Advances in Bioresearch

ORIGINAL ARTICLE

Exploring The Experiences and Perceptions Saudi Nursing Students With Debriefing After Simulation Session And Highlighting The Perspectives of The Nursing Faculties Regarding The Students' Experiences With Simulation And Viewpoints - A Qualitative Approach

Howaida Shaker Saati*

*Assisstant Professor, Nursing Department, College of Nursing-Jeddah branch, King Saud bin Abdulaziz University for Health Sciences, King Abdullah International Medical Research Center, Jeddah City, Saudi Arabia

ABSTRACT

Although simulation-based learning has been widely used in medical education, little is known about its application in nursing field, particularly the challenges faced by students and faculty. The aim of the study was to explore the experiences of Saudi nursing students with debriefing after simulation, and to highlight the perspectives of nursing faculty regarding the students' experiences. The study targeted 3rd-year Saudi nursing students and faculty at a university in the city of Jeddah, located in the capital of the Kingdom of Saudi Arabia. A convenience sample of 20 students and 15 nursing faculty members were recruited for the study. Four focus group interviews were conducted with the 20 students who participated in debriefing after simulation-based learning. The transcribed interviews were analyzed using a thematic analysis approach. Five major themes emerged from the focus group interviews: first, debriefing after simulation-based training created learning opportunities for analyzing and prioritizing the work. Second, it improved self-confidence as students felt less scared and more confident in their abilities after the simulation. Third, it offered new information and linked theory to practice. Fourth, it highlighted the importance of communication and collaboration, as teamwork and communication skills were necessary to overcome challenges. And finally, the study emphasized the importance of effective communication and coordination in achieving successful outcomes. Debriefing helps students to reflect on their learning and take charge of their education, leading to improved patient outcomes. Therefore, debriefing is considered an effective strategy for enhancing clinical proficiency and nursing education in Saudi Arabia.

Keywords: Nursing Students, Nursing Faculty, Simulation, Debriefing, Student Experiences

INTRODUCTION

For students to reflect on their experiences and improve their learning outcomes, debriefing is a crucial part of simulation-based learning (SBL) [27]. It is an essential stage that comes after the simulation session because it gives students an opportunity to evaluate their performance, talk about their strengths and limitations, and pinpoint areas where they may improve [1]. Debriefing is crucial in nursing education because it helps students strengthen their clinical reasoning skills and integrate their theoretical knowledge with real-world applications [2].

The nursing curriculum generally consists of a hybrid approach that emphasizes both theory-based education and practical training [3]. However, such an approach has been challenging for a long time, particularly in Saudi Arabia, where education has had less focus on practical training [3]. As a result, there has been a significant gap between theoretical knowledge and clinical practice, hindering the development of students' clinical skills. To overcome the challenges inherent in practical training in a

real-life setting, simulation-based learning has been introduced as an alternative. Simulation offers an environment that mimics the real world and facilitates the integration of cognitive, technical, and behavioral skills into a learning environment [4, 5]. Notably, the International Nursing Association for Clinical Simulation and Learning (INASCL) emphasized that simulation-based experiences are intentionally designed to achieve specific objectives and optimize the expected outcomes [1].However, simulation-based learning is not commonly utilized in Saudi Arabia [2]. Furthermore, nursing education in Saudi Arabia faces several challenges, including limited resources, inadequate faculty members, and a lack of clinical placements.

On the other hand, numerous studies have highlighted the importance of integrating simulation-based learning into the nursing curriculum in Saudi Arabia [10, 11, 12, 7]. Simulation-based learning can bridge the gap between theory and practice in nursing education, providing Saudi nursing students with a safe and controlled environment to apply theoretical knowledge, develop clinical skills [8, 9], enhance critical thinking [13], and lifelong learning skills [12, 6]. By allowing students to learn from their mistakes, reflect on their actions, and receive feedback from their instructors, simulation-based learning can encourage students to develop a growth mindset and a desire to continuously learn. Additionally, simulation-based learning can prepare students for real-life clinical situations and improve their confidence in clinical practice [14-16].

In Saudi Arabia, nursing education has undergone significant changes in recent years, with a shift towards SBL as an innovative teaching method [17]. Despite its benefits, students in Saudi Arabia are still reluctant to implement simulation-based learning practices [18]. The Literature emphasized the importance of pre-briefing and debriefing to achieve the best learning outcomes in simulations [19, 20]. Specifically, debriefing is identified as a post-experience teaching technique [21], that involves the active participation of learners in a realistic experience, guided by a competent facilitator whose primary goal is to identify and close gaps in knowledge and skills [22, 23]. Planned debriefing after a simulation session allows the healthcare team to re-examine the clinical encounter, fostering the development of clinical reasoning, critical thinking, judgment skills, and communication through reflective learning processes [24]. The intention is to assist learners in examining the meaning and implications of actions taken during a simulated experience.

Previous studies in Saudi Arabia have either focused solely on nursing students' experiences [25] or on nursing faculty experiences [26, 27] with debriefing after simulation, and to our knowledge, not many have explored the experiences and challenges from both sides. Therefore, it is imperative to understand the simulation program and how faculties in clinical practice can provide metacognitive guidance during debriefing, as well as how students experience this guidance. This study aims to address this gap in the literature by exploring the experiences of Saudi nursing students with debriefing after simulation, and by highlighting the perspectives of nursing faculty regarding the students' experiences. The findings of this study will contribute to the existing literature on SBL in nursing education and inform the development of effective debriefing strategies that can enhance students' learning outcomes.

MATERIALS AND METHODS
Study design and participants
A qualitative descriptive design using focus group interviews was adopted. This allowed for in-depth exploration of the experiences and perception of Saudi nursing students regarding debriefing after simulation as well as the position of the nursing faculty. This study design also provided a platform for the study participants to express their views without restriction, thereby generating robust and diverse data.
Sample and Study setting
The study was conducted in Nursing College of Jeddah, King Saud Bin Abdulaziz University for Health sciences. Twenty (20) third year nursing students and fifteen (15) nursing faculties were recruited using convenience sampling technique.
Measurements
Table 1 and 2 depicts the list of questions included in the focus group interview for both students and faculties, respectively.

Table 1: List of interview questions asked to student focus groups

S.No.	Questions
1	How did you feel in the role of the nurse during this situation?
2	Share what you learned in relation to establishing a therapeutic nurse client relationship?
3	Not everyone works their way through this scenario perfectly. What can you take away from the incorrect decisions/ responses you may have made?
4	As you worked your way through this simulation, did you find yourself going to other sources to learn more about prenatal health? If you did go to other sources, what types of things did you review to help increase your knowledge?
5	If a similar situation arose where you completed assessment task, what will you take away from this simulation to incorporate into your clinical practice?
6	What questions remain unanswered for you in relation to this prenatal nursing simulation? Scenario?

The interview questions from Table 1 focused more on the perception of the nursing students of a prenatal nursing simulation. The questions assessed how they felt during the situation, lessons on therapeutic nurse-client relationships and from their mistakes. This set of questions aimed to provide some background insight into the alternative methods the participants used to improve their knowledge.

Table 2. List of interview questions asked to faculty focus groups

S.No.	Questions
1	Please describe how you conducted your last debriefing.
2	What do you see as the benefits of your debriefing methods?
3	What are the challenges of your debriefing methods?
4	What other creative debriefing adjuncts in simulation are used in your program beyond those you have already discussed?
5	What further resources do you feel are needed for your simulation debriefing?
6	What ways do you self-evaluate or are you evaluated on your debriefing for effectiveness?
7	What additional education would you feel useful in your debriefing process?
8	What additional information would you like to share about your debriefing experiences with the students?

The second set of interview questions comprised eight questions that assessed the debriefing process of the participants and if they noted any benefits during the process. The questions also hoped to explore the challenges they experienced using debriefing methods as well as adjuncts that were helpful in achieving the desired result.

The two set of interview helped to explore the experiences of Saudi nursing students with debriefing after simulation while highlighting the perspectives of nursing faculty regarding the students' experiences

Data Collection

Data collection was carried out using focus group methodology until saturation of information was achieved. to collect data from a convenience sample of 3rd-year nursing students, consisting of 20 participants divided into four focus group interviews. Similarly, another focus group study was conducted with nursing faculty members, consisting of 15 participants divided into three focus group interviews. The faculty members provided their perspectives on the students' experiences and helped to analyze the findings and provide further depth to the data. The focus groups took place in a private setting, with participants' permission, and were recorded on audio for a duration of 45 to 60 minutes. Data were collected between November 2021 and December 2021, and the analysis was conducted between January 2022 and July 2022.

To ensure credibility [10], member checking was employed where researcher gave feedback to participants to ensure the data interpretation was a true representative of their views and realities. The dependability of findings was achieved through a rigorous process of coding and analyzing the data. The research process was documented for auditing purposes. Confirmability was achieved through the documentation of data capture and reflection. The study discussed relevant topics for the emerging healthcare educational strategy of simulation and debriefing, making it transferable to other settings.

Data analyses

Qualitative content analysis is a data-driven approach where codes are generated from the data, systematically applied, and continuously modified to include emergent data and insights from the researcher.

Ethical consideration

The study was approved by the institutional review board, and permission to conduct the research was granted by the administration of the nursing school, the study was conducted at a privet nursing college in Jeddah, Saudi Arabia. Prior to each focus group interview with the students and faculty, a consent form was administered. The researcher was not actively teaching the students during the study and participants were reminded of their right to withdraw from the study at any time. The study was thoroughly explained to the students, and they were informed that their names and identification numbers were not required. All of the qualitative data was kept on the researcher's personal computer and will be destroyed following the publication of the research. The researcher ensured the confidentiality and privacy of the participants' data.

RESULTS

In total of 20 students and 20 faculty members participated in the study.

Students Benefits and Challenges

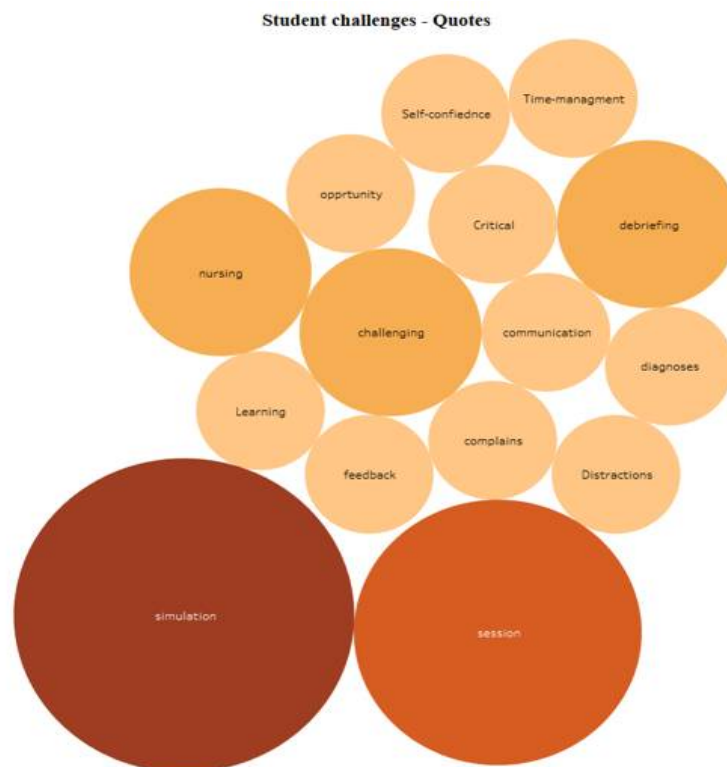In this section, students 'benefits and challenges towards debriefing after simulation are discussed.

Figure 1Learning Opportunities

Time management is a crucial skill for nursing students to excel in their educational and clinical endeavors. With good time management skills, students can balance their educational and extracurricular responsibilities, meet deadlines, and manage their homework effectively. To improve their time management skills, students can set objectives, prioritize their work, and allocate sufficient time for each activity. One of the excerpts from the focus group:

"The simulation session was challenging for me because it gives me oppurtunity to put what I learedn in prectice, the challenge was about how to analyse the situation and come up with a nursing plan and how to put a parioties for my plan to work".

This statement highlights the challenges that nursing students face when participating in simulation exercises. While these exercises provide an opportunity for students to apply their theoretical knowledge in practice, it can be difficult to analyze the simulation scenario and create a comprehensive care plan that meets the patient's needs. To do this effectively, students must utilize critical thinking, decision-making,

and logical reasoning skills. One of the key difficulties is prioritizing the nursing care plan, as the student must determine which demands are most urgent and require immediate attention. This requires an understanding of the patient's condition and needs, as well as the ability to make wise clinical decisions.

Feeling of Self-confident

One of the challenges that students may face during their education is a lack of confidence, which can manifest in various ways such as feeling unprepared for upcoming practice or lacking confidence in their abilities. This uncertainty can hinder their motivation and willingness to take risks, particularly in unfamiliar or difficult situations. Additionally, students may feel pressure to live up to expectations or compare themselves unfavorably to their peers, further diminishing their confidence. The fear of being unprepared for future practice, especially in fields like medicine or education where they are responsible for others, can also contribute to this lack of confidence.

To address these challenges, students should have access to resources and support that can help build their confidence, such as guidance from experienced mentors, opportunities to practice and receive feedback, and encouragement from peers and instructors. Adopting a growth mindset can also be beneficial, as it emphasizes the belief that abilities can be developed through effort and dedication. By focusing on their strengths and taking steps to overcome their weaknesses, students can increase their confidence and better prepare themselves for their future careers.

"It was scary for me at the begging of the simulation but after the experience debriefing and getting feedback from our instructors at the debriefing session post the simulation, I believe I will be better in my next experience with simulation, and I learned how to improve myself and to be more independent next time"

This statement describes a common initial response of participants in simulation exercises. Initially, students may feel apprehensive and uncertain about their abilities, despite being in a simulated environment that closely mirrors real-life practice. However, with guidance from teachers and feedback provided during post-simulation debriefing sessions, students can gain confidence in their ability to handle similar situations in the future. By reflecting on their performance during the simulation exercise and identifying areas where they excelled or struggled, students can create plans to fill any knowledge or skill gaps. Participating in role-play activities can also promote independence and self-reliance, as students learn to trust their own abilities and gain confidence in their decision-making skills while being required to make judgments and take action in a simulated environment.

Distractions with new information and link theory to practice

While theory provides a framework for understanding ideas and principles, new information or real-world events may not always align with it. This can make it difficult to apply theory to practice. To address this, it's helpful to focus on the fundamental concepts learned in theory and use them as a basis for handling new information or situations. It's also important to critically examine the theory to determine how it can be modified and applied to real-world experiences. Seeking guidance and support from professors, colleagues, or healthcare professionals can also be beneficial in making connections between theory and practice.

"The simulation session was about a case that we didn't have in in our theory lectures, however, we try to understand the patient complains at the simulation session and with the group work we came up with plan and one of the team member of the students who were working at the scenario manage to read about the patient diagnoses and clarify to us and this really help us to put good plan".

When participating in simulation exercises, students may initially feel intimidated and uncertain about their skills. However, with support from teachers and feedback from post-simulation debriefing sessions, students can gain confidence in their ability to handle similar situations in the future. By reflecting on their performance and identifying areas where they can improve, students can create plans to fill knowledge or skill gaps. Role-play activities can also encourage independence and self-reliance, as students learn to trust their own abilities and gain confidence in their decision-making skills. Overall, simulation exercises provide a valuable opportunity for students to apply their knowledge and skills in a safe and controlled environment, and to develop their confidence and competence in their future practice.

Room for communication

Effective communication is crucial in promoting order and coordination among students. This involves ensuring that each team member is aware of their responsibilities, deadlines, and expectations. Communication can take various forms, such as oral and written exchanges, peer feedback, and group discussions. When students have the opportunity to connect with each other, it promotes cooperation and collaboration, and helps to minimize misunderstandings and errors. Therefore, creating space for communication is essential in fostering order and collaboration among students.

"I learned from this experience that teamwork is very important to nursing practice specially if we are facing challenging cases in real life, I hope to improve my time megamenus skills with next simulation session".

This quote stresses the significance of collaboration in nursing practice, particularly when dealing with complex patients. It highlights the importance of effective teamwork and communication in achieving optimal patient outcomes. The author also acknowledges the need for improved time management during future simulation sessions, indicating that the experience provided opportunities for personal growth and development, particularly in the area of time management.

Clinical Educator Perspective

The clinical educator perspective contributed to the discussion on debriefing as it provided a more robust discussion and provided new perspective to the subject of this study. Including the faculty perspectives provided clarity on some of the benefits of debriefing and how students can better adapt it for their learning process. These perspectives are highlighted under various themes below.

Instruction simulation guidelines

To ensure the success of simulation-based learning, educators must follow specific guidelines when creating and implementing simulation scenarios. These guidelines provide a standardized approach to teaching through simulations, which helps to ensure consistency in the learning and instruction process. The guidelines typically include the patient case, learning goals, and expected outcomes of the simulation scenario, as well as strategies for debriefing and providing feedback to encourage reflection and learning. Following these guidelines is essential for ensuring that the education framework is effective and meets the needs of both learners and instructors. They provide a roadmap for instructors to design and execute well-planned simulation scenarios and achieve learning objectives.

"For use as faculties it was really challenging for simulation planning from our own reading without guidelines from our program in Saudi Arabia because simulation is a new approach, and we really need to have workshops to help us as faculties to improve our teaching approach by using simulation".

Clinical educators in Saudi Arabia face challenges in preparing and conducting simulation exercises without appropriate standards. Efficient simulation scenarios and debriefing sessions require specific knowledge and skills that may be lacking without proper training and support. To address this, seminars and training courses can provide educators with the information and skills needed to create, administer, and assess simulation scenarios aligned with their nursing program's learning goals. Effective debriefing techniques can also be developed to improve students' learning and reflective abilities. Providing clinical educators with the necessary assistance and tools for simulation-based learning is crucial for equipping students with the skills they need for their future careers and improving patient care.
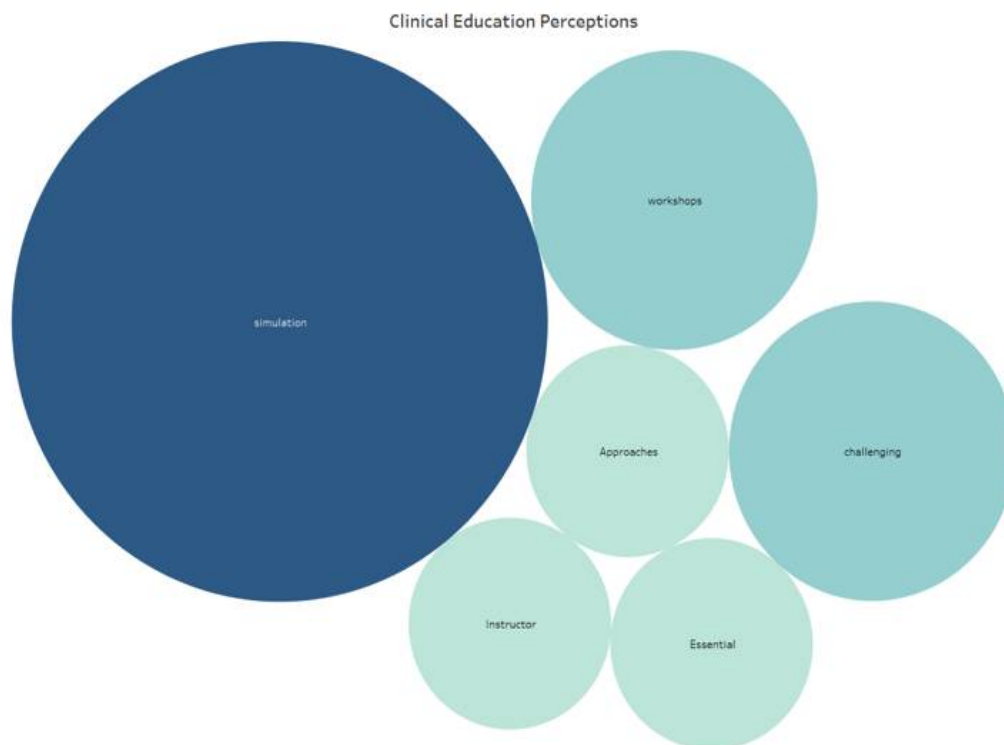

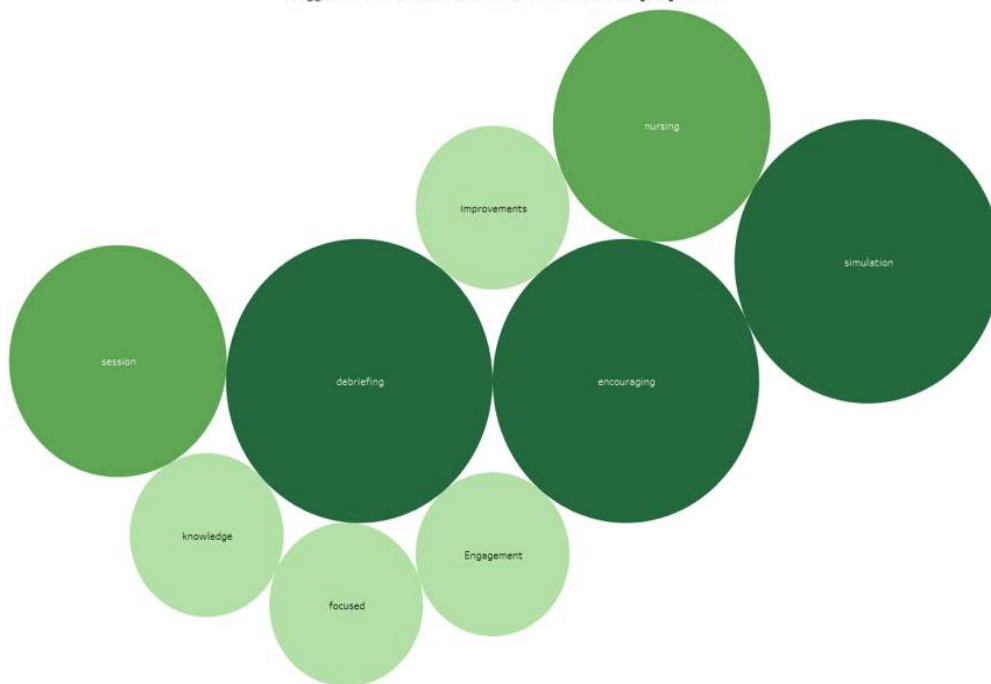**Figure 2. Suggestions for faculties to understand the student perspective**

Figure 3. Steps towards autonomy

The emphasis on promoting student independence as a nursing faculty member is a constructive and significant strategy for nursing education. Both the students and indeed the nursing profession throughout its entirety stand to gain much from this.
"As nursing faculty, I will be focused more in encouraging the students to be more independent".

Encouraging nursing students to be independent can enhance their critical thinking and problem-solving abilities, providing them with the competence and confidence necessary to succeed as nurses in an evolving healthcare setting. However, promoting independence does not mean abandoning student support. Nursing college professors should remain accessible to provide guidance, feedback, and support as needed. A balanced approach that considers students' individual learning needs and challenges while providing the necessary resources for success is essential.
Engagement in participation and reflection
Debriefing sessions are an effective way to enhance students' learning by encouraging them to reflect on their simulation experiences. Through debriefing sessions, students can evaluate their performance, identify areas for improvement, and apply what they have learned to real-world clinical situations.
"As faculty I will encouraging the students to engage in the debriefing session reflections to help them to understand how to use the simulation session experience in positive way to improve their learning abilities".
Simulation sessions provide students with exposure to real patient situations, promoting the devlopment of critical thinking and clinical decision-making skills. However, the learning experience may be limited without proper reflection and debriefing. Debriefing sessions allow students to reflect on their actions, thoughts, and feelings during the simulation, gaining insight into how they responded to the situation and identifying areas for improvement.
Promoting safe debriefing spaces
A crucial component of nursing education is to support nursing students in becoming more self-assured and unafraid of making errors. For nurses to care for patients safely and effectively, confidence is crucial. Nonetheless, students often refrain from taking chances and making choices that are essential to their success out of a fear of making errors.
"As nursing faculty, I will be encouraging the students to be more confident and don't be afraid from making mistakes".
Fostering self-confidence in students can encourage them to take chances and make judgment-based decisions, leading to greater independence and initiative in their healthcare practice. This confidence can also improve their interactions with patients, families, and other healthcare professionals, resulting in stronger connections and high-quality treatment. It's important to remember that making mistakes is a

natural part of the learning process. As a nursing faculty member, you can encourage students to view their mistakes as opportunities for growth and learning. Developing resilience and flexibility in the face of challenges is essential for success in the nursing field. Overall, by promoting self-confidence and embracing the learning experiences that come with making mistakes, you can help nursing students develop the skills and attitudes necessary for success in their careers.

Fortifying knowledge

The simulation reflection process is an essential component of nursing education as it allows for reflection, reinforcement of positive actions, and identification of areas for improvement. Through debriefing, students can assess their actions and thought processes during the simulation, determining what went well and what needs improvement. This process promotes positive behaviors such as effective communication, critical reasoning, and collaboration, allowing students to build on their strengths and become more confident healthcare practitioners.

"The simulation debriefing is really benefit for the students because it is reinforcing the positive things and help them to discover what are the areas for improvements and to plan better in next simulation sessions and be able to take what they learned in theory and put it in their practice in real life".

By identifying areas for improvement during debriefing, students can create a strategy to address these issues in future simulations and clinical practice. This may include tactics for improving their clinical expertise, communication skills, and understanding of clinical concepts. Additionally, debriefing can help bridge the knowledge gap by allowing students to apply theoretical principles to real-life scenarios. This results in more competent healthcare professionals who can provide safe and effective treatment to their patients.

DISCUSSION

The findings from this study indicated that nursing students faced challenges during simulation sessions. Though they stated that simulations presented them with a scope to apply their theoretical knowledge during practice, delivering care that caters to the needs of patients on the basis of a simulated scenario would be challenging *"The simulation session was challenging for me because it gives me oppurtunity to put what I learedn in prectice.....".* This finding was at par with the findings derived through the study by Al-Elq [2], which indicated that while simulation brought several benefits, there were several challenges as well like student disengagement, technical issues, and time restrictions. The finding in this study also indicated that students had confidence issues where they were unsure about their capabilities. However, with due support and guidance from their instructors and through debriefing sessions, it could be overcome *"It was scary for me at the begging of the simulation but after the experience debriefing and getting feedback from our instructors at the debriefing session post the simulation....".* Similar findings were reported through the study by Kaliyaperumal et al [23], which reported improved self-confidence for nursing students following debriefing after a simulation. Students also expressed a disconnect between their theoretical knowledge and simulation cases *"The simulation session was about a case that we didn't have in in our theory lectures....".* These findings were echoed through a study by Hashemiparast et al. [20]. The importance of collaboration was also indicated through the current study *"I learned from this experience that teamwork is very important to nursing practice specially if we are facing challenging cases in real life.....".*

On the part of the faculty, it was found that simulations were challenging as they did not have proper training sessions given that it was a new approach. This was supported through the findings by Dzioba et al. [13], who opined that training on simulations were necessary for better clinical teaching and learning outcomes. The faculty also reported that debriefings were important as it helped students to reflect from their simulation experience. Abulebda et al.,[1] reported similar findings through their study where they emphasized that it helped in developing student engagement. The findings from this study also indicated that instilling confidence among students was important, through proper encouragement. However, the authors focus on encouragement from a general perspective and not from a simulation or debriefing perspective.

Improving nursing education in Saudi Arabia would involve identifying the knowledge gaps and challenges experienced by the nursing students. This can be made possible through interviews on key instructional tools as this study has attempted using the debriefing after simulation. In line with the objectives of this study, the findings can contribute to the improvement of the utilisation of debriefing by Saudi nursing students. The study outlined the challenges the students experienced which included lack of confidence. However, they also acknowledged that debriefing provided them with an opportunity to apply theoretical knowledge in practice. The results of the study suggested that feedback from instructors could improve the confidence of nursing students and help them to perform better in future attempts. The

study findings provide a basis for adjustments in nursing education that can help students to properly deploy debriefing after simulation. The results align with the study aim of exploring the experiences of Saudi nursing students with debriefing after simulation and highlighting the perspectives of nursing faculty.

Overall, the focus group interviews and qualitative descriptive style of the study were successful in capturing the faculty and student nurses' and students' subjective experiences with debriefing after simulation. These findings add to the body of knowledge on debriefing in nursing education and offer nursing educators useful advice on how to improve the use of debriefing by nursing students in Saudi Arabia.

CONCLUSION

Debriefing is a planned discussion between instructors and students after a clinical simulation, designed to improve learning and encourage self-reflection. This research focuses on the advantages of debriefing in Saudi nursing education, including the promotion of critical thinking skills and improvement of clinical decision-making abilities. Saudi nursing students have expressed satisfaction with debriefing sessions, as it has helped them identify areas for improvement and apply lessons learned to new scenarios. Faculty members have emphasized the need for a safe and supportive environment for debriefing sessions, where students can freely express their experiences. Debriefing sessions allow students to take charge of their education, leading to improved patient outcomes. Therefore, debriefing is a crucial part of nursing education in Saudi Arabia that needs to be consistently included in the curriculum.

REFERENCES

1. Abulebda, K., Auerbach, M. & Limaiem, F. (2023). Debriefing Techniques Utilized in Medical Simulation. StatPearls Publishing.
2. Al-Elq, A. (2010). ''Simulation-based medical teaching and learning'', Journal of Family and Community Medicine, 17 (1). 35.
3. Alharbi, K.N. & Alharbi, M.F. (2022). ''Self-Confidence and Satisfaction of Nursing Students after Simulation Experience: Literature Review'', International Journal of Biotech Trends and Technology, 12 (1). 1–8.
4. Alkazemi, D., & Sheikhalzakariya, R. (2021). Current trends and future directions of nursing education in Saudi Arabia. Journal of Nursing Education and Practice, 11(5), 118-124.
5. Alshutwi, S., Alsharif, F., Shibily, F., Wedad M., A., Almotairy, M.M. & Algabbashi, M. (2022). ''Maintaining Clinical Training Continuity during COVID-19 Pandemic: Nursing Students' Perceptions about Simulation-Based Learning'', International Journal of Environmental Research and Public Health, 19 (4). 2180.
6. Anon (2016). ''INACSL Standards of Best Practice: SimulationSM Simulation Design'', 12. S5–S12.
7. Arafeh, J.M.R., Hansen, S.S. & Nichols, A. (2010). ''Debriefing in Simulated-Based Learning'', Journal of Perinatal & Neonatal Nursing, 24 (4). 302–309.
8. Ashley Creasy Johnson (2020). Prelicensure Nursing Faculty Experiences with Debriefing Adjuncts in Simulation. The University of Tennessee at Martin.
9. Baldwin, K.B. (2007). ''Friday Night in the Pediatric Emergency Department'', Nurse Educator, 32 (1). 24–29.
10. Bart W. Miles & Jozefowicz, D. (2010). ''The Handbook of Social Work Research Methods''. In: Naturalistic inquiry.
11. Cates, L.A. & Wilson, D. (2011). ''Acquisition and Maintenance of Competencies Through Simulation for Neonatal Nurse Practitioners'', Advances in Neonatal Care, 11 (5). 321–327.
12. Chamberlain, J. (2017). ''The Impact of Simulation Prebriefing on Perceptions of Overall Effectiveness, Learning, and Self-Confidence in Nursing Students'', Nursing Education Perspectives, 38 (3). 119–125.
13. Dzioba, J., Cant, R., Cooper, S., Bogossian, F. & Phillips, N.M. (2014). ''Barriers and enablers to learning during team-based clinical simulations: Reflective interviews with final year undergraduate nursing students'', Journal of Nursing Education and Practice, 4 (10).
14. Elarousy, W., Beer, J. de & Alnajjar, H. (2019). ''Exploring the Experiences of Nursing Students during Debriefing: A Qualitative Study'', American Journal of Nursing Research, 7 (3). 310–315.
15. Fawaz, M.A. & Hamdan-Mansour, A.M. (2016). ''Lebanese Student's Experience of Benefits of High Fidelity Simulation in Nursing Education: A Qualitative Approach'', Open Journal of Nursing, 06 (10). 853–862.
16. Foster, A., & Ooms, A. (2016). Debriefing: A nursing faculty toolkit. Clinical Simulation in Nursing, 12(5), 187-191.
17. Grande, R.A.N., Berdida, D.J.E., Madkhali, N.A.A., Aljaber, N.Y.A., Albagawi, B.S., Llaguno, M.B.B. & Adriano, J.T. (2022). ''Psychometric validity of the Arabic versions of the Simulation Design Scale, Educational Practices Questionnaire, and the Students Satisfaction and Self-Confidence in Learning Scale among Saudi nursing students'', Teaching and Learning in Nursing, 17 (2). 210–219.
18. Guerrero, J.G., Ali, S.A.A. & Attallah, D.M. (2022a). ''The Acquired Critical Thinking Skills, Satisfaction, and Self Confidence of Nursing Students and Staff Nurses through High-fidelity Simulation Experience'', Clinical Simulation in Nursing, 64. 24–30.
19. Guerrero, J.G., Tungpalan-Castro, G.M. & Pingue-Raguini, M. (2022b). ''Impact of simulation debriefing structure on knowledge and skill acquisition for postgraduate critical care nursing students: three-phase vs. multiphase'', BMC Nursing, 21 (1). 318.

20. Hashemiparast, M., Negarandeh, R. & Theofanidis, D. (2019). ''Exploring the barriers of utilizing theoretical knowledge in clinical settings: A qualitative study.'', International journal of nursing sciences, 6 (4). 399–405.

21. Henneman, E.A. & Cunningham, H. (2005). ''Using Clinical Simulation to Teach Patient Safety in an Acute/Critical Care Nursing Course'', Nurse Educator, 30 (4). 172–177.

22. Johnston, A.N.B., Weeks, B., Shuker, M.-A., Coyne, E., Niall, H., Mitchell, M. & Massey, D. (2017). ''Nursing Students' Perceptions of the Objective Structured Clinical Examination: An Integrative Review'', Clinical Simulation in Nursing, 13 (3). 127–142.

23. Kaliyaperumal, R., Raman, V., Kannan, L.S. & Ali, M.D. (2021). ''Satisfaction and Self-Confidence of Nursing Students with Simulation Teaching'', International Journal of Health Sciences and Research, 11 (2). 44–50.

24. Kassabry, M.F. (2023). ''Evaluation of simulation using objective structured clinical examination (OSCE) among undergraduate nursing students: A systematic review'', International Journal of Africa Nursing Sciences, 18. 100553.

25. Laursen, P.F. (2014). ''Multiple bridges between theory and practice 1''. In: From Vocational hcare, 1(1), 49-55.

26. LeFlore, J. L., Anderson, M., Michael, J., Engle, W. D., Anderson, J., & LeFlore, N. (2015). Simulation in nursing education: Debriefing in a student-led postconference. Nursing Education Perspectives, 36(6), 390-392.

27. Rudolph, J. W., Simon, R., Dufresne, R. L., & Raemer, D. B. (2006). There's no such thing as "nonjudgmental" debriefing: A theory and method for debriefing with good judgment. Simulation in Healthcare, 1(1), 49-55