," which involves diagnosis of readiness, selection of clinical problems, supervision, and evaluation. These categories, although not exhaustive or exclusive, provide a useful framework for considering the functions of the clinical teacher that may enhance student satisfaction by using effective clinical teaching strategies that are appropriate for student needs and enhance their development (10).

Justification ofthe Problem

The largest health discrepancy in the world is maternal mortality with most deaths occurring around the labor, delivery and postpartum period. The presence of skilled qualified competent nurses, optimal student Learning for high quality maternity care is a leading factor in averting maternal death and disability., (10)The ultimate goal for nursing faculty is to produce nursing graduates that think critically and apply technical skills in complex patient care situations. Given the increasing complexity in the health care environment, realistic educational experiences that give students the chance to hone their skills before interacting with real patients are more important than ever. The demands for change in curricula have escalated in the last decades, it's a widely a knowledge that a nursing curricula should overtly and systematically foster the development of the behaviors and skills that graduates will require to fulfill the societal expectations of the health care professionals. In Egyptian nursing, there is limited research on the effectiveness and outcomes when using simulators and simulations on students' satisfaction regarding clinical teaching methods and its consequences on their self-confidence.

Aim of the Study

Evaluate the effect of sim-lab versus traditional lab training on maternity nursing students' satisfaction & self-confidence.This aim will be achieved through:

1. Assess students' satisfaction & self-confidence trained using traditional lab and sim- lab
2. Compare betweenstudents' satisfaction & self-confidence trained using traditional lab& who trained using sim-lab

Research hypothesis

Sim-lab as a teaching strategy has a positive effect on maternity nursing students' satisfaction & self-confidence than traditional laboratory training.

Subject and Methods

Design

A comparative quasi-experimental posttest design was used. The research compared the effect of Sim-lab versus traditional lab training on satisfaction & self-confidence of nursing students

Participants/Setting

The convenience sample was recruited from Third -year nursing students N = 200 were involved in the study divided into two equal groups (study/simulated and control/traditional). The study was conducted at Maternity clinical Lab. in faculty of nursing, Ain Shams University during the course entitled maternity & gynecological nursing. Data was collected at the beginning of the second semester in the academic year 2013/2014, and at beginning of first semester of the academic year 2014-2015 second semester

Exclusion criteria are previous experience with sim-lab.None of the students in either group had been exposed to simulation previously.

Tools of data collection

I. Self-administered questionnaire the researchers constructed a questionnaire sheet after reviewing the related literature. It was divided in 2 parts and Consisted of (41) questions of open and closed-ended types: *The first part;* included assessment of student personal data and past clinical experience (questions: 1- 8). *Second part:* included students assessment of clinical laboratory regarding its preparedness: questions (9-20) , training process: questions(21- 28) , trainer characteristics questions (29- 32), and teaching strategies & tool of evaluation(procedure book) : questions(33- 41). In addition to open-ended questions to assess student's perception of weakness and strengths of simulationto reported by simulated group.It took 20 minutes to be fill by students

II. Student satisfaction and self-confidence assessment tool in lab. Training adopted from (11):

It was used by the researchers to evaluate student self-confidence and satisfaction regarding clinical teaching strategy for postnatal management. A 12 statements of Satisfaction and Self-Confidence in learning questionnaire. It took 10 minutes to be fill by students. The instrument was divided into two subscales:

- Satisfaction with current learning: it consisted of 5 statements (from1 to 5) about students' personal attitudes about the instructions they received during their training activity, it ranged from strongly disagree(0), disagree(1), agree(2), and strongly agree(3).The statements are;
    1. The teaching methods used in this skills were helpful & effective
    2. The method of training provided me with a variety of learning materials & activities to promote my learning for needed skills
    3. I enjoyed how my instructor taught the skills
    4. The teaching materials used in this skills were motivating & helped me to learn
    5. The way my instructor(s) taught the skills was suitable to the way I learn

- Self-Confidence in learning strategy: it consisted from 7 statements (from 6 to 12) about students' personal attitudes about the instructions they received during their training activity, it ranged from strongly disagree(0), disagree(1), agree(2), and strongly agree(3).The statements are;
    1. I am confident that I am mastering the content of the training activity that my instructors presented to me.
    2. I am confident that the training covered critical content necessary for the mastery of the curriculum.
    3. I am confident that I am developing skills & obtaining the required knowledge from this training to perform necessary tasks in a clinical area
    4. My instructors used helpful resources to teach this skills
    5. It is my responsibility as the student to learn what I need to know from this method of training
    6. I know how to get help when I do not understand the concepts covered in the this method of training
    7. I know how to use this method of training to learn critical aspects of these skills.

Scoring system

All items were rated using a Likert-type scale with 1 being low and 5 being high. Total scores could range from 12 to 36 & it divided into two parts:

1. Total score for student satisfaction:

- Total score of 6 to 15 is considered as satisfied
- Total score of 0 to 5 is considered as unsatisfied

2. Total score for student self-confidence:

- Total score of 8 to 21 is considered as confident
- Total score of 0 to 7 is considered as unconfident.

In addition to Supportive materialcovered the following items; concept of clinical teaching, sim-lab, demonstration, types of simulation, advantages/disadvantages of simulation, applied situations ……

Validity and Reliability

These tools were reviewed by jury of 7 expertise in the field of maternity and gynecological nursing to test its contents and face validly. Reliability was done by Cronbach's Alpha coefficient test which revealed r = 80.2.

Administrative Design andEthical Consideration

The necessary official approval was obtained from the Dean of the Faculty of Nursing Ain Shams University. The aim of the study was explained to each student and informed consent to participate was obtained. They were given an opportunity to refuse to participate and they could withdraw at any stage of the research. Additionally, they were assured that the information would be confidential and used for the research purpose only. Without any effect on their current at future academic course assessment

Field Work

Prior to data collection, Pilot study was conducted for (20) students. It was conducted to evaluate the efficiency and content validity of the tool, to find the possible obstacles and problems that might be faced during data collection. Students included in the pilot study were excluded from the sample, to avoid contamination of research sample.

A data collection for this study was carried out in the period fromthe beginning of the second semester in the academic year 2013/2014, and at beginning of first semester of the academic year 2014-2015.The researchers first explained the aim of the study to the participants and reassure the students that information collected would be treated confidentiality and that would be used only for the purpose of the research without implication for their course grade .implementation phase was divided into two stages:

Assessment Stage

All students were firstly assessed for personal data and past clinical experience at classroom by self-administered questionnaire (part 1) .Then the researcher assigned them randomly by having the students draw cards either labeled A (study/simulation group)., or B (control/traditional group). After arriving of their scheduled clinical session at laboratory setting. The students either control group or study group were divided into 5 groups, each group (20) students in the second semester of the academic year 2013- 2014 divided into 2 subgroups of 10 students (total 100 students), and 14 students in first semester of the academic year 2014 -2015 (total 135 students), with drop out of 35 student in both groups because of absent of any session, or incomplete data collection sheets by some students.

2. Implementation stage: it divided into 2 phases

Phase 1: Educational & training phase

a. For study/simulation group:

The simulation group was assigned to participate in clinical simulation at lab regarding nursing care for immediate post-partum period using a high fidelity simulation, procedure was developed to teach student postpartum skills.High fidelity Advanced Childbirth Simulator was used. It is designed to provide a complete birthing experience before, during and after delivery. The birthing manikin touch screen vital signs and perinatal monitors provide students with feedback provided in real clinical settings. This Simulation is high in all fidelity types as it is situated in the maternity nursing skills laboratories, which is set up and fully equipped to simulate a 2 beds hospital ward.

At first The simulation group was given an educational session included brief introduction to the simulation experience which included watching a 10-minute produced video portraying woman experiencing immediate postnatal

period; which consist of Complete postpartum assessment using BUBBLE HE technique., Clinical procedures including fundus & Lochia assessment and perineal care & examination, in addition to Dealing with postpartum woman problems as after pain and perineal pain in addition to health education related to these problems.

Each section consisted of 8-10 students. The simulation begins with all students listening to client's report. This report gives detail of client diagnosis, reason for admission, length of stay, current condition etc. Students hold a short meeting to make a decision about work allocation. The student's practice was recorded and used for debriefing and evaluation. Debriefing was done every 40 minutes of practice for 20 minutes

After the educational session, students were assigned to participate and interacting to clinical scenario regarding management of postpartum period "the clinical scenario included situations developed by the researchers and similar to those in the educational video session".

Sessions plan for course

phase	process
PRE-BRIEFING: Before the Day of the Simulation	▪ In advance of simulation event day, provide students with case stem, learning objectives, healthcare provider orders, and preparatory activities [questions, videos, readings, etc.].
BRIEFING Day of Event	▪ Highlights new & prior concepts that apply to this event ▪ Makes explicit ties to theory and previous learning ▪ Reviews learning objectives ▪ Explains assessment [formative-summative]/evaluation Established Rules of Engagement ▪ Fidelity Modulation is made explicit ▪ Provide info event flow information ▪ Explains roles E.g. observer ▪ Students are given the opportunity to voice concerns and questions ▪ Provides equipment/environmental overview
EVENT Scenario	Allow scenario to unfold without interruption, or as planned
DEBRIEFING: Reaction Phase	▪ Can use Plus Delta Gamma process to quickly ascertain key pluses, key need for change, important evidence used. ▪ Plus: What went well? ▪ Delta: What needed improvement? ▪ Gamma: To make changes, what would you base your suggested changes on? Standards, Guidelines? (Gamma should come later in the understanding phase)
DEBRIEFING: Understanding Phase	Advocacy-Inquiry 1. Observation and Remark Advocate for you position, make clear what you observed and offer critical analysis or appreciative "good" judgment statements that are balanced with inquiry and a genuine curiosity to uncover learner frames. 2. Inquire and Probe into the Drivers behind students' thinking (their 'frames'*) and actions that they think lead to the observed event or result. Seeks to uncover others' valid viewpoints. 3. To promote deeper reflection, employ double loop learning and explore the broader context and encourage critical thinking about ALL contributing factors. 4. Discover and Plan with the students, ways to close performance gaps.
DEBRIEFING: Wrap-Up Summary Phase	▪ Inquire about how students feel about the simulation as a whole and what learning they will take away ▪ Ask students to create an intention or concrete plan for how they will apply their learning

b. For Control/Traditional Group

The researcher first discussed the aim and requirements of the procedure with the students and then displayed the procedure on a mannequin for 20 minutes. Then, each student practiced the procedure for 15 minutes on the mannequin and explanation of nursing interventions using demonstration on doll regarding immediate post-partum practical skills included: "fundus and Lochia assessment, perinea care, and perineal examination. The total time of this method was 35 minutes.

Phase 2: Student Evaluation

Students asked to fill assessment tool regarding laboratory preparedness to assess training process, trainer characteristics and teaching strategies & tool of evaluation (procedure book), strengths & weakness of simulation as reported by simulated group using tool I part 2 developed by researchers, it took 15 minutes to be filled by students. Students were evaluated for their satisfaction with teaching method and self-confidence during lab training using tool II, it took 10 minutes to be filled by both groups.

A comparison between two groups (simulation group and traditional group) was done to evaluate the effect of two clinical teaching strategies on traditional and simulated groups to investigate the research hypothesis.

Limitations ofthe Study

- Data collection was somewhat difficult and exhausted due to the necessity of researcher to assess and evaluate each student alone using various tools of data collection.
- Dropout rate of 35 students in both groups because of student absenteeism during any session or due to incomplete

data filled by students.

Statistical design

Data entry was done using Epi-Info 6.04 computer software package, while statistical analysis was done using Statistical Packages for Social Science (SPSS) version 18.0. Quality control was done at the stages of coding and data entry. The collected data was analyzed and results were presented in tables and graphics using frequency distribution tables. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Qualitative variables were compared using chi-square test. Test of significance was used to determine whether there is a statistically significant difference between the study and control groups.

- Statistical significance was considered at P-value < 0.05.
- Non-significance difference obtained at P-value > 0.05.
- Highly significance difference at P-value < 0.01.
- Bivariate analysis was used to compare the summary values from the two groups.

II. Results

Table (1) illustrates that 68% of simulated group are females compared to 70% in traditional group, and 98% of students are single in both simulation and traditional group, this table also shows that 62% of simulated group from urban area compared to 68% in traditional group, and 82% of simulated group has secondary education while 90% in traditional group

Table (2) shows that 80% of simulated group has not past nursing experience while 60% of traditional group has past experience, 66.7% of them has past nursing experience in private hospital, their experience in different department with higher percentage; (43.3%) in intensive care unit.

Table (3) illustrates that the only significant difference is observed in the different aspects of training process in comparison between two groups , as 98% of the simulation group reached satisfactory agreement withtype oftraining methodcompared to 42% of the traditional group.

Table (4) This table shows highly significant difference between simulated & traditional group regarding satisfaction with current training, as 88% of simulated group are satisfied with current method compared to 78% in traditional group. It also illustrates that 92% in simulated group reached self-confidence compared to 62% in traditional group with highly statistically significance difference between two groups.

Table (5)this table indicatesStrengths & weakness of Simulation as reported by the simulated group, the simulated group lists sim-lab strengths as follow; enhanced assessment and decision-making skills, absence of patient risk, reflection on clinical decision making &retention of knowledge related to procedures (70%, 60%, 55%, 35% respectively). On the other hand they lists its' weakness as follow; time-consuming, doesn't really close to clinical practice& the material provided was insufficient(30%, 21% & 5% respectively).

Table (1): Personal data of studied nursing students

Items		Groups			
		Simulation method (n=100)		Traditional method (n=100)	
		No	%	No	%
Gender	Female	68	68.0	70	70.0
	Male	32	32.0	30	30.0
MaritalStatus	Single	98	98.0	98	98.0
	Married	2	2.0	2	2.0
Residence	Rural	38	38.0	32	32.0
	Urban	62	62.0	68	68.0
Education	Secondary school	82	82.0	90	90.0
	Technical school	18	18.0	10	10.0
Age in years (Mean±SD)		21.04±0.64		20.74±0.64	

Table 2 Comparison between simulated group and traditional group regarding past nursing experience

items		Groups			
		Simulation method (n=100)		Traditional method (n=100)	
		No	%	No	%
Past experience	Yes	30	20.0	60	60.0
	No	70	80.0	40	40.0
Place	Governmental hospital	8	26.7	10	16.7
	Private hospital	22	73.3	40	66.7
	Polyclinics	0	0.0	10	16.7
Department	Surgery	4	13.3	4	6.7
	Emergency room	6	20	4	6.7
	Pediatrics	2	6.7	4	6.7
	ICU	5	16.7	26	43.3
	Ob&Gyn	3	10	4	6.7
	Dental	0	0.0	2	3.3
	Incubators	0	0.0	2	3.3
	Not specified	10	33.3	14	23.3
How long (N, Mean±SD)		30, 1.9±0.99		30, 2.43±1.4	

Table 3 Comparison between simulated group and traditional group regarding satisfaction with different aspects oftraining process.

items		Groups: Simulation method No	Simulation method %	Traditional method No	Traditional method %	Chi square	p value
Training Place	Unsatisfactory	26	26.0	32	32.0		
	Satisfactory	74	74.0	68	68.0	0.437	0.509
Training Material	Unsatisfactory	12	12.0	20	20.0		
	Satisfactory	88	88.0	80	80.0	1.19	0.275
TheTrainer	Unsatisfactory	4	4.0	12	12.0		
	Satisfactory	96	96.0	88	88.0	2.174	0.14
Training method	Unsatisfactory	2	2.0	18	58.0		
	Satisfactory	98	98.0	82	42.0	7.111	0.008*

Table (4) Comparison between simulated group and traditional group regarding satisfaction with clinical teaching methods & students' level of confidence

items		Groups: Simulation method No	Simulation method %	Traditional method No	Traditional method %	Chi square	p value
Satisfaction with current training	Unsatisfactory	12	12.0%	22	22.0%		
	Satisfactory	88	88.0%	78	78.0%	1.772	0.003
Self Confidence in current method	Unconfident	8	8.0%	38	38.0%		
	confident	92	92.0%	62	62.0%	12.705	0.001

Table (5) Strengths & weakness of Simulation as reported by the simulated group

Items	No= 100	%
Strengths		
▪ Enhanced assessment and decision-making skills	70	70
▪ Retention of knowledge related to procedures	35	35
▪ Absence of patient risk	60	60
▪ Reflection on clinical decision making	55	55
Weakness		
▪ Time-consuming	30	30
▪ Doesn't really close to clinical practice	21	21
▪ The material provided was insufficient	5	5

III. Discussion

Considering students' self-confidence in maternal clinical training is of great importance, because students are often anxious in the beginning of these courses (12) This is due to their clients being irritable because perinatal period is an exciting and anxious time for the woman and her family, immediate postpartum period represents the beginning of a major life changes for the mother & her partner. Moreover, relatives are usually present at the time of care, and this can be stressful and threatening for nursing students(13).

Nurse educators must address the challenge of educating and ensuring the competence of new graduate nurses and using simulators can be an integral part of this process. Development of safe nursing practice through the use of simulation for entry-level baccalaureate nursing students requires nurse educators to carefully consider the use of this strategy. There is little empirical literature on the effect of simulation on the self-confidence of students in performing psychomotor skills. Therefore, the researchers decided to assess the effect of simulation method on nursing students satisfaction & their self-confidence during training related to maternal postpartum management through an experimental study.

The present study shows highly significant difference between simulated & traditional group regarding satisfaction with current training,as 88% of simulated group are satisfied with current method compared to 78% in traditional group. It also illustrates that 92% in simulated group reached self-confidenceduring lab training compared to 62% in traditional group with highly statistically significance difference between two groups. This finding was in similarity with a study conducted by (14)that reported positive results for the simulation experience. Overall, students were satisfied with simulation as a teaching method.

On the same line with a research, done by(15) who showed that using the simulation technique leads to satisfaction and self-confidence.Students' self-confidence has a significant impact on their understanding and feeling of success in their

clinical practices (16)Feeling of efficacy, self-esteem, and self-confidence influence students' ability to accept their role as a nurse (17)In the research of (18) a significant increase was observed in the level of students' confidence, who were trained clinical skills using simulation, compared to the traditional training group in areas such as diagnosis and symptoms of disease, patient assessment, nursing interventions, and evaluation. (19) indicated the students' self-confidence score showed a significant increase in the simulation group after the intervention in comparison to other groups in pediatric care.

These results agree with the descriptive study by (20) on ten newly graduated nursing students showed that students who were trained through simulation method, had more confidence in the care of patients. Based on the intervention study by (21) on 32 nursing students of advanced performance level, self-confidence of students who were trained cardiovascular assessment through simulation increased significantly compared to the group who were trained by lecture and using models. Moreover, in a research conducted by (22), a significant increase was observed in the self-confidence of nursing students who were trained electrocardiogram course through simulation in addition to lecture compared to those who only received training through lectures.

These findings are also consistent with(23), who studied the effect of clinical simulation on student level of confidence , revealed that half of the students believed that working with patient simulation increased their confidence, clinical competence, and prepared them for real clinical settings.A similar study was done by Wilson showed that nursing students expressed positive attitudes toward the simulation-based course. They agreed that the simulation was motivating and effective. Participants also expressed satisfaction toward the resources used during the simulation. They were confident in their mastery of skills and knowledge covered in the simulation and in their ability to apply this content to clinical settings. They also felt it was their own responsibility to determine what was to be learned from the simulation.(24), These findings are coinciding to those of other studies regarding the use of simulation in pharmacy education. Seybert and colleagues found that pharmacy students' satisfaction, knowledge, and confidence increased after participation in a human patient simulation exercise in a pharmacotherapy course (25).

The results of the above mentioned studies confirm that if students are given an opportunity to participate in a level-appropriate laboratory experience, their level of self-confidence may increase due to active participation and the ability to practice the new skill in a supportive environment with feedback from their instructor.

However, in the research by (26)no significant difference was seen between self-confidence of the students who were trained acute myocardial infection through simulation compared to those who were trained by lecture. In addition, the results of the study by (27) on 49 nursing students did not show a significant difference in the self-confidence of students who were trained caring for pediatric patients through simulation, compare to those trained through the traditional method.The cause of the inconsistency of these results with the present study could be the type of study, applied instruments, &/ or the difficulty of students to be engaged in new strategy that they were not costumed with in teaching clinical practice.

The findings of present studyconfirmed the nursing literature that supporting the use of simulation as a valid educational strategy. This study also demonstrates a positive relationship between student self-confidence and active involvement in teaching.Simulation in maternal clinical nursing education allows students to actively learn and develop confidence in maternity nursing care without the fear of putting the patient at risk and being scrutinized by the relatives, as assured by simulated group report for sim-lab strengths at the present study.

Conclusion & Recommendation

The study concluded thatSim-lab or simulation as a clinical teaching strategy is effective on enhancing students' satisfaction and level of confidence during lab training.

As a result of this study, it is recommended that;

- Integrating sim-lab as a clinical teaching method in maternity student teaching curriculum
- Training workshops should also be conducted for nurse educators and instructors to increase their competencies in applying simulation as a teaching strategy in the clinical teaching.
- Further researches are needed to evaluate the effect of sim-lab versus other types of clinical teaching methods on student competency.

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