

# The Effect of Standardized Patient Simulation Training on Anxiety Levels among Psychiatric and Mental Health Nursing Students

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## Abstract

**Background:** Anxiety and fears perceived by nursing students before clinical mental health practices rotations can be attributed to a lack of experience in ways of interacting with psychiatric patients, negative attitudes and stereotypes towards psychiatric patients such as stigma, hostility or perpetuation of perverse or dangerous behaviors. This can not only hinder learning and develop a therapeutic relationship with the patient, but it can also threaten the safety of the patient and nursing students. **Aim:** This study was aimed at investigating the effect of standardized patient simulation training on anxiety levels among psychiatric and mental health nursing students. **Design:** A quasi- experimental one group study design was utilized to fulfill the aim of the current study. **Setting:** this study was conducted in psychiatric and mental health nursing department, faculty of nursing, October 6 University. **Subject:** A convenient sample of (n=40) nursing students were available from (N=99) students who were enrolled in the psychiatric and mental health nursing course during the Fall semester of the academic year 2023-2024. **Tools:** it consisted of (2) tools, 1) Socio-demographic characteristics sheet and 2) State-Trait Anxiety Inventory questionnaire. **Results:** Most of the nursing students studied had low anxiety levels post simulation training compared to moderate and high anxiety levels pre simulation training. **Conclusion:** The anxiety levels are dramatically decreased from high and moderate to low levels of anxiety. **Recommendations:** Clinical training using Standardized patient simulation must be adopted in psychiatric nursing courses among the faculties of nursing prior to actual clinical training.

**Keywords:** Anxiety, Psychiatric Nursing Students, and Standardized Patient Simulation.

## Introduction:

Anxiety and fear perceived by nursing students before clinical mental health practices rotations can be attributed to a lack of experience in ways of interacting with psychiatric patients, negative attitudes and stereotypes towards psychiatric patients such as stigma, hostility or perpetuation of perverse or dangerous behaviors. This can not only hinder learning and develop a therapeutic relationship with the patient, but it can also threaten the safety of the patient and nursing students (De Presno, et al., 2021). Psychiatric nursing students encounter heightened stress in their clinical practice, driven by biases, fear, and anxiety toward mental illnesses. Furthermore, while they confront a diverse display of patient interactions,

faculty members may not consistently observe these encounters, limiting opportunities for crucial feedback and reflection. Additionally, as awareness of patient safety and rights continues to rise, nursing students find diminishing opportunities for hands on nursing experiences (Kim, 2024). Nursing students in addition to psychiatric nurses have been required to work in increasingly challenging situations with fewer resources, heavier workloads, and increasingly hostile environments leading to increasing anxiety levels (Fletcher et al., 2021).

Nursing students face several learning problems when they start to attend mental health and psychiatric nursing courses. Anxiety, negative attitudes toward psychiatric patients, the nature of the

patients and the need for close monitoring and observation, and the fear of causing offense to the patient prevent nursing students from establishing therapeutic relations (**Ali et al., 2020**). Additionally, the causes of anxiety among nursing students working in psychiatric settings are multifactorial and complex. Several factors may contribute to anxiety, including workload, fear of making mistakes, lack of experience, exposure to traumatized patients, and lack of support from colleagues and clinical instructors. Lack of support and guidance from clinical instructors was the most common cause of anxiety among nursing students working in psychiatric settings. The study also reported that lack of experience and exposure to traumatized patients were identified as significant contributors to anxiety symptoms. Also, nursing students in psychiatric settings face unique challenges, primarily related to the nature of the work. They deal with patients who have complex mental health conditions and challenging behaviors like aggression. These factors can be stress-provoking and anxiety-inducing, leading to emotional exhaustion and burnout. Additionally, psychiatric settings have an unpredictable and constantly changing environment, which can be overwhelming for nursing students (**Bhurtun et al., 2020**).

Anxiety among nursing students working in psychiatric settings can have several adverse effects on their mental health, academic performance, and quality of life. Studies have shown that anxiety symptoms can negatively affect nursing students' ability to provide safe and effective patient care. Furthermore, anxiety symptoms may lead to increased levels of stress, insomnia, poor academic performance, and decreased quality of life. Moreover, nursing students with anxiety symptoms reported significantly lower academic performance and quality of life compared to those without anxiety symptoms (**Ali et al., 2020**). In addition, Anxiety can impact students' mental health and academic performance in numerous ways. Studies show that students with anxiety are at a higher risk of developing depression and other mental health concerns (**Alizadeh et al., 2019**). They are also more prone to developing physical symptoms such as headaches, muscle tension, and sleep disturbances (**Faisal, 2019**). Anxiety can have a significant impact on academic performance, leading to lower grades, decreased motivation, and increased absenteeism (**Garrett, McLaughlin, & Svrcek, 2018**).

Several interventions or strategies can be applied to address anxiety in nursing students. These include cognitive-behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), focuses

on minimizing stress and enhancing self-awareness, and social support. These strategies are shown to be effective in reducing anxiety levels and improving cognitive function. Social support in the form of peer mentoring programs and counseling services, has also been shown to decrease anxiety levels and improve academic performance among nursing students (**Bhurtun et al., 2020**).

Clinical nursing education is essential for the acquisition and growth of the fundamental nursing competencies required when nursing students assume a professional nursing role. As it enables nursing students to translate and apply the theoretical knowledge gained from the classroom to their nursing practices, prepared to critically think, and to communicate effectively, moreover enhancing their caring and cultural competences, ethical reasoning, and decision-making skills (**Cornine, 2020**). However, with the increasing complexity of health care systems, on-going nurse faculty shortage, continued rise in nursing student applications for admission, and limited clinical placement options, providing a maximum clinical learning experience to nursing students remains a great challenge for nurse educators. So, the adoption of alternative teaching approaches such as simulation-based activities is essential to enhance the preparation of nursing students to assume professional nurse roles and work with interprofessional health care teams (**Labrague et al., 2019**).

Simulation in nursing education has become an integral tool in teaching a wide range of clinical skills as it can effectively promote critical thinking, clinical judgment, and decision-making, in addition to enhancing clinical skills and competencies, patient safety, and quality of care. The advancement of simulation technology has led to different types of simulation modalities, including high and low fidelity simulations, virtual simulations, and standardized patients' simulation (**Amherst & Dubay, 2021**). According to the specific technological complexity, the types of simulators are divided into three categories depending on 'fidelity' (the degree of realism of the models and the intended experience): low, medium and high. The complexity of low-fidelity simulation (LFS) is essential and is used to acquire basic psychomotor skills in a simple procedure or physical examination which only simulates one part of the body, for example, basic cardiac auscultation (**Amherst & Dubay, 2021**).

High Fidelity Simulation (HFS) and Low Fidelity Simulation (LFS) have differences in terms of

their realism, cost, and complexity levels. HFS is more realistic than LFS and can simulate complex scenarios with advanced equipment and software. However, HFS is more expensive and requires more resources, such as specialized staff, pre-planning, and training time (Luebbert et al., 2023). Additionally, the high-fidelity simulation is a method which uses mannequins with anatomical and physiological similarities to human bodies. Simulations used in medium fidelity rely more on technology than anatomical comparisons. Mannequins and models used in medium- and high-fidelity simulations can reproduce auditory cues for breathing, heartbeats, coughing, and moaning. Low-fidelity simulation methods include case studies, scenarios, role-playing, and instructor debriefing. In low-fidelity simulation, models and mannequins are used to teach psychomotor skills to student nurses. While these models or mannequins allow performance of coarse movements, they do not show any reactions to the performed interventions (Findik et al., 2019). On the other hand, LFS is cost-effective, easy to implement, and accessible, but may lack realism, especially in complex cases. The choice of simulation modality for PMHN education should depend on the learning objectives, available resources, and the level of complexity of the clinical scenarios. For example, LFS can cover the basic assessment and communication skills, whereas HFS can offer comprehensive training in complex cases, such as suicide prevention and crisis management (Luebbert et al., 2023).

Mental health nursing is a unique clinical specialty because human responses to mental illness are so diverse and unpredictable; therefore, communication skills, knowledge, and professional responses to distress are required to manage potentially escalating situations. simulation consists of achieving realistic environments representative of the student's professional responsibilities, through different methodologies such as role-playing games with real people or simulation mannequins, using clinical cases. Moreover, the use of clinical simulation is a useful pedagogical approach that allows the training of clinical skills in a safe environment, without compromising the well-being of the patient (Smith et al., 2018).

Nursing students enrolled in psychiatric mental health (PMH) courses encounter wide variation in patient interactions. Clinical instructors may not always observe these interactions, limiting opportunities for critical feedback and reflection. Students may also experience unease during initial patient encounters, contributing to confidence barriers

and learning delays (Ok et al., 2020). Simulation using various modalities can be useful in increasing student confidence, satisfaction, knowledge, and communication skills. While knowledge levels increased regardless of simulation modality, clinical reasoning, clinical learning, communication, realism, and overall rating of the simulation experience were significantly higher among participants in standardized patient simulation compared to mannequins (Luebbert et al., 2023). Simulation modality is an important consideration for PMHN education and should be chosen based on learning objectives, available resources, and the complexity of clinical scenarios. For that, there are different simulation modalities available, such as Low Fidelity Simulation (LFS) and High-Fidelity Simulation (HFS). While LFS can cover basic assessment and communication skills, the HFS can provide comprehensive training in complex cases, such as suicide prevention and crisis management (Piot et al., 2021).

Due to the complex nature of interactions with psychiatric patients there are lacks high-fidelity patient-simulators, such as the inability to provide realistic situations that include non-verbal communication such as facial expressions and body language. That is why the use of simulated patients (SP) eliminates these shortfalls and can provide high-fidelity mental health experiences for students (Hatfield, 2020). Subsequently, simulation in psychiatry is not limited merely to the use of mannequins or even video training, rather needs in vivo and human simulation to make the experience as realistic as possible. Thus, simulated standardized patient can produce the same as they provide in an environment where the learner can explore and understand the occurring psychiatric situation. There are opportunities for role play in psychiatry or the experience of learners attempting to simulate a real-life situation. Medical education in psychiatry has become more innovative, and different education systems in different countries have developed their curriculum around it, as the principal use for simulation is to improve formative training in psychiatry (Mitra & Fluyau, 2019).

Low-fidelity simulation methods are commonly used in psychiatric nursing education. These methods include role-playing exercises, case studies, and standardized patients. Role-playing exercises involve students acting out scenarios to practice communication and interpersonal skills. Case studies present students with hypothetical scenarios to analyze and discuss. Standardized patients are actors

trained to portray patients with specific medical conditions or mental health issues. While low-fidelity simulation methods may not be as realistic as high-fidelity methods, they can still be effective in psychiatric nursing education, particularly when used in combination with other teaching methods (**Findik et al., 2019**). Simulation-based learning experiences (SBLEs) utilizing standardized or simulated patients (SPs) for interpersonal and therapeutic communication skill development facilitates positive learning outcomes in PMH nursing education. SPs provide opportunities for complex interpersonal interactions with persons experiencing alterations in psychiatric or cognitive functioning. Faculty can directly observe SBLEs and provide learners with essential guidance and instruction in skill development (**Pfeiffer & Wands, 2021**).

Nursing students may not have the opportunity to interact and/or intervene with a patient diagnosed with schizophrenia during their clinical rotation. This may be due to the high acuity of the patient or simply that there was not a patient with this diagnosis during the student's clinical rotation. Compounding the lack of experience assessing and communicating with patients diagnosed with schizophrenia is the fact that nursing students often express anxiety and apprehension prior to the start of their clinical rotation which can further reduce confidence and impede learning (**Speeney et al., 2018**). Accordingly, when the focus for learning is on the patient's psychosocial-emotional responses to the situation and when body language and physical movement are key components of the learning situation, then simulated standardized patient (SP) is the better choice over manikins. Simulated patient scenarios are especially effective in simulations that are based around communication and provide a low risk setting in which students can practice confrontational situations which are commonly found in mental health settings but in a safe controlled environment (**Hatfield, 2020**).

The most common scenarios in simulation include the use of emergency behavioral codes containing members of mental health teams, role-playing patients in behavioral health crises. Students often receive training about behavioral health emergencies, which typically involve a patient in crisis, which may include a team member posing in an agitated manner, e.g., screaming and pacing and often behaving in physically aggressive behavior. Learners are expected to be able to learn to de-escalate a patient in crisis using verbal techniques. Besides, learners need to learn about the use of physical and chemical restraints and to understand when to use appropriate

methods of restraint. Notably, as several professionals in mental health, learners learn to be able to respond to debriefing techniques. Training facilitators in debriefing techniques is critical to ensure effective debriefing among simulation faculty (**Mitra & Fluyau, 2019**).

Use of simulation training among psychiatric nursing students can improve communication skills, leadership, and teamwork, which overall gives a learner more confidence and ability to navigate real-life situations, encourages critical thinking in students. Simulation-based mental health nursing education can provide students with a learning module and simulation-based mental health nursing education experience prior to clinical placements. Nursing students report a high degree of satisfaction with the use of clinical simulation in psychiatric and mental health nursing (**Mitra & Fluyau, 2023**). In addition simulated standardized patient can enhance healthcare team outcomes through the acquisition of appropriate skills to perform a mental status examination, a better understanding of psychopathology through role-playing, and enhance residents or students' confidence in conducting a thorough psychiatric evaluation. Also, simulation can be a standardized tool to assess resident or student clinical skills performance and improve patient safety. In addition, nursing students report a high degree of satisfaction with the use of clinical simulation in psychiatric and mental health nursing (**García-Mayor et al., 2021**).

#### **Subject and Methods:**

##### **I: Technical design:**

The aim of this study was aimed at investigating the effect of standardized patient simulation training on anxiety levels among psychiatric and mental health nursing students through:

1. Assess levels of anxiety among psychiatric and mental health nursing students (pre and post training sessions).
2. Design, implement, and evaluate the effect of standardized patient simulation training program to psychiatric and mental health nursing students.

##### **Hypothesis:**

**H0:** The standardized patient simulation training will not influence the anxiety levels of psychiatric and mental health nursing students.

**H1:** The standardized patient simulation training will influence the anxiety levels of psychiatric and mental health nursing students.

##### **Research design:**



A quasi- experimental one group study design was utilized to fulfill the aim of the study.

#### Setting of the study:

The study was conducted in psychiatric and mental health nursing department, faculty of nursing, October 6 University, Giza governate.

#### Subjects:

A convenient sample of (n=40) nursing students were available from (N=99) students who were enrolled in the psychiatric and mental health nursing course during the Fall semester of the academic year 2023-2024.

#### Tools of data collection:

A structural self-reported questionnaire was used in the study after reviewing the national and international related literature and will contains two parts that were designed by the researcher using Microsoft Forms.

1<sup>st</sup> tool: Socio- demographic characteristics sheet of university nursing students.

which was designed by the researcher after reviewing both national and international literatures reviews related to the study title and includes the Sociodemographic characteristics of the study subjects as; sex, Nationality, Gradient Point Average (GPA), experience with simulation lab, fears from dealing with psychiatric patient.

2<sup>nd</sup> tool: The State-Trait Anxiety Inventory (STAI, form Y-1) by *Ok, Kutlu, & Ates (2020)*; the scale was used to measure anxiety levels among university nursing students. The inventory was adopted from *Ok, Kutlu, & Ates (2020)*, and the inventory was originally developed by *Spielberger, et al., (1970)*. The STAI consists of 40 items total; classified into: A 20-item state anxiety scale (STAI- form Y1) and a 20-item trait anxiety scale (STAI-Form Y2). The researcher used the STAI, form Y-1, that consists of 20 items that report the intensity of the participants anxious feelings "right now, at this moment on the following four-point rating scale: (1) Not at all, (2) Somewhat, (3) Moderately so, and (4) Very much so. Scoring system should be reversed for the anxiety-absent items (item 1,2,5,8,10,11,15,16,19,20). For example, for question (#1), if the respondent marked -4- then the weight would be -1-. The inventory Cronbach's alpha coefficient of STAI were 0.90. Higher scores were indicative of higher levels of perceived anxiety and pre-training data and post-training data results were compared where the degrees of change in the anxiety levels also identified. Total Scoring system for State-

Trait Anxiety Inventory (STAI, form Y-1) was calculated as following

#### Total scoring system:

No or Low anxiety	20-40
Moderate anxiety	41-60
High anxiety	61-80

## II- Operational Design:

This design included description of the preparatory phase, content validity and reliability, pilot study and implementation phase including fieldwork, methods and procedures of the study, design and implementation of the training program and evaluation phase

### A) preparatory phase

The Standardizes Patient Simulation Training sessions was designed in English language after reviewing the related past, and current Arabic and English literature covering various aspects of the training, using available books, articles, periodicals and magazines to get acquainted with the research training and develop the content.

### B) Tools validity and reliability

A panel of five experts from faculty members in psychiatric and mental health nursing discipline at Helwan University, Ain-Shams University, and October 6 University tested and evaluated the instruments for their face, content validity, and reliability to meet the criteria of trustworthiness of the data collection tools in this study. They belonged to distinct academic ranks, namely assistant professors, and professors. Experts gathered agree/disagree responses for face validity, content dependability, significant, not important, and comments to evaluate the tools' relevance, clarity, and completeness.

The inventory Cronbach's alpha coefficient of STAI were 0.90.

### C) Pilot Study:

The pilot study was done on (4) students enrolled in psychiatric and mental health nursing course, at the faculty of nursing, October 6 university representing 10% of the study sample (n=40) to examine the clarity of questions and time needed to complete the study tools. According to the pilot study results there were not any required modifications to be applied, so pilot study was included in the main study subjects.

#### D) Field work:

Phase I: Data collection of this study was carried out in the beginning of Fall semester (October -2023) of the academic year 2023-2024 after obtaining an ethical approval from the Head of the Psychiatric and Mental health nursing department and the dean of the faculty of nursing at October 6 University followed by preparation for the program through presence of Workplace Violence Prevention for Nurses (Web-Based) training program provided by Center for Disease Control (CDC) in the period from end of July to begin of August in the year of 2023.

Phase II: There was a working phase through which the researcher agreed on the allocated time for the theoretical portion of the sessions that was agreed upon on a regular weekly basis on Tuesdays and Fridays for two-hours sessions for both study groups from 05:00 pm to 07:00 pm, and the researcher implemented the program for psychiatric nurse's students in an organized time and date.

Through an online and electronic form of data collection the researcher explained the purpose of the study before implementing the program and distributing the tool to the study subjects to be filled in, while the researcher was present to assure that all questions were completed and fully understood. Finally an (n=40) were completely and successfully submitted. Filling in the tools lasted for 20 minutes for each subject included in the study

The practical part of the training session was conducted at the faculty lab, with accordance to formal clinical laboratory skill lab time on Mondays and Tuesday from 02:00 p.m. to 04:00 with assistance of the course leader and the faculty members to save the time for practical sessions for the experimental group.

#### Simulation training program:

The Standardizes Patient Simulation Training consists of (4) practical sessions in a period of (4) weeks including the formal and informal practices placed on the official Microsoft channel and the faculty practical lab prior to the actual clinical hospital rotation according to the departmental agenda.

The simulation sessions consisted of different scenarios regarding multi psychiatric disorders with the main objective was to equip the psychiatric nursing students with a variety of clinical skills that enables their confidences level and in managing and communicating with the psychiatric patients in variety of settings and disease conditions.

The specific session objectives were to conduct a successful mental health assessment, interviewing, therapeutic communication techniques, psychiatric and mental health nursing principles, de-escalation skills

Prior to the application of simulation a variety of theoretical content was provided by the department academic staff at the department to enable their levels of understanding of mental health and mental illness, symptomatology, therapeutic communication, psychiatric mental health nursing principles, nursing assessment and care for schizophrenic, manic, aggressive, suicidal, antipsychotic, Electroconvulsive therapy, Cognitive behavior therapy, psychiatric emergencies, addiction, and the pharmacological treatment as antipsychotic, antidepressant, mood stabilizer's, and anxiolytic.

The design of the simulation included three major phases: pre-simulation, simulation, and post-simulation (**INACSL Standards Committee, 2016**). The pre-simulation phase consisted of a pre-briefing immediately before the simulation, which included orientation to the simulation and provided the participants with expectations and objectives for the simulation. The simulation design included the use of a realistic individual who acts as a standardized patient. Simulation scenarios and conceptual, psychological, and physical fidelity were considered when developing the simulation and gathered in a simulation template that was developed by the **National League for Nursing in 2023**.

To increase the fidelity of the simulation, the scenario was reviewed by the course leader and clinical coordinator for the PMHN course. After the simulation, a debriefing session followed the debriefing template developed by the INACSL, which was used to facilitate a guided reflective discussion and enrich the participants' learning (**INACSL Standards Committee, 2016**).

The practical part includes therapeutic communication techniques & psychiatric interviewing, exercise mental health assessment

of patient's cognitive functioning and willingness to collaborate with treatment and safety measures & and how to synchronize between verbal and non-verbal SP behaviors, how to label the verbal and behavioral cues of aggression and using of assessment tools for aggression (STAMP criteria), illustrate the coercive interventions that escalate patient agitation, and testing & applying the different domains of de-escalation.

Standardized patient persona:

Male patient, 27 years old been diagnosed with bipolar disorder type I since a half years ago. Currently paranoid and suspicious, brought to ED by police due to erratic public behavior and attacking the cashier guy in the mall when he told her that your credit card is out of money, she is overly nervous and agitated, cursing, threatening and pacing in room, occasionally banging her face and the nurse disk. She is loud and suspicious of all the surroundings. She keeps looking to the office exit while pacing because she is being monitored by unknown people. She escalates if you challenge her delusions or comment or stare at her grooming or ask her to calm down. She de-escalates if her feelings are validated and feels that she is being heard.

standardized patient persona and script was consequently modified to suit each of the practical aims and objectives. The skills checklist and script needed were available for the students one week in advance from the session. The researcher observes and checklists the student's performance in accordance with the skill checklist. The skills pre and posttest were also used to obtain feedback in the briefing and debriefing time.

Phase III: There was a terminating phase for the researcher through which the same tools used in pre-training sessions implementation was used to evaluate the effect of the program post simulation training.

### III: Administrative design:

Approval to carry out this study was obtained from Dean of the Faculty of Nursing, October 6 University after explanation of the study aim and objectives, an official permission

was obtained from the Dean of faculty of nursing, Helwan University asking for cooperation and permission to conduct the study.

### IV: Statistical Design:

Data entry and statistical analysis for the students pre and posttest were done using the statistical package for social science (SPSS), version 22.0 Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables. Quantitative continuous data were compared using the non-parametric Mann-chi square test as normal distribution of the data could not be assumed.

Qualitative categorical variables were compared using Chi-square test While Linear Correlation coefficient was used for detection of correlation between two quantitative variables in one group. Whenever the expected values in one or more of the cells in a 2×2 tables were less than 5, Fisher exact test was used instead. In larger than 2×2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Statistical significance was considered at p-value < 0.05; while highly Significant was considered at p-value p < 0.001.

### Ethical Consideration:

An official permission to conduct the proposed study was obtained from the Scientific Research Ethics Committee of Faculty of Nursing Helwan University and to be delivered to the Dean of the Faculty of Nursing, October 6 University. Participation in the study was voluntary, and subjects will be given complete full information about the study and their role before signing the informed consent. The ethical considerations will include explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it will not be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs of the study subjects were respected

### Limitations to the study:

There is no limitation identified by the researcher at the current study.

### Results:

**Table (1)** shows that, 62.5% were males while 37.5 % were females. All the students were Egyptians. Also, 65.0% of the students were familiar with simulation lab training. Additionally, 57.5% of the students reported fear of dealing with psychiatric patients.

**Figure (1)** shows that 67.5% of the students studied had low anxiety levels post simulation training compared to 72.5% and 7.5% had moderate and high anxiety levels of pre simulation training respectively.

**Table (2)** shows that, there is a significant statistical difference between pretest and posttest scores regarding total levels of anxiety among the students studied in terms of Mean $\pm$ SD (44.38 $\pm$ 5.33 and 40.63 $\pm$ 7.42) respectively at P-value 0.046.

**Table (3)** shows that, there were a significant statistical relation between level of anxiety among Nursing students post training with their sex, and fear from dealing with psychiatric patient at P-value=0.036, 0.049 respectively.

**Table (1): Distribution of the students studied according to their demographic characteristics (n=40).**

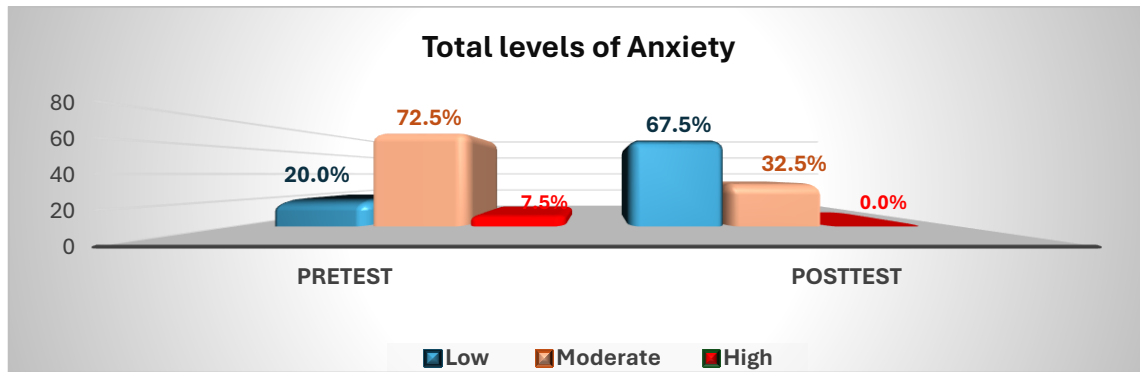
Socio- demographic characteristics of the Studied students (n=40)		
	No	%
<b>Sex</b>		
Male	25	62.5
Female	15	37.5
<b>CGPA</b>		
<2	18	45.0
$\geq 2$	22	55.0
<b>Nationality</b>		
Egyptian	40	100.0
Non-Egyptian	0	0.0
<b>Familiar with simulation lab training</b>		
Yes	26	65.0
No	14	35.0
<b>Fear of dealing with psychiatric patient</b>		
Yes	23	57.5
No	17	42.5

**Table (2): Comparison of the anxiety levels pretest and posttest scores of the students studied (n=40).**

Item	Pre / Post	Nursing students' anxiety levels pre and posttest scores (Mean $\pm$ SD) (n=40)
Anxiety	Pre	44.38 $\pm$ 5.33
	Post	40.63 $\pm$ 7.42
Paired t test		0.807
P-value		0.046*

P-value > 0.05 Non-significant \* P-value  $\leq$  0.05 Significant





**Figure (1):** distribution of nursing students according to their total levels of anxiety pre and post training (n=40).

**Table (3): Relationship between demographic characteristics of the Nursing students and their anxiety levels post training (n=40).**

Socio- demographic characteristics		Anxiety levels post training among experimental group (n=40)						FET	P-value
		Low		Moderate		High			
		No	%	No	%	No	%		
Sex	Male	6	15.0	19	47.5	25	62.5	0.850	0.036*
	Female	4	10.0	11	27.5	15	37.5		
CGPA	<2	4	10.0	14	35.0	18	45.0	0.714	0.135
	≥2	6	15.0	16	40.0	22	55.0		
Familiar with simulation lab training	Yes	8	20.0	18	45.0	26	65.0	1.319	0.251
	No	2	5.0	12	30.0	14	35.0		
Fear of dealing with psychiatric patient	Yes	4	10.0	19	47.5	23	57.5	1.671	0.049*
	No	6	15.0	11	27.5	17	42.5		

FET= Fisher Exact Test P-value > 0.05 Non-significant \* P-value ≤ 0.05 Significant

## Discussion:

The current study shows that, 62.5% were males while 37.5 % were females. All the students were Egyptians. Also, 65.0% of the students were familiar with simulation lab training. Additionally, 57.5% of the students reported fear of dealing with psychiatric patients (**Table1**).

The current study findings proved that most of the students studying nursing had low anxiety levels of post simulation training compared to moderate and high levels of anxiety pre simulation (**Fig. 1**).

From the researcher point of view that may be due to the perceived demanding and

challenging nature of the course, the unfamiliar medical terminology, the communication and interviewing with psychiatric patients, and the inability to definitively define how to treat the mentally ill patient, newly registered nurse students focused on mental health are consumed with feelings of fear and anxiety. They were able to get over their nervousness once they were focused on practicing the de-escalation techniques, testing and applying them in the simulation lab, and getting feedback on their work.

Likewise, **Oliveira Silva et al., (2022)** study of 'effect of simulation on stress, anxiety,

and self-confidence in nursing students: Systematic review with meta-analysis and meta-regression in Spain', that simulation is an effective strategy for reducing anxiety and increasing self-confidence at P-Value= 0.051 and <0.001 respectively compared to conventional teaching strategies, such as lectures, laboratory demonstration, case studies and clinical practice.

The current study showed that there is a significant statistical difference between pretest and posttest scores regarding total levels of anxiety among the students studied in terms of Mean±SD (44.38±5.33 and 40.63±7.42) respectively at P-value 0.046 (**Table 2**).

Congruently with the study findings **Ok et al., (2020)** study of 'the effect of standardized patient simulation prior to mental health rotation on nursing students' anxiety and communication skills in Istanbul' that, there is a meaningful difference between the students who received and who did not receive SPS in terms of the scores obtained from the STAI-T at P-Value= 0.046. where comparison of the scores obtained by the intervention group prior (Mean±SD; 42.44 ± 7.95) and after (Mean±SD; 40.46 ± 8.26 at P-Value= 0.009) the SPS shows a statistically meaningful decrease in the anxiety levels and the intervention group.

During the current study post simulation debriefing time one of the studied students mentioned that "firstly I could not imagine myself standing and speaking with a psychiatric patient, I even felt flushed, tachycardia and being anxious prior and during the simulation. With the provided guidance and support I think that currently I know what it takes and required to deal and interview with the psychiatric patient even in his worst state of escalation, at least I will keep eye on the STAMP criteria, and I will take care not to be a proactive person.

From the researcher point of view that was due to the supportive environment saved by simulation training that focused on the safety of both the students and the patient. Such perceived feelings provide the students with the needed reassurance that enables testing and overcome the feelings of fears from interviewing with a psychiatric patient in real environment.

Also along with the current study findings **Ok, et al., (2020)** added that if we consider that the clinical practice component of a mental health

and psychiatric nursing course may cause anxiety due to the characteristics of the patients, negative attitudes towards psychiatric patients or environmental factors, we may state that the anxiety levels of the students prior to the clinical practice of the course may be relatively high. Additionally, they suggest that the use of SPS prior to the clinical practice of the course may decrease the anxiety caused by concerns about clinical practice in the psychiatric nursing field.

Moreover, similarly to the study findings **Doğru & Aydın (2020)** study of 'the effects of training with simulation on knowledge, skill and anxiety levels of the nursing students in terms of cardiac auscultation: A randomized controlled study that a highly significant decrease in anxiety scores posttest at P-Value 0.001. while the posttest score of high-fidelity simulation studied students group showed a significant decrease in anxiety scores (Mean±SD; 20.00±40.00 at P-Value<0.0001) compared to the students who were trained with traditional education methods (Mean±SD; 35.00±52.00 at P-Value<0.608) posttest.

Similarly to the study results **Reed & Ferdig (2021)** study of "Gaming and anxiety in the nursing simulation lab: A pilot study of an escape room in USA" concluded that the nursing students had a high level of anxiety before and during the simulation, and that anxiety levels significantly decreased from pretest (Mean±SD; 58.80 ±11.95) to posttest (Mean±SD; 47.61±8.41). A comparison of pre- and post-test scores showed a mean drop of 11.19 points; this difference was statistically significant (P-value = 0.013).

Congruent to the current study results and in spite the different simulation approaches **Nakayama et al., (2021)** study of "stress and anxiety in nursing students between individual and peer simulations in Japan", concluded that, the individual simulation students scored significantly higher anxiety scores than the peer simulation students. As the scores of states and trait anxiety before practice did not differ between the individual and peer simulations (P-Value= .352 and 0.077 respectively). However, after simulation, the individual group had a significantly higher state anxiety score than the peer group (P-Value= 0.010).

From the researcher point of view Nursing students perceived general satisfaction with peer learning, as it allows them to engage in more detailed learning, and discussion than traditional learning methods and it can save the chances to deal and collaborate with the challenges they face during the running of the simulation scenario in a friendly and controlled environment.

The current study results proved there were a significant statistical relation between level of anxiety among Nursing students post training with their sex, and fear from dealing with psychiatric patient at  $P\text{-value}=0.036, 0.049$  respectively (**Table 3**).

That might be due to both anxiety, negative attitudes, and the fear of violating patients are major learning obstacles faced by nursing students in courses related to mental health and psychiatric nursing. Following SPS training, students comprehend patient safety and feel more at ease in a practical setting. In addition, most of study sample are male students tested how patient aggression can impact patients' physical and mental health while working part-time in hospitals.

Opposed to the study findings, **Uslu et al., (2020)** study of "effect of simulation-based learning on first clinical day stress and anxiety

levels of nursing students in Turkey". There were no significant differences between the groups based on age or gender or other demographic characteristics of the subjects studied prior or post simulation training regarding anxiety levels. And the author argued this result is due to both males and females' students responding similarly to the clinical stress, additionally in contrast with the current study findings many of the author students was female students.

### Conclusion:

Standardized patient simulation application at Psychiatric and Mental Health Nursing clinical training proved its efficacy in decreasing the student's anxiety levels and fears from dealing or interviewing with the psychiatric patient as it sharpen the clinical confidence ability of the students through a safety structured simulation environment where the students can make mistakes in safe environment without compromising their as well the patient safety.

### Recommendations:

Using the Standardized patient simulation to introduce the practical skills in clinical training of psychiatric nursing courses prior to actual clinical training among all the nursing faculties.

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