Arab American University
Faculty of Graduate Studies
Department of Health Sciences
Ph.D. Program in Nursing

Effectiveness of High-Fidelity Simulation-based Education on Performance, Satisfaction, and Self-Confidence among Mental Health Nursing Students

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This Dissertation Was Submitted in Partial Fulfillment of the Requirements for the Doctor of Philosophy (Ph.D.) Degree in Nursing

Palestine, 12 / 2024

Arab American University
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Dissertation Approval

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Declaration

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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Dedication

To the one who embraced life and pursued its journey... To the one who labored with dedication and achieved greatness... To the one who filled me with hope, both in the past and still today, whose spirit continues to guide and protect me—I dedicate this work.

Nida Teyseer Yusef Jawabreh

Acknowledgements

I extend my profound gratitude to all who have been pivotal in bringing this dissertation to completion.

Firstly ,I dedicate this dissertation to the memory of my beloved mother and father, whose presence in my life, though cut short, has been a profound source of inspiration. Their love, kindness, and unwavering belief in me continue to guide me every day. Though they're no longer here to witness this achievement, I feel their spirit with me in every step of this journey. This work is, in part, a tribute to their enduring influence on my life.

I extend my heartfelt gratitude to my husband, Saed, and my children—Doaa, Shahd, Mohammad, Sana, and Mostafa—whose unwavering support has been my foundation. Their encouragement, patience, and love have been pivotal in making this achievement possible.

I am sincerely appreciative of my main supervisor, Dr. Ayman Mansour, for his steadfast guidance, invaluable insights, and unwavering support throughout this journey. His expertise and commitment have been essential. I am also deeply grateful to my co-supervisor, Dr. Lubna Harazneh, for her thorough supervision and thoughtful recommendations, which have significantly contributed to the success of this work.

My sincere thanks to Prof. Mohammad Asia, Vice President of AAUP, for his unwavering support and confidence in my abilities, which have been a great source of encouragement. His leadership and foresight have motivated me to pursue excellence.

I would also like to express my gratitude to Arab American University for offering a stimulating academic environment and the essential resources needed for this research. The nursing staff at the College of Nursing, through their consistent support and teamwork, has been instrumental in the success of this endeavor

This dissertation is a reflection of the invaluable support, encouragement, and affection I have received from these extraordinary individuals. I am deeply grateful for their presence in this journey

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Abstract

Background: As nursing program enrollment continues to rise and clinical experience site availability remains limited, nursing educators are facing challenges in meeting students' clinical experience requirements. Nursing lab simulations help recreate clinical experiences and aid educators in training future nurses. Utilizing clinical simulation in nursing education has been crucial in bridging the gap between theoretical knowledge and practical skills in a secure learning setting. So, High-fidelity simulation (HFS) provides a method to enhance cognitive, emotional, and physical skills and inspire the next generation of learners.
Aim: to evaluate the efficacy of employing HFS in enhancing mental health nursing students' performance, satisfaction, and self-confidence in contrast to a group of students undergoing traditional nursing education methods.
Methodology: A mixed method design was utilized by recruiting 75 nursing students from Arab American University Palestine and An-Najah National University using a convenience sampling technique. The Educational Practices Questionnaire-Curriculum (EPQ-C) and Learner Satisfaction and Self-Confidence in Learning (LSSCL) method were used to assess nursing students' performance, satisfaction, and self-confidence. Interviews were conducted to gather qualitative data and then analyzed. Statistical tests like t-tests and repeated measures ANOVA were employed to evaluate how HFS impacted the study variables.
Result: The study found significant differences between intervention and control groups, with students using HFS reporting better satisfaction, confidence, and performance. Main qualitative outcomes were identified: enhancing self-esteem and confidence, patient-centered care, developing effective communication skills, and psychological and physical preparedness for mentally ill patient care.
Conclusion: Simulation has been demonstrated to be a successful teaching method for nursing students. Simulations serve as an effective and worthwhile teaching tool. Learning results are typically better for students who have a favorable opinion of the simulations' design elements. As a result, incorporating simulation into nursing students' education helps them make the connection between theory and practice, improving their performance, confidence, and satisfaction while providing a secure setting in addition to traditional clinical training.

Keywords: High-fidelity simulation, performance, satisfaction, confidence.

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List of Definitions of Abbreviations

Abbreviations	Title

(HFS): high-fidelity simulation

C (EPQ-C): The Educational Practices Questionnaire

(LSSCL): Learner Satisfaction and Self-Confidence in learning method

(GPA): general point average

(AAUP): Arab American University Palestine

(WHO): World Health Organization

(T-test): t value of independent sample

(NLN): (National League of Nursing

(PNA): Palestinian National Authority

(BSN): Bachelor of Science in Nursing

BC before the birth of Christ

(ICN): International Council of Nursing

(IBM-SPSS):Statistical Package for the Social Sciences

(ANOVA): Analysis of the variance formula

Chapter One: Introduction

1.2 Background

The accelerated changes in healthcare management and provision, globally, provoked the attention of healthcare professionals and educators to commensurate with the required changes seeking ultimate goals, performance, and outcomes. The rapid changes and advances in health technology are becoming essential components of quality of care and education, as well. Therefore, nurse educators are in a position to use technology in nursing education to attain to best performance of nursing education and training and meet the intended learning outcomes utilizing the advanced models and approach of education. As a profession, nursing is an integrated discipline requiring knowledge and skill reflected in cognitive, affective, and psychomotor learning domains (Salifu et al., 2022). Nursing education quality outcomes is no longer dependent on using the traditional and unidimensional approaches, and rather, advanced technology such as high-fidelity simulation (HFS) is becoming one significant contributor to nursing quality of education outcomes. Thus, using HFS and similar competitive and similar approaches and methods need to be investigated further to ensure that nursing students and educators are appropriately using HFS and that benefits are all optimized.

A major goal of nursing programs is to prepare future nurses to attend to the health needs of the community. The global standards are essential components of high-quality nursing education programs (Baker et al, 2021). However, traditional teaching methods, in which instructors decide the best approach solely, and the transfer of information occurs through a one-way communication approach, are no longer meeting the requirements of the up-to-date and continuously changing intended learning outcomes (Koukourikos et al, 2021). Such education practices that are not student-centered lead to students assuming passive roles as healthcare professionals. Therefore, curricula in nursing education need to be adjusted to the new generation of nursing students who are mainly coming from the Y- generation and are components in using technology and all advanced social and communication media. Such an advancement will ensure assuming the active role of nurses and be more influential and flexible in terms of using and accepting all novel approaches of health provision. This requires the application of an innovative approach in the education system such as high-fidelity simulation (HFS) (Dil et al, 2012). HFS is an example of an interactive teaching-learning method in nursing education that is widely used across disciplines and specialization

fields including construction, molecular biology, aviation, the automotive sector, the industry, and the healthcare system (Goris, Bilgi & Bavindir, 2014).

The willingness and popularity of using the HFS is due to the high level of applicability and usefulness witnessed across disciplines. Therefore, using HFS in nursing education is appraised by students for its benefits and found to have positive impact on students' achievements and accumulation of knowledge (Fawaz, Hamdan-Mansour, 2016a; Fwaza, Hamdan Mansour, 2016). Furthermore, it has been reported that HFS is representing the future of nursing education and training (Fawaz, et al., 2018). Utilization of HFS for enhancing learning outcomes in nursing education found to be positive and appraised as innovative method by nurses and nursing students (Ayed & Khalaf, 2018). Such robust and valid literature support is well recognized as evidence and acknowledgement of HFS in nursing education for its valuable contribution to learning and training materials in nursing sciences.

One of the definitions of simulation is the imitation of certain tasks, relationships, phenomena, equipment, behavior, and cognitive activities that occur in real life (Goris et al., 2014). Gaba (2004) defined simulation as a technique, not a technology, to replace real experiences in a fully immersive and interactive way. Jeffries (2005) defined this term as activities that reflect the reality of the clinical environment and are designed to demonstrate procedures, appropriate organization of students in the simulation activity, decision-making, and critical thinking through techniques such as role-playing (Eyikara, E. & Baykara, G., Z. 2017). Therefor the nursing field has a lot to gain from HFS. It appears to boost students' self-confidence and offer a secure setting where they can practice in clinical settings and learn by doing without endangering patient safety (Watson et al, 2021). In order to prepare nurses for their responsibilities as future nurses, nursing education entails both theoretical and practical instructions. The complete spectrum of human experiences and reactions to health and illness are covered by the scope of nursing practice which includes all roles and duties assumed by nurse (Koukourikos et al., 2021). The teaching methods employed in nursing theory and practice education play a vital role in determining the competency of new nurses in critical thinking, clinical decision-making, and psychomotor skill development. Through diverse real-life situations encounters, HFS offers nursing students the chance to hone their clinical and decision-making abilities (Ghimire & Kachapati, 2020).

By planning practice sessions, giving feedback, and reducing or adding environmental distractions, HFS allows the nurse educators to manage the learning

environment appropriately and safely. A gadget that simulates a patient or a portion of a patient can respond to the learner's activities and engage with them in the context of health care (El-Meanawi et al, 2019). Additionally, referred to as simulation, these activities are created to be used in demonstrating procedures and fostering critical thinking and decision-making processes in a therapeutic setting. Simulation can be either simple or extremely complicated in the context of healthcare education (Edward & Chukwuka, 2020).

Using HFS in instruction and training for undergraduate nursing students, knowledge and comprehension of mental health care can be improved (Goh et al, 2021). This includes the opportunity for nursing students to use this in their clinical practice in nursing care, as well as greater comprehension of concepts and advances in clinical talents, skills, reasoning, and decision-making (Kunst, et al 2016). Simulation plays a major role in enhancing motivation and nursing students' knowledge, ultimately benefiting those who are on the path to becoming qualified psychiatric nurses. HFS provides virtual clinical experiences and environments rich in diversity and exposure, yet safe for experimentation and learning for mental health nursing students (Elnehrawy, 2022). In a secure, practical nursing setting, HFS connects technology with learning practice and guided reflection. HFS is proven to enhance students' cognitive, affective, and decision-making skills, HFS is helpful for learning and performance because it can accurately simulate physiological responses (D'Souza et al., 2017). A key factor in determining student performance, satisfaction, and self-confidence is the incorporation of HFS into mental health nursing education (Haynes Redding, 2017). Students are better equipped to manage the intricacies of mental health nursing practice by integrating technology and simulation, streamlining clinical processes, and enhancing workflow design (Parker & Turnbull, 2018). In the end, this leads to improved clinical competency, contentment with their educational journey, and heightened self-assurance. The integration of HFS principles into nursing education will be essential to producing a new generation of mental health nurses who are prepared to deliver compassionate, high-quality treatment as healthcare environments continue to change.

1.3 **Statement of the research problem**

The rapid development in informatics and increased usage of advanced technology have a major influence on healthcare provisions and nursing education. The use of technology and portable digital assistants has become a crucial component of today's teaching and learning. An interactive and sophisticated experiential learning approach to nursing is

using high-fidelity simulation. HFS ties guided reflection and the use of technology for educational experiences together. Because it can faithfully imitate physiological reactions, HFS is beneficial for learning and performance (D'Souza et al., 2017). HFS is an excellent teaching tool to help students learn about psychiatric and mental health nursing. (Murray, 2014).

Psychiatric nursing is a specialized field that requires nurses to possess a diverse skill set to establish effective care for individuals with mental health conditions. However, traditional didactic teaching methods may not adequately prepare nurses for the complex and dynamic nature of psychiatric care. As a result, there is a growing interest in utilizing simulation-based education as an innovative approach to enhance psychiatric nursing training. (Brown, 2015). Clinical practices at mental health units can provoke stress in nursing students and patients. Mental disorders theoretical courses in most nursing curriculums are not exceeding 3-5 hours, which may not be enough to prepare the student for safe effective mental health practice. These issues could be addressed by teaching methods that utilize clinical simulation in controlled settings, offering students a safe environment to engage in professional practice and develop the necessary experience for clinical practice in this field. Many Psychiatric nursing students have low self-confidence and self-efficacy in providing care for psychiatric patients because they are untrained from the distinctive challenges of clinical practice in the psychiatric setting, Therefore, simulation can be used to give students positive experiences and useful role models during their psychiatric mental-health clinical rotation (El malky et al., 2016). However, despite the potential benefits, there are several challenges and limitations associated with the use of simulation-based education in psychiatric nursing training. These challenges include limited access to realistic scenarios, a Lack of standardized assessment and evaluation measures, and Emotional and psychological safety concerns (García-Mayor et al, 2021).

Addressing these challenges and limitations is crucial to maximizing the effectiveness of simulation-based education in psychiatric nursing training. By identifying and addressing these issues, nursing educators and healthcare institutions can develop comprehensive and evidence-based approaches to enhance the quality of psychiatric nursing education, improve patient outcomes, and promote the delivery of safe and competent psychiatric care

1.4Study significance

HFS provides a safe learning environment that prevents the risk of harm and increases the ability of decision-making, critical thinking, and effective communication skills. Previous research discussed extensively the utilization of simulation-based education and practice, these researches such as (El-Meanawi et al., 2019) and (Alharbi & Alharbi., 2022) emphasized the role of simulation training on self-confidence, clinical judgment, and decision-making, those skills are critical for safe nursing practice and its core in psychiatric mental health practice. Consequently, HFS is a more advantageous instructional approach for students compared to traditional learning methods. The advanced simulation faithfully emulates the actual clinical scenario. It could be used as a teaching method to improve undergraduate nursing students' knowledge acquisition, self-confidence, and skills performance. However, few studies were published that examine how HFS affects nursing students' performance, satisfaction, and self-confidence when it replaces traditional clinical hours in mental health nursing. Therefore, this study will complement the literature by assessing student performance, satisfaction, and confidence during clinical practice.

Nursing students have a crucial role in effective assessment, diagnosis, and interventions, which are considered challenging issues in mental health practice, and there is an evident gab between theory and practice in mental health sciences simulation can bridge this gap and assure patient safety. This study also provides a database for nursing educators on the effectiveness of her HFS in improving training quality and income outcomes. This will later affect the competence of graduate nurses. In addition, depending on the results of this study, it may help healthcare professionals formulate wellness strategies to improve patient care, especially in the field of mental health.

Political, societal, and cultural factors provide difficulties for mental health nurses in Palestine. By improving clinical decision-making, empathy, and communication skills in a safe setting, High-Fidelity Simulation (HFS) can help students get ready for these challenges. This helps students get ready for clinical rotations in mental health settings, especially in areas affected by political upheaval.

The current study will utilize a complementary qualitative approach in addition to a quasi-experimental quantitative approach, a qualitative approach will be implemented in data collection and analysis which can enable the participants to express their experience regarding using HFS in psychiatric education, this makes the study pioneer one to address the importance of adopting HFS in nursing psychiatric education. In addition, it will improve the

need to adopt simulation-based education as a crucial part of the nursing curriculum generally and psychiatric health nursing courses specifically; it is also considered the first study in Palestine to explore the effectiveness of HFS in psychiatric nursing.

1.5The purpose of the study

This research aims to evaluate the efficacy of employing HFS in enhancing mental health nursing students' performance, satisfaction, and self-confidence in contrast to a group of students undergoing traditional nursing education methods.

1.6 Research questions

This study aims to answer the following suggested questions:

1- What is the effect of using HFS compared to conventional clinical training on the performance of nursing students enrolled in clinical mental health nursing courses?
2- What is the using HFS in replacing conventional clinical hours of mental health nursing training programs on nursing students' satisfaction in Palestine?
3- What is the effect of using HFS in replacing conventional clinical hours of mental health nursing training programs on nursing students' self-confidence in Palestine?

1.7 Research Hypotheses

The following hypotheses will guide the study:

1- Nursing students enrolled in clinical mental health nursing courses utilizing the HFS will have higher scores of performance than those utilizing the conventional clinical training approach.
2- Nursing students who engaged in HFS in replacing conventional clinical hours of mental health nursing training program will have higher satisfaction than those who had participated in the traditional lecture.
3- Nursing students who engaged in HFS in replacing conventional clinical hours of mental health nursing training program will have higher self-confidence than those who had participated in the traditional lecture.

1.8 Study variables definitions

Independent variable:

High-Fidelity Simulation: Defined as a full-size computerized patient simulator experience that offers learners a high level of interactivity and realism (NLN-SIRC, 2013). High-fidelity simulation (HFS) refers to the use of fully featured computerized patient simulators to represent authentic clinical symptoms and scenarios (Au et al., 2016; Meakim et al. al., 2013). HFS is becoming an increasingly popular educational approach in nursing education.

1.9 Dependent variables:

Performance:

Conceptual definition: This can be defined as a student's performance when taking a hybrid course (Fialho et al., 2021). It refers to the quality of work that healthcare workers do to influence and improve the quality of healthcare outcomes (Fowowe & Arogundade, 2021).

Operational definition: The Educational Practices Questionnaire C (EPQ-C) will be used to evaluate performance. (EPQ-C) consists of 22 items. Responses are on a five-point scale. Its purpose is to determine (1) whether students agree or disagree with seven teaching practices (student and teacher). Interaction, cooperative learning, active learning, feedback, time spent on the task, high expectations, and versatile learning) are present in the educational experiences created by the teacher; and (2) the significance of each of the seven educational practices to the student in the learning process.

Satisfaction

Conceptual definition: It is the joy that comes from what the person desires. In relation to simulation, student satisfaction is the student's subjective perception of how well the simulation-learning environment supports learning. High student satisfaction means that appropriately challenging teaching methods help stimulate student thinking and learning. There is also evidence that student satisfaction may be somewhat related to performance (Aljohani et al., 2016).

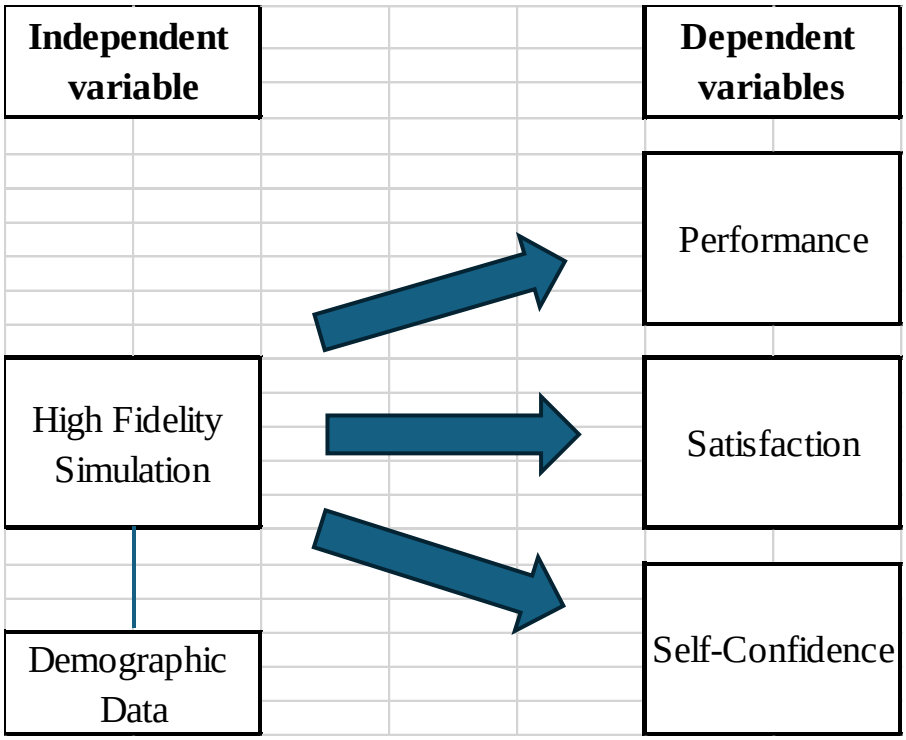
· Self-confidence: Confidence is a student's belief that they can succeed in nursing (White, 2009). It is identified as the health of one's own judgment and execution (Jeffries, 2005).

Operational Definitions

The operational definitions used in this study will be as follows:

Students' Satisfaction and Confidence: It will be assessed utilizing the Learner Satisfaction and Self-Confidence in Learning (LSSCL) method created by the NLN. (2011). The 13 items are divided into two subscales, student satisfaction and self-confidence, and each is graded on a 5-point Likert scale. The total scores for the satisfaction subscale range from 5 to 25, while the total scores for the confidence scale range from 8 to 40. Ratings that are higher reflect greater satisfaction.

Demographic Data: Includes age, gender, and general point average (GPA).



Chapter Two: Literature Review

2.1Introduction

This study aims to assess the effectiveness of HFS in enhancing the performance, satisfaction, and self-confidence of mental health nursing students when compared to traditional nursing education approaches.

This section gives a summary of the pertinent literature on the variables under investigation

The research approach evaluated studies that were published in English between 2008 and 2024. One conducted a literature search by exploring various databases of nursing education, including EBSCO, AAUP Library, Google Scholar, PubMed, Medline, and WHO online library.

The keywords included teaching strategy with simulation, HFS, confidence, contentment, success, nursing training, and nursing learners.

2.2 Nursing Education

Nursing education is rapidly developing with new tools and technologies being introduced all the time. This requires continuous learning and acceptance of change. Education plays a critical role in preparing students to work properly in real-world situations (Sellars et al., 2018). Nursing training must equip students with critical thinking abilities and practical experiences to prepare them for real clinical practice.

In the past, nursing education depended on the teachers' expertise to determine what and how students learn. Recent research suggests that learning outcomes can be enhanced by curriculum and instruction that are student-centered (National League of Nursing [NLN], 2002). Because of these changes, nursing educators need empirical evidence for the effectiveness and efficiency of these new methods to apply them in the classroom. Consequently, nursing education is slowly abandoning reliance heavily on the classic lecture-based and adopting more active learning strategies. These new strategies include problem-solving, case studies, role-playing, and simulation exercises. These new methods supposedly are more engaging and entertaining for the students.

Nursing education is dynamic and expanding aiming to generate compassionate and skilled healthcare practitioners (Barbosa et al., 2021). Nursing education aims to integrate of theory and practice for nursing students to acquire the knowledge, skills, and attitudes they will need

for their future jobs (Budgen & Garmoth, 2008). Clinical practice is a fundamental component of nursing education. According to Curtis et al. (2017), nursing students can provide good nursing care to the extent that they can adequately apply their classroom learning in a clinical setting. Nursing students must practice what they have learned in the classroom in actual clinical situations. Linking theory to practice is vital for students' success.

In nursing education, simulation as a teaching tool is becoming more widespread. Nursing educators therefore must find out how to encourage successful student learning in both clinical and classroom settings. Simulation training has demonstrated moderate to significant improvements compared to conventional teaching techniques.

2.3 Nursing education in Palestine

The history of nursing in Palestine began when the Spafford Baby Home was founded in Jerusalem in 1925. The hospital provided refuge for children who had been abandoned. Later, it became the Spafford Memorial Children's Hospital, the sole children's hospital in the vicinity during that period. The initial nursing training program was introduced for individuals seeking to utilize the hospital's children's services (Shahin et al., 1994, p. 3). The foundation of nursing and midwifery education in Palestine was established by the government hospitals, Augusta Victoria Hospital, and the Al-Maskopeya, where numerous nurses have received their education since the 1920s (Abdul Aziz, M., 2006).

The British mandate in Palestine constructed some health facilities in Palestine. The leading one was the Jaffa Government General Hospital. British nurses spent three years teaching nursing theory and practice to a group of Palestinian girls. The subjects covered included anatomy and physiology, medicine and surgery, gynecology, pediatric illnesses, and ophthalmology (Shahin et al., 1994, p. 4).

In 1953, nursing education was still in the early stages of development. Following that, the Jordanian Ministry of Health began awarding nursing certificates to the nurses (Abdul Aziz, M., 2006).

The first nursing school hospital constructed by Palestinians was Jerusalem's Augusta Victoria Hospital opened in 1951. A decade later, Palestinians founded Saint John Hospital School in 1960 for practical nurses and subsequently Saint Luke's Hospital in 1965. Ibn Sina College for Nursing became the first state-sponsored nursing college to offer a three-year

nursing degree when it opened in 1971. In 1976, the establishment of Al-Makassed School of Nursing and Al-Ittihad School of Nursing was authorized by the Israeli government.

The initial Palestinian nursing program in academia was founded at Bethlehem University in 1974. Shortly after, the Arab College of Health Professions was established in Jerusalem in 1979 (Abdul Aziz, M., 2006). The College of Health Workers was the initial Palestinian university to provide a nursing program. The university has emerged as a frontrunner in this field.

During the 1990s, several enhanced programs and postgraduate programs were introduced at both Bethlehem University and ACHP. In 1997, the Palestinian National Authority (PNA) decided to improve the status of nursing and midwifery education for this purpose the Ibn Sina College of Health Sciences was developed to modernize basic nursing and midwifery education (Abdul Aziz, M., 2006).

Palestine now has 19 educational institutions that offer nursing education: two hospital schools, nine community colleges, seven universities, and one hospital that offers an advanced diploma in ophthalmic nursing. A BSN in general nursing is provided by eight institutions. Nine universities provide two-year degree programs in midwifery and practical nursing. Palestine's nursing schools include five master's degree programs: community mental health, anesthesia, maternity and child_health, pediatric nursing, and nursing management (Palestinian Ministry of Higher Education and Scientific Research, 2023).

According to Hamdan and Imam (2014), the first steps in developing the Palestinian healthcare system include, creating nursing education programs, creating nursing curricula, coming up with innovative ways to teach, and emphasizing teacher competency.

2.4 Simulation and nursing education

Simulation was employed for many years in various industries, such as aeronautics and the armed forces. The military used to be the most common user of the simulation. Even as far back as 1000 BC, simulation techniques were used to prepare soldiers for battle. From mentally demanding board games to illustrate military exercises to physically demanding wooden clubs where a fighter can practice his skills, simulation has been used throughout the storied history of training applications (Aebersold, 2016 & Harb et al 2022). Simulation has also been utilized in other disciplines, such as education and healthcare (McDougall, 2015).

Currently, simulation is increasingly being employed in healthcare education to facilitate experiential learning in a safe learning environment (Muckler, 2017). Simulation aims to replicate the fundamental elements of clinical situations (Levett-Jones & Lapkin, 2014). Katoue, Iblagh, Somerville, and Ker conducted a study in 2015. Integrating simulation into the curriculum has proven to be a powerful connection between theory and practice in healthcare, boosting students' understanding and abilities. The use of simulation in healthcare education has become increasingly popular in recent decades as a way to improve experiential learning. The advancement of simulation in healthcare is primarily driven by the desire to enhance patient safety (Qayumi et al, 2014).

Simulation in learning encompasses planned activities that reflect actual life situations. This strategy enables students to enhance skills and behavior through authentic scenarios presented via case studies (Meakim et al., 2013).

Simulation in education is defined as the educational process in which attempts are made to closely resemble actual patients in real clinical practice. Simulation involves substituting real patients in real clinical experiences with guided scenarios that closely interactively mimic the real world (Koukourikos, 2021).

There are several types of simulations, including:

High-fidelity mannequins utilize computers to replicate patients' body reactions, physical functions, and body structures. High-fidelity mannequins are usually preferred because they are the most versatile type of simulation. Nevertheless, they are also among the most expensive. (Abulfaraj et al., 2021).

Low-fidelity mannequins consist of screen displays, partial-task simulators, and static models. They can assist students in acquiring particular skills, like CPR or IV placement (Altun et al., 2022).

Virtual reality utilizes computers and standardized patients to generate an authentic simulation. This type of simulation is a recent development, growing in popularity within the healthcare industry. Some technologies in virtual reality enable students to care for multiple patients simultaneously, making it a useful tool for teaching complex situations with many individuals involved. (Abulfaraj, 2021).

Simulation engages more than one sense at the same time. Simulations can simultaneously include puppets, players, or a student or group of students performing a series of patient care activities on a standardized patient (Eyikara & Baykara, 2017). Additionally,

simulations provide a realistic setting for acquiring professional abilities. Nurses are expected to have a high level of knowledge and skills. When an interactive method like simulation is incorporated into a nursing program, it leads to the improvement of the nursing staff's competency and experience. Cognitive, affective, and psychomotor skills can be improved in nursing through simulation technology (Pasquale, 2015). Hence, it is essential to form nursing instruction programs based on progressed teaching procedures, such as reenactment to move forward the responses of the nursing staff (Kim et al., 2016; Patrick & Sean, 2017; Sofer, 2018). Such techniques allow nurses to practice clinical decision-making in a risk-free environment (Everson et al., 2020). Simulations are of three categories of fidelity; low, medium, and high (Decker et al., 2008).

Static, non-computerized manikins or task trainers have been classified as low-fidelity simulations (Abdulmohsen, 2010 and Aebersold & Tschannen, 2013). In contrast to HFS, low-fidelity simulation does not as faithfully mimic the traits of a real patient. Low-fidelity simulation models are commonly used for educating critical thinking and psychomotor skills. Examples of low-fidelity simulators are referred to as "task trainers"; these include devices like a model arm that can be used to practice administering intramuscular injections, measuring blood pressure, or changing wound dressings (Cant & Cooper, 2010).
Moderate fidelity simulations are utilized for teaching advanced skills and closely resemble real-life scenarios, like replicating sounds from the lungs and heart. Special stethoscopes can be used with moderate fidelity devices to produce both normal and abnormal lung and heart sounds during auscultation. Advanced simulations use realistic mannequins in authentic patient settings. Students also experience physiological reactions in realistic simulations (Hayden, 2010).

One of the shortcomings addressed by simulation is preparing nurses for critical and urgent decisions on real patients since doing so in actual clinical settings could expose patients to untoward risks. So, gaining experience through simulations is expected to fill this gap (Koukourikos et al., 2021). Simulations also prepare and train students on how to deal with different cases and prevent errors in clinical practice (Harder, 2010). Simulations allow for the opportunity to practice in scenarios closely resembling real-life situations by adapting clinical scenarios accordingly. One student or a group of students will utilize simulation to perform different patient care duties on a manikin, actor, or standardized patient, based on the clinical situation. With the simulation method, students can study at their own pace, freely make mistakes, and constantly practice their clinical abilities until they feel confident and

proficient (Chang et al., 2022). Additionally, by having the nursing students play a variety of roles in authentic scenarios along with simulation exercises, their critical thinking and self-efficacy increased and they gained a greater understanding of clinical scenarios (Kim, 2018). Developing a suitable simulation strategy enhances students' grasp of clinical practice, strengthens their practical abilities, and lowers their stress levels in difficult circumstances (Neugebauer et al., 2022).

In recent decades, there has been a significant increase in simulation used in nursing education (Aebersold, 2011; Berragan, 2011). Given the rapid change in nursing education, simulation-based training is increasingly becoming accepted as a more effective teaching and learning approach (Park, 2018).

A huge increase in simulation-based nursing education has occurred over the past decade. Simulation is included in numerous nursing programs to deal with the challenge of limited acute care clinical opportunities, to instruct in skill development and task practice, to enhance critical thinking and clinical reasoning, to upgrade communication abilities, and to boost student confidence and satisfaction (Adamson, 2015, Boling and Hardin-Pierce, 2016, Dreifuerst, 2012, Lee and Oh, 2015, Pauly-O'Neill and Prion, 2013). Simulation has minimized the psychological burden of patient care execution while providing trainees with a safe environment to practice and build self-confidence in the absence of real clinical experience (Jeffries, 2006). The transition from classroom theories to practical application is helped by simulation education. Simulation improves patient safety by honing nursing competencies before encountering real patients. Nursing students' knowledge, satisfaction, and competency are all improved via simulated education (El-Meanawi, Almanzalawi, & Eittah, 2019; Woda, Dreifuerst, & Garnier-Villarreal, 2019). Additionally, the simulation enables students to prioritize tasks to carry out nursing interventions and make decisions (Jeffries, Swoboda, & Akintade, 2016).

In addition, simulation is utilized in nursing education to change how students learn and adapt to the decrease in available clinical settings. Nursing training has been adapted according to shifts in clinical and academic settings. Academic administrators are currently facing challenges in managing a growing student population, securing faculty and preceptors for student support, and dealing with a shortage of clinical sites capable of hosting multiple interns. One solution to address these changes is to substitute clinical hours with simulation. Several nursing organizations in the USA currently advocate for and endorse the utilization of simulation as a clinical learning tool in nursing education (AACN 2009; Hyden et al.,

2014; Larue, Pepin, & Allard, 2015). The utilization of simulation in nursing education as a teaching method has risen. Data show the strong educational impact of simulation when created with appropriate standards, methods, and performance measures (Shin, Park, & Kim, 2015; Hyden et al., 2014). It is recommended that learning through simulation should account for approximately 20% of learning (Akhu-Zaheya et al., 2013; Kapp, 2020). The National Council of State Boards of Nursing recommended that simulation could be used effectively to replace up to 50% of clinical time (Hyden et al., 2014; Alexander et al., 2015). The use of HFS is another clinical activity through which students can communicate and respond to nursing interventions (Gates, Parr, & Hughen, 2012).

Nursing teachers are very important in helping nursing students in their simulation experiences and in enhancing the effectiveness of simulation The National League for Nursing (NLN) supports the use of high-fidelity simulation as a viable alternative to traditional clinical instructions in nursing education, recognizing it as an essential teaching approach to prepare students for the demanding role of professional nursing (NLN, Vision Statement, 2015).

Several studies have used patient care simulations to augment self-satisfaction for learners and self-confidence (Omer, 2016; Gamal El-deen, 2020; Guerrero-Martínez et al, 2020; Dearmon et al., 2013; Crocciti, 2014). Furthermore, it progresses nursing clinical practice (Koukourikos et al., 2021; Terzioğlu et al., 2016; Ko, & Kim, 2019), nursing knowledge, critical thinking, clinical decision making and communication skills (Crowe, Ewart, & Derman, 201; Oh, Jeon, & Koh, 2015; Kim et al., 2012).

Simulated environments are effective arenas for addressing intricate medical situations. HFS may improve students' abilities to meet patients' needs in clinical practice (Reime et al., 2016). The use of simulations is a useful and effective learning strategy that offers a safe realistic setting in which learners can train and make errors in a controlled environment (Doğru, & Aydın, 2020; Leal-Costa et al., 2024).

Some of the main reasons for disease and disability around the world are mental illnesses. Despite that nurses are the largest workforce confronting mental health problems globally, they do not receive sufficient training in mental health during their undergraduate studies. Simulation training may foster the development of the appropriate competencies required when supporting people with mental disorders and provide nursing students with the opportunity to integrate necessary knowledge, skills, and attitudes toward the mentally ill

during practice., (Piot et al., 2022; Choi et al. 2016). Our psychiatric nursing students must be provided opportunities to learn about mental illness and the development of psychiatric nursing treatment skills in safe environments that approximate practice settings (Shaygan et al., 2023).

In addition, High-Fidelity Simulation (HFS) in mental health nursing provides immersive learning experiences in a secure setting, preparing students for complex therapeutic situations like trauma and psychiatric diseases. This approach prepares students for clinical judgment, empathy, and communication skills, allowing them to treat patients with mental health issues without real-world consequences.

Moreover, the integration of simulation in psychiatric and mental health clinical experiences is an effective means of facilitating student learning (Yong-Shian et al., 2016; de Presno, Øgård-Repål, & Fossum, 2021).

2.5High fidelity simulation in nursing education

The Human-Fidelity Simulator (HFS) and evidence-based practice are increasingly becoming core components in nursing programs. This approach instructs the healthcare service to use HFS as a teaching tool for students enrolled in nursing education programs and healthcare professionals (Alfes, 2011). Numerous studies have demonstrated the advantages of high-fidelity simulation in nursing education. It has been demonstrated that high-fidelity simulation improves nursing students' learning outcomes in terms of performance, knowledge, self-efficacy, satisfaction, and self-confidence (Najjar, & Miehl, 2015; Lei et al, 2022; Au et al, 2016). Through its function as a bridge between theoretical knowledge and practical skills, it enhances patient care in nursing education (D'Souza, Arjunan, & Venkatesaperumal, 2017; Fawaz, & Hamdan-Mansour, 2016). Through high-fidelity simulation, students can hone their communication, clinical judgment, critical thinking, and teamwork skills in actual situations (Ayed et al, 2022; Yuan, Williams, & Man, 2014). Motivation, clinical judgment, and competence also were shown to improve significantly with HFS. Research has also demonstrated how HFS diminishes anxiety among nursing students. Students appreciate the chance to practice in a secure setting even though they could feel stressed out during simulation sessions (Labrague et al,. 2015; Yu et al,. 2021). Furthermore, it has been shown that high-fidelity simulation is a useful tool for raising nursing students' performance on dosage calculation and medicine administration tests (D'Souza, Arjunan, & Venkatesaperumal, 2017; Cant & Cooper, 2017).

Additionally, HFS has also been studied in different scenarios, such as enhancing palliative care communication proficiency and showing promise in enhancing skills related to discussing death and end-of-life care. Furthermore, it has been proven to enhance male nursing students' skills in MCH care, particularly when hands-on experiences are limited due to cultural or religious factors. The review of the research ends by emphasizing the crucial role of HFS in improving learning results, clinical proficiency, communication abilities, and self-assurance in nursing students. Evidence indicates that HFS can be implemented in nursing education to better prepare students for real-world clinical practice.

Conventional teaching techniques have not sufficiently equipped students for the demands of the nursing profession. Clinical judgment, critical thinking, and the inability to work effectively in a healthcare team are needed skills for nurses. The Health Resources and Services Administration has found an additional variable that plays a role in the nursing shortage: a lack of advanced nursing education. High-fidelity (HF) human patient simulators are currently being introduced in undergraduate nursing programs. The results of several qualitative and quantitative studies that have been reviewed indicate that teaching with HF human patient simulators enhances students' learning in addition to their critical thinking and clinical judgment (Kim et al, 2021).

Several factors drive the increasing use of (HFS) in nursing education programs. Improving health outcomes depends on training nurses who are adequately skilled in clinical problem-solving and critical thinking. A systematic review (D'Souza et al., 2017) supports the use of (HFS) in nursing education to create and develop different patient conditions across disciplines to learn nursing management and in collaboration with health care. Utilizing HFS to enhance nursing results is a successful and cutting-edge method. Including HFS in nursing education can boost nursing quality and student learning results in safe nursing practice.

A Meta-analysis study conducted by (Li et al., 2022) provided in-depth evidence for the effectiveness of HFS in BSN education. Compared to alternative teaching strategies, HFS proved to be more successful at developing BSN students' understanding, abilities, teamwork, empathy, and motivation to learn. Nonetheless, the efficacy of HFS is comparable to other teaching approaches when it comes to enhancing BSN students' critical thinking, self-confidence, and satisfaction with learning. In the future, nursing educators can select suitable teaching methods depending on the contexts and specifics of each clinical situation to attain desired learning results as each method has its advantages and disadvantages.

2.6Impact of HFS on self-confidence and satisfaction

Numerous studies demonstrated that (HFS)significantly improves nursing students' self-confidence and satisfaction. Theoretically, this can be explained by HFS immersing students in realistic clinical scenarios, which nurtures a deeper understanding of clinical procedures and consequently enhances self-efficacy. Research shows that students who participate in HFS report higher self-confidence in performing clinical procedures and increased satisfaction in their training (Johnson et al., 2020) Guerrero et al., 2022; Häusermann, 2023). For example, Johnson et al. showed that nursing students' self-confidence and satisfaction increased after practicing simulation activities that included standardized patients (Johnson et al., 2020). This aligns with Guerrero et al., who reported that nursing students experienced significant gains in self-confidence and satisfaction following high-fidelity simulation experiences, which also contributed to their critical thinking and clinical competence (Guerrero et al., 2022). These results highlight how HFS improves both the technical skills and psychological preparedness of nursing students for real-life clinical obstacles. Moreover, Häusermann's study highlighted that HFS optimizes communication skills and caring competencies, which are essential for effective nursing practice (Häusermann, 2023). Students can enhance their skills with confidence by practicing in a safe environment that permits making mistakes without facing real-life consequences. D'Souza and colleagues also confirmed this idea by showing that students who had previous experience with high-fidelity simulation reported increased levels of self-assurance and contentment, especially when dealing with stressful scenarios like managing diabetic ketoacidosis (D'Souza et al., 2020). This indicates that continual exposure to HFS may result in increasing self-efficacy and overall satisfaction with the learning process. Along with boosting self-assurance, HFS has been associated with enhanced contentment levels in nursing students. Research by Carrero-Planells et al. emphasized that the realism and quality of high-fidelity simulators contribute significantly to student satisfaction, as they engage with advanced technology and realistic scenarios (Carrero-Planells et al., 2021). Furthermore, studies have shown that students who experience HFS, report higher satisfaction levels compared to those who undertake lower fidelity simulations, reinforcing the idea that the type of simulation influences students' educational experiences (Alconero-Camarero et al., 2021; Cerra et al., 2019). In sum, HFS is a successful teaching method that significantly boosts students' confidence and satisfaction. HFS enhances students' technical skills and boosts their confidence and satisfaction with nursing training, preparing them for clinical practice.

2.7 Effect of high-fidelity simulation on clinical performance

High-fidelity simulation (HFS) enhances clinical performance among nursing students because it allows students to engage in scenarios that resemble real patient care situations, which improves their clinical skills, judgment, and performance (Ayed & Khalaf, 2018) Ayed et al., 2022). Clinical judgment and decision-making are greatly enhanced by HFS. A systematic review demonstrated the superiority of HFS over low-fidelity simulation in improving clinical judgment among nursing students, which in turn ensures patients' safety and quality of care (Ayed & Khalaf, 2018). Similarly, Ayed et al. found that students who participated in HFS were better at noticing, interpreting, responding, and reflecting on clinical situations (Ayed et al., 2022). These findings suggest that HFS not only improves technical skills but also enhances critical thinking and clinical reasoning, which are needed for quality nursing practice. More, studies revealed that HFS improves knowledge retention and clinical application. McGaghie et al. noted that simulation-based medical education improves the performance of medical graduates, through practice and feedback, which are crucial for skill acquisition and retention (McGaghie et al., 2011). This accords with results from Dante et al., who demonstrated that multiple exposures to HFS significantly enhanced clinical performance among nursing students, particularly in critical care scenarios (Dante et al., 2021). The chance to practice in a secure setting where students can make errors without facing actual repercussions leads to enhanced learning and skill improvement. The impact of HFS on clinical performance was also noted in inter-professional education. For example, Thompson's research indicated that HFS not only improves individual nursing students' skills but also enhances teamwork and collaboration among healthcare professionals (Thompson, 2020). Effective communication and collaboration are crucial in today's healthcare setting for ensuring patient safety and quality care. Moreover, HFS reduces anxiety among nursing students, enhancing their clinical performance. The controlled and realistic clinical environment of HFS helps increase confidence and reduce the anxiety that is associated with real clinical conditions (Thompson, 2020). This reduced anxiety will improve focus and performance during actual patient care. In conclusion, HFS is a powerful educational method in nursing that significantly improves clinical performance, clinical judgment, and critical thinking, by reducing anxiety and increasing critical thinking. The evidence backs up the incorporation of HFS into nursing programs to help students get ready for the challenges of actual clinical work, resulting in improved patient results.

2.8 Summary

Simulation in nursing education is the process of creating scenarios using models that resemble real patients on which students can practice and develop their clinical skills without the risk of harming real patients. Students can repeat the scenarios until they are confident in their abilities to deal with real patients. Simulation can be of low, moderate, or high fidelity based on the degree to which the scenario of the Mannequin model resembles reality. The Mannequins can range in sophistication from static non-computerized task trainers to advanced interactive and computerized dolls.

This research aimed to assess the effects of (HFS) on nursing students' clinical performance, confidence, and satisfaction. Previous research has shown that HFS can improve clinical decision-making, critical thinking, and clinical skills. Other studies linked HFS to improved nursing knowledge, communication skills, and reduced anxiety. Those effects can reduce nursing errors, improve patients' safety, and enhance nursing care quality.

Despite these studies, training students on simulated scenarios is very expensive and requires extensive experience by nursing educators. Therefore, the effectiveness of HFS within the Palestinian context needs to be firmly established to justify its integration within the nursing curricula.

HFS has been extensively studied in nursing education in various fields such as cardiology, palliative care, and emergency care. There is less focus on the application of HFS in the field of mental health even though mental health disorders are among the most common problems in Palestine and around the world. This thesis, therefore, fills in the gap by evaluating the impact of HFS on nursing student's performance, confidence, and satisfaction in the field of psychiatry.

Chapter Three: Methodology

This chapter discusses a mixed method design of the study aiming to investigate the impact of HFS on mental health nursing students' performance, satisfaction, and self-confidence when compared to traditional nursing education methods among Palestinian nursing students. The procedure for selecting samples and gathering data was outlined, followed by a discussion on the data analysis plan.

3.1 Study design

The study is primarily quantitative with the complementary use of a qualitative approach. The qualitative approach was used in data collection and data analysis. The qualitative research can greatly enrich the quantitative results. Researchers have more alternatives and qual/quant tools than ever to design projects that produce more useful information, regardless of the study aims (Timans et al., 2019). Quantitative and qualitative research are complementary methods that can yield both deep and wide insights. Regardless of the study goals, researchers have more options and qual/quant tools than ever to design projects that provide more valuable results (Abuhamda et al., 2021). Data was collected using the structured self-reporting questionnaire about demographic information, Learner Satisfaction, and Self-confidence in Learning (LSSCL), and Educational Practices Questionnaire C (Across the Curriculum) (EPQ-C). The qualitative method involves semi-structured interviews to investigate the impact of HFS on mental health nursing students' performance, satisfaction, and self-confidence in comparison to traditional nursing education.

The study used a quantitative approach utilizing a post-test quasi-experimental design complementary to the qualitative approach will be employed to examine the impact of HFS on mental health nursing students' performance, satisfaction, and self-confidence compared to those receiving a conventional nursing education among Palestinian nursing students.

The quantitative approach, a quasi-experimental posttest design was used for over four months to assess the effectiveness of using HFS in mental health nursing training programs on nursing students’ performance, satisfaction, and self-confidence.

Quasi-experimental designs are used to estimate an intervention's effect in the absence of randomization. Stepped wedges, discontinuous time series, and pre-post designs with a non-equivalent control group are a few examples of these designs (Miller et al., 2020). With some restrictions, quasi-experimental designs enable implementation scientists to conduct thorough research in these situations (Handly et al., 2018).

To compare the performance, satisfaction, and self-confidence of the two groups of nursing students from two universities in Palestine (Arab American University Palestine and An-Najah National University), in an attempt to establish differences between groups on performance, satisfaction and self-confidence, each in their third academic year, the enrollment will be split in half. The intervention group will receive high-fidelity simulated instructions, whereas the control group will receive traditional clinical instructions.

This approach will be triangulated with a complementary qualitative approach to examine nursing students' experiences through focus groups. The study used priority sequence designs, where the major quantitative methodology will be used first, followed by a supplementary qualitative method. This was referred to as "a two-phase design" by Creswell (2003). The key component of this approach is an endeavor to divide the task to combine the complementary strengths of other ways.

3.2 Setting

The study was conducted at AAUP and An-Najah National University, Palestinian universities in the northern region of the West Bank.

The simulation center, which was developed by the Faculty of Nursing at AAUP, was used to carry out the simulation experience for the current study. High-fidelity simulators, static manikins, and other simulation tools are available in the lab. There are maternity, pediatric, critical care, and fundamental units in the nursing simulation lab. A few of the situations that students practice in include inserting a Foley's catheter, taking vital signs, performing blood tests, listening to heart sounds, intubating a patient, and other nursing techniques.

3.3 Sample size

The study’s participants were undergraduate nursing students who enrolled in a psychiatric mental health course in the Faculty of Nursing at AAUP and An-Najah National University. Participants in the current study were randomly selected from a list of qualified students compiled using university identification numbers. Then, a random assignment placed each student in either the intervention group or the control group. This method ensured that there would be no bias in the selection process. The sample size was determined using G*power, version 3.0.10 (Munro, 2005). With 75 samples in the two groups (control group 35 and intervention group 40) for a total of 75 in the t test, the alpha was set at 0.05, the

power at 0.80, and the effect size at 0.5. 75 people made up the final sample, with 75 people in tow group to make up for dropouts.

The teaching in the nursing school at AAUP and An-Najah National University is English. The inclusion criteria for participation in this study included nursing students at the two universities, enrolled in the psychiatric mental health nursing course for fall 2023-2024 and taking the course for the first time. On the contrary, students who have been diagnosed with or have a history of mental illness and bridging nursing students were excluded because their personal experiences would influence their attitudes and intended behaviors.

The baccalaureate nursing students in the Faculty of Nursing who enrolled in the psychiatric mental health course participated in the qualitative portion of the study. Deliberate sampling is widely used in qualitative research to identify and choose samples that include a wealth of pertinent information about the subject being studied. Although there are other unique purposeful sampling methods, criterion sampling appears to be the most popular (Palinkas et al., 2015).

Research on implementation is frequently employed. Combining sample techniques, however, could be more in line with implementation research's goals and more current with quantitative methodological developments (Rai & Thapa 2015).

3.4 Study measure

Demographic information and Learner Satisfaction and Self-confidence in Learning (LSSCL) were measured in this study using a structured self-reporting questionnaire. Additionally, the performance was assessed using the Educational Practices Questionnaire C (Across the Curriculum) (EPQ-C).

Demographic data will include:

Age: Nursing students' age in years.

Gender: It will be categorized into male or female.

General point average (GPA): It is related to scoring of grades on average. It is classified as weak, moderate, good, very good, and excellent.

Educational Practices Questionnaire-C (Across the Curriculum): which was based on the work of Chickering and Gamson (1987). The following seven educational practices are present in instructor-developed learning experiences: student-faculty interaction, collaborative learning, active learning, and feedback, time on task, high expectations, and diverse learning. This 22-item compromised instrument uses a five-point scale to rate

respondents' agreement with this statement and their perceptions of the significance of each of the seven educational practices in their educational experience.

Students Satisfaction and Confidence: utilizing the NLN (2011) developed Learner Satisfaction and Self-Confidence in Learning (LSSCL) process. The 13 items are divided into two subscales, student satisfaction, and self-confidence, and each is graded on a 5-point Likert scale. The satisfaction subscale's total scores range from 5 to 25, whereas the confidence scale's total scores fall between the ranges of 8 and 40. Higher scores suggest greater satisfaction.

For the qualitative part, the effects and experiences of Baccalaureate nursing students related to the use of High-Fidelity Simulation are investigated using a focus group design.

3.5 The reliability of the study measures

Cronbach's alpha was used to evaluate the reliability of the Educational Practices Questionnaire-Curriculum (EPQ-C). particular practice prevalence is 0.94; particular practice importance is 0.87. The EPQ-C fits with the seven best practices for undergraduate education and has a content validity index (CVI) of.90. (Chickering and Gamson, 1987).

Cronbach's alpha for the Students' Satisfaction and Self-confidence Scale was 0.94 while it was 0.87 for self-confidence. (Jeffries & Rizzolo, 2006).

3.6 Ethical consideration

This study proceeded after Institutional Review Board (IRB) ethical approval was issued. The written consent of each participant was obtained. Confidentiality and privacy were always respected. No private information was recorded or saved. It was made clear to the participants that their participation was completely voluntary and that they were free to stop at any time without facing any repercussions. Additionally, students were informed of the minimal risks involved.

3.7Informed Consent

According to the International Council of Nurses (1996), the process of obtaining participants' informed consent involves informing them of the study's objectives and assuring them of their rights in a way that is free of coercion. The participants' consent was obtained before any data gathering. To confirm their voluntary involvement, a cover letter was given

to them for signature. Participants received guarantees that the information will be only utilized for this study's objectives. Participant's return of the questionnaire used in Phase One is considered acquiescence to these questions. In addition to the questionnaire details, each questionnaire was accompanied by a descriptive text to make subjects feel comfortable participating in the study. The procedure was also outlined as the purpose of the study. The researchers encouraged participants to ask questions and seek clarification. After explaining the purpose of the study, potential participants received a letter describing the interview. Participants were given an informed consent form to read and sign before the interview began.

3.8 Voluntarily Participation

The principle of voluntary participation is a well-recognized aspect of social research. Hence, it is essential that participants are not misled or forced into being required to take part in a study. So, during each phase of the research, potential participants were told they could choose to participate or not and could leave the study at any point. Not participating or leaving at any time could lead to the subject losing their entitled results or benefits. Potential candidates were also informed that they had the right to decline answering questions, ask for the tape recorder to be switched off, or terminate the interview at any point throughout the research.

3.9 Anonymity and Confidentiality

Beneficence, loyalty, fairness, honesty, and secrecy were recommended as acceptable standards for nursing research by the International Council of Nursing (ICN, 1996). Participants may also suffer consequences if the agreements to keep information private and secret are breached. To address concerns about anonymity and confidentiality, prospective participants were informed before, throughout, and after the study's conclusion. Additionally, all feasible precautions were taken to guarantee that the research reports will not compromise the informant's confidentiality and identity in any manner by giving the participant a pseudonym once the interview or questionnaire has been finished.

Responses and answers to the questionnaire were completely under the control of the study participants. To safeguard confidentiality, participants were informed that the data will be used only by the researchers and would not be used by others without their consent. All written records used pseudonyms for identification purposes. It may be possible to identify

the content of the interview. Teachers are omitted. All recorded material was heard for the first time and transferred to documents transcribed by researchers. Again, she listened to these audio recordings three times to ensure that all verbatim and semantic speech by the participants were accurately transcribed. All recorded materials were subsequently erased to ensure participant confidentiality. Data were analyzed and transcripts were archived by the researcher according to the IRB directions and will be stored in a computer with a password and the hard copy in the cabin for four years.

As with any research involving human subjects, the rights of research participants should be protected (Guraya, 2014). Such protection of participant rights stems from the ethical principles of voluntary participation and obtaining informed consent (Guraya, 2014). The study ensured these principles by ensuring participants' rights to privacy, anonymity, and confidentiality without harm. To achieve this, participants used the consent form concept when returning the questionnaire. Participants were sent an explanatory cover letter explaining the purpose of the study and their right to accept or refuse to participate in this study. Those who agreed to participate were instructed to submit their completed questionnaires in a separate box, which was placed on the lectern in front of the classroom for confidentiality purposes. Participants were instructed not to write their names to ensure their anonymity.

Ethics approval forms were submitted to the Institutional Review Board (IRB) at both the institutional and faculty levels. Data collection will start following this approval.

3.10 Trustworthiness and Credibility

The validity of this study was demonstrated using a variety of methods. These procedures included: (a) a thorough explanation of the study's findings; and (b) the opinions of a second researcher and academic supervisors. These procedures were utilized to validate the analysis and acquire impartial support for the data.

3.11 Data collection

The study was initially publicized via electronic links and student message boards. Then, data were gathered for the fall semester of 2023–2024 using the procedures described below.

The researcher first met with the nursing coordinators for psychiatric and mental health at the nursing faculties at AAUP and An-Najah National University. The coordinators informed

and invited the students to take part in the study, after which the researcher described its objectives, scope, and time frame. Forms for informed consent were signed by eligible students who have expressed interest.

In the second step, students were randomly assigned to the intervention group or control group. On the first day of data collection, the questionnaires for demographic data, participant satisfaction and self-confidence, and participant performance were filled out by both participant groups. Each participant will receive a unique evaluation from the instructor.

Third step, during the first week, students received a three-hour orientation session on schizophrenia that covered topics like identifying the psychopathology of the disorder, factors that affect care, creating a secure environment, and using a nursing care plan. The intervention group members received orientation because they are inexperienced simulators and this is their first simulation experience.

Fourth step: the study was conducted in two phases (control group and intervention group):

Phase I: the control group at An-Najah National University participated in three-hour lectures on schizophrenia involving identifying the psychopathology of the disorder, contributing factors affecting care, establishing a safe environment, and applying a nursing care plan. The traditional clinical practice includes 7-8 students with a trainer in fourteen shifts in total, with eleven in community mental health centers and three in Dr. Kamal Psychiatric Hospital in Bethlehem. Each day for 7 hours in the clinical area, the last hour they meet to discuss cases. After the completion of the clinical practice to prevent contamination, the participants took a schizophrenia case, then participants used this case to notice important aspects of the patient's condition, interpret information, respond to the situation, and finally establish a care plan.

The researcher assessed the performance using the Educational Practices Questionnaire C (Across the Curriculum) (EPQ-C) and Students' Satisfaction and Confidence were evaluated using the NLN (2011)-developed Learner Satisfaction and Self-Confidence in Learning (LSSCL) process.

Phase II: The intervention group at AAUP took part in three hours of lectures on schizophrenia that covered topics like identifying the psychopathology of the disorder, creating a safe environment, and applying nursing care plans. After the lectures, the intervention group was trained using a High-Fidelity Simulation for a schizophrenia case that the researcher provided, and after training was complete, the participants were put through a case study. Participants used this scenario to identify critical elements of the patient's

condition, interpret data, react to the circumstances, and ultimately create a care plan. The researcher assessed the performance using the Educational Practices Questionnaire C (Across the Curriculum) (EPQ-C) and Students' Satisfaction and Confidence were evaluated using the NLN (2011)-developed Learner Satisfaction and Self-Confidence in Learning (LSSCL) process.

Posttest: The researcher administered the posttest sheet in the same way as a pretest. The (LSSCL) and the (EPQ-C) scales had a time limit of 50 minutes.

The intervention scenario (schizophrenia scenario) is retrieved from (https://scenariocloud.laerdal.com/library/recommendation/newscenarios/1).

Nineteen groups made up of four students each were formed from the intervention group participants. Four groups per day completed the groups within a week.

Structured debriefing can guide students to reflect on their actions and perform better. Many simulation educators believe that this is an essential practice for learning in simulation-based classrooms. Deep learning can occur during debriefing, and this often depends on the facilitation skills of the debriefers as well as learners' perceptions of learners' ability to create a safe and supportive learning environment (Palaganas et al., 2016).

For the qualitative part, whatever philosophical point of view the researcher adopts. Regardless of the data collection method (focus groups, one-on-one interviews, etc.), this process generates a large amount of data.

3.12 Data analysis plan

Software IBM-SPSS version 23 was used for data analysis.

The demographic information for the participants was analyzed using descriptive statistics, where the mean and standard deviation of 33 were used for continuous variables, and frequencies and percentages (percent) were used for categorical variables. The differences between study groups were examined using paired t-tests, chi-square, and independent t-tests. A p-value of < 0.05 was considered statistically significant

Data analysis for the qualitative component is a continuous process that begins with data collection and continues once the recorded interviews have been transcribed. In-depth interview transcripts were analyzed using a content analysis method for the assessment of the HFS experience. The interviews were recorded, verbatim transcribed, and error-checked.

When writing essays, we constantly confront the essay's theory, technique, and aim as a whole and not as discrete elements of the question. As soon as I begin the process of

gathering data, the data analysis will begin. From the time I made the decision to use the data, I had been considering how I would analyze it.

A qualitative approach. A breakdown of the many themes and background material is included in the design of the interview guide.

Chapter Four: Results

4.1 Introduction

This chapter presents the findings. The statistical analysis was conducted using the Statistical Package for the Social Sciences (IBM-SPSS, version 28), employing descriptive and inferential statistics to address the research hypotheses. Descriptive statistics including frequency, percentage, central tendency measures (mean and median), and dispersion measures (standard deviation and range) were utilized to describe the participants and provide an overview of their demographics and baseline characteristics. These statistics helped in summarizing the key attributes of the study population. The inferential statistics (independent t-test, paired t-test, Repeated measures, and X^2) were utilized to test the research hypotheses.

4.2 Description of the participant characteristics

The analysis revealed that the mean age of the students was 21.7 ± 0.98 years old and approximately equal in terms of their sex (females, n = 38, 50.7%; males, n = 37, 49.3%). The mean score of their GPA was 2.9 ± 0.47. See Table 4-1.

Table 4. 1: Description of Participants socio-demographics and academic background (N =75)

socio-demographics characteristics		N (%)	M(SD)
Age			21.7(0.98)
Gender	Male	37(49.3)	
	Female	38(50.7)	
GPA			2.9(0.47)

GPA, General point average

4.3 Socio-demographics characteristics and academic background of the participants in both groups

The results of the independent t-test and chi-square analyses revealed no significant differences between the interventional and control groups regarding socio-demographic data and academic background ($p > 0.05$). These findings suggest that the two groups were comparable at baseline, see Table 4-2.

Table 4. 2: Comparison between socio-demographics and academic background of the participants (N =75)

Characteristics		Intervention M(SD)	Control M(SD)	Statistical test	*p.* value
Age		21.8(1.0)	21.6(1.0)	t= 1.11	*0.272*
GPA		3.0(0.5)	2.8(0.5)	t= 1.47	*0.145*
		n(%)	n(%)		
Gender	Male	17(48.6)	20 (50.0)	X^2= .015	*0.902*
	Female	18 (51.4)	20 (50.0)		

P. value significant at the 0.05 level

4. 4 Variables of the study

The mean total scores obtained by the students who participated in the interventional group were 55.6±9.2 and 55.3± 8.7 in the control group for the Educational Practices. Also, Student Satisfaction, was 16.7± 2.1 in the interventional group and 17.1±2.2 in the control group. According to students' confidence, 26.5 ± 3.0 in the interventional group and 27.3±3.6 in the control group, as seen in Table 4-3.

Educational practice, student satisfaction, and self-confidence of both groups at baseline

To compare the outcomes of the two groups at the post-test, it is imperative to assess the homogeneity of the two groups at the pre-test stage. Consequently, an independent sample t-

test was conducted to compare the means of outcomes between the interventional and control groups.

The first assumption of the t-test pertained to the normal distribution of the variable outcome scores. This was evaluated through histograms and measures of skewness of normality, which indicated that the outcome variable scores were approximately normally distributed within both groups. The second assumption, Levene's test, was conducted to test the homogeneity of variances between the two groups ($p > 0.05$). This indicated no significant violation of the equal variance assumption, as seen in Table 4-3.

Table 4. 3: Comparisons of Mean scores of Educational Practice, Student Satisfaction, and Student Self-confidence at Pre-test (N= 75)

Outcomes	Control	Interventional	Levene's test	p. value	t test	p. value
	M(SD)	M(SD)				
Educational practice	55.3(8.7)	55.6(9.2)	.258	.613	.169	.866
Student satisfaction	17.1(2.2)	16.7(2.1)	.499	.482	-.762	.449
Student confidence	27.3(3.6)	26.5(3.0)	1.406	.239	-.995	.323

P. value significant at the 0.05 level

The third assumption involves the existence of two mutually exclusive groups: the interventional and the control groups. This ensures that each participant belongs to only one group and that there is no overlap or ambiguity in group assignments.

4. 5. Testing research hypotheses

Hypothesis one: Nursing students enrolled in clinical mental health nursing courses utilizing the HFS have higher mean scores of educational practices than those utilizing the conventional clinical training approach.

Repeated measure ANOVA for educational practice

Table 4. 4: The mean scores of educational practices (N = 75)

Outcome	Interventional	Control

Practice Pre	55.6	55.3
Practice Post	73.4	61.3

A repeated measures ANOVA was conducted comparing the differences in the mean scores of educational practices before and after the intervention "within-subjects factor" and by the group "between-subjects factor". The group variable was entered as a between-levels factor. The primary purpose of repeated measures ANOVA was to detect if the interaction between those two independent variables was significant.

Before conducting the repeated measures ANOVA test, the major assumptions were checked which included, the dependent variable (educational practice) being continuous, the within-group factor (time) having at least two points, the between-group factor (group) having at least two categories, no significant outliers, and normally distributed outcome scores for each group. The Sphericity assumption was not assessed because the within-subjects factor contained only two levels.

The repeated measures ANOVA descriptive results are shown in Table (4-4). The F tests determined that there is a statistically significant effect over time difference (pre vs. post) in mean scores of educational practices ($F_{(1,\ 73)} = 77.384, P < .001$). The effect of the intervention across time and group was tested by the repeated measures ANOVA interaction effect of time and group Table (4-5). The results showed that there is a significant group by time interaction ($F_{(1,\ 73)} = 18.571, P < .001$). This indicates that the intervention significantly improved the educational practices scores in the intervention group compared to the control group, Figure (4-1). The increase in mean scores of educational practices in the intervention group from 55.6 at the pretest to 73.4 is significantly higher than the increase in scores in the control group (55.6 at the pretest to 61.3 at the post-test).

Table 4. 5: Repeated measures ANOVA group by time interaction

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Practic * GROUP	Sphericity Assumed	1270.630	1	1270.630	18.571	.000

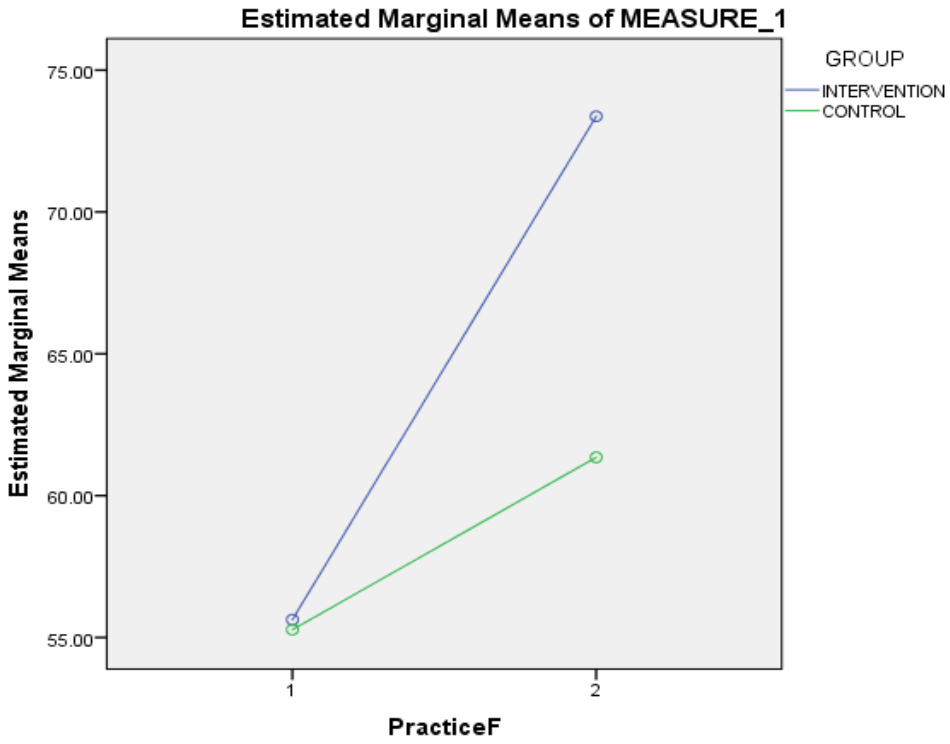


Figure 4. 1: The mean scores of education practices

The analysis revealed a significant difference in the mean scores of educational practices between the pre- and post-tests of the interventional group ($t = 8.157$, $p < 0.05$). Specifically, the mean of the mean scores of educational practices for the interventional group at the post-test ($M = 73.4 \pm SD\ 5.6$) was higher than at the pre-test ($M = 55.6 \pm SD\ 9.5$). Furthermore, the mean scores of educational practices subscales exhibited significant statistical differences between the pre- and post-tests of the interventional group ($p < 0.05$). Notably, the mean scores of educational practices depicted higher values at the post-test compared to the pre-test, as outlined in Table 4-6.

Table 4. 6: Differences in domains of Educational Practice in the interventional group

Educational practice	Pre test	Post test	t test	p. value
	M(SD)	M(SD)		
Active learning	35.4(5.5)	45.7(3.6)	7.584	0.001*
Collaboration	6.7(2.2)	8.7(1.4)	4.676	0.001*
Diverse Ways of Learning	6.3(1.9)	9.5(0.7)	8.518	0.001*
High Expectations	7.20 (1.8)	9.43(0.8)	6.540	0.001*
Educational practice	55.6(9.5)	73.4 (5.6)	8.157	0.001*

**P. value significant at the 0.05 level*

The analysis showed that there was a significant difference in the mean scores of educational practices between the pre-and post-tests of the control group ($t=3.634$, $p < 0.05$). However, the subscale of High Expectations exhibited no significant differences between the pre-and post-tests of the control group, as illustrated in Table 4-7.

Table 4. 7: Differences in Domains of Educational Practice in the Control Group

Educational practice	Pre test	Post test	t test	p. value
	M(SD)	M(SD)		
Active learning	35.0(5.1)	37.8(4.6)	2.604	0.013*
Collaboration	6.7(2.1)	7.8(1.3)	3.308	0.002*
Diverse Ways of Learning	6.3(1.8)	8.1(1.3)	5.691	0.001*
High Expectations	7.3(1.7)	7.8(1.6)	1.107	0.275
Educational practice	55.3(8.7)	61.4(6.8)	3.634	0.001*

**P. value significant at the 0.05 level*

Hypothesis two: Nursing students who engaged in HFS in replacing conventional clinical hours of mental health nursing training program have higher mean scores of satisfactions than those who had participated in the traditional lecture.

Repeated measure ANOVA for satisfaction

Table 4. 8: The mean scores of satisfactions (N = 75)

Variable	**Interventional**	**Control**
Satisfaction Pre	16.7	17.1
Satisfaction Post	21.8	18.1

A repeated measures ANOVA was conducted comparing the differences in mean scores of satisfactions before and after the intervention "within-subjects factor" and by the group "between-subjects factor". The group variable was entered as a between-levels factor. The primary purpose of repeated measures ANOVA was to detect if the interaction between those two independent variables was significant.

Before conducting the repeated measures ANOVA test, the major assumptions were checked which included, the dependent variable (satisfaction) being continuous, the within-group factor (time) having at least two points, the between-group factor (group) having at least two categories, no significant outliers, and normally distributed outcome scores for each group.

The Sphericity assumption was not assessed because the within-subjects factor contained only two levels.

The repeated measures ANOVA descriptive results are shown in Table (4-8). The F tests determined that there is a statistically significant effect over time difference (pre vs. post) in mean scores of satisfactions ($F_{(1, 73)} = 31.25$, $P < .001$). The effect of the intervention across time and group was tested by the repeated measures ANOVA interaction effect of time and group Table (4-9). The results showed that there is a significant group by time interaction ($F_{(1, 73)} = 14.57$, $P < .001$). This indicates that the intervention significantly improved the satisfaction scores in the intervention group in contrast to the control group (Figure 4-2). The increase in satisfaction scores in the intervention group from 16.74 at the pretest to 21.77 is

significantly higher than the increase in scores in the control group (17.13 at the pretest to 18.08 at the post-test), Table (4-8) and Figure (4-2).

Table 4. 9: Repeated measures ANOVA group by time interaction.

Tests of Within-Subjects Effects

Measure: Satisf

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Satis * GROUP	Sphericity Assumed	155.258	1	155.258	14.578	.000

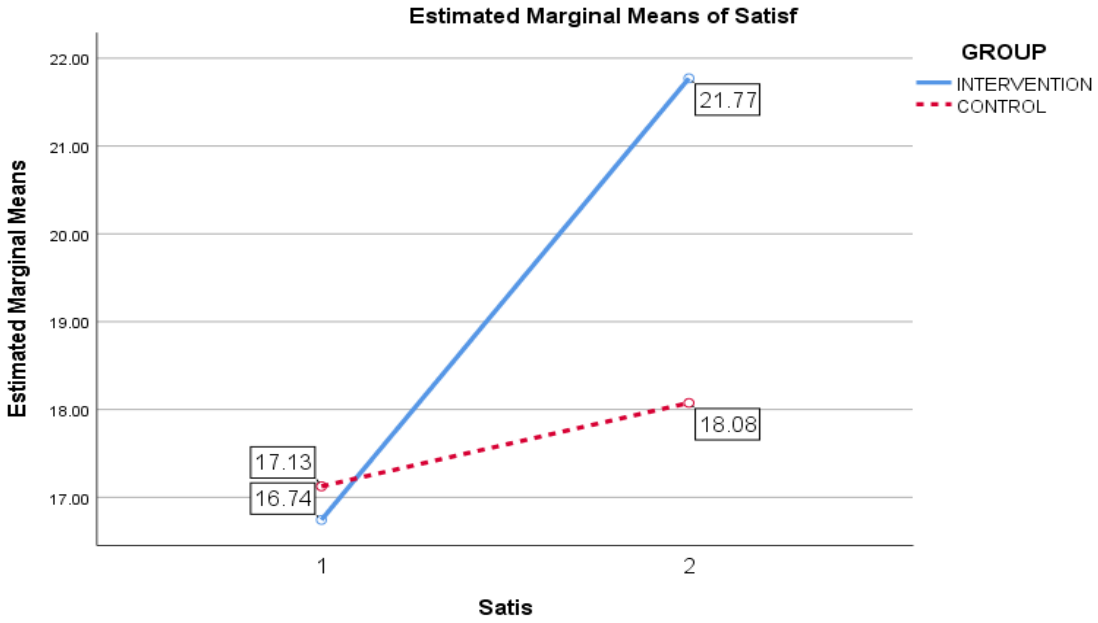


Figure 4. 2: The mean scores of satisfaction (N = 75)

The analysis revealed a significant difference in the mean scores of student satisfaction between the pre-and post-tests of the interventional group ($p < 0.05$). Specifically, the mean of the student satisfaction scores for the interventional group at the post-test (M = 21.8 ± SD 2.35) was higher than at the pre-test (M = 16.7 ± SD 2.08).

However, the analysis indicated that there was no significant difference in the mean scores of student satisfaction between the pre-and post-tests of the control group ($p > 0.05$), as shown in Table 4-10.

Table 4. 10: Differences in mean scores of Student Satisfaction

Student satisfaction	**Pretest**	**Posttest**	**t-test**	**p. value**
	M(SD)	**M(SD)**		
Interventional	16.7 (2.1)	21.8(2.4)	8.887	0.001
Control	17.1(2.2)	18.1(4.8)	1.095	0.280

**P. value significant at the 0.05 level*

Hypothesis three: Nursing students who engaged in HFS in replacing conventional clinical hours of mental health nursing training program have higher mean scores of self-confidences than those who had participated in the traditional lecture.

Repeated measure ANOVA for confidence

Table 4. 11: The mean scores of confidences by group and time (N = 75)

	Intervention	Control
Confidence Pre	26.5	27.3
Confidence Post	35.8	29.1

A repeated measures ANOVA was conducted comparing the differences in mean scores of confidences before and after the intervention "within-subjects factor" and by the group "between-subjects factor". The group variable was entered as a between-levels factor. The primary purpose of repeated measures ANOVA was to detect if the interaction between those two independent variables was significant, Table (4-11).

Before conducting the repeated measures ANOVA test, the major assumptions were checked which included, the dependent variable (confidence) being continuous, the within-group factor (time) having at least two points, the between-group factor (group) having at least two categories, no significant outliers, and normally distributed outcome scores for each group.

The Sphericity assumption was not assessed because the within-subjects factor contained only two levels.

The repeated measures ANOVA descriptive results are shown in Table (4-11). The F tests determined that there is a statistically significant effect over time difference (pre vs. post) in mean scores of confidence ($F_{(1, 73)} = 52.44, P < .001$). The effect of the intervention across time and group was tested by the repeated measures ANOVA interaction effect of time and group Table (4-12). The results showed that there is a significant group by time interaction ($F_{(1, 73)} = 23.30, P < .001$). This indicates that the intervention significantly improved the confidence scores in the intervention group compared to the control group (Figure 4-3). The increase in confidence scores in the intervention group from 26.5 at the pretest to 35.9 at the post-test is significantly higher than the increase in scores in the control group (27.3 at the pretest to 29.1 at the post-test), Table (4-12) and Figure (4-3).

Table 4. 12: Repeated measures ANOVA group by time interaction.

Tests of Within-Subjects Effects

Measure: Confidance

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Confidenc * GROUP	Sphericity Assumed	524.500	1	524.500	23.300	.000

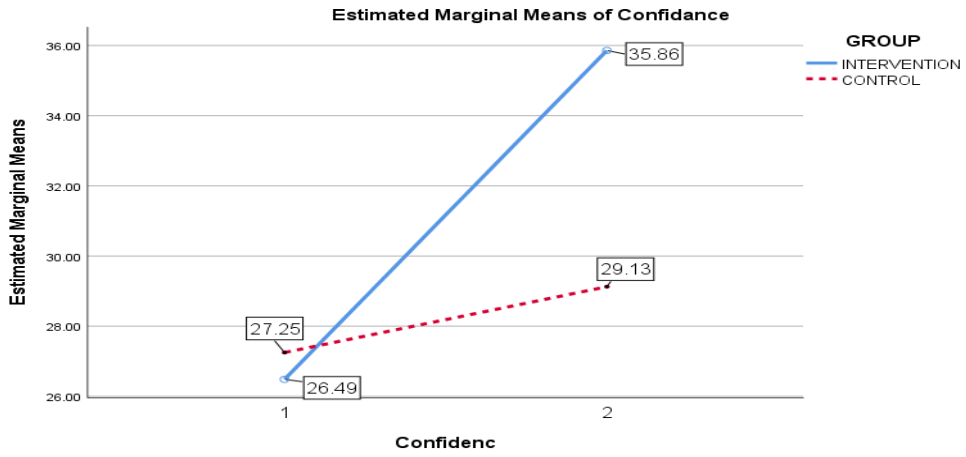


Figure 4. 3: The mean scores of confidence by group and time (N = 75)

The analysis revealed a significant difference in the mean scores of Student self-confidence between the pre-and post-tests of the interventional group ($p < 0.05$). Specifically, the mean of the Student self-confidence scores for the interventional group at the post-test (M = 35.9 ± SD 3.47) was higher than at the pre-test (M = 26.5 ± SD 3.00).

However, the analysis indicated that there was no significant difference in the mean scores of Student self-confidence between the pre-and post-tests of the control group ($p > 0.05$), as shown in Table 4-13.

Table 4. 13: Differences in mean scores of Student Self-confidence

Student self-confidence	**Pretest**	**Posttest**	**t test**	**p. value**
	M(SD)	**M(SD)**		
Interventional	26.5(3.00)	35.9(3.47)	11.036	0.001
Control	27.3(3.57)	29.1(6.69)	1.503	0.141

**P. value significant at the 0.05 level*

Qualitative analysis

To provide an in-depth description of the quantitative findings, the qualitative technique was employed including 15 participants engaged in simulation volunteer students in each of the 2 focus groups who took part in the simulation experiences and participated in this study approach. Data were gathered through semi-structured interviews with students who had undergone clinical training after the simulation as oral and written consent from each participant was obtained the interviews were recorded in full and later transcribed. Upon review, four themes of great importance – meaningful learning as demonstrated through the students' activities – emerged. Focus group output resulted in the four themes (1) Enhance self-esteem and confidence (2) Patient-centered care (3) develop effective communication skills (4) psychological and physical preparedness for mentally ill patient care.

Participants characteristics

1-Enhancing self-confidence.

Participants reported that education by simulation about schizophrenia enhances their clinical abilities during clinical training in mental health institutions, which affects their self-

confidence during clinical training, one student reported that:" Due to simulation scenario about schizophrenia I was able to practice some skills confidently during clinical training "

The majority of students who participated in the MH simulation increased their confidence in communicating with schizophrenic clients.

"I felt I will be more confident in engaging with schizophrenics in a clinical setting "

Students felt more confident in their clinical skills because of HFS offered them the opportunity to practice mental status examination, empathy, and developing therapeutic relationships with patients.

I believe that I grasp the concepts well and am sure to finish MSE. I gained the skills to focus on the individual and improve my ability to communicate effectively, identifying strengths and ways to grow such as developing empathy.

The students felt more secure, less worried, and anticipated the MH placement with enthusiasm, while having reservations about this unit and whether or not they liked it. It seems like the information we have learned is logical.

2-Collaborative learning and teamwork skills

Students noticed that their learning was the result of their involvement with the simulation. As one student explained: 'Being aware of my emotions and reactions resulted from my interactions with the HFS.' (S)

The student and the SP work together to create these collaborative learning experiences. The service provider noticed a dynamic learning environment where both the team and students were actively engaged. The service provider had a prepared summary to rely on, but she depended on the student to create the learning opportunities "We were able to act and react within a group, furthermore, the team collaboratively learned from feedback of another student during briefing sessions "

3- Patient-centered care:

Participants students reported that simulation scenarios affect their abilities to individualize care plans according to patient's needs and develop decision-making based on patient health conditions and symptoms

One student reported," I was able to understand differences in patients' health conditions, and chose the best care plan, this was enhanced during practicing scenarios before actual clinical training".

Students also reported how simulation scenarios focused on patient-centered care and practices which were reflected during clinical training

4- Develop effective communication skills

The students were confident in stating that communication in a clinical setting is one of the skills they learned throughout the simulation. Additionally, the students stated that they were competent enough to perform assessments for the time they would be engaged in providing care for MH patients.

> I believe that I gained interpersonal and therapeutic communication skills to strengthen the knowledge I acquired and utilize it in real-life situations with individuals.
>
> I now know how to perform an MSE [mental status examination] and determine the most suitable questions to inquire.

Most notably while on placement and learning how to speak to patients, the students were anxious about how such interactions were carried out and what and how they were supposed to ask, and so were willing to know what types of questions and the manner of asking them. This was because of having a negative perspective of the clinical area of MH and possibly asking questions that would be distressing to the patients.

> "Simulation helped me to overcome my fears of asking questions

The simulation experience taught students the significance of building therapeutic relationships in the mental health (MH) field, especially in terms of communication confidence. Many students emphasized that learning how to improve communication skills was one of the most valuable aspects of the simulation experience.

Chapter Five: Discussion

5.1 Introduction

Clinical simulation is now a key part of nursing education, offering numerous advantages that improve student learning and readiness for real-life practice. Clinical simulations assist students in improving skills in a secure, organized setting. This chapter discusses the study's findings, implications for nursing practice, education, and administration. It also critically analyzes the study's strengths and limitations and proposes suggestions for future research. Finally, it draws conclusions based on the findings.

In this regard, this is one of the first studies examining simulation among Palestinian nursing students. To develop the impact of HFS on the performance, satisfaction, and self-confidence of mental health nursing students, as well as to determine how best to use HFS in nursing education globally, a mixed-method approach was utilized to offer a multidimensional description of how HFS is implemented. The quantitative data revealed that simulation is an effective learning modality that enhances students' performance, satisfaction, and self-confidence among nursing students, furthermore, the qualitative analysis revealed that participants revealed that the simulation experience was positive, indicating that it should be a required activity before beginning clinical rotations.

5.2Examining how HFS impacts mental health nursing educational practices

The first hypothesis states " Nursing students in clinical mental health courses utilizing the HFS have higher mean scores of educational practices than those utilizing the conventional clinical training approach". The findings showed that the students' educational practices in the experimental group increased after HFS. According to the results students in the intervention group averaged higher scores in academic achievement compared to those in the traditional instructions group, and this difference was statistically significant.

The increase in the intervention group's scores indicated that HFS is an effective in improving educational practices. In Arab and Palestinian cultures, education is highly valued and considered a pathway to better opportunities and societal contributions **(**Mehtap et al, 2017**).** The improvement in educational practices suggests that students are responsive to innovative and effective teaching methods, which aligns with the cultural emphasis on educational attainment. Also, HFS represents a modern, technology-driven approach to

education. This aligns with the increasing integration of technology in various sectors within Arab societies. The positive response to high-fidelity simulation indicates openness to adopting new teaching methodologies that enhance learning outcomes.

The findings of this study confirmed results from the previous studies from other cultures using different educational policies and systems. On the other hand, Guerrero et al. (2021) substantiates our results and reported that HFS exposure improves nursing interns' clinical performance, which can help boost their competency. Similarly, and sustaining using of HFS as an educational tool, a total of 15 studies were included meta-analysis study conducted by Lei et al. (2022) indicated that high-fidelity simulation significantly increased nursing students' knowledge acquisition, and enhanced nursing students 'professional skills. A similar result by Al-Amrani, et al. (2018) study indicated improvement in critical thinking at the posttest than the pretest in the simulation group. Also, Ayed et al. (2023) noticed a significant change in clinical decision-making among students after pediatric health nursing simulation more than traditional practice. Additionally, a significantly larger proportion of students in the intervention group than in the control group increased the number of correct responses in their knowledge post-HFS intervention (Haddeland et al., 2021). Moreover, a systemic review composed of 15 studies indicated that HFS significantly improved nursing students' knowledge and communication skills. HFS also significantly boosted critical thinking skills and clinical judgment abilities. Also, HFS increased theoretical-practical learning (Al Khasawneh et al., 2021; Lubbers & Rossman, 2017; Oanh et al., 2021; Weaver, 2015) and improved psychomotor skills (Ahn & Kim, 2015; Vincent et al., 2015; Zhen et al., 2021). In addition, improvements have been obtained in learning (Shin et al., 2015), the acquisition of competencies, and self-efficacy (Cant & Cooper, 2017). Therefore, nursing students acquire knowledge in patient care, psychomotor skills, problem-solving, professional communication, and critical thinking. Another study showed that HFS improved performance when managing airways. (Hodrob et al., 2022). They also promote their socializing and confidence in their professional roles (Pai, 2016). Furthermore, Sullivan et al. (2019) reported that students who participated in HFS demonstrated significant improvements in knowledge, which is an essential component of educational practices.

The current study's findings are consistent with those of previous studies due to the robust empirical support, rigorous methodological approaches, similar measured outcomes, broad applicability, and alignment with modern educational practices. The widespread adoption of high-fidelity simulation in educational institutions reflects a broader shift towards integrating

modern, technology-enhanced teaching methods. The consistent positive outcomes suggest that HFS is an effective pedagogical tool that aligns with current educational trends and best practices.

5.3Testing the Effect of HFS on mental health nursing students' satisfaction

The second hypothesis states "Nursing students who were involved in HFS in mental health nursing training program have higher mean scores of satisfactions than those who had participated in the traditional lecture". The results showed that students in the experimental group averaged significantly higher on satisfaction than those in the traditional lectures. This could be because HFS improved critical thinking and the sensation of being more qualified in clinical practice. Self-satisfaction would increase as a result. Students were more satisfied during the simulation and could practice nursing procedures safely, just like in real-life situations, without risking harm to the patients.

The analysis demonstrated that the intervention group, who likely received more interactive and practical training, reported higher satisfaction compared to those who were taught using traditional lectures. This can be attributed to the cultural emphasis on practical, hands-on learning, which the intervention method provided. Additionally, the strong cultural value placed on interpersonal relationships and communal activities means that the interactive nature of the intervention likely fostered a sense of community and support among students, enhancing their satisfaction. There is also an appreciation for innovative approaches that improve educational outcomes, and experiencing a new and effective method of learning may have contributed to higher satisfaction. Moreover, the intervention method likely allowed for more direct engagement with instructors, which is highly valued in these cultures, leading to increased student satisfaction.

The results of the current study were consistent with results from the previous studies as in a quasi-experimental study conducted by Toqan (2023) who evaluated the effect of using simulation-based scenarios on pediatric nursing students' satisfaction, and self-confidence. Students’ satisfaction scores were greater after the simulation training. Also, several studies supported the current results. García-Mayora et al. (2021), Verkuyl and Hughes (2019), and Kirkpatrick et al. (2017) showed overall satisfaction among nursing students after their human patient simulation experience. Another study, done by Saied (2017), found that students were satisfied with the simulation experience and that their self-confidence levels improved following the simulation.

These consistent findings across different studies highlight the universal benefits of simulation-based learning, reinforcing its efficacy as a teaching method in nursing education. This teaching method proves to be more effective than traditional lectures, providing a valuable approach to improving educational outcomes for nursing students.

5.4Testing the Effect of HFS on mental health nursing students' self-confidence

The third hypothesis states "Nursing students who engaged in HFS in replacing conventional clinical hours of mental health nursing training program have higher mean score of self-confidence than those who had participated in the traditional lecture". The current study showed significant differences in self-confidence between the two groups. The analysis revealed that students in the intervention group had a higher mean score of confidence than those who received training using traditional lectures. This can be explained by the interactive and practical nature of the intervention method, which likely provided students with more hands-on experience and real-world applications of their knowledge. Such methods can enhance students' understanding and mastery of the material, leading to increased self-confidence. Additionally, the intervention may have included more opportunities for students to engage with instructors and peers, receive immediate feedback, and practice their skills in a supportive environment, all of which contribute to building self-confidence. Traditional lectures, on the other hand, tend to be more passive and less interactive, offering fewer opportunities for direct engagement and practical application, which can result in lower confidence levels among students.

In Arab and Palestinian societies, there is a strong emphasis on community and interpersonal relationships. The intervention method probably involved collaborative activities and peer support, fostering a sense of belonging and mutual encouragement, which are important cultural values. This collaborative environment can significantly boost self-confidence as students feel supported and validated by their peers and instructors. Moreover, these cultures respect and appreciate close teacher-student interactions. The intervention likely allowed for more direct engagement with instructors, enabling students to receive immediate feedback and personalized guidance. This close interaction not only helps in better understanding and mastering the material but also enhances self-confidence as students feel more assured of their skills and knowledge.

In contrast, traditional lectures, which are more passive and less interactive, may not provide the same level of engagement, support, and practical application, leading to lower self-

confidence among students. Thus, the higher self-confidence scores in the intervention group can be attributed to the alignment of the teaching method with the cultural values and learning preferences of Arab and Palestinian students.

The results of the current study were consistent with results from the previous studies. Alharbi (2023) confirmed the findings of the current study about students' gaining self-confidence after the simulation experience. Also, Sapyta and Eiger (2017) reported a significant statistical increase in confidence after taking part in the simulation experience. Additionally, Tawalbeh and Tubaishat (2014) found more confidence in adopting Advanced Cardiovascular Life Support (ACLS) through simulation. Furthermore, Lubbers and Rossman (2016) found that students who received pediatric simulation training reported greater self-confidence.

These findings collectively emphasize the value of interactive and practical learning experiences in nursing education, highlighting their role in fostering greater self-confidence among students.

5.5Findings and emerging themes

Themes abstracted from the qualitative part of this study revealed a positive experience with HFS. This has been displayed in the following themes: (1) Enhance self-esteem and confidence (2) Patient-centered care (3) develop effective communication skills (4) psychological and physical preparedness for mentally ill patient care.

A positive learning experience in clinical practice improves students' understanding of patient care, collaboration, and critical thinking, which contribute to successful careers and support students to become highly qualified nurses (Ben Nathan, Mahajana, and Mahajana, 2020). Therefore, in clinical practice, the learning experience should include proper preparation for work, the hospital environment, and the clinical relationship based on communication between students and their instructors.

The finding of this study promoted that students perceived that HFS experiences have improved their self-confidence. The students in this study conveyed that education by simulation about schizophrenia enhances their clinical abilities during clinical training in mental health institutions. The students' point of view regarding HFS as an effective method of learning that provides students opportunities to gain real or simulated experience with

clients with schizophrenia may reduce negative perceptions and improve self-confidence are consistent with., Labrague et al, (2019) who reported similar results among nursing students, who revealed that HFS increasing student nurse's confidence and reducing their anxiety when caring for patients and applying nursing skills, and Aldhafeeri, & Alosaimi, (2020) reported that HFS is a teaching method, useful as a real tool not threaten patient life and improves student performance and confidence.

On the other hand, results are inconsistent with Karabacak et al (2019) and Liaw et al. (2012) who found that the confidence of "non-accelerated" nursing students encountering one to two complex simulations was unaffected by HFS experiences, and that self-efficacy scores decreased in the post-simulation scenario when using standardized patients in simulation training enables new nursing students to meet a real patient and recognize their own true self-efficacy.

According to the study's participants, learning through simulation led to a notable improvement in decision-making and skill implementation when compared to the traditional learning group. They also reported that simulation scenarios impacted their ability to customize care plans based on patient needs and develop decision-making based on patient health conditions and symptoms. Students therefore responded favorably to the introduction of HFS as an active-learning format.

The finding of this study supports previous studies involving nursing students participating in simulation experiences with reported that using The HFS approach, when combined with more conventional didactic methods, can help nursing students become more competent caregivers by helping them become more self-aware and to develop better communication and empathy skills. This will help nursing students from the younger generation remain competent in providing person-centered care Ayed et al (2021) and Park & Choi (2020). Patient-centered care and safety were not enhanced by employing simulation, according to inconsistent nursing students, who said that the use of simulation had no discernible effect on student knowledge, attitude, or self-efficacy. Alfes (2015). Therefore, the study sustained the notion that showed that HFS enhanced decision-making, skill implementation, their ability to customize care plans based on patient needs which enhances patient-centered care.

The study findings confirmed that students perceived that HFS experiences have enhanced their ability to develop effective communication skills, and their ability to exchange information and to ask questions. These perceptions of simulation as a means of assisting

students to develop effective communication skills, Students would have consistent experiences with simulation if they were to develop effective communication skills. In a simulated setting, students can practice delivering a structured report, giving and receiving feedback from peers, and receiving feedback from patients, Chapelain, Morineau& Gautier (2015). Tate, Newtz, Ali, & Happ, (2020) and Lee, Choi, & Jeon, Y. (2021). **On** the other hand,

The HFS experience, according to study participants, enhanced their interpersonal relationshi ps and equipped them for working in clinical settings when they collaborated during simulati ons and group learning. Their experiences equip them not only to provide excellent patient care but also to function well in interdisciplinary medical teams. They claimed that being able to collaborate with others on directed acts, as well as getting moral support and helpful criticism, enhanced their sense of drive and made learning easier in clinical practice. Nieuwoudt, L., Hutchinson, A., & Nicholson, P. (2021) and Badowski (2019) revealed that using interprofessional simulation sessions can introduce and foster collaborative clinical practice. By incorporating peer coaching into the simulation, students can learn how to treat others with respect, communicate honestly, and collaborate to make decisions that will help patients in a secure setting. Thus, developing teamwork skills is essential to preparing aspiring student nurses for a variety of interpersonal interactions in diverse healthcare environments. Thus, the study supported the idea that HFS improved communication, motivation, and teamwork during patient care decision-making processes. It is possible to draw the conclusion that incorporating simulation into nursing education could help these inexperienced students feel more competent, satisfied, motivated, and confident.

Additionally, the current study showed that students who took part in simulation training reported favorable and positive levels of motivation, satisfaction, and confidence. Comparing the simulation-based learning group to the traditional learning group, there was a notable increase in the application of decision-making and skills. Students responded favorably to the introduction of HFS as an active learning format. The current study supports the findings of previous studies that have included HFS in nursing curricula. HFS is a fun teaching method that gives students experiences that closely resemble real-world situations in which they are safely placed in a nurturing nurse-patient relationship. By presenting a simulation scenario involving a patient with cultural needs, students are motivated to build critical thinking abilities and become interested in experimenting with various strategies. This allows students to practice assessing, planning, implementing, and evaluating culturally tailored care.

5.6Conclusion

Graduate nurses are facing growing challenges in the intricate healthcare systems. Patients' acuity levels have increased, technology is always advancing, and nurses' duties are more demanding than before. Nurse educators have the responsibility of delivering top-notch educational techniques to prepare prospective nurses. Nursing students in Palestine are frequently unable to reach clinical settings due to the consistent political and economic instability in the region.

The current study confirmed that HFS can be an effective teaching method, offering a safe and effective learning environment for mental health nursing students. This approach enhances their educational practices, satisfaction, and confidence. The study supports using HFS alongside clinical site experiences to link nursing knowledge and practice. Consequently, mental health nursing students benefit from advanced training that maintains their competency, theoretical knowledge, clinical judgment, collaborative functioning, leadership, and communication skills.

Moreover, the integration of simulators in the mental health nursing curriculum can decrease the need for clinical placements. Research indicates that students preferred role-playing during simulation-based active learning, leading to enhancements in their educational approaches, personal gratification, and self-assurance when compared to conventional learning techniques. Hence, students who received instruction through HFS simulation were more content with this educational approach.

5.7Implications to nursing education, practice, and administration

The study has several implications for nursing education, practice, and administration.

5.8Nursing Education

The results emphasize the necessity for nursing educators to integrate HFS into the curriculum to bridge the gap between theory and practice. This approach allows students to apply current and complex class theories to case scenarios.

One critical issue to address when including simulation in the curriculum is the training of nursing instructors so that they can provide quality education. Educator training for simulation is a costly and time-consuming process, requiring repetitive practice to understand the procedures fully. Additionally, time is needed to write or modify scenarios and practice

them before implementation. An unprepared educator can negatively impact the desired outcomes of the simulation and hinder students' learning.

Providing students with more practice hours can increase their comfort and competence in patient care. This study supports HFS as an effective educational strategy, complementing traditional training. Incorporating HFS into nursing programs allows students to rehearse newly learned skills and reinforce prior knowledge in a safe environment. Increased confidence in patient care during HFS arises as students become familiar with expectations after participating in multiple simulations.

The HFS also helps nursing educators in modifying the orientation and competencies of students. Educators should promote HFS that bridge the gap between classroom lectures and practical clinical training. This can improve the quality of nursing care. Furthermore, using standardized scenarios ensures that all students acquire the necessary knowledge to provide the best possible care for patients in clinical settings.

5.9Nursing Practice

Because educational practices are developed through practical learning, demonstration, and clarification in a controlled setting without the risk of harming patients, patient safety is a primary concern in nursing practice. Nursing students are trained in patient safety throughout their clinical experiences. Integrating simulation into each semester’s theory courses enhances the quality and safety of graduate nurses in clinical practice.

Simulated learning is recognized as an innovative method for students to learn and practice without risking patient harm. For simulated learning to meet the objectives of nursing practice, the experiences must be as realistic as possible. Ideally, students will perform and react to situations in real-life settings based on their simulated learning experiences. Additionally, simulated learning allows students to encounter critical and rare events that may not be available during regular clinical practice.

5.10 Nursing Administration

The present research highly suggests integrating (HFS) into the nursing program at different universities in Palestine. After many years, nursing educators' collective experience has shown faculty and administrators the significance of integrating simulation throughout the curriculum.

Utilizing the results of this study can aid nursing administrators and educators in creating policies for nursing students during their clinical practice and training faculty on simulation. The primary reason for adopting HFS into nursing programs is to protect patients from potential harm. Student nurses need a safe, controlled setting to practice until they master their skills and can provide safe, effective care.

Nursing program administrators and instructors should consider the positive reactions of students to HFS as an alternative to traditional clinical experiences in healthcare settings. Preparing skilled nurses is essential for improving the healthcare system.

The findings support health and nursing directors in promoting patient safety. HFS provides opportunities for nursing students to practice patient care and demonstrate skills in a safe, controlled environment, reducing the risk of patient harm.

5.11 Recommendations

Baccalaureate nurses are the primary practitioners in healthcare settings, facing increased pressure to be ready and competent in practice. Based on this study's findings, it is recommended that faculty allocate more time in their curriculum to integrate high-fidelity simulation (HFS) as an adjunct teaching and learning methodology. Integrating HFS in courses like mental health nursing can help students develop competent skills.

Replicating this study with a representative sample from various universities in Palestine would enhance the generalizability of the findings. This study focused only on educational practices, self-confidence, and satisfaction. Therefore, future studies should examine other variables, such as teacher factors and simulation design characteristics, on additional learning outcomes. According to the Jeffries (2005) framework, outcomes like learning knowledge, skill performance, and critical thinking should be evaluated using larger sample sizes, more simulated scenarios, and students at all levels. Future research should also investigate the sustainability of the simulation's effects and whether the impact translates to real clinical practice. While high satisfaction and confidence levels were reported post-simulation in this study, the longevity of these outcomes is unknown. Educational practices, satisfaction, and confidence might increase due to the supervised, controlled environment where students can do no harm. The real test of these outcomes may only be appreciated when students encounter similar real-life situations. More research is needed to examine the transferability of the simulation experience to actual clinical settings.

5.12 Strengths of the study

This study is the first interventional study in Palestine to evaluate the influence of HFS on student educational practices. The use of a quasi-experimental design is a primary strength, along with the random assignment of participants, standardized simulation procedures and environment, consistent data collection procedures, and the use of the same simulation instructor throughout the study. Additionally, the study examined nursing students' educational practices, self-satisfaction, and self-confidence using two valid and reliable questionnaires, further strengthening its reliability and validity.

5.13 Limitations of the study

Despite strengths in methodology and rigorous assessment using validated questionnaires, limitations included using a non-probability sampling approach to gather data from nursing students at two prominent universities in Palestine. Consequently, the results may not generalize to other academic institutions. However, the study's nursing students are comparable to other nursing students at different Palestinian schools because there aren't many notable differences in the education they get. Because of this, the researcher believes that these results could, at the very least, apply to nursing students enrolling at similar universities with comparable curriculum.

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Appendices

Appendix A: IRB

Arab American University- Palestine
Deanship of Scientific Research
IRB committee
Tel: 04-241-8888, ext 1196
E-mail: irb.aaup@aaup.edu

الجامعة العربية الامريكية- فلسطين
عمادة البحث العلمي
لجنة أخلاقيات البحث العلمي
تلفون: ext 04-241-8888 1196
البريد الالكتروني: irb.aaup@aaup.edu

IRB Approval Letter

Study Title: "Effectiveness of Using high Fidelity Simulation-based Education on Performance, Satisfaction, and Self Confidence among Mental Health Nursing Students "

Submitted by: Nida Teyseer Yusef Jawabreh

Date received: 25th July 2023

Date reviewed: 7th September 2023

Date approved: 7th September 2023

Your Study titled **"Effectiveness of Using high Fidelity Simulation-based Education on Performance, Satisfaction, and Self Confidence among Mental Health Nursing Students "** with archived number 2023/A/151/N was reviewed by the Arab American University IRB committee and was approved on the 7th September 2023.

Ahmad Ayed, PhD
IRB Committee Member
Arab American University of Palestine

Sajed Ghawadra, PhD
IRB Committee Vice-chairman
Arab American University of Palestine

Reham Khalaf-Nazzal, MD, PhD
IRB Committee Chairman
Arab American University of Palestine

General Conditions:

1. Valid for one year from the date of approval.
2. It is important to inform the committee with any modification of the approved study protocol.
3. The committee appreciates a copy of the research when accomplished.

لجنة أخلاقيات البحث العلمي في الجامعة العربية الامريكية

IRB at Arab American University

Appendix B: Questionnaire in English version

"Effectiveness of using high Fidelity Simulation-based Education on Performance, Satisfaction, and Self Confidence among Mental Health Nursing Students"

Demographic Data: (

Age: ----------

Gender:

Male **Female**

GPA: ----------

Educational Practices Questionnaire (Student Version)

Use the following rating system when assessing the educational practices:
1 - Strongly disagree with the statement.
2 - Disagree with the statement.
3 - Undecided - you neither agree nor disagree with the statement.
4 - Agree with the statement.
5- Strongly agree with the statement.
6- NA - Not Applicable; the statement does not pertain to the simulation

Active learning-						
Statement	1	2	3	4	5	6
1. I had the opportunity during the simulation activity to discuss the ideas and concepts taught in the course with the teacher and other students.						
2. I actively participated in the debriefing session after the simulation.						
3. I had the opportunity to put more thought into my comments during the debriefing session.						
4. There were enough opportunities in the simulation to find out if I clearly understand the material.						
5. I learned from the comments made by the teacher before, during, or after the simulation.						

6. I received cues during the simulation in a timely manner.						
7. I had the chance to discuss the simulation objectives with my teacher.						
8. I had the opportunity to discuss ideas and concepts taught in the simulation with my instructor.						
9. The instructor was able to respond to the individual needs of learners during the simulation.						
10. Using simulation activities made my learning time more productive.						
Collaboration						
11. I had the chance to work with my peers during the simulation.						
12. During the simulation, my peers and I had to work on the clinical situation together.						
Diverse Ways of Learning:						
13. The simulation offered a variety of ways in which to learn the material.						
14. This simulation offered a variety of ways of assessing my learning						
15. The objectives for the simulation experience were clear and easy to understand.						
16. My instructor communicated the goals and expectations to accomplish during the simulation.						

Student Satisfaction and Self-Confidence in Learning

1 - Strongly disagree with the statement.
2 - Disagree with the statement.
3 - Undecided - you neither agree nor disagree with the statement.
4- Agree with the statement.
5- Strongly agree with the statement.

statement	1	2	3	4	5
Satisfaction with Current Learning					
1. The teaching methods used in this simulation were helpful and effective.					
2. The simulation provided me with a variety of learning materials and activities to promote my learning the medical surgical curriculum.					
3. I enjoyed how my instructor taught the simulation.					
4. The teaching materials used in this simulation were motivating and helped me to learn. م					
5. The way my instructor(s) taught the simulation was suitable to the way I learn.					
Self-confidence in Learning-					
6. I am confident that I am mastering the content of the simulation activity that my instructors presented to me. .					
7. I am confident that this simulation covered critical content necessary for the mastery of medical surgical curriculum.					
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.					
9. My instructors used helpful resources to teach the simulation.					
10. It is my responsibility as the student to learn what I need to know from this simulation activity.					
11. I know how to get help when I do not understand the concepts covered in the simulation.					

12. I know how to use simulation activities to learn critical aspects of these skills.					
13. It is the instructor's responsibility to tell me what I need to learn of the simulation activity content during class time.					

Interview questions

a. How did simulation help to develop your clinical practice abilities?

b. Was simulation helpful or not in your clinical practical experiences? How?

c. How did your experience with simulation improve or reduce from your clinical experiences?

d. Is there anything else you would like to discuss that we have not covered or asked about regarding the simulation experience?

Appendix C: Questionnaire in Arabic version

"Effectiveness of using high Fidelity Simulation-based Education on Performance, Satisfaction, and Self Confidence among Mental Health Nursing Students"

نموذج موافقة على المشاركة في دراسة/ بحثٌ علميٌّ

عنوان الدراسة/ البحث العلمي:

" فاعلية استخدام تعليم عالي الدقة قائم على المحاكاة على الأداء والرضا والثقة بالنفس بين طلاب تمريض الصحة النفسية"

الباحث الرئيسي: نداء جوابرة- طالبة دكتوراه- كلية التمريض- الجامعة العربية الامريكية

هدف الدراسة:

تهدف هذه الدراسة الى اختبار مدى فعالية استخدام المحاكاة عالية الدقة على أداء طلاب تمريض الصحة النفسية ورضاهم وثقتهم بأنفسهم مقارنة بمن يتلقون النهج التقليدي لتعليم التمريض
. كذلك تهدف هذه الدراسة إلى الحصول على درجة الدكتوراه في التمريض.

من المستهدفين في هذا البحث؟ ولماذا تمَّ اختياري للمشاركة في الدراسة؟

طلاب التمريض في السنة الثالثة هم المستهدفون من البحث، وقد تم اختياري للمشاركة في الدراسة كوني مسجلاً في مادة تمريض الصحة النفسية والعقلية.

ما المطلوب مني عمله في هذا الدراسة؟

مطلوب مني في هذه الدراسة ملء استمارات خاصة بالبحث. وسوف أُسأل من خلال المقابلة مع الباحثة عن تجربتي في المشاركة في المحاكاة عالية الدقة.

مخاطر المشاركة في الدراسة وفوائدها:

هناك حد أدنى من المخاطر في هذه الدراسة. قد أشعر بالتعب عند ملء الاستمارات ،كذلك قد أشعر بالقلق خلال مشاركتي في المحاكاة العالية الدقة وعند تقييمي. قراري في المشاركة أو عدم المشاركة لن يؤثر على درجتي في المادة.
سوف أستفيد من المشاركة في الدراسة من خلال التفكير بما تعلمته وتحديد كيف يمكن أن أكون ممرض أفضل.

هل مشاركتي في البحث اختياريَّة طوعيَّة؟

مشاركتي في البحث اختيارية طوعية، ولا يترتَّب عن انسحابي منه أي إجراء.

هل المعلومات المستخدمة سريَّة؟

ستكون الباحثة الشخص الوحيد الذي يعرف أسماء المشاركين. حتى إن البيانات والأشرطة ستُحفظ في خزانة مقفلة، لا يعرف في شأنها أحدٌ إلا الباحثة، وستُمحى البيانات كافة بعد كتابة النسخ. كذلك ستبقى هوية المشاركين غير معلنة حفاظاً على السرية.

كيف سأتمكن من الاطلاع على نتائج الدراسة؟

سأطّلع من الباحثة على نتائج الدراسة فور انتهائها.

تمَّ توضيح النقاط السابقة الذكر كافة لي وبشكل مفصَّل. وتمَّت الإجابة عن أسئلتي كلها. وفهمت أن لي الحق في طرح أي سؤال حول الدراسة في أي وقت كان. وأن هذه الأسئلة ستُجاب من خلال الباحث الرئيس المُدرج اسمه في الصفحة الأولى.

بتوقيعي على هذا النموذج، أوافق على المشاركة في هذه الدراسة البحثيَّة.

توقيع المشـــــــــارك	**توقيع الباحـــــــث**
التاريخ:	**التاريخ: .....**

فعالية استخدام التعليم القائم على المحاكاة عالية الدقة في الأداء، والرضا، والثقة بالنفس بين طلاب التمريض النفسي

الجزء الأول:

البيانات الديموغرافية (الرجاء وضع إشارة X على المربع المناسب):

العمر: .....

الجنس:

ا- ذكر **2- انثى**

المعدل التراكمي: ( ).

استبيان الممارسات التعليمية (نسخة الطالب)

استخدم نظام التصنيف التالي عند تقييم الممارسات التعليمية:
1 - أختلف بشدة مع العبارة
2 - عدم الموافقة على العبارة
3 - لم تقرر - أنت لا توافق أو لا توافق على العبارة
4 - موافق على العبارة
5-أوافق بشدة على العبارة

6-غير متاح، العبارة لا تتطابق مع النشاط في المحاكاة

-Active learningالتعليم الفعال						
Statement	**1**	**2**	**3**	**4**	**5**	**6**
1-كان لدي الفرصة خلال ممارسة نشاط المحاكاة مناقشة الأفكار والمفاهيم التي تم تعلمها خلال المساق مع المدرس وبقية الطلبة						
شاركت بفعالية خلال مرحلة استخلاص المعلومات بعد جلسة المحاكاة						
كان لدي الفرصة لوضع المزيد من الأفكار بتعليقاتي خلال جلسة استخلاص المعلومات						
كان هناك فرص كافية في جلسة المحاكاة لاكتشاف اذا انا افهم المادة الدراسية بوضوح						
تعلمت من التعليقات من قبل المدرس قبل وخلال وبعد جلسة المحاكاة						
تلقيت تلميحات خلال جلسة المحاكاة في وقتها المناسب						
لدي الفرصة لمناقشة اهداف جلسات المحاكاة مع مدرس المساق						
كان لدي الفرصة لمناقشة الأفكار والمفاهيم التي تم تعلمها من خلال المساق مع المدرب						
المدرب كان قادرا على الاستجابة للاحتياجات الفردية للمتعلم خلال جلسة المحاكاة						
استخدام أنشطة المحاكاة جعلت اوقات التعلم أكثر انتاجيه بالنسبة لي						
التعاون						
لدي الفرصة للعمل مع أقراني خلال جلسات المحاكاة						
خلال جلسات المحاكاة أقراني وانا كان علينا العمل سويا على مواقف سريريه						
طرق متنوعة للتعلم						
جلسات المحاكاة وفرت طرق متنوعه لتعلم المادة						
جلسات المحاكاة وفرت طرق متنوعه لتقييم التعلم لدي						
اهداف تجربة جلسات المحاكاة كانت واضحة وسهلة الفهم						
مدرب المحاكاة قام بتوصيل الاهداف والتوقعات المراد انجازها من خلال جلسات المحاكاة						

رضا الطلاب والثقة بالنفس في التعلم

- 1أختلف بشدة مع العبارة
- 2عدم الموافقة على العبارة
- 3لم تقرر - أنت لا توافق أو لا توافق على العبارة
-4موافق على العبارة
-5أوافق بشدة على العبارة

statement	1	2	3	4	5
الرضا عن التعلم الحالي					
طرق التعليم التي استخدمت من خلال جلسات المحاكاة كانت مساعدة وفعالة					
جلسات المحاكاة زودتني بالمواد التعليمية المتنوعة والأنشطة لتحسين التعلم لدي في مساق الباطني والجراحة					
استمتعت بكيفية تعليم المدرب لي خلال جلسات المحاكاة					
مواد التعليم التي استخدمت خلال جلسة المحاكاة هذه كانت محفزة ومساعده لي على التعلم					
طريقة المدربين للمحاكاة كانت ملائمة لطريقة التعلم لدي					
الثقة بالنفس في التعلم					
لدي ثقة بانني اسيطر على محتوى نشاط المحاكاة التي قدمها لي المدرب.					
لدي ثقة بان المحاكاة غطت المحتوى المهم الضروري لاتقان مساق ***الباطني والجراحة***					
لدي ثقة بانني اطور مهاراتي واحصل على المعلومات المطلوبة من جلسات المحاكاة لاداء المهام اللازمة في المؤسسات السريرية					
المدربين استخدموا مصادر مساعده لتعليمي جلسات المحاكاة					
مسؤوليتي كطالب (ه) لتعلم ما احتاج معرفته من جلسات المحاكاة					
انا اعلم كيف احصل على المساعدة عندما لا افهم أي مفهوم تم تغطيته من خلال جلسات المحاكاة					
انا اعرف كيف استخدم أنشطة المحاكاة لتعلم النواحي المهمة من المهارات					
انها مسؤولية المدرب اخباري ما احتاج تعلمه من محتوى انشطة المحاكاة خلال وقت الدرس					

فعالية استخدام التعليم القائم على المحاكاة عالية الدقة في الأداء، والرضا، والثقة بالنفس بين طلاب التمريض النفسي.

نداء تيسير يوسف جوابرة

أ. د. أيمن منصور

أ. د. لبنى حرازنة

أ. د. أحمد العايدي

أ. د. ميرنا فواز

أ. د. شاهر حميدية

ملخص

الخلفية: مع استمرار ارتفاع تسجيل الطلاب في برامج التمريض وتقييد توفر مواقع التدريب السريري، يواجه مربو التمريض تحديات في تلبية متطلبات الطلاب في الخبرات السريرية. تساعد محاكاة المختبرات التمريضية في إعادة خلق التجارب السريرية وتساعد المعلمين في تدريب ممرضي المستقبل. ويُعتبر استخدام المحاكاة السريرية في تعليم التمريض أداة أساسية لسد الفجوة بين المعرفة النظرية والمهارات العملية في بيئة تعلم آمنة. وتوفر المحاكاة عالية الدقة (HFS) وسيلة لتعزيز المهارات الإدراكية والعاطفية والبدنية، وتحفيز الجيل القادم من المتعلمين .

الهدف: تقييم فعالية استخدام المحاكاة عالية الدقة في تحسين أداء طلاب التمريض النفسي، ورضاهم، وثقتهم بأنفسهم مقارنةً بمجموعة من الطلاب الذين يتلقون التعليم التقليدي في التمريض .

المنهجية: تم استخدام تصميم ذو منهج مختلط، حيث تم اختيار 75 طالب تمريض من الجامعة العربية الأمريكية في فلسطين وجامعة النجاح الوطنية باستخدام تقنية العينات المريحة. تم استخدام استبيان الممارسات التعليمية – المنهج الدراسي (EPQ-C) وطريقة الرضا عن التعلم والثقة بالنفس (LSSCL) لتقييم أداء طلاب التمريض ورضاهم وثقتهم بأنفسهم. وتم إجراء مقابلات لجمع بيانات نوعية ثم تحليلها. استُخدمت اختبارات إحصائية مثل اختبار T للاختبارات المستقلة و ANOVAللقياسات المتكررة لتقييم تأثير المحاكاة عالية الدقة على متغيرات الدراسة .

النتائج: وجدت الدراسة فروقاً ذات دلالة إحصائية بين مجموعتي التدخل والتحكم، حيث أظهر الطلاب الذين استخدموا المحاكاة عالية الدقة مستوى أفضل من الرضا والثقة والأداء. وتم تحديد أربعة محاور رئيسية للتعلم وهي: تعزيز احترام الذات والثقة بالنفس، رعاية تركز على المريض، تطوير مهارات الاتصال الفعّالة، والاستعداد النفسي والبدني لرعاية المرضى النفسيين .

الخلاصة: أثبتت المحاكاة أنها طريقة تدريس ناجحة لطلاب التمريض. وتُعد المحاكاة أداة تعليمية فعّالة وذات قيمة. وتكون نتائج التعلم أفضل عادةً للطلاب الذين لديهم رأي إيجابي في عناصر تصميم المحاكاة. وبالتالي، فإن إدماج المحاكاة في تعليم طلاب التمريض يساعدهم على الربط بين النظرية والتطبيق، مما يعزز أدائهم وثقتهم بأنفسهم ورضاهم مع توفير بيئة آمنة بالإضافة إلى التدريب السريري التقليدي .

الكلمات المفتاحية: المحاكاة عالية الدقة، الأداء، الرضا، الثقة بالنفس .