

# Simulation Versus Traditional Method Of Teaching On The Retention Of Birthing Care

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## Abstract

**Background:** Nursing is profession where practical and theoretical knowledge needs to be highly integrated and clinical practice is significant for the professional development of Nursing students. The shift from traditional instructional methods towards 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. Nursing faculties are always looking for more effective teaching methods that enhance student knowledge and skills.

**Materials and Methods:** Comparative research design was used to evaluate the effectiveness of simulation based training versus traditional method of teaching on the retention of birthing care knowledge and skills. Convenience sampling technique was used to select 77 B.Sc Nursing Fourth Year students from SGT University Gurugram and R.R College of Nursing Gurugram.

**Results:** The knowledge score for simulation group (23.05) was higher than traditional teaching group (17.87) at  $t = 31.08$ . The skill score for traditional teaching group (29.23) and simulation based training group (37.23) at  $t = 33.23$ . Simulation based training was more effective rather than traditional method of teaching in improving the retention birthing care knowledge and skills among students.

**Conclusion:** Simulation based training has opened up a firsthand learning in a nursing profession. Evidence-based practices can be put into action by means of protocols and algorithms, which can then be practiced via simulation scenarios. The key to success in simulation training is integrating it into traditional education programmes.

**Key words:** Effectiveness, Simulation based training, Traditional method of teaching, knowledge, Skills.

## Introduction

Practical and academic knowledge needs to be highly integrated in nursing, and clinical practice is essential for the expert growth of all nursing students. The shift

from traditional teaching methods to student-centered teaching challenges Nursing ability to create learning knowledge that will grow safe and capable graduates. Going out to the clinical area can be exhausting for nursing students. They know errors can extremely impact the patient's outcome. So failure isn't a choice. Students may end up being overly careful and uncertain about decisions, or maybe disastrous. Nursing faculties are still finding more efficient teaching approaches to improve student knowledge and skills.<sup>1</sup>

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The traditional teaching approach mentions to the visual depiction of the act and actions or practical work relevant to the truths and values of a teacher's lecture in the classroom. Traditional teaching approaches typically do not fulfill the needs of students to be active learners, since they do not provide time for independence, critical thinking; this means that nursing educators shift from a teacher-centered approach to a student-centered method that can promote individuality in learning and innovative problem-solving skills and dedication to lifelong knowledge and critical thinking.<sup>1</sup>

Technological advances advance practice in all fields of education and industry, and the same applies to nurse education. Simulation tasks include controlled depictions of actual clinical incidents as a strategy not a technology to mirror, foresee, or intensify specific simulations with fully immersive directed interactions.<sup>1</sup>

The world's greatest health difference is maternal mortality, with most death occurring around labour, childbirth, and postpartum. The presence of skilled, competent nurses, optional learning for high-quality maternity care is a leading factor in decreasing maternal death and disability. The ultimate aim for Nursing Faculty is to develop nursing graduates who can think critically and apply professional expertise in dynamic circumstances of patient care. Given the growing complexities of the healthcare environment, practical educational opportunities that give students the opportunity to learn skills before working with actual patients are more relevant than ever. Curriculum reform demands have increased in recent decades, it is very critical that a nursing curriculum should overly and consistently improve the development of the habits and skills that graduates need to meet the social standards of health care professionals.<sup>2</sup>

### **Need of the Study**

Maternity Nursing students, in particular, face many difficulties during work and delivery rotation that interfere with their knowledge chances, especially the partisans are typically known at the early phase of work and students can whole their work and distribution rotation without even witnessing the whole process of birth. Simulation-based approaches can be used

to improve healthcare professionals' knowledge in secure surroundings without sacrificing enduring safety while retaining high degree of realism<sup>18</sup>. In particular, simulation-based training has major assistances for the training of medical and nursing students and inhabitants who not only face strict work-hour restrictions, but also the emotionally charged labour and distribution ward where it is very problematic and sometimes very uncomfortable to teach throughout work with eager parents waiting for their child's birth. Obstetrics simulators were used to impart rare and catastrophic events to recover enduring safety and learner skills learner<sup>4,5,6</sup>.

Hence, the researcher felt that there is a essential to assess the efficiency of simulation based training versus traditional technique of teaching on holding of birthing care information and services among students. This result or conclusion could be used in Nursing curriculum and clinical settings so that evidence-based practice can be followed in the Nursing education. That is why the Nursing researcher has undertaken education.

### **Statement of the Problem**

A study to evaluate the effectiveness of simulation-based training versus traditional method of teaching on the retention of birthing care knowledge and skills among students in selected Nursing Institutions of Gurugram NCR

### **Objectives of the study**

1. To evaluate the effectiveness of simulation-based training on the retention of birthing care knowledge and skills among Group A.
2. To evaluate the effectiveness of traditional method of teaching on the retention of birthing care knowledge and skills among group B.
3. To compare effectiveness of simulation-based training versus traditional method of teaching on the retention of birthing care knowledge and skills among Group A and B
4. To find association between simulation-based training on the retention of birthing care

knowledge and skills with selected demographic variables.

5. To find out association between traditional method of teaching on the retention of

birthing care knowledge and skills with selected demographic variables.

### Review of Litrature

**E. Nelissen et al., (2015)** Helping mothers thrive after birth: keeping awareness , skills and trust nine months after simulation-based exercise at a Rural hospital in Northern Tanzania. Eighty-nine healthcare staff from different cadres have been trained in “Helping Mothers Survive Bleeding After Birth,” which addresses the requisite distribution skills such as active third-stage labour and postnatal haemorrhage management (PPH). Awareness, skills and security among 38 healthcare workers were assessed before, immediately after, and nine months later. Completing a 26-item questionnaire confirmed understanding. Two virtual “basics” Trust in successful third-stage labour organisation, PPH management, placenta wholeness determination, bimanual uterine density, and advanced care access was self-assessed using a written 5-item questionnaire. Results showed that Mean awareness scores increased immediately after training from 70% to 77%, but decreased close to pre-training (72%) at nine-month follow-up ( $p=0.386$ ). After training, the mean score in basic delivery skills increased from 43% to 51% after nine months ( $p=0.165$ ). Mean PPH management scores rose from 39% to 51% and were kept at 50% at nine months ( $p=0.003$ ). Bimanual density skills increased from 19% before, 43% immediately after, to 48% nine months after training ( $p=0.000$ ). Confidence rose immediately after training and was mostly retained in nine-month follow-up. Training resulted in immediately enhanced understanding , skills and sureness. Although perception and simulated basic distribution declined after nine months, security and simulated spare services were largely reserved. These answers indicate ongoing training.<sup>8</sup>

**2.M. D. Beal et al., (2017)** Showed a study to analyse the views of nursing students on the use of simulated pregnant in the practise of labour courses.270

students were chosen using a suitable sampling method. Data were collected using a questionnaire form. It was calculated that 64.1% of students assumed that the use of simulated pregnant women led to the practical learning of labour stages. Students were found to assume that there were variations between simulation procedure and clinical applications ( $p<0.001$ ), between the laboratory setting conditions used and the actual clinical conditions ( $p= 0.012$ )<sup>7</sup>.

**3. L. C. Stayt et al. (2015)** Conducted a clinical simulation efficacy analysis to enhance the clinical efficiency of identifying and treating adult declining patients in hospitals. Ninety-eight first year Nursing students were assigned to also a control group where they received a standard lecture or a simulation interference group. Participants performed a pre- and post-intervention objective standardized clinical review. General Perceived self-efficacy and self-reported capability scores were slow before and after the intervention. Student satisfaction teaching was also surveyed. Results showed the intervention group done substantially better in standardized after impartial clinical review. There was no substantial change in General Perceived Self Effectiveness and Self-Reported Competency scores between the regulator and intervention group. The interference group enjoyed their teaching process slightly more. The study concluded that simulation-based education can be an important instructive technique for teaching skills to identify and effectively treat a worsening patient<sup>9</sup>.

### Material and Methods

The study was conducted from December 2018 – September 2020 .A quantitative approach with comparative research design was adopted for the the study. Total of 77 students who met the inclusion criteria were selected using Non probability Convenient sampling technique. The selected students are then divided into two groups 38 students for simulation based training ( Group A ), 39 students for traditional method of teaching ( Group B ). Structured knowledge questionnaire and checklist by self administration and observation technique were used to assess the knowledge and skills regarding retention of birthing care. Knowledge questionnaire includes 30 questions

and checklist consists of 4 dimensions namely getting ready, conduction of delivery, active management of 3<sup>rd</sup> stage of labor and post procedure tasks. Reliability of the tool was established by Karl Pearson’s coefficient of correlation method and it was to be 0.77. Ethical approval was obtained from DRC and the ethical committee concerned heads of the selected Nursing institutions. Written informed consent was taken from the participants prior to data collection. The data was analyzed and interpreted in terms of objectives of the study. Descriptive and inferential statistics were utilized for the data analysis. A p value  $\leq 0.5$  was considered as significant for the present study.

### Findings

The findings of the study indicated that 13% students had poor knowledge, 79% students had average knowledge and 8% students had good knowledge in Group A. 37% students had average skill and 63% students had good skill and 0% had poor skill regarding retention of birthing care skill in Group A .

24 % students had poor knowledge, 55% students had average knowledge and 8% students had good knowledge in Group B . 79% students had average skills and 21% students had poor skills regarding retention of birthing car in group B . Hence, it concluded that students have adequate skill regarding retention of birthing care among Group B .

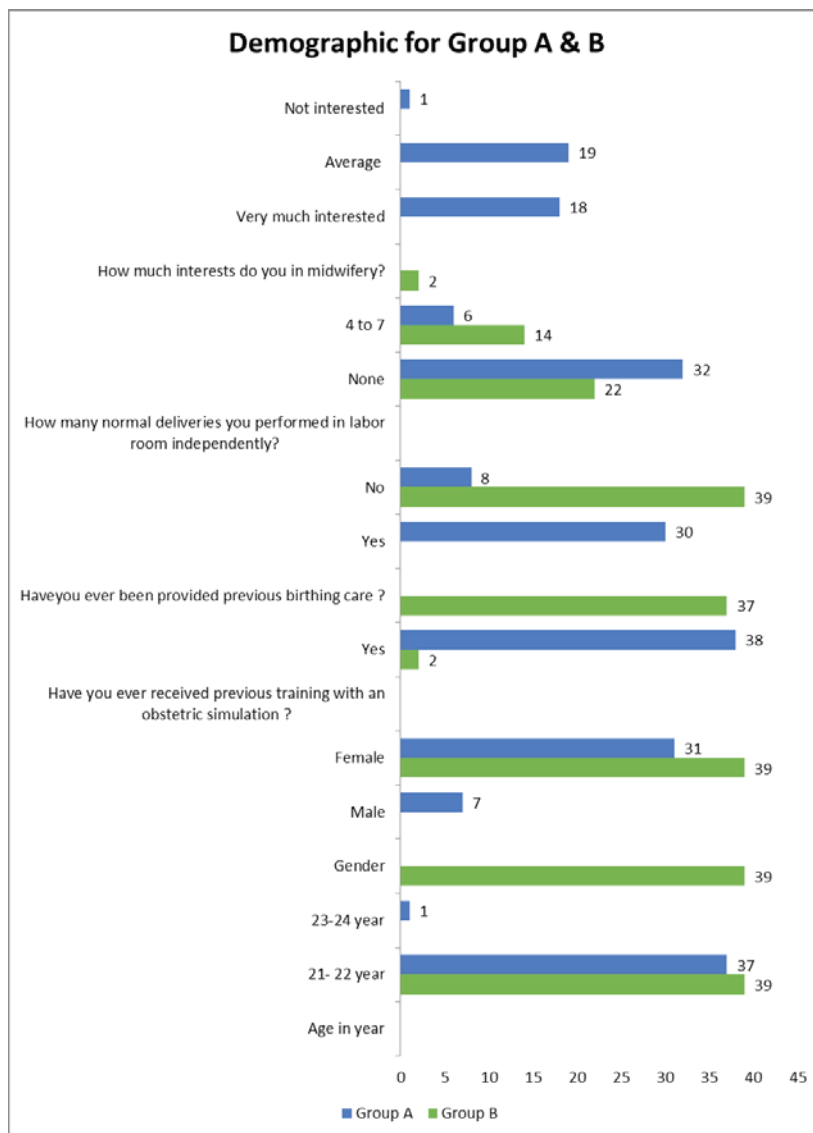


Figure No. 1 Bar Diagram showing percentage distribution of sample characteristics for Group A & B.

Study findings also revealed that the effects of simulation based training on retention of birthing care knowledge among students in Group A with selected demographic variables such as previous training with an obstetric simulation was found to be statistically significant. The effects of simulation based training on retention of birthing care skills among students in Group A with selected demographic variables such as age, previous birthing care, normal vaginal deliveries performed in labor room independently was found to be significantly associated.

Further it was observed that the effects of simulation

based training on retention of birthing care knowledge among students in Group B with selected demographic variables such as age, gender, previous training with an obstetric simulation, normal vaginal deliveries performed in labor room independently was found to be statistically significant. The effects of simulation based training on retention of birthing care skills among students in Group B with selected demographic variables such as age, gender, previous training with an obstetric simulation, normal vaginal deliveries performed in labor room independently was found to be significant at 0.05 level of significance.

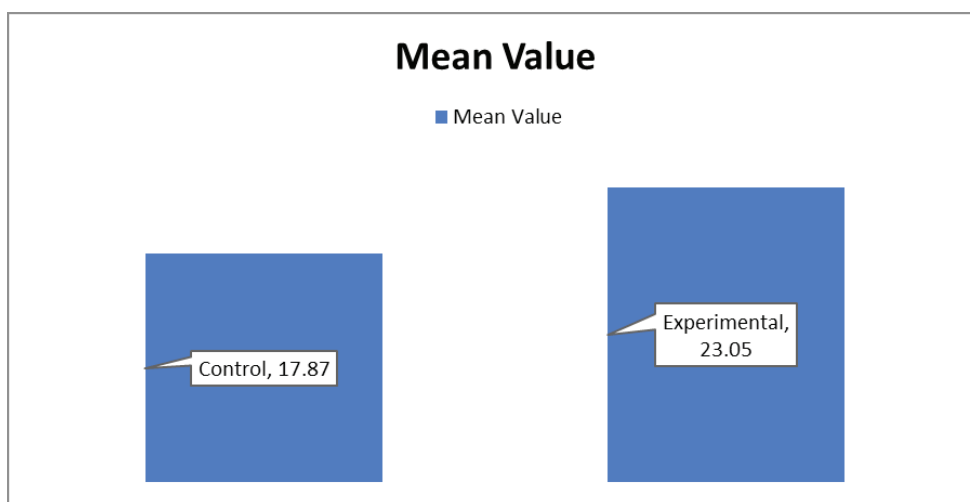


Figure No.2: Comparison of Group A and Group B post test knowledge score regarding retention of birthing care

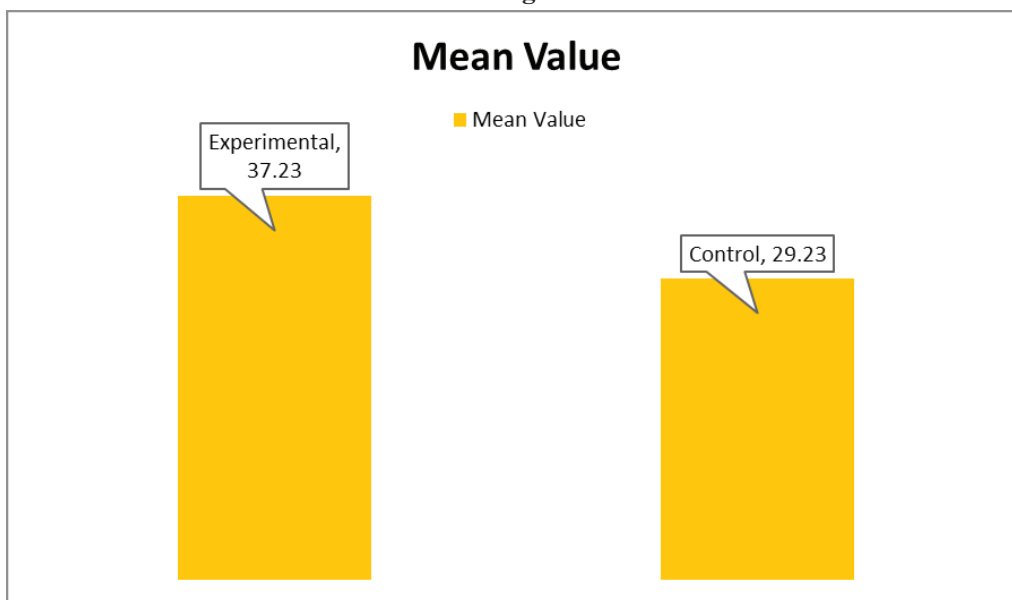


Figure No.3: Comparison of Group A and Group B post test skill score regarding retention of birthing care

## Discussion

Findings of the present study revealed that the effects of simulation based training on retention of birthing care knowledge among students in Group A with selected demographic variables such as previous training with an obstetric simulation was found to be statistically significant. These findings are consistent with the findings of a study conducted by **Marzouk T [2015]** where it was found that students in the simulation community had higher statistically significant scores than the control group ( $46.5 \pm 4.7$  vs.  $36.9 \pm 3.6$ ; 95 % CI 11.25, 7.75 &  $p < .001$ ) for realistic achievement and ( $21.1 \pm 3.8$  vs.  $11.2 \pm 3.3$ ; 95 % CI 8.396, 11.331 &  $p < .001$ ) for students' satisfaction with the clinical training knowledge.<sup>10</sup>

The effects of simulation based training on retention of birthing care skills among students in Group B with selected demographic variables such as age, gender, previous training with an obstetric simulation, normal vaginal deliveries performed in labor room independently was found to be significant. However, these findings are consistent with the study conducted by **Antonelli PM** et al where it was concluded that the SIM group showed better performance in all the domains with a better comprehension of the mechanisms of childbirth, managing and assistance of labor and delivery.

## Conclusion

The study at last concluded that there was a significant difference in knowledge score and skill score of Group A and Group B regarding retention of birthing care. Group A has more knowledge and skills regarding retention of birthing care. The association which found significant at of 00.0 ( $p < 0.05$ ) the effects of simulation based training on retention of birthing care knowledge among students in Group A with selected demographic variables such as previous training with an obstetric simulation. There was association which found significant at of 00.0 ( $p < 0.05$ ) the effects of simulation based training on retention of birthing care knowledge among students in Group A with selected demographic variables such as age, previous birthing care, normal vaginal deliveries performed in labor room independently. of post test knowledge score and skill score regarding retention of birthing care among Group A and Group B students with

selected demographic variables. There was association which found significant at of 00.0 ( $p < 0.05$ ) the effects of simulation based training on retention of birthing care knowledge among students in Group B with selected demographic variables such as age, gender, previous training with an obstetric simulation, normal vaginal deliveries performed in labor room independently. There was association which found significant at of 00.0 ( $p < 0.05$ ) the effects of simulation based training on retention of birthing care knowledge among students in Group B with selected demographic variables such as age, gender, previous training with an obstetric simulation, normal vaginal deliveries performed in labor room independently. It was proven that effectiveness of simulation based training was effective regarding retention of birthing care knowledge and skills.

**Implication of the study:** The findings of the study have several implications which are discussed under the following areas.

### Nursing practice

The study has an important implication in Nursing education and other fields. The Nursing curriculum should lay more emphasis on the importance of simulation based training so as to increase the knowledge, skill related to clinical learning among Nursing students.

Nursing students should be trained by giving simulation based training before their actual clinical exposure.

The simulation based training will help the students to deal with all difficulties which they may face during their actual clinical exposure. Nursing students can think critically so that they avoid a big mistake which can put the life of a patient in risk.

### Nursing research

Nursing Research provides knowledge among Nursing students on the importance of simulation based training. The findings of the present study can help the future researchers to conduct studies in other field of Nursing education such as Medical Surgical Nursing, Mental Health Nursing, Child Health Nursing.

### **Nursing administration**

Nursing administration can provide adequate funds to establish simulation lab so that students as well as the teachers can be take benefits.

### **Suggestions**

1. The Educational Institutions could arrange periodic simulation based training for students to learn the skills.

2. Simulation based training will help the teachers to teach the skills to students by creating a real situation so that they will not repeat the same mistake when they will be exposed to clinical area.

### **Recommendations**

On the basis of the findings of the study, the following recommendations have been made for further study:

The study can be replicated on the larger scale.

1. A similar study can be conducted in a different setting to find out the significant difference between effectiveness of simulation-based training versus traditional method of teaching on the retention of birthing care knowledge and skills among students.

2. A follow up study of simulation based learning to find out the effectiveness in terms of increase in knowledge, skills, confidence among the students.

3. It is recommended that the study can be done in all educational institutions to foster the learning of students.

4. It is recommended that the study can be conducted among the teachers so that in service educations can be conducted accordingly.

5. A similar study can be conducted in large sample, thereby findings can be generalized for a large population.

### **Ethical Consideration**

Ethical approval to conduct this study was obtained from DRC and the ethical committee of the Faculty of

Nursing , SGT University.

**Conflict of Interest** – There is no conflict of interest among the authors.

**Source of Funding** – Self

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