Maternal and Child Health Instructors and Students' Perceptions of the Engagement in the Learning of Clinical Simulation: A Review of the Literature.

Dr. Hussien Al-Qasem, assistant professor, [*], dr. Abedallah kasem [**], Nadin Kanaan[**]

[*] Audiology, faculty of applied science, private Zarqa University
[**] maternal and child health department, faculty of nursing, Jordan university of science and technology.
*** child health, Faculty of nursing, Jordan university of science and technology.

Abstract- Objective: To gain insight into the existing scientific evidence on the effect of simulation on maternal, child instructor and students perception
Design: A systematic literature review of original research publications
Data Sources: In this systematic review, the papers in English, databases CINAHL Plus, Medline, health Source: Nursing/Academic Education, Google Scholar, and Digital Dissertations and Theses through ProQuest, from 2009 to 2020 were reviewed.
Result: According to the inclusion criteria, 19 publications out of the 20 whose titles and abstracts had been reviewed were included in the review. 18 of the studies found that simulation training had a positive impact on perception, while 5 had a negative one.

Index Terms- *students' simulation lab, nursing students, nursing instructors, child instructors' perception, maternal instructors' perception, nursing student perception, and simulation training*

I. INTRODUCTION

Clinical simulation is a method of simulating a specific area of clinical care in order to recreate real-world healthcare events in a safe setting for education and experimentation. Healthcare Simulation, Medical Simulation, Nursing Simulation, Simulation in Healthcare, and Surgical Simulation are some of the more prevalent names this term.
Simulation-based education (SBE) is a rapidly evolving approach of augmenting and enhancing medical students' practical instruction, where clinical scenarios are replicated for teaching and learning objectives, allowing for intentional practice of new abilities without engaging actual patients (Weller et al., 2012). Mannequins, part-task trainers, simulated patients, or computer-generated simulations are used to mimic clinical circumstances for teaching and learning purposes, allowing the requirements of learners at each step of their education to be targeted (Weller et al., 2012). Emerging data supports simulation's utility as an instructional approach. To be effective, it must be integrated into the curriculum in a way that encourages the transfer of skills learned to clinical practice (Weller et al., 2012). However, most Health Workforce projects are aimed at developing a more coordinated national strategy to maximizing the benefits of simulation.

The following inclusion criteria were used for the selection of studies for this review:

- The study has to relate to simulation methods only directed on
Instructor and nursing student.
- The study has to give information about the effects of simulation on nursing students.
- The full text of study has to be available in.

The Exclusion Criteria were used for the selection of studies for this review:

- Pilot studies.
- Non-original publications paper such as letters to the editor, or abstracts only.

2.2. Searching Data Base:
The papers published in English international databases, from 2016 to 2020. CINAHL Plus, Medline, and Health Source: Nursing/Academic Education, Google Scholar, and Digital Dissertations and Theses through ProQuest were among the electronic resources searched for the systematic review of the literature. The titles and abstracts of papers that found in the international databases were searched using different combination of keywords including students' simulation lab, nursing students, nursing instructors, child instructors' perception, maternal instructors' perception, and nursing student perception, and simulation training. That were combined with search operators (AND, OR).
2.3. Selection:
Initially, 25 studies were retrieved. After screening of abstract and title, 6 studies were excluded as they were not met the inclusion criteria. Finally, 19 research studies remained in the review.

II Methods used in study:

II.1 Design: Among the studies reviewed. Seven studies had qualitative descriptive studies ((Teles et al., 2020), (Au et al., 2016), (Campanati et al., 2021), (Marwa et al., n.d.), (Coutinho et al., 2016), (Ronquillo, 2009), (Saied, 2017)), four studies were quasi experimental stud (Keskin et al., 2021), (Nadler et al., 2022), (Kim & Cho, 2018), (Yousif Omer & Author, 2018)), two studies had mix design ((Jim, 2020), (Maclean et al., 2019)), one study had random control trial (Boostel et al., 2018), two study were Q-methodology ((Landeen et al., 2015), (Young Lee et al., 2020)), one phenomenology study (Cordeau, 2010), one self-report study (Omer, 2016), and one study literature review (Negri et al., 2017).

II.2 Sample:

the studies' sample sizes varied greatly and ranged from 9 participants (Keskin et al., 2021), to 266 participants (Yousif Omer & Author, 2018).

II.3 ***Students Perceptions themes that results from the Simulation:***

Positive perception:

18 of the 19 studies found that nursing students' perceptions during the high fidelity simulation were mirrored in themes. By utilizing modern technology, role-playing techniques, variety of scenario, and educational resources, all of them which lead to a positive impact on clinical practice by ensuring patient safety, preventing patient harm, dealing with difficult situations, find rapid, and smart solutions to solve the issues, recognize the sign and symptoms of disease, and intervene to meet the need of patients. Also from high fidelity simulation students gain a new knowledge, self-confidence, team work skills, satisfaction, communication skills, self-efficacy, clinical skills, Empathy, and realism of situation (Teles et al., 2020), (Au et al., 2016), (Keskin et al., 2021), (Landeen et al., 2015), (Young Lee et al., 2020), (Maclean et al., 2019), (Cordeau, 2010), (Marwa et al., n.d.), (Negri et al., 2017), (Omer, 2016), (Yousif Omer & Author, 2018), (Coutinho et al., 2016), (Ronquillo, 2009), (Saied, 2017), (Eremita, 2018), (Kim & Cho, 2018), (Jim, 2020), (Nadler et al., 2022), (Campanati et al., 2021).

Negative perception:

5 of 19 studies highlight the difficulties nursing students perceived as a result of the simulation lab. The first difficulty was that the models did not represent actual people, making it challenging to apply simulation lessons in a real clinical situation. Also there is a difficulty and a fearful perspective that the students experienced both before and after the simulation, such as the feeling that they were unable to assist the patients, could be doing psychological harm to them, couldn't respond to their questions, or could be killing them, encountering a scenario and being unsure of what to do, relationships with coworkers, and encountering a patient who struggles to communicate. Finally There are various difficulties that nursing students encounter when applying the knowledge they have learned through simulation in a real-world clinical setting, such as not enough patients, inadequate resources, and nurses who didn't let the students to practice as much as they should have (Au et al., 2016), (Keskin et al., 2021), (Landeen et al., 2015), (Boostel et al., 2018), (Jim, 2020).

Faculty, and instructors' perception resulting from simulation:

3 of 19 studies focus on clinical simulation is advised by faculty because it creates a secure learning environment that supports clinical decision-making and deep learning. Although faculty members acknowledged that high-fidelity simulation had its limitations in terms of how realistic it could be, they still work to improve the simulation learning environment and make it more like clinical practice environments, which can improve the effectiveness of teaching skills like critical thinking and decision-making. Instructors began to see simulation-based learning as a useful teaching strategy that enhances students' nursing abilities by combining theoretical knowledge with real-world application. Also During simulation-based learning, faculty were aware of the need to help students, noting that "learners should be provided an environment where they feel safe to make mistakes." and raise self-confidence and satisfaction (Nadler et al., 2022), (Landeen et al., 2015), (Young Lee et al., 2020).

III CONCLUSION:

The researcher believe that because it can benefit students, faculty, patients, and their families, clinical simulation practice in the classroom should be promoted. In fact, evidence points to clinical simulation as a useful teaching and learning tool for maternity nursing. However, at times, the laboratory training was insufficient because of the sparse use of simulation methods. Simulation methods have been shown to be helpful in enhancing knowledge and to be very effective in learning processes. However, the simulation influences how the students perceive pressures and encourages self-reflection and critical thinking about the responsibility that goes along with learning. In reality, students' perceptions of and happiness with their learning from simulation activities were moderate, and they had a high degree of self-confidence in their ability to learn from simulation activities. However, students saw organized debriefing as an engaging technique that enables them to organize their thoughts, individually and collectively reflect on the activities, and solidify and systematize their information.

.

1V Recommendations

Based on the analysis, the study recommends the following:

1. The study suggests more research be done to confirm healthcare situations for children and families.
2. It is advised to stick with this approach to teaching nursing fundamentals.

3. Prior to clinical practice, it advises the development and use of SIM-PBL for a variety of circumstances in the nursing curriculum.

4. To maximize the learning impact for nursing students, simulation-based curriculum should be created and implemented.

5. To optimize student learning, the faculty should be aware of the variety of student perspectives and adapt their teaching strategies accordingly.

6. To raise students' levels of perception, contentment, and confidence in their maternity nursing abilities, different simulation-based education should be made available to them.

Appendixes, if needed, appear before the acknowledgment.

ACKNOWLEDGMENT

WE THANK DR. ABEDALLAH KASEM FOR HIS CONTRIBUTION WHO ACTED A S CRITICAL DISCUSSANTS AND REVIEWER OF THE ARTICLE.

CONFLICT OF INTEREST:

NONE TO BE DECLARED .

REFERENCES

[1] Au, M. L., Lo, M. S., Cheong, W., Wang, S. C., & Van, I. K. (2016). Nursing students' perception of high-fidelity simulation activity instead of clinical placement: A qualitative study. *Nurse Education Today*, *39*, 16–21. https://doi.org/10.1016/j.nedt.2016.01.015

[2] Boostel, R., Felix, J. V. C., Bortolato-Major, C., Pedrolo, E., Vayego, S. A., & Mantovani, M. de F. (2018). Stress of nursing students in clinical simulation: a randomized clinical trial. *Revista Brasileira de Enfermagem*, *71*(3), 967–974. https://doi.org/10.1590/0034-7167-2017-0187

[3] Campanati, F. L. da S., Ribeiro, L. M., Silva, I. C. R. da, Hermann, P. R. de S., Brasil, G. da C., Carneiro, K. K. G., & Funghetto, S. S. (2021). Clinical simulation as a Nursing Fundamentals teaching method: a quasi-experimental study. *Revista Brasileira de Enfermagem*, *75*(2), e20201155. https://doi.org/10.1590/0034-7167-2020-1155

[4] Cordeau, M. A. (2010). The Lived Experience of Clinical Simulation of Novice Nursing Students. *International Journal of Human Caring*, *14*(2), 8–14. https://doi.org/10.20467/1091-5710.14.2.8

[5] Coutinho, V. R. D., Martins, J. C. A., & Pereira, F. (2016). Structured debriefing in nursing simulation: students' perceptions. *Journal of Nursing Education and Practice*, *6*(9). https://doi.org/10.5430/jnep.v6n9p127

[6] Eremita, D. A. (2018). Examining the Relationship Between the Use of Simulation in Nursing Education andSafety with Medication Adminstration in the Clinical Setting. *University of Maine*.

[7] Jim, D. (2020). *Simulated Video Consultations as a Learning Tool in Undergraduate Nursing : Students ' Perceptions*. 1–12.

[8] Keskin, A. Y., Senturk, S., Molu, B., & Tuna, P. T. (2021). Opiniile studenților la asistență medicală privind educația bazată pe tehnici de simulare și impactul acestora în practica clinică | [Students' opinions of simulation-based nursing education and its impact on clinical practice]. *Jurnal Medical Brasovean*, *2*, 56–64. https://doi.org/10.31926/jmb.2020.2.1

[9] Kim, Y., & Cho, O. (2018). *SIMULATION EDUCATION WITH PROBLEM-BASED LEARNING : EFFECT ON NURSING STUDENTS '*. *46*(1), 151–160.

[10] Landeen, J., Pierazzo, J., Akhtar-danesh, N., Baxter, P., Eijk, S. Van, Ec, R. N., & Evers, C. (2015). *Exploring Student and Faculty Perceptions of Clinical Simulation : A Q-Sort Study*. *54*(9). https://doi.org/10.3928/01484834-20150814-02

[11] MacKinnon, K., Marcellus, L., Rivers, J., Gordon, C., Ryan, M., & Butcher, D. (2015). Student and educator experiences of maternal-child simulation-based learning: a systematic review of qualitative evidence protocol. *JBI Database of Systematic Reviews and Implementation Reports*, *13*(1), 14–26. https://doi.org/10.11124/jbisrir-2015-1694

[12] Maclean, S., Geddes, F., Kelly, M., & Della, P. (2019). Realism and presence in simulation: Nursing student perceptions and learning outcomes. *Journal of Nursing Education*, *58*(6), 330–338. https://doi.org/10.3928/01484834-20190521-03

[13] Marwa, A. A., Galal, A. E., Soad, A. R., & Hend, A. E. (n.d.). *Original Article Satisfaction and Self-Confidence*. *9*(3), 14–26.

[14] Nadler, C. F., Pina, J. C., de Quadros Schmidt, S., Okido, A. C. C., Fonseca, L. M. M., Rocha, P. K., Anders, J. C., Do Nascimento, K. C., & de Oliveira, S. N. (2022). Impact of High-Fidelity Simulation in Pediatric Nursing Teaching: an Experimental Study. *Texto e Contexto Enfermagem*, *31*, 1–16. https://doi.org/10.1590/1980-265X-TCE-2021-0140

[15] Negri, E. C., Mazzo, A., Martins, J. C. A., Pereira Junior, G. A., Almeida, R. G. dos S., & Pedersoli, C. E. (2017). Simulação clínica com dramatização: Ganhos percebidos por estudantes e profissionais de saúde. *Revista Latino-Americana de Enfermagem*, *25*. https://doi.org/10.1590/1518-8345.1807.2916

[16] Omer, T. (2016). Nursing Students's Perceptions of Satisfaction and Self-Confidence with Clinical Simulation Experience. *Journal of Education and Practice*, *7*(5), 131–138. www.iiste.org

[17] Ronquillo, M. B. (2009). *Nursing Student Perceptions of Clinical Simulation During a Maternity Nursing Scenario*. https://scholarworks.sjsu.edu/etd_projects/813/%0Ahttps://scholarworks.sjsu.edu/cgi/viewcontent.cgi?article=1813&context=etd_projects

[18] Saied, H. (2017). The Impact of Simulation on Pediatric Nursing Students' Knowledge, Self-Efficacy, Satisfaction, and Confidence. *Journal of Education and Practice*, *8*(11), 95–102. http://ezproxy.lib.uconn.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1139780&site=ehost-live

[19] Teles, M. G., Mendes-Castillo, A. M. C., Oliveira-Kumakura, A. R. de S., & Silva, J. L. G. (2020). Clinical simulation in teaching Pediatric Nursing: students' perception. *Revista Brasileira de Enfermagem*, *73*(2), e20180720. https://doi.org/10.1590/0034-7167-2018-0720

[20] Weller, J. M., Nestel, D., Marshall, S. D., Brooks, P. M., & Conn, J. J. (2012). Simulation in clinical teaching and learning. *Medical Journal of Australia*, *196*(9), 1–5. https://doi.org/10.5694/mja10.11474

[21] Young Lee, J., Park, S., student, D., & Professor, A. (2020). Nursing students' and instructors' perception of simulation-based learning. *International Journal of Advanced Culture Technology*, *8*(1), 44–55. https://doi.org/10.17703/IJACT.2020.8.1.44

[22] Yousif Omer, T., & Author, C. (2018). *Nursing Students' Perceptions on Standardized Debriefing Experience After Clinical Simulation*. *7*(December), 59–66. https://doi.org/10.9790/1959-0705065966

AUTHORS

First Author – Dr.Hussien Al-Qasem, assistant professor, Private zarqa university
P.O. Box:3030Jordan
Second Author – dr. Abedallah kasem, associate professor, Jordan university of science and technology,
Third Author – Nadin Kannan, Master student, Jordan university of science and technology,

Correspondence Author – (Hussien Al-Qasem)
Affiliation: Private zarqa university
P.O. Box:3030Jordan