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# Students' Level of Satisfaction in Nursing Skills Demonstration: Basis for Designing Debriefing Strategies

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#### ABSTRACT

**Background:** The use of laboratory in demonstrating nursing skills to enhance students competency will highly benefit in the transition of theory learned into the delivery of care to actual patients in the clinical field. It provides opportunities to practice the procedures, evaluate learning outcomes and reinforce reasoning objectives. **Objective:** The study aims to identify the level of satisfaction of nursing students in the skills demonstration in terms of debriefing and reflection, clinical reasoning and clinical learning. Methods: This study used the Quantitative-Descriptive design to describe the level of student satisfaction in nursing skills. **Results:** The results of the study showed that the majority of FCMS nursing students expressed high level of satisfaction according to level of respondents. Mean=3.81). Meanwhile, FCMS nursing expressed a high level of satisfaction in three categories debrief and reflection (Mean=3.77;  $\chi^2$ =90.796), clinical reasoning (Mean=3.80;  $\chi^2$ =77. 632) and clinical learning (Mean=3.86;  $\chi^2$ =93.285). **Discussion:** The results highlighted that the nursing students mostly benefited from clinical learning during skills demonstration. **Conclusion:** The study concludes that the nursing students of FCMS have a high level of satisfaction in nursing skills demonstrations in terms of clinical learning and clinical reasoning.

Keywords: Skills demonstration, Clinical reasoning, Clinical learning, Debriefing and reflection

# INTRODUCTION

Using skills laboratory for the students can facilitate the transition from practice of required skills to deliver direct care to clients. It provides opportunities to practice procedures, evaluate learning outcomes and reinforce reasoning objectives. Through the use of patient's simulators, the faculty can provide a real scenario [1]. Simulation is the copying of real patient scenarios and a learning strategy that is new for the students. Nowadays, nursing schools are using low to high fidelity manikins to train students from basic to complex nursing skills. Nurses were trained in the actual clinical setting. The first mannequin custom-made for health care practice included stitched knees, hips, elbows, and shoulders. Several years after, an arm injection port and an internal reservoir were added to it. Also, the pediatric mannequin baby Chase was then used in nursing schools in most countries. Nurses in different parts of the world have been trained with the use of nursing skills laboratory. Furthermore, using the mannequin appears to work well along with clinical experience. This nursing training method remains to be important and helpful to nursing students both in clinical learning and nursing skills demonstration laboratories. Doing the nursing skills in the laboratory allows students to perform tasks that they may not see in their clinical rotations like attending injections, vaginal births, and assessing newborn development. In addition, peer mentoring can also be an effective educational strategy that benefits the students [2].

In addition, the use of nursing skills laboratory increases the interest and application in the teaching of applied sciences including nursing science [3]. One of the major advantages and characteristics of the nursing skills demonstration -based learning lies at the safe training environment, which offers the nursing and other medical specialties the opportunity to experience and practice repeatedly and frequently prior to engagement in real-life clinical practice, thus reducing the chances of committing medical errors. Hence, patient's safety is also emphasized and reflected in demonstration-based learning. Student safety is important since it is part of the staff- patient relationship when dealing with patients.

Nursing skills demonstration has been the principal focused of nursing education. It emphasizes the use of didactic, clinical and debriefing sessions [4]. Furthermore, debriefing should be the primary concern since it is a critical element during and after nursing skills demonstration exercises of students. The views of the students and teaching staff about the demonstration modalities, found out that undergraduate students were satisfied with nursing skills demonstration, its modalities and resources available, however, students found the feedback about demonstration sessions provided by teaching staff to be constraining. Nursing skills demonstration is principle based learning where reasoning and observational learning helps in improving knowledge among students [5].

Likewise, debriefing is a serious factor of the nursing demonstration experience that requires active participation by students. The utmost practice in conducting a debriefing session includes environmental considerations, and the role of the faculty. Reflective learning like personal feedbacks, and listing the steps of the simulated event are important aspects in developing nursing skills [4]. The nursing skills development is valuable learning for the students. There should be more emphasis on human factor training and well-constructed debriefing strategies [6]. In another study, with the bigger use of simulation as a teaching approach, there remains an essential to establish best practice strategies to increase nursing education goals. The debriefing strategy clearly provides an opportunity to enhance clinical judgment development among nursing students [7].

The utilization of technology in nursing education has been studied and encouraged so that students will have a more experiential learning than instructional mode which will make nursing students more satisfied and gain more self-confidence after such demonstration-based learning experience [8]. Satisfaction might be with different in terms types of simulators from low to high fidelity. Likewise, high fidelity simulators are more realistic in the decision making and recognizing tasks compared to low and medium fidelity simulators [9]. However, a different conclusion in which students significantly valued the skills demonstration regardless of the level of fidelity [10].

Self-confidence, clinical reasoning, and sstudent satisfaction are enhanced with the use of skills demonstration as teaching strategy, however, the study did not settle a positive relation between demonstration and critical thinking skills. Student satisfaction was strongly correlated to demonstration-based learning design, specifically its objectives, as well as the scenario that contained an excellent problem solving exercise [11]. Another study claims that strategies should be person-centered and should value student diversity [12]. Likewise, clinical instructor should implement activities aimed to foster mutual respect and support for students by understanding the beginning students struggle to develop clinical reasoning requires a sound clinical judgment [2].

Although evidences are deemed strong, there are some weaknesses such as the samples used. Therefore, this study was conducted to explore undergraduate nursing students' level of satisfaction toward nursing skills demonstration-based learning at FCMS. The researchers felt that there was a need to develop debriefing strategies which are often neglected during the skills demonstration. Such strategies help students in enhancing their skills to become competent and confident in the field of nursing profession.

## Conceptual Framework



Figure 1 Kolb's experiential learning theory

The researchers used the Kolb's experiential learning theory (Figure 1). It is a view of learning which emphasizes the role experience, which includes perception, cognition, and behavior. This theory consists of four stages; the first stage is the concrete experience in which the learner enthusiastically experiences an activity such as a laboratory session. The second is reflective observation in which the learner reflects back on the experience. The third stage is abstract conceptualization in which the learner tries to posit a theory or model of what is observed. Lastly, active experimentation in which the learner is trying to design for an upcoming experience.

Experiential training is a way to revitalize the curriculum and to handle with many of the changes that higher education is facing nowadays. The key significant differences among students is not only in verbal skills and academic preparation but also in learning styles, capacity for independent work, and self-understanding [13].

The levels of satisfaction in terms of debriefing and reflection, clinical reasoning and clinical learning were identified to improve the simulation skills of nursing students. The problems sought are the following: (1) What is the level nursing student's satisfaction in simulation skills training (2) What is the nursing student's skills satisfaction in terms of (2.1) Debrief and reflection, (2.2) Clinical reasoning, (2.3) Clinical learning (3) Is there a significant relationship between the satisfaction of nursing students and their simulation skills? (4) What recommendation can be proposed to enhance the debriefing strategies of faculty members before and after the nursing skills training of students?

## **METHODOLOGY**

This study used a quantitative-descriptive design to describe student satisfaction toward nursing skills demonstration at FCMS. The sample of the study included all Level 2-Level 8 undergraduate nursing students involved with simulation based-learning. The quantitative design is appropriate to quantify the satisfaction of students in terms of debriefing and reflection, clinical reasoning and clinical learning. This study was conducted at Fakeeh Colleges for Medical Sciences (FCMS), a private college located in Jeddah, KSA during the second semester of the academic year 2018-2019. The researchers collaborated with the instructors to cover the total population of nursing students (N=142) who experienced nursing skills training using a low, medium or high fidelity manneguin. The level 1, and internship students were excluded since they were not engaged in laboratory skills training at the time of the study was conducted. Furthermore, level 5 are also excluded since the study was conducted during the second semester wherein Level 5 courses are not offered. The study respondents were all female students, so the study was not able to describe male satisfaction with nursing skills demonstration, detect gender variations in results, or to correlate the male gender with other satisfaction subscales of the instrument. The study was conducted after the simulation skills classes or demonstration. This allowed the students to further reflect on the value of their skills training. An informed and voluntary consent was asked from the respondents assuring that they were not coerced to participate in the study. Consent forms were distributed and obtained from the target respondents. This procedure adhered to the larger issue of respect for the participants.

A standardized scale called Satisfaction with Simulation Experience Scale (SSES) was used as the primary instrument for data gathering with an internal consistency value of 0.77 [10]. The instrument consists of 18 questions divided into three subscales, namely: debrief and reflection, clinical reasoning and clinical learning. A Chi-square statistic was used to test relationships between the levels of satisfaction in the different subscales of the instrument. The responses were classified from very high satisfaction, high satisfaction, moderate satisfaction, low satisfaction and very low satisfaction. The SPSS software version 23 was used for statistical analysis.

The study described students' level of satisfaction with nursing skills training which enabled the researchers to develop more appropriate strategyy to improve the effectiveness of teaching the skills. The students must develop competencies in performing procedures to be able to prepare them for a real life situations. The study emphasizes the need for debriefing as part of the preconference or post conference session where the teaching staff, raters and students review what happened during the nursing skills demonstration experience and how to improve. It is important to enhance the debriefing strategy to nursing students' reflection, learning, and practice of psychomotor skills, clinical reasoning, problem solving, and team collaboration [14].

#### RESULTS AND DISCUSSION

Table 1 Students' level of satisfaction in nursing skills demonstration according to level of respondents

Respondent	Frequency	Mean	Level of satisfaction
Level 2	35	4.69	Very High
Level 4	32	3.89	High
Level 6	44	3.57	High
Level 7	18	3.21	Moderate
Level 8	13	3.7	High
Total	142	3.81	High

Range: 1.00-1.80 very low satisfaction; 1.81-2.60 low satisfaction; 2.61-3.40 moderate satisfaction; 3.41-4.20 high satisfaction; 4.21-5.00 very high satisfaction

Table 1 shows that 35 nursing students from Level 2 had a very high level of satisfaction. On the other hand, Level 4 (32 students), Level 6 (44 students) and Level 8 (13 students) had a high level of satisfaction. While, 18 nursing students from Level 7 had a moderate satisfaction level. The overall mean of the 142 nursing students is 3.81 which indicate that there was a high level of student satisfaction with skills demonstration at FCMS.

Academic satisfaction is greatly connected to the quality of students' learning. It is a vibrant process that can be affected by the institution's features within its educational setting and by the way students themselves recognize and appreciate their learning environment [15]. The success, quality, and efficiency of nursing students are affected by the effectiveness, sufficiency, and quality of the services provided by the school. A high level of satisfaction indicates that the students' learning experiences during skills demonstration at FCMS met their academic expectations and students greatly benefited from them as measured by their satisfaction level.

Table 2 Students' level of satisfaction in nursing skills demonstration in debriefing and reflection

Respondent	Frequency	Mean	Level of satisfaction
Level 2	35	4.65	Very High
Level 4	32	3.82	High
Level 6	44	3.54	High
Level 7	18	3.2	Moderate
Level 8	13	3.62	High
Total	142	3.77	High

Range: 1.00-1.80 very low satisfaction; 1.81-2.60 low satisfaction; 2.61-3.40 moderate satisfaction; 3.41-4.20 high satisfaction; 4.21-5.00 very high satisfaction

Table 2 shows that 35 nursing students from Level 2 had a very high level of satisfaction. On the other hand, Level 4 (32 students), Level 6 (44 students) and Level 8 (13 students) had a high level of satisfaction. While, 18 nursing students from Level 7 had a moderate satisfaction level. The overall mean of the 142 nursing students is 3.77 which indicate that there was a high level of satisfaction in demonstration skills of nursing students in terms of debriefing and reflection.

Debriefing is an essential component of learning to consolidate knowledge and skills. In debriefing, students are given a chance to reflect on their performance during demonstrations and determine how they will perform with succeeding tasks. A high level of satisfaction in nursing skills demonstration in terms of debriefing and reflection indicates that students recognized that they gained competencies in clinical situation and improved in the use of cognitive, affective and psychomotor skills [16].

Debriefing and reflection subscale had a high satisfaction score of 3.77. However, it was the lowest score in terms of value compared to clinical learning and clinical reasoning. Debriefing and reflection subscale had a lower satisfaction value probably because it happens mostly after nursing skills demonstration sessions. Therefore, such stage could be easily skipped, ignored, or not performed well so as to finish the session and immediately proceed the feedback stage. With such case, there will not be enough focus on it. Debriefing and reflection is a step that closes the educational cycle

High

Total

and enhances or improves any teaching strategies, circumstances, and resources.

142

Debriefing was a concern and found to be constraining this might be due to different nursing skills demonstration teaching strategies and practices used, and the fast advances in medical and clinical training education techniques compared to previous era of education, where now there is more interest in following up and seeking feedback about teaching methods from students perspective, which might have enhanced and posed more focus on debriefing strategy in nursing skills demonstration experience nowadays [5]. In another study, results were consistent in relation to debriefing, reflection and feedback, where nursing students scored very high satisfaction in terms of debriefing and reflection [8].

Level of satisfaction Respondent Frequency Mean Level 2 4.64 Very High 35 Level 4 32 3.92 High Level 6 44 3.51 High Level 7 18 3.19 Moderate Level 8 13 3.75 High

Table 3 Students' level of satisfaction in nursing skills demonstration in clinical reasoning

Range: 1.00-1.80 very low satisfaction; 1.81-2.60 low satisfaction; 2.61-3.40 moderate satisfaction; 3.41-4.20 high satisfaction; 4.21-5.00 very high satisfaction

3.8

As shown in Table 3, 35 nursing students from Level 2 had a very high level of satisfaction. On the other hand, Level 4 (32 students), Level 6 (44 students) and Level 8 (13 students) had high level of satisfaction. The 18 nursing students from Level 7 had a moderate satisfaction level. The overall mean of the 142 nursing students is 3.80 which indicates that there was a high level of satisfaction in skills demonstration in terms of clinical reasoning.

Nurses face various situations that require good judgment and decision making. The primary aim of nursing education is to train students in clinical reasoning [17]. Clinical reasoning is developed among nursing students through immersing them in real life situations. High fidelity simulations and nursing skills demonstrations provide students with such experiences, while student satisfaction is a way to gauge the quality of such experiences. A high level of satisfaction among students of Fakeeh College for Medical Sciences indicates that they appreciate and recognize their nursing skills demonstration as a great factor in the development of their clinical reasoning.

Respondent	Frequency	Mean	Level of Satisfaction
Level 2	35	4.76	Very High
Level 4	32	3.94	High
Level 6	44	3.65	High
Level 7	18	3.22	Moderate
Level 8	13	3.71	High
Total	142	3.86	High

Table 4 Students' level of satisfaction in nursing skills demonstration in clinical learning

Range: 1.00-1.80 very low satisfaction; 1.81-2.60 low satisfaction; 2.61-3.40 moderate satisfaction; 3.41-4.20 high satisfaction; 4.21-5.00 very high satisfaction

Table 4 shows that 35 nursing students from Level 2 had a very high level of satisfaction. On the other hand, Level 4 (32 students), Level 6 (44 students) and Level 8 (13 students) had a high level of satisfaction. The 18 nursing students from Level 7 had a moderate satisfaction level. The overall mean of the 142 nursing students is 3.86 which indicate that there was a high level of satisfaction in terms of clinical learning.

Demonstration increases students' curiosity and enhance their clinical nursing experience. It enhances clinical learning because it motivates students to assume primary inquiry. Likewise, demonstration helps link innovation and previous learning. A high level of satisfaction in terms of clinical learning indicates that students were able to develop profound and good understanding of nursing concepts and those nursing demonstration skills were able to improve their perception of concepts and achievement of the required nursing skills. In addition, to raise a non-threatening safe learning atmosphere, the training learning center like nursing skills laboratory is used to inspire directed experiences that allow students to practice and develop psychomotor, affective and cognitive skills. Simulation is an example of a teaching technique used in the skills laboratory [2].

Table 5 Relationship between students' level and their nursing skills demonstration in debrief and reflection

<b>Computed values</b>	Critical values	Degrees of freedom	Level of significance	Decision	Interpretation
90.796	26.296	16	0.05	Reject Ho	Significant

Table 5 shows the computed value of  $\chi^2$  is 90.796 which is greater than the critical value of 26.296 at 5% level of significance and degrees of freedom of 16. Therefore, the decision is to reject the null hypothesis. The result shows that there is a sufficient evidence to show that there is a significant relationship between the level of the students and their satisfaction in terms of debrief and reflection.

Nursing students on the early level of nursing education (e.g. Levels 2 and 3) have minimal experience of the situation during clinical exposures in which they are expected to perform. They lack the flexibility and speed to demonstrate safe practice. Such nurses are considered novice in the field [18]. Demonstrations and return demonstrations develop the psychomotor skills of the students and consequently their confidence in delivering care. It serves as an advanced training prior to exposure to hospitals thus developing other attributes such as organization, orderliness, and correct prioritization. This is reflected in their level of satisfaction in terms of debrief and reflection. There are several frameworks which could be used to further help the students in terms of debriefing and reflection. These includes the following: Debriefing with Good Judgment, Promoting Excellence and Reflective Learning in Simulation (PEARLS), Debriefing for Meaningful Learning (DML), Structured and Supported Debriefing, and the 3D Model of Debriefing [19]. Furthermore, debriefing model(s) contributes to improved critical thinking and clinical judgment abilities of undergraduate nursing students [20].

There were some variations among student's study levels related to skills satisfaction in terms of debrief and reflection. Students who were on Level 7 had the lowest score of satisfaction, which was only moderate, compared to other student levels. Level 2 had a very high satisfaction level, this could be explained by the transformation of status from traditional -Level 1- university courses to a different and more interactive new experience of nursing skills at the start of Level 2. While Levels 4, 6, and 8 had high score satisfaction compared to the lower levels, satisfaction score of Level 7 was on moderate level of satisfaction in all three subscales. It is on Level 7 in which the critical care nursing course is offered. This moderate satisfaction might be attributed to a more difficult and more complex type of course procedures on this level which require a lot of resources such as equipment, faculty, and specific nursing skills demonstration requirements for those complex procedures needed in the course. Those critical procedures on Level 7 require more advanced interaction between many inter-professional team members. Levels 4, 6, and 8 also had high levels of satisfaction, Such may be attributed to the implemented teaching strategies at FCMS and to the students' longer and richer experience on those levels than on previous levels. They had been exposed to more nursing skills demonstration experience, so they became familiarized with it and with the debriefing process.

Table 6 Relationship between the Students' Level and their Nursing Skills Demonstration in Clinical Reasoning

<b>Computed values</b>	Critical values	Degrees of freedom	Level of significance	Decision	Interpretation
77.632	26.296	16	0.05	Reject Ho	Significant

Table 6 shows the computed value of  $\chi 2$  is 77.632 which is greater than the critical value of 26.296 at percent level of significance and degrees of freedom of 16. The result shows that there is a significant relationship between the level of the students and their satisfaction in terms of clinical reasoning.

Nursing students' self-confidence, satisfaction, and clinical reasoning in learning are enhanced with the use of nursing skills demonstration as a teaching model. Student satisfaction was strongly correlated with the use of a demonstration-based learning design, specifically its objectives, as well as the scenario containing an excellent problem solving exercise [11]. The FCMS students confirm that they have good clinical reasoning regardless of the mannequin fidelity.

Table 7 Relationship between students' level and their nursing skills demonstration in clinical learning

Computed values	Critical values	Degrees of freedom	Level of significance	Decision	Interpretation
93.285	26.296	16	0.05	Reject Ho	Significant

Table 7 shows the computed value of  $\chi 2$  is 93.285 which is greater than the critical value of 26.296 at 5 percent level of significance and degrees of freedom of 16. The result shows that there is a significant relationship between the level of the students and their Nursing Skills demonstration satisfaction experiences in terms of clinical learning.

Nursing skills demonstration experiences are diverse and use several strategies and modalities ranging from low to high fidelity simulators. The response rate of this study was 55 percent of the 142 respondents from different student levels. This study found high level of student satisfaction with nursing skills demonstration with an overall average of 3.81. There was high satisfaction with nursing skills demonstration in terms of debriefing and reflection (3.77), clinical learning (3.86) and clinical reasoning (3.80). The results are consistent with Nursing skills demonstration is used these days as compared before which is made possible by the advances in manufacturing of demonstration materials [5,8,10,11]. These advances made the equipment easier to use and even function closer to real-life situations. Also satisfaction levels found in this study agree with the study by Baptista, et al. [9], which found a high level of student satisfaction with demonstration experience. High fidelity mannequins were more satisfying than low fidelity ones, but even medium level fidelity mannequins. However, this might be attributed to the inclusion of higher level of students who were more experienced and knowledgeable than Level 2, 3 or 4 students in terms of nursing procedures. They were also subjected to more demonstration experiences by reaching late study levels, so they were more familiar and more skilled because of their longer exposure to the field. Considering that our study included low fidelity nursing skills demonstration, the results still showed high level of satisfaction, which might be attributed to the different practices used at FCMS, staff who were responsible for training were from different educational backgrounds, multidisciplinary team members, and supervised by medical education department and assessment center at FCMS, this finding agrees with Lubbers, et al. [8], that students had high satisfaction with nursing skills demonstration regardless of the fidelity level.

## **CONCLUSION**

Generally, the study concludes that students Fakeeh College of Medical Sciences have high levels of satisfaction with nursing skills demonstration. There is a high level of satisfaction in nursing skills demonstration experience of nursing students in terms of debrief and reflection. A high level of satisfaction in nursing skills demonstrations experience of nursing students in terms of clinical learning. Lastly, there is significant relationship between the level of students and their nursing skill demonstration satisfaction experiences in terms of debrief and reflection, clinical reasoning and clinical learning.

The use of multidisciplinary training among nursing students would be of great help in nursing skills demonstration since it is more interactive, and it provides real-life situations, conditions and circumstances. Also, it allows practitioners to benefit from one another most especially when debriefing is performed. It is worth remembering that adults learn best when they are actively engages in problem-centered activities that are meaningful in their life situation. Experiential learning provides students a chance to practice the clinical reasoning and decision-making skills through various real-life scenario, Training specific skills like newborn care, injections, and turning and positioning patients are important through skills that gave be learned in a simulated environment. After the skills demonstration, reflection is important as a fundamental of debriefing. Nursing instructors want their students to reflect, draw conclusions, and think outside-the-box during skills demonstration. Debriefing is an important part of learning environment which gives a more intense experience for students in clinical settings to develop their cognitive, affective and psychomotor skills.

The researchers would like to recommend a debriefing strategy which is considered as a core component after a simulation-based learning. It is an important method to encourage students to learn and receive a good, constructive feedback. To emphasize Kolb's theory, experiential learning is a holistic method that can help in overcoming the problems of learning from experience. Debriefing is a critical discussion that needs to occur between nursing instructors and the students to clarify viewpoints and expectations. Nursing students who participate in a simulation or skills laboratory should go through a number of questions to help the students discuss and recap their experience and what they learned.

The following is the debriefing procedure is recommended: there should be person who will conduct the debriefing session and must witness the Objective Structured Clinical Examination (OSCE); the students should be in a separate room for debriefing/guided reflection as needed; the debriefing session should be part of the time allotted for simulation, skills demonstration or OSCE schedule. To discuss what went well or any clarifications that occurred in the demonstration and make necessary interventions for future learning. In case time runs out and students still want to discuss during debriefing a follow up session is needed. It is highly recommended that nurse educators follow any of the five INACSL Standards of Best Practice during debriefing. The session could be conducted as a focus group discussion in a holistic approach.

#### **DECLARATIONS**

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#### **Conflicts of Interest**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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