

# Self-Confidence And Level Of Satisfaction Of Nursing Students With Simulated Teaching In University Of Tabuk

Aisha Alamrani\*, Abeer Alatawi\*, Maryam Alanazi, Nourah Hamdan,  
Shahad Ali, Bashayer Ali, Amal Mahal

\*Department Of Nursing, Faculty Of Applied Medical Sciences, Tabuk University, Tabuk, Saudi Arabia

## Abstract

**Background** The nurses providing direct patient care, nursing students should be well-prepared before entering a clinical setting. By practicing, training, and reflecting on a specific experience, learners have the chance to be active learners through simulation (Kluwer, 2018). The purpose of this study is to investigate Nursing students' level of satisfaction and self-confidence with the simulation experience.

**Methods** A cross-sectional descriptive study was undertaken on a sample of nursing students from female and male sections at Tabuk University to assess the satisfaction of nursing students and their self-confidence in learning with simulation teaching in faculty of Applied Medical Sciences, at Tabuk University, Saudi Arabia. A standard questionnaire with established validity and reliability used.

**Results** The total of the students 103 (Female 59.2%, Male 40.8%) The participants' grade point average in their first year was moderate, with an average of  $2.70 \pm 0.42$ . The comparison between satisfaction between male and female students revealed no significant difference. (t-value is 0.66775. The p-value is .252933). There is no correlation between satisfaction and number of courses taken with simulation (The value of R is -0.0047. P value is 0.27). There is no correlation between satisfaction and age (The value of R is -0.07. P value is 0.37).

**Conclusion** This study showed the using of simulation as a clinical education technique increases student learning satisfaction and improves self-confidence. Simulators help students get ready for real-world situations and hasten the transition to a professional career.

**Keywords:** Self- Confidence, Level of Satisfaction, Nursing Students, Simulation

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## I. Introduction

Nursing As a profession it is a vital job. The nurses provide comprehensive care for patients. When caring for patients, nursing students must be self-confidence and Satisfaction (Rosen, 2008). Around the world, nursing schools frequently incorporate simulation as a crucial part of their curriculum. The use of simulation activities in the classroom increases the self-confidence. Self-confidence is the belief in self and own abilities to accomplish something (Greenacre et al., 2014) and Satisfaction is the individual's judgment of his/her pleasurable level associated with fulfillment (Folorunso & Paul, 2015). Through simulation defined simulation as "an imitation of some real thing, state of affairs, or process" (Rosen, 2008). The simulation history can be traced back to World War II, when Jon Von Neumann and Stanislaw Ulam worked on a problem involving neutron behavior. In nursing education programs, simulation is becoming increasingly important. Simulation has been a part of all nursing curriculums and programs since the 1950s (Alharbi & Alhamidi, 2020). The Saudi Society for Simulation in Healthcare (SSSH) was founded in 2018 by healthcare professionals who were interested in using simulation as a teaching tool for education, as well as to support training and research in healthcare and patient safety. The SSSH seeks to advance simulation-based education to support, develop, and improve the standard of care and patient safety among all healthcare professionals through advancing communication abilities, training, performance, and practice (SSSH, 2018).

Self-confidence is having faith in one's ability and potential to succeed (Greenacre et al., 2014). Nursing students must have self-confidence in order to provide their patients with safe treatment that is free from blunders. The value of simulation exercises in nursing education has been emphasized in several research. The individual's assessment of the amount of pleasure they connect with completion is known as satisfaction (Folorunso & Paul,

**2015**). Positive effects of simulation on pupils' self-confidence (**Martins et al., 2018**). A study was carried out by Shin et al. (2015) to evaluate nursing students' critical thinking abilities. Yoon's Critical Thinking Disposition tool was employed.

According to Tawalbeh (2020), following simulation experiences, the self-confidence scores of 76 nursing students rose from 5.36 to 23.00. Nursing students report feeling more confident following simulation because they exercised skills in a setting that is similar to actual practice, according to a qualitative study by Kaddoura et al (2016). In addition, a study by Nye et al (2019), 77% of students were happy with the simulation and requested that it take the place of the clinical placement. According to Silvia's (2013) study, addition, 64% of nursing students were happy with the simulation experience since it helped them develop their skills. 95% of students in a different study by McCaughey and Traynor (2010) were pleased with the simulation since it gave them the chance to practice in a secure setting. High satisfaction scores of nursing students with simulation were found in the Kaliyaperumal et al. (2021) study (mean = 4.60). High satisfaction scores with simulation were reported by Demirtas et al. (2021): 23.98 out of 25. Nursing students said they were happy with the simulation experience because it helped them meet their learning objectives in Zapko's et al. (2018) study.

According to Ha (2018), 74.4% of students felt simulation prepared them for future clinical practice. Students were happy with the simulation, according to Martins and Pinho (2020), since they noticed an improvement in their teamwork and communication abilities. According to Nye et al. (2019), 98% of students thought simulation should be included in nursing teaching programs. Alalhareth & Howarth (2020) did a systematic review, which shows that simulation is a useful method in nursing education since it raises student satisfaction. The results of the students' work are still difficult to measure (**Alalhareth & Howarth, 2020**). To comprehend the students' happiness and self-confidence after their human patient simulation experience, more research is required. Understanding the human patient simulation experience and nursing students' views of pleasure and confidence was the main goal of the current study. The following were the study's goals: To start, gauge how happy and confident nursing students were after their experience with the real patient simulation. Second, to investigate the connection between contentment and self-confidence among nursing students. Third, to investigate the correlation between the demographic details of nursing students and their degrees of satisfaction and confidence. Fourth, to investigate the connection between nursing students' levels of satisfaction and confidence and the simulated educational practice context.

## **II. Methodology**

### **Research Design**

A cross-sectional descriptive study carried out on a sample of nursing students from female and male sections at Tabuk University to assess the satisfaction of nursing students and their self-confidence in learning with simulation teaching in faculty of Applied Medical Sciences, at Tabuk University, Saudi Arabia.

### **Study Population and Sampling Method**

Male and female third- and fourth-year nursing students from all sections, including the student interns who served as the study's responders, were sampled equally. 100 people in all. These population have received exposure and are participating in a simulation.

The first four semesters' students were not included in the study since they had no interaction with the simulation and couldn't adequately describe their simulation experience.

### **Instrument for Data Collection**

A standard questionnaire with established validity and reliability used. This questionnaire developed by Pam Jeffries.

**Part one** elicited socio demographic data, including age, gender, GPA, Academic year. This part was developed by the researcher to enable her to examine the interrelationships between the demographic variables, satisfaction and self-confidence.

**Part two** tow Student Satisfaction and Self-Confidence in Learning, a 13-item instrument designed to measure student satisfaction) five items (with the simulation activity and self-confidence in learning) eight items ( using a five-point scale. Reliability was tested using Cronbach's alpha :satisfaction = 0.94; self-confidence = 0.87.

### **Data Gathering Procedure**

The researchers themselves floated the survey questionnaire to Nursing students online thru Google forms. Permission was sought from the Department Head and Female Supervisor to conduct the study. The data

was collection within a week in from Male and female third- and fourth-year nursing students and interns at Tabuk University the Respondents was 103.

**Statistical Analysis**

In this study, we analysed the data that we collected by SPSS system, the system statistically analysed the data that was entered by us and that was collected through questionnaires. The system also deals with two types of data, one of them is quantitative variables which we used in the study.

The importance of using this system lies in its ability to classify data and analyze it, and then to obtain explanatory results for the assumptions that were made, which are the basis for this study. The program describes the variables and then generalizes the results that are reached to the study population. How the statistical system SPSS works. The data is entered into the program by placing symbols that represent it, and we have chosen symbols such as (N, P), after which the appropriate test form for the data to be analyzed is chosen.

**Ethical considerations**

Before collecting data, there are several ethical considerations that we followed : Written consent was distributed to the individuals participating in the study, which includes an adequate description of the study and all related risks and tests, and we explained to them that they have the full right to withdraw from the study If they feels there privacy has been compromised in any way , and the most important ethical consideration is the identity of the study participants and their information was completely unknown.

**III. Results**

**Participants’**

Table (1) described the characteristics of the participants. The participants ranged in age from 18 to 25 years old, with an average±standard deviation (SD) of 19.92±0.52 years. The total of the students 103 (Female 59.2%,Male 40.8%) The participants’ grade point average in their first year was moderate, with an average of 2.70 ±0.42.

**Table 1: The characteristics of the participants**

Nursing students’ satisfaction correlation with demographic data.

The comparison between satisfaction between male and female students revealed no significant difference. (t-value is 0.66775. The p-value is .252933).

There is no correlation between satisfaction and number of courses taken with simulation (The value of R is - 0.0047. P value is 0.27).

There is no correlation between satisfaction and age (The value of R is -0.07. P value is 0.37).

There is no correlation between satisfaction and GPA (The value of R is -0.0003. P value is 0.87).

Characteristics		Female	Male	Overall
Number		61 students	42 students	103 students
Age	18-21 years	22(36%)	9(21%)	30(30%)
	21-22 years	31(51%)	24(57%)	53(53%)
	23-25 years	7(11%)	7(17%)	14(14%)
	25 years and more	1(2%)	2(5%)	3[3%]
Academic year	3 <sup>rd</sup> year	35(57%)	13(31%)	47(47%)
	4 <sup>th</sup> year	19(31%)	10(24%)	28(28%)
	Internship	7(11%)	19(45%)	25(25%)
GPA average		4.2±0.47	4.0±0.1	4.0±0.3

**2.Student experience with simulation**

Table (2) described the students experience with simulation training. Most of the students were females (61). Majority of them had previous simulation experience (93%). The participants were distributed across the clinical courses such as Emergency nursing, Adult Health Nursing, Maternal Health Nursing, Critical Care Nursing, Community Nursing , Pediatric nursing , other courses.

**Table 2: The students experience with simulation training.**

Question		Female	Male	Overall
Had prior or current experience with simulation training course?.		57(93%) students had prior experience	42 students	99Students
No. of courses they had with simulation training		Average 5	Average 3	Average8
What is the course?	Emergency nursing	1 students	14 students	15 students
	Critical care nursing	18 students	15 students	33 students
	Pediatric nursing	21 students	12 students	33 students
	Maternity nursing	22 students	13 students	35 students
	Community nursing	17 students	9 students	26 students
	Adult nursing	62 students	34 students	96 students
	Other courses	6 students	1 students	7 students

3.Nursing students’ satisfaction and confidence with simulation-based learning

Table (3) described the Nursing students’ satisfaction and confidence with simulation-based learning. The participants mostly agreed with each statement and some strongly agree with the question statements. The highest satisfaction items mean indicating participants agree that the teaching methods and strategies used in the simulation were effective Participants either agreed or strongly agreed with the statements related to self-confidence. They indicated that they were particularly confident that they were able to recognize signs and symptoms of disease, able to obtain the required knowledge and skills to perform necessary tasks in clinical practice. In addition, they indicated that they could accurately assess an individual with any abnormalities. Data elicited from self-confidence scale indicated overall high levels of self-confidence as a result of with simulation. Participants indicated that their self-confidence is built after clinical simulation experience. (Table 3). Most of the students had an overall satisfaction (4.3±0.8) with simulation learning experiences (Table 3). The students’ greatest satisfaction was towards the teaching methods employed in simulation experiences (4.1 ± 0.9)

**Table 3: The Nursing students’ satisfaction and confidence with simulation-based learning.**

Variable	Female	Male	Overall
The teaching methods used in this simulation were helpful and effective.	4.3±0.8	4.1±0.9	4.1±0.9
The simulation provided me with a variety of learning materials and activities to promote my learning of the medical-surgical curriculum.	4.3±0.9	4.4±0.8	4.4±0.9
I enjoyed how my instructor taught the simulation.	4.2±0.9	4.3±0.7	4.3±0.9
The teaching materials used in this simulation were motivating and helped me to learn.	4.4±0.9	4.5±0.8	4.5±0.9
The way my instructor(s) taught the simulation was suitable to the way I learn	4.3±0.9	4.5±0.8	4.4±0.8
Self-confidence of participants with simulation-based learning	4.2±0.9	4.5±0.7	4.5±0.9
I am confident that I am mastering the content of the simulation activity that my instructors presented to me	4.4±0.8	4.5±0.8	4.4±0.9
I am confident that this simulation covered critical content necessary for the mastery of the medical-surgical curriculum	4.2±0.9	4.5±0.62	4.5±0.8
I am confident that I am developing the skills and obtaining the required knowledge from this simulation to perform necessary tasks in a clinical setting	4.4±0.8	4.5±0.7	4.4±0.9
My instructors used helpful resources to teach the simulation	4.2±0.9	4.4±0.8	4.3±0.8
It is my responsibility as the student to learn what I need to know from this simulation activity	4.4±0.8	4.6±0.62	4.5±0.7
I know how to get help when I do not understand the concepts covered in the simulation	4.4±0.7	4.5±0.7	4.5±0.7
I know how to use simulation activities to learn critical aspects of these skills	4.4±0.8	4.5±0.7	4.5±0.7
It is the instructor's responsibility to tell me what I need to learn of the simulation activity content during class time	4.6±0.6	4.5±0.7	4.6±0.7

**IV. Discussion**

The results of our research showed comparison between satisfaction between male and female students revealed no significant difference. (t-value is 0.66775. The p-value is .252933). Also, there is no correlation between satisfaction and number of courses taken with simulation (The value of R is -0.0047. P value is 0.27) and there is no correlation between satisfaction and age (The value of R is -0.07. P value is 0.37) and there is no

correlation between satisfaction and GPA (The value of R is -0.0003. P value is 0.87). Most of the students were females (61). Majority of them had previous simulation experience (93%). The participants were distributed across the clinical courses such as Emergency nursing, Adult Health Nursing, Maternal Health Nursing, Critical Care Nursing, Community Nursing, Pediatric nursing, other courses.

The participants mostly agreed with each statement and some strongly agree with the question statements. The highest satisfaction items mean indicating participants agree that the teaching methods and strategies used in the simulation were effective. Participants either agreed or strongly agreed with the statements related to self-confidence of the students had an overall satisfaction ( $4.3 \pm 0.8$ ) with simulation learning experiences and the students' greatest satisfaction was towards the teaching methods employed in simulation experiences ( $4.1 \pm 0.9$ ). Assessing nurse student satisfaction with their learning and self-confidence can serve as a foundation for the creation and implementation of educational programs for nurses that enhance their clinical practice and knowledge development.

The study's results showed that the participants were satisfied with their teaching and that the clinical simulation session had improved their confidence. Because the simulation approaches were successful and gave the students a clear understanding of what was expected of them, for instance, they expressed high satisfaction. Also, students claimed that learning through simulation helps them remember and develop their knowledge, allowing them to, for example, recognize disease signs and symptoms and carry out important duties in a clinical setting. Their capability for knowledge acquisition raises their confidence. The findings of this study are consistent with those of several studies conducted in a variety of fields, including nursing, which found that learning through clinical simulation increased learner satisfaction and self-assurance in their abilities. This is also consistent with Jefferies' (2007) Nursing Education Simulation Framework, which contends that a number of elements connected to demographic characteristics contribute to the outcomes of satisfaction and self-confidence. In this study, there was no statistically significant relationship between self-confidence and demographic factors (age, stream, courses).

Participants in a study that examined the impact of a computerized training simulator on the retention of neonatal resuscitation skills reported high levels of satisfaction and self-confidence because the simulation helped to make learning engaging and creative as well as better prepare them to handle future emergencies. (Curran, Aziz, O'Young, & Bassell 2004). Some research have shown that after engaging in simulation activities, people's confidence in their abilities increases, despite the fact that Alinier et al.(2006) stated that their study was unable to identify whether or not using simulation leads to a higher degree of confidence (Bearnson, 2005; Hicks, Merritt, & Elstein, 2003; & Laschinger, 2008). According to Australian Commission and Quality & Safety in Healthcare (ACSQHC, 2010), the confidence scale in this study showed high means for items such as assessment and documentation (Buykx, 2011; Kinsman et al. (1), 2012; Kinsman et al. (2), 2012) that are thought to be crucial components for identifying clinical determination. In addition, the current showed no correlation between students' GPA and satisfaction scores; and students' GPA and self-confidence scores. These findings were similar of Ma (2013) study who reported no correlation between those variables. In this study, there was no statistically significant difference in the students' satisfaction scores according to the age variable. These findings were different from those of Cura et al. (2020) and Cabañero Martínez et al. (2021). This study's findings are in line with a recent study conducted at the College of Medicine in Riyadh, which found that medical students were satisfied with simulation-based instruction (ACSQHC, 2010). Fakeeh College for Medical Sciences, Nursing Department, Abdul Wahab Naib Al Haram, Al-Hamra'a, Jeddah, Saudi Arabia. Their findings study revealed that nursing students and staff nurses can develop and enhance their critical thinking skills and boost their learning retention through HFS. Both groups of participants reported high levels of satisfaction and self-confidence with the HFS experience. HFS is not only effective in preparing nursing students for practice, but it is also a powerful tool for enriching and boosting the critical thinking skills and confidence levels of practicing professional nurses.

## **V. Limitations**

The current study had a number of limitations. The use of the purposive sampling method could result in bias and reduce the generalizability of the results. Another limitation is that a cross-sectional research design makes it challenging to report the cause-and-effect relationship between variables. The current study was conducted in a single location, which presents another constraint and may make it challenging to generalize the study's results. Nursing students' satisfaction and confidence may also be impacted by additional factors, such as the experiences and backgrounds of their professors. Thus, it is advised that future research be done using different study designs in various situations while controlling for other variables.

## VI. Conclusion

To help prepare students for future clinical practice, nursing education programs should include simulation as an effective teaching technique. The outcomes of this research show that using simulation as a clinical education technique increases student learning satisfaction and improves self-confidence. Simulators help students get ready for real-world situations and hasten the transition to a professional career.

## VII. Recommendation

To college students' satisfaction and self-confidence, the authors advise using repeated simulation experiences in all nursing clinical courses. Pre-briefing and de-briefing are crucial techniques that enhance students' learning and should be incorporated into simulations.

Each clinical course should give students the blueprint for the planned simulation. For the purpose of creating an effective learner-centered simulation scenario, routine need assessment is necessary. When creating the simulation scenarios, domains of educational taxonomies should be taken into account in accordance with the course objectives. It is important to evaluate each simulation in order to assure process improvements.

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