

Simulation-Based Training for Reframing Psychiatric Nurses' Communication and History-Taking Competencies: A Quasi- Experimental Study

Amal I. Khalil

khalila@ksau-hs.edu.sa

King Abdullah International Medical Research Center

Rawan F. Aldehani

King Abdullah International Medical Research Center

Shroog A. Aljahdali

King Abdullah International Medical Research Center

Waad Almehemadi

King Abdullah International Medical Research Center

Mohammed M. Alharthi

Mental health hospital

Research Article

Keywords: Psychiatric nursing, Simulation-based training, Therapeutic communication, History-taking, Quasi-experimental study, Mental health education, Nurse–patient interaction

Posted Date: February 3rd, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-8496718/v1>

License:  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Additional Declarations: No competing interests reported.

Abstract

Background: Simulation-based education is a highly effective method for enhancing psychiatric nurses' communication and history-taking skills, effectively bridging the gap between theoretical knowledge and clinical practice in the relationally intensive field of mental health.

Aim: This study aimed to assess the effectiveness of a simulation-based educational intervention in improving psychiatric nurses' communication and history-taking competencies through a quasi-experimental design.

Methods: A quasi-experimental pre–post intervention study was conducted among psychiatric nurses working in selected psychiatric wards. Participants underwent a structured simulation-based training program delivered over four sessions, each lasting 45–60 minutes. The program incorporated standardized patient scenarios, role-play, guided reflection, and debriefing, all focused on therapeutic communication and systematic psychiatric history-taking. Data were collected using a validated knowledge assessment tool, an observational communication skills checklist, and a structured case history-taking performance tool. Descriptive and inferential statistics were employed to evaluate pre–post differences and intervention effects.

Results: Participants were predominantly young to middle-aged nurses (mean age 37.4 ± 7.6 years), with balanced gender representation. Most held a bachelor's degree and had moderate clinical experience (≥ 5 years). Post-intervention findings revealed statistically significant improvements in nurses' knowledge, communication skills, and history-taking performance compared to baseline ($p < 0.001$). Large to very large effect sizes were observed across all domains, indicating clinically meaningful gains. Nurses showed marked enhancement in the use of open-ended questions, empathic responses, structured data collection, and integration of psychosocial and clinical information during both simulated and clinical encounters. **Conclusion:** Simulation-based training is an effective and impactful educational strategy for reframing psychiatric nurse–patient interactions as intentional, therapeutic processes. The intervention significantly improved psychiatric nurses' communication and history-taking competencies, supporting the integration of simulation-based learning into psychiatric nursing education and continuing professional development programs.

Introduction

Training that utilizes simulations is increasingly acknowledged as a beneficial and research-supported method for improving clinical skills in nurses. This is especially true in intricate fields like psychiatric nursing. Simulation offers a secure, organized, and student-focused setting. In this environment, psychiatric nurses can practice therapeutic communication, clinical interviewing, and gathering patient histories without endangering actual patients. Through the use of standardized patients and scenario-based simulations, learners can experience realistic nurse-patient interactions [1, 2]. These interactions mirror typical and difficult psychiatric scenarios, thus fostering clinical judgment, empathy, reflective practice, and professional self-assurance. Moreover, simulation-based education facilitates immediate

feedback and structured debriefing, which are critical for consolidating skills and translating theoretical knowledge into clinical practice [3].

Psychiatric nursing practice relies heavily on effective communication and accurate history-taking, as these skills are crucial for valid assessments, a strong therapeutic relationship, patient adherence to treatment, and positive recovery results. Research consistently reveals shortcomings in psychiatric nurses' communication and history-taking abilities, even though these skills are essential in mental health care [4]. Studies using observation and surveys have shown that nurses frequently use closed-ended, task-focused questions and often show limited emotional connection with patients, especially in acute inpatient and emergency psychiatric settings. These communication patterns can limit patients' willingness to share information, impede the development of trust, and negatively affect the quality and thoroughness of psychiatric evaluations [5].

Therapeutic communication in psychiatric nursing extends beyond the exchange of information to encompass empathy, active listening, emotional attunement, and the creation of a psychologically safe environment in which patients can express distressing thoughts and experiences. Psychiatric care is fundamentally grounded in recovery-oriented and patient-centered models, where therapeutic interaction represents the primary medium for engagement and healing [6]. Research has shown that patients who perceive nurses as empathic and emotionally responsive report greater satisfaction, trust, and engagement with treatment, while nurses with strong communication competencies are better positioned to identify early signs of emotional distress and relapse [7]. In contrast, ineffective communication has been associated with patient alienation, symptom exacerbation, reduced treatment adherence, and increased reliance on coercive practices such as seclusion and restraint [8].

In psychiatric nursing, taking a comprehensive history is just as crucial as it is in other medical fields, given that mental health evaluations primarily depend on patient accounts rather than lab tests or imaging results. Detailed psychiatric histories, which include psychosocial stressors, substance use, trauma exposure, medication compliance, and family psychiatric background, are essential for accurate diagnosis and effective treatment planning [9]. However, studies have highlighted significant deficiencies in nurses' abilities to gather detailed and sensitive psychiatric histories, especially on topics like self-harm, suicidal thoughts, sexual health, and trauma [10]. Challenges such as time limitations, insufficient training, discomfort with sensitive subjects, and lack of institutional support further hinder effective history-taking, particularly in acute care environments [11]. While communication and history-taking are often taught as separate skills, modern psychiatric practice necessitates their integration as interconnected competencies. Therapeutic communication builds trust and encourages disclosure, whereas structured history-taking adds depth, focus, and clinical relevance to nurse-patient interactions. Nonetheless, nursing education literature indicates that many undergraduate and continuing professional development programs focus on theoretical content and checklist-based assessments, offering limited opportunities for experiential learning, reflective practice, and context-specific skill application [12]. Consequently, many psychiatric nurses enter clinical practice with sufficient theoretical knowledge but lack the confidence and competence to conduct psychiatric interviews independently [29,

30]. Educational interventions like communication skills training, structured interviewing frameworks, and simulation-based learning have shown short-term improvements in nurses' knowledge, confidence, and self-perceived competence [13]. Quasi-experimental and pre–post studies in psychiatric settings suggest that targeted educational programs can enhance nurses' use of open-ended questions, empathetic responses, and systematic history-taking techniques. However, evidence on the sustainability of these improvements is inconsistent, with skill decline noted in the absence of ongoing supervision, mentorship, and organizational support [14]. Additionally, while factors such as education level and years of experience affect baseline competence, their impact on post-intervention outcomes seems variable, indicating that experiential learning and institutional culture may be more significant determinants of sustained practice change [15]. To effectively transform psychiatric nurse–patient interactions, a shift is needed from routine, task-oriented exchanges to intentional, reflective, and patient-centered interactions supported by structured communication and history-taking frameworks. Simulation-based training, which emphasizes experiential learning, guided reflection, and realistic clinical scenarios, is increasingly recommended as an effective strategy for bridging the gap between theory and practice in psychiatric nursing education [16]. However, there is still a lack of well-designed studies examining the combined impact of simulation-based training on both communication and history-taking competencies using quasi-experimental designs. Therefore, this study aims to assess the effectiveness of a simulation-based educational intervention in reshaping psychiatric nurses' communication and history-taking skills through a quasi-experimental approach, providing evidence to support sustainable educational strategies for enhancing psychiatric nursing practice and patient outcomes.

Significance of the Study

In the field of psychiatric nursing, the ability to communicate therapeutically and gather comprehensive patient histories is crucial for accurate assessments, building therapeutic relationships, and achieving favorable mental health outcomes. Despite their importance in psychiatric practice, research shows that psychiatric nurses often exhibit gaps and inconsistencies in these skills, especially in complex clinical settings with high patient acuity, time constraints, and organizational challenges [17]. These shortcomings can undermine the accuracy of assessments, restrict patient disclosure, weaken care engagement, and negatively impact recovery paths. This study is significant because it focuses on redefining psychiatric nurse–patient interactions through simulation-based training, treating communication and history-taking as deliberate, structured, and therapeutic processes rather than routine tasks. By assessing a simulation-based educational intervention through a quasi-experimental design, this study addresses a critical gap in psychiatric nursing education and ongoing professional development, where experiential and reflective learning methods are underutilized [18]. The study's findings could guide evidence-based educational strategies, support competency-based workforce development, and improve the quality of psychiatric nursing practice by fostering patient-centered, empathetic, and clinically effective nurse–patient interactions, ultimately leading to better patient outcomes and enhanced mental health care delivery [19, 20].

Theoretical Framework:

Figure 1 illustrates that this study is grounded in an integrated theoretical framework combining Peplau's Interpersonal Relations Theory, Adult Learning Theory, and Experiential Learning Theory to explain how simulation-based training can enhance psychiatric nurses' communication and history-taking skills. Peplau's Interpersonal Relations Theory provides the core conceptual foundation for psychiatric nursing, emphasizing the therapeutic nurse–patient relationship as a fundamental component of effective mental health care. This theory underscores the importance of intentional communication and systematic history-taking throughout all stages of the nurse–patient interaction, facilitating accurate assessment, therapeutic engagement, and recovery-focused care [21]. Adult Learning Theory (Andragogy) informs the educational structure of the intervention by highlighting that adult learners are self-directed, problem-focused, and driven by learning activities that are directly applicable to their clinical duties. Simulation-based training aligns with these principles by providing realistic, practice-based scenarios that tackle real-world psychiatric issues, thereby boosting engagement, motivation, and skill development among practicing nurses [22].

Experiential Learning Theory further clarifies how simulation-based training results in lasting changes in practice. Through tangible simulated experiences, guided reflection during structured debriefing, integration of theory with practice, and opportunities for skill practice, nurses can internalize and enhance therapeutic communication and history-taking behaviors. This iterative learning process promotes reflective practice and aids in transforming acquired skills into consistent clinical performance [23].

Together, these theories offer a cohesive framework that connects the therapeutic goals of psychiatric nurse–patient interactions with the educational processes facilitated by simulation-based training. The framework supports the study's hypothesis that a simulation-based educational intervention, assessed using a quasi-experimental design, can effectively reshape psychiatric nurses' communication and history-taking skills, resulting in more deliberate, therapeutic, and patient-focused nurse–patient interactions.

Figure 1 **Application of the theoretical framework to the study variables**

Aim

The purpose of this research is to assess how effective a simulation-based educational program is in improving psychiatric nurses' skills in communication and history-taking, as well as in transforming nurse–patient interactions into structured, therapeutic, and patient-focused engagements.

Research Questions

- What are the initial levels of communication and history-taking skills among psychiatric nurses before they undergo the simulation-based training?
- Does engaging in a simulation-based educational program enhance the communication abilities of psychiatric nurses?
- Does the simulation-based training improve nurses' history-taking skills, including their capacity to perform thorough and sensitive psychiatric evaluations?
- In what ways does the simulation-based training influence the therapeutic quality and organization of psychiatric nurse–patient interactions?
- Are the enhancements in communication and history-taking skills affected by nurses' demographic or professional attributes, such as their years of experience or previous education?
- What is the perceived effect of the simulation-based training on nurses' confidence, reflective practice, and the application of skills in actual clinical environments?

Hypotheses

Primary Hypothesis:

H1: Psychiatric nurses who undergo the simulation-based educational program will show significantly improved communication and history-taking skills compared to their pre-intervention levels.

Secondary Hypotheses:

H2: Nurses who participate in the simulation-based training will engage in more structured and therapeutic nurse–patient interactions than they did before the intervention.

H3: The improvements in communication and history-taking skills will be facilitated by experiential learning processes, including active participation, reflection, and guided debriefing.

H4: The success of the simulation-based intervention may differ based on nurses' demographic factors, such as their years of experience and previous education.

MATERIALS AND METHODS

Study Area/Setting

This study was conducted at Erada and Mental Health Complex, affiliated with Saudi Arabia's Ministry of Health, located within Jeddah. Data collection occurred at Erada for Mental Health services, which provides comprehensive psychiatric treatment through medical, psychological, social, and religious approaches. In addition to its focus on mental health services, this hospital addresses diverse mental health issues across multiple departments. The facility includes six inpatient wards catering separately

to male and female patients while also offering outpatient services for both adults and children alongside an emergency department.

Study Subjects

The study included all nurses working the morning shift, totaling 75 participants. Eligible nurses were those employed in the psychiatric services department at Erada Mental Health Services Hospital in Jeddah who held a bachelor’s degree in nursing and provided informed consent to participate in the study.

Study Design

A quantitative quasi-experimental (pre/post-one-group) design was utilized to meet the study's goals. While randomized controlled trials are often seen as the gold standard, a quasi-experimental design was chosen as a practical and ethical option suitable for applied healthcare environments, balancing scientific rigor with practical feasibility.

Sample Size Estimation

The sample size was calculated using the Rao-Scott calculator, based on the total population of 75 nurses at the time of data collection. The calculation included a 5% margin of error, a 95% confidence level, and a response distribution of 50%, leading to a recommended sample size of 62 nurses. The sample size and margin of error were determined using the following formulas:

In terms of the numbers, you selected above, the sample size n and margin of error E are given by

$$x = Z(c/100)^2r(100-r)$$

$$n = N x / ((N-1) E^2 + x)$$

$$E = \text{Sqrt} [(N - n) x / n(N-1)]$$

Where N is the population size, r is the fraction of responses that you are interested in, and $Z(c/100)$ is the critical value for the confidence level.

Sampling Technique

A non-probability convenience sampling method was employed to efficiently and cost-effectively recruit a representative cohort of nurses, aligning well with the study's objectives. Data collection was conducted in 2024, targeting nurses working morning shifts in inpatient, outpatient, and emergency units. The nursing department at Erada and the Mental Health Complex provided initial approval for the study. Staff distributed pre- and post-intervention surveys in both paper and digital formats, enabling researchers to assess improvements in communication skills and history-taking abilities.

Tools of the Study

An English questionnaire gathered data to meet the study's aims. It included three main parts: **1. Demographic Characteristics:** This part asked for details like age, gender, marital status, years of experience, education level, and attendance at workshops on communication and history-taking. It covered other key demographics, too.

The Knowledge Assessment Scale was developed by Khalil in 2025 [24] based on a comprehensive review of relevant studies and literature. The scale was further adapted by the researchers of the current study to align with the content of the educational program. It consists of eight main categories designed to assess nurses' understanding of core domains in psychiatric nursing practice. ¹

Each category lists specific sub-items. "Understanding the Importance of Effective Communication in Psychiatric Nursing" has five statements. "Building a Therapeutic Nurse-Patient Relationship" also has five. "Effective Communication Skills" has three sub-items. "Psychiatric History-Taking" has seven sub-items. "Managing Challenging Situations" has five items. "Cultural Competence in Psychiatric Nursing," "Role-Playing and Simulation Exercises," and "Interdisciplinary Collaboration" each have two items.

Participants answer on a Likert scale. Choices run from "Agree" (3 points), "Unsure" (2 points), to "Disagree" (1 point).

Scoring

Total scores range from 30 to 90. Scores from 30 to 45 show weak knowledge. From 46 to 61 points for fair knowledge. Scores from 62 to 77 mean solid knowledge. From 78 to 90 shows strong knowledge. This setup matches the scale points. It sorts knowledge levels in psychiatric nursing with ease. Scores are split into weak, fair, solid, and strong across all categories.

Validity and Reliability of the Knowledge Assessment Scale

The Knowledge Assessment Scale was developed by researchers following an extensive literature review and was designed to align with the content and objectives of the simulation-based training program. To establish content validity, the Content Validity Index (CVI) was utilized, with a panel of experts in psychiatric and mental health nursing and nursing education assessing the relevance and clarity of each item. The item-level CVI values indicated acceptable to excellent agreement, while the scale-level CVI confirmed robust content validity. Face validity was verified through pilot testing with psychiatric nurses, who found the items to be clear, relevant, and appropriate for their clinical practice. Construct validity was supported by the theoretical structuring of the scale into eight competency-based domains and its capacity to detect changes in knowledge following the intervention. Internal consistency reliability was measured using Cronbach's alpha coefficient (86.0), indicating good reliability for the overall scale and demonstrating that the instrument consistently assessed psychiatric nursing knowledge.

3. Communication Skills Checklist

The Communication Skills Checklist will be used to assess nurses' proficiency in therapeutic communication during patient interviews. The checklist consists of 35 items adapted from Chauhan et al. [25], with an additional 10 items incorporated from the *Manual of Psychiatric Clinical Competencies* developed by Khalil [26]. These added items assess essential introductory and attending behaviors, including greeting the patient, self-introduction, and the use of attending behaviors.

The final checklist is organized into four interview phases: *setting up an interview*, *opening an interview*, *conducting an interview*, and *closing an interview*. It comprises nine domains: attending behavior (6 items), rapport building (9 items), introduction (3 items), clarity (4 items), attention (8 items), responsiveness (5 items), empathy (3 items), support (5 items), and summarization (2 items), with a total possible score ranging from 0 to 45.

Scoring and competency classification:

Each item is scored dichotomously (1 = achieved, 0 = not achieved). Based on the total score, nurses' communication skills will be categorized into three competency levels:

- Competent: $\geq 75\%$ of the total score (34–45)
- Partially competent: 50–74% of the total score (23–33)
- Not competent: $< 50\%$ of the total score (0–22)

Higher scores indicate better communication competency.

4. History-Taking Competency Checklist

The History-Taking Competency Checklist evaluates nurses' ability to obtain a comprehensive psychiatric history. The competency encompasses ten categories, including patient demographic data, presenting complaints, current and previous medications, past psychiatric and medical history, family history, personal history, premorbid personality, substance use history, and forensic history. The tool comprises 19 items, developed by Khalil [26], and has demonstrated established validity and reliability as approved by the Clinical Skills Review Committee at the College of Nursing, King Saud University for Health Sciences. The total possible score ranges from 0 to 58.

Scoring and competency classification:

Each item is scored dichotomously (1 = achieved, 0 = not achieved). Based on the total score, history-taking competency will be classified into three levels:

- Competent: $\geq 75\%$ of the total score (44–58)
- Partially competent: 50–74% of the total score (29–43)
- Not competent: $< 50\%$ of the total score (0–28)

Reliability of the scales

The scale has been translated into Arabic, and the back translation has been compared with the original definition to confirm the accuracy of translation. Five nursing education experts in nursing education examined the scale before piloting it with ten Nurses, where the internal consistency of the Arabic versions was determined using Cronbach's alpha and reported 86.0, 83.0, and 86.0, respectively, which means high reliability and internal consistency.

Data Collection Procedure

Data collection commenced after obtaining official approvals from the King Abdullah International Medical Research Center (KAIMRC) Institutional Review Board (IRB) and a separate IRB from the Ministry of Health, Jeddah, KSA. Participants were invited to take part in the study through informational leaflets and brief explanatory sessions. Additional approvals were obtained from the nursing managers of the Erada Mental Health Complex and each ward, including the emergency department.

Of the total 75 nurses, a minimum sample of 62 was required. Participants were organized into seven small groups according to ward assignments. Each nurse was assigned a unique identification code, which was used to track pre-intervention and post-intervention assessments.

The educational intervention was delivered by the principal investigator (PI) and co-researchers using a combination of PowerPoint presentations, handouts, and practical demonstrations. The practical component involved direct interaction with real patients or role-played simulated patients. To minimize experimenter bias, the researchers ensured that all participants completed the initial assessments, verified informed consent and IRB approvals, and consistently used their assigned codes throughout the sessions for accurate data tracking.

Simulation-Based Training Program for Psychiatric Nurses: Keys Summary:

Key Component	Description
Program Aim	To enhance psychiatric nurses' therapeutic communication and systematic psychiatric history-taking through immersive simulation-based learning grounded in theory-driven practice.
Theoretical Framework	Adult Learning Theory (learner-centered, self-directed learning) [21]; Experiential Learning Theory (concrete experience, reflection, application) [22]; Peplau's Interpersonal Relations Theory (therapeutic nurse–patient relationship) [23].
Design & Duration	Four simulation-based sessions were delivered face-to-face; each session lasted 60–90 minutes.
Participants	Small groups of 6–8 psychiatric nurses to maximize engagement, individualized practice, and feedback.
Setting	Hospital inpatient wards or designated psychiatric training rooms.
Facilitators	Experienced psychiatric nurse educators trained in simulation facilitation and structured debriefing with coauthors.
Pre-briefing	Orientation to the simulation environment, clarification of learning objectives, establishment of psychological safety, and review of communication and history-taking frameworks.
Simulation Scenarios	Realistic nurse–patient encounters using standardized patients or scenario enactments representing common psychiatric conditions (e.g., depression, schizophrenia, bipolar disorder, and substance-induced psychosis).
Core Skills Targeted	Therapeutic communication (empathy, active listening, emotional sensitivity) and structured psychiatric history-taking (psychosocial assessment, substance use, trauma, suicidality, medication adherence).
Debriefing & Reflection	Structured facilitator-led debriefing following each scenario, emphasizing reflective practice, performance feedback, and application to clinical care.
Skill Reinforcement	Progressive scenario complexity, repeated practice, peer observation, and guided feedback to consolidate learning.
Teaching Methods	Simulation-based practice supported by brief interactive lectures, small-group discussions, instructional videos, PowerPoint presentations, and informational booklets.
Evaluation	Competency-based checklists are used for formative and summative assessment; pre- and post-program performance is reviewed with individualized feedback.
Implementation Strategy	Four sessions delivered daily across psychiatric wards; two groups trained per day to optimize participation and learning engagement.
Expected Outcome	Improved communication proficiency, enhanced psychiatric history-taking accuracy, and strengthened therapeutic nurse–patient relationships in clinical practice.

Research Implementation Phase

Figure 2 delineates the execution of a simulation-based educational initiative by the research team within designated psychiatric wards, aimed at enhancing nurses' competencies in communication and history-taking. Nurses were systematically organized into groups according to the program's learning objectives, with four daily sessions, each spanning 45 to 60 minutes, and two groups participating per day to optimize engagement and learning outcomes.

The program's content was meticulously tailored to correspond with the nurses' comprehension levels, available time, and session themes. The pedagogical approach integrated interactive lectures, small group discussions, PowerPoint presentations, instructional videos, and informational booklets. Post-activity group discussions and debriefing sessions were conducted to reinforce learning, encourage reflection, and facilitate knowledge retention.

The program's core was the simulation-based component. Participants engaged in realistic simulated nurse-patient interactions utilizing standardized patients or scenario-based enactments that depicted prevalent psychiatric conditions such as depression, schizophrenia, bipolar disorder, and substance withdrawal. Each scenario was designed to incorporate therapeutic communication and comprehensive history-taking, addressing sensitive topics such as suicidality, trauma, family dynamics, and psychosocial stressors. Role-playing and guided demonstrations enabled nurses to actively practice open-ended questioning, empathy, active listening, and structured psychiatric assessment.

Each simulation was succeeded by a structured debriefing, wherein facilitators provided immediate, personalized feedback on performance, highlighting strengths, areas for improvement, and practical strategies for clinical application. Reflection questions prompted participants to consider the impact of their communication and history-taking on the quality of nurse-patient interactions and therapeutic engagement. Positive reinforcement, including verbal encouragement and recognition of skill mastery, was employed to foster active participation and confidence.

Participants were evaluated using a competency checklist for each targeted skill. Each session commenced with a summary of objectives, ensuring alignment with the nurses' understanding and expectations.

At the conclusion of the program, nurses were reassessed on each competency, and their performance was scored and discussed with the researchers, providing personalized feedback to document skill enhancement and consolidate learning. The program emphasized the integration of theoretical knowledge, reflective practice, and experiential learning, ensuring that nurses could apply acquired competencies in real-world psychiatric care.

Figure 2 summarizes the simulation-based program.

Data Management and Analysis Plan

The data management and analysis for this study were conducted using the Statistical Package for the Social Sciences (SPSS), Version 25. Descriptive statistics were employed to summarize the study

variables. Categorical variables, such as gender, education level, years of experience, and job position, are presented in terms of frequencies and percentages. For continuous variables, such as age, means and standard deviations were calculated. Inferential analyses included paired t-tests to compare participants' pre-test and post-test scores in communication and competence in history taking. Pearson's correlation coefficient (r) or Chi-square tests, where applicable, were utilized to assess the correlations among sociodemographic variables, the effectiveness of the educational program, and perceived barriers to completing the educational program. The level of statistical significance was established at $p < 0.05$.

Results

Table 1 shows the demographic characteristics of the participants in this study. Young or middle-aged nurses made up many participants, with the largest percentage of participants between the ages of 25 and 35 years (46.7%), and the next highest (36.0%) were between the ages of 36 and 46 years, with the smallest percentage (17.3%) over the age of 46 years. The mean age of participants was calculated to be 37.4 ± 7.6 years, indicating most participants were either just starting their careers or were in the early stages of their careers. Males represented almost half of the participants, and females represented approximately 53.3% of the sample of 46.7%. Therefore, there appears to be equal gender representation in the psychiatric nursing profession. Further, of the participants, 70.7% were married, and 29.3% were unmarried.

Table 1
Distribution of the demographic characteristics of the
study sample N = 75.

Variables	n	%
Age (Years)		
25–35	35	46.7
36–46	27	36.0
> 46	13	17.3
Mean ± SD	37.4 ± 7.6	
Gender		
Female	40	53.3
Male	35	46.7
Marital status		
Married	53	70.7
Single	22	29.3
Educational level		
Diploma	14	18.7
Bachelor	46	61.3
Master	12	16.0
PhD	3	4.0
Current working place		
Inpatient departments	39	52.0
Outpatient clinics	36	48.0
Years of experience		
5–9	42	56.0
10 or more	33	44.0
Workshops (History Taking)	32	42.7
Workshops (Communication)	29	38.7
Problems with patients	8	10.7

In terms of education, 61.3% of the study's participants had obtained a bachelor's degree, 18.7% had obtained a diploma, 16.0% had obtained a master's degree, and only a very small number (4.0%) had obtained a doctorate. The majority of participants in the study had completed an undergraduate degree and did not pursue additional credentials at a graduate level. According to survey data, the clinical practice environments for participants were approximately equal: 52% worked in inpatient care and 48% in outpatient care. This represents an opportunity for participants to train in both the inpatient and outpatient environments of psychiatric care. Participants had 5–9 years of work experience as Registered Nurses (56%) or more than 10 years of experience (44%), showing that the sample was primarily composed of nurses with moderate levels of experience. The most significant gap between the participants with respect to training opportunities is in the areas of history taking (42.7%) and therapeutic communication (38.7%). Very few nurse participants reported that they had experienced issues related to patient care (10.7%), so the difficulties are likely to stem from the communication, interaction, and management difficulties that they have when working in a psychiatric setting.

As shown in Table 2, the Education Intervention had a significant positive effect on Nursing Staff's ability to perform the following functions: Communication, History Taking, Building Therapeutic Relationships, Managing Emotions, Being Culturally Competent, Using Role-Play, and Collaborating Interdisciplinarity. The overall percentage of participants who understood the importance of Communication increased from 9.3% before the program to 54.7% after; there was a statistically significant change in this outcome ($X^2 = 35.696$, $p < 0.001$). Understanding the components of Therapeutic Relationships (Trust, Rapport, Empathy) increased from 16.1% pre-training to 54.7% post-training ($X^2 = 16.684$, $p < 0.001$). Competence in performing a Comprehensive History Taking Assessment improved from 26.7% accepting the statement 'Competent to Conduct a Comprehensive History Taking' at the outset of the project to 58.0% after completion of the program ($X^2 = 18.160$, $p < 0.001$). Knowledge of how to Manage Emotional Distress and De-escalate situations increased from 22% pre-program to 54.7% post-program. Agreement with the use of Role-Play and Simulation as Educational Strategies to promote learning increased from 28% to 50.7%. The percentage of participants who had Non-Traditional Role Collaboration Knowledge increased from 26.6% to 63.3%, indicating that Teamwork is important to Nursing Practice in Psychiatric Care. Cultural Competence improved slightly (from 41.3 to 48.7), indicating a need for ongoing training in this area. The Education Intervention transitioned participants from mostly moderate levels of knowledge before the program to 96% at the adequate and 4% at the highly adequate level after completion, with none remaining at the moderate level ($X^2 = 123.046$, $p < 0.001$). This improvement was also reflected in the mean total knowledge score, which increased from 57.9 ± 5.1 pre-intervention to 69.8 ± 3.9 post-intervention ($t = 15.995$, $p < 0.001$), confirming the effectiveness of the program in enhancing nurses' knowledge and competencies in communication and history-taking within psychiatric practice.

Table 2

Comparison of Pre- and Post-Intervention Knowledge Assessment in Communication and History-Taking Competencies

Domain	Pre-Intervention (n, %)	Post-Intervention (n, %)	Chi-square / Fisher's Exact Test
Importance of Effective Communication	Disagree/Unsure: 68 (90.6%) Agree: 7 (9.3%)	Disagree/Unsure: 34 (45.3%) Agree: 41 (54.7%)	$X^2 = 35.696$, $p < 0.001^{**}$
Building Therapeutic Relationships (Rapport, Empathy, Trust)	Disagree/Unsure: 78 (83.9%) Agree: 15 (16.1%)	Disagree/Unsure: 57 (75.3%) Agree: 41 (54.7%)	$X^2 = 16.684$, $p < 0.001^{**}$
Psychiatric History-Taking Skills	Disagree/Unsure: 77 (73.3%) Agree: 28 (26.7%)	Disagree/Unsure: 65 (42.0%) Agree: 90 (58.0%)	$X^2 = 18.160$, $p < 0.001^{**}$
Managing Challenging Situations (Emotional Distress, De-escalation)	Disagree/Unsure: 85 (78.0%) Agree: 24 (22.0%)	Disagree/Unsure: 53 (45.3%) Agree: 64 (54.7%)	$X^2 = 21.706$, $p < 0.001^{**}$
Cultural Competence	Disagree/Unsure: 76 (58.7%) Agree: 53 (41.3%)	Disagree/Unsure: 58 (51.3%) Agree: 55 (48.7%)	$X^2 = 16.436$, $p < 0.001^{**}$
Role-Playing and Simulation	Disagree/Unsure: 81 (72.0%) Agree: 32 (28.0%)	Disagree/Unsure: 59 (49.3%) Agree: 61 (50.7%)	$X^2 = 8.090$, $p = 0.018^*$
Interdisciplinary Collaboration	Disagree/Unsure: 75 (73.4%) Agree: 27 (26.6%)	Disagree/Unsure: 52 (36.7%) Agree: 89 (63.3%)	$X^2 = 7.437$, $p = 0.024^*$
Total Knowledge Level	Moderate: 67 (89.3%) Adequate: 6 (8.0%) Highly Adequate: 2 (2.7%)	Moderate: 0 (0.0%) Adequate: 72 (96.0%) Highly Adequate: 3 (4.0%)	$X^2 = 123.046$, $p < 0.001^{**}$
Mean Score $\pm$ SD	57.9 $\pm$ 5.1	69.8 $\pm$ 3.9	$t = 15.995$, $p < 0.001^{**}$
Notes: $p < 0.05$ indicates statistical significance; $p < 0.001$ indicates highly significant differences. Categories are summarized by domain to simplify multiple items while retaining the statistical interpretation.			

Table 3
Comparison of Pre- and Post-Intervention Mean Scores Across Knowledge, Communication Skills, and History-Taking Competencies (Paired Design)

Assessment Tool	Pre-Intervention (Mean $\pm$ SD)	Post-Intervention (Mean $\pm$ SD)	t-value	p-value	Effect Size (Cohen's d)
Knowledge Assessment Scale	57.9 $\pm$ 5.1	69.8 $\pm$ 3.9	15.995	< 0.001**	1.85
Communication Skills Checklist	54.0 $\pm$ 2.7	58.2 $\pm$ 3.3	8.522	< 0.001**	0.99
History-Taking Competency	12.2 $\pm$ 4.4	32.3 $\pm$ 4.4	27.742	< 0.001**	3.20
Notes $p < 0.001$ indicates a highly significant improvement following the educational intervention.. Cohen's d was calculated for paired samples using the formula $d = t / \sqrt{l}$. Effect size interpretation: 0.2 = small, 0.5 = moderate, 0.8 = large.					

Results from **table (3)** show that assessment of the effect size of education interventions is indicative of how positively it impacts physicians' knowledge and nursing skills when compared to their baseline before receiving this type of learning. The educational intervention had large to very large positive impacts on knowledge gained by developing an understanding of the intervention (large effect size ($d = 1.85$)), a result of the educational intervention leading to substantial increases in nurses' theoretical knowledge. Communication skills improved due to participation in the educational program (large effect size ($d = 0.99$)), meaning the nurses' ability to develop and apply interpersonal skills improved after participating in the educational session. The history-taking competency of the nurses who completed the training had a very large positive effect (effect size ($d = 3.20$)) on the nurse's ability to provide a comprehensive psychiatric assessment; therefore, the results support using structured, competencies-focused educational approaches (i.e., history-taking skills), which are known to produce substantial improvements in developing these complex clinical competencies that have been traditionally lacking among psychiatric nurses.

Figure 3 illustrates that the comparative analysis of pre- and post-intervention scores demonstrated significant improvements across all assessed competency domains following the simulation-based training program. The mean knowledge scores increased from baseline to post-intervention, indicating an enhanced theoretical understanding pertinent to psychiatric nursing practice. Communication skills also exhibited measurable improvement, reflecting gains in therapeutic engagement, empathy, and structured interaction with patients. The most pronounced improvement was observed in psychiatric history-taking competency, with post-intervention scores showing a substantial increase compared to baseline. This domain demonstrated the largest relative percentage gain, suggesting that simulation-based learning was particularly effective in enhancing nurses' ability to conduct comprehensive, structured, and sensitive psychiatric assessments. Overall, the results support the effectiveness of simulation-based education in improving both knowledge-based and performance-based competencies

among psychiatric nurses, with especially strong effects on complex clinical skills requiring experiential learning and reflective practice.

Figure 3. Comparison of Total Mean Scores Pre- and Post-Intervention Across Knowledge, Communication Skills, and History-Taking Competencies

Table 4 indicates that the checklist assessing communication skills based on direct observation indicated that after participating in an educational intervention, direct observations for all categories showed significant improvement. Before the intervention, none of the 48 nurses sampled had demonstrated full competency in their ability to communicate effectively. After finishing the course, 48.0% of the sample exhibited competency, while 52.0% displayed partial competency. Furthermore, all individual categories (greeting the patient, establishing eye contact, utilizing language effectively, using active listening skills, expressing empathy) displayed statistically significant improvements at $p < 0.001$ following the completion of the intervention. The mean score went from 9.2 ± 3.2 to 32.8 ± 3.4 , indicating that the educational intervention resulted in a statistically significant increase in Psychiatric Healthcare communication skills of the nurses in the sample group.

Table 4
Comparison of the pre and post Observation-Based Communication Skill Checklist N = 75.

Items of observation	Pre		Post		Chi – square / Fisher's exact test	
	n	%	n	%	χ^2	P
Greets the patient	19	25.3	55	73.3	34.566	< 0.001**
Check the patient's readiness for communication through verbal (agree) and nonverbal facial expressions (smile, and head nodding) and take his permission to start interaction.	14	18.7	45	60.0	26.849	< 0.001**
Introduces self by name and category	14	18.7	56	74.7	47.250	< 0.001**
Sits squarely facing the client.	16	21.3	53	70.7	36.742	< 0.001**
Maintains open relaxed erect posture	15	20.0	50	66.7	33.258	< 0.001**
Has neutral facial expression (mild anxiety is acceptable)	9	12.0	63	84.0	77.885	< 0.001**
Leans forward towards the client	14	18.7	59	78.7	54.038	< 0.001**
Establishes eye contact while demonstrating cultural sensitivity.	14	18.7	58	77.3	51.709	< 0.001**
Maintains personal space (not too close or away from the patient)	14	18.7	55	73.3	45.115	< 0.001**
Avoids (social comments/behaviors e.g., we will be friends, indiscriminative use of touch)	16	21.3	54	72.0	38.679	< 0.001**
Neat appearance and wears a white apron.	20	26.7	56	74.7	34.566	< 0.001**
Ensures the comfort of patients in the environment.	13	17.3	56	74.7	49.624	< 0.001**
Shows respect for the patient's privacy & confidentiality.	19	25.3	55	73.3	34.566	< 0.001**
Shows respect for the patient's culture, and beliefs.	18	24.0	52	69.3	30.964	< 0.001**
Establish trust by non -threatening & non-judgmental behavior	19	25.3	52	69.3	29.123	< 0.001**
Addresses the patient by name.	17	22.7	58	77.3	44.827	< 0.001**

Items of observation	Pre		Post		Chi – square / Fisher's exact test	
Ask for a reason to visit.	13	17.3	51	68.0	39.353	< 0.001**
Provide an overview of the interview's purpose.	14	18.7	51	68.0	37.167	< 0.001**
Uses everyday language.	17	22.7	56	74.7	40.589	< 0.001**
Uses appropriate vocabulary.	18	24.0	58	77.3	42.674	< 0.001**
Explains medical terms (if used).	18	24.0	62	82.7	51.857	< 0.001**
Matches voice tone and intonation with the verbal content.	14	18.7	56	74.7	47.250	< 0.001**
Active listening with minimal interruption.	15	20.0	61	81.3	56.437	< 0.001**
Avoids self-touching and non-purposive movements.	11	14.7	57	76.0	56.923	< 0.001**
Frequent vertical head nods.	19	25.3	55	73.3	34.566	< 0.001**
Occasional Vocalization	12	16.0	59	78.7	59.075	< 0.001**
Appropriate length of eye contact is comfortable to the patient	12	16.0	56	74.7	52.080	< 0.001**
Forward lean facing the patient.	10	13.3	42	56.0	30.141	< 0.001**
Open posture with uncrossed arms.	13	17.3	52	69.3	41.294	< 0.001**
Matches facial expressions with verbal content.	15	20.0	61	81.3	56.437	< 0.001**
Allow the patient to narrate illness.	19	25.3	47	62.7	21.212	< 0.001**
Asks open-ended questions (avoids double barrel & negative questions).	14	18.7	60	80.0	56.437	< 0.001**
Allow wait time for patients to respond.	19	25.3	47	62.7	21.212	< 0.001**
Probe understanding and reinstate important points.	15	20.0	58	77.3	49.342	< 0.001**

Items of observation	Pre		Post		Chi – square / Fisher's exact test	
Checks accuracy of the statement by getting the patient's approval.	16	21.3	55	73.3	40.676	< 0.001**
Responds to the patient's emotions.	12	16.0	54	72.0	47.727	< 0.001**
Demonstrate understanding of a patient's rationale for behavior or illness.	19	25.3	55	73.3	34.566	< 0.001**
Appreciates the patient's coping efforts.	18	24.0	51	68.0	29.227	< 0.001**
Offers supportive words of assurance.	13	17.3	59	78.7	56.517	< 0.001**
Express willingness to help.	13	17.3	50	66.7	37.466	< 0.001**
Express understanding of patients' barriers to compliance.	13	17.3	57	76.0	51.857	< 0.001**
Express concern for patients.	16	21.3	53	70.7	36.742	< 0.001**
Express understanding of patient beliefs.	12	16.0	56	74.7	52.080	< 0.001**
Asks patients for any unresolved issues.	18	24.0	56	74.7	38.514	< 0.001**
Provide guidance on further action plan	18	24.0	52	69.3	30.964	< 0.001**
Total Checklist level	n	%	n	%	χ ²	P
Not competent	75	100.0	0	0.0		
Partially competent	0	0.0	39	52.0		
Competent	0	0.0	36	48.0	150.000	< 0.001**
Mean ± SD	9.2 ± 3.2		32.8 ± 3.4		44.053	< 0.001**
Table 4. Comparison of the nurses' case history score						
	Pre		Post		Chi – square / Fisher's exact test	
	n	%	n	%	χ ²	P
Case history level						

Items of observation	Pre		Post		Chi – square / Fisher's exact test	
Not competent	75	78.9	20	21.1		
Partially competent	0	0.0	51	100.0		
Competent	0	0.0	4	100.0	86.842	< 0.001**
Mean ± SD	12.2 ± 4.4		32.3 ± 4.4		27.742	< 0.001**

Table 4
Comparison of the nurses' case history score N = 75

	Pre		Post		Chi – square / Fisher's exact test	
	n	%	n	%	χ^2	P
Case history level						
Not competent	68	90.7	11	14.7		
Partially competent	7	9.3	21	28.0		
Competent	0	0.0	43	57.3	91.127	< 0.001**
Mean ± SD	25.6 ± 4.6		42.8 ± 11.3		12.242	< 0.001**

Figure 4 shows a significant improvement in the levels of competency exhibited by participants following the intervention, compared to baseline. At baseline, most participants (92%) did not meet the minimum standard of being considered competent; 8% had some measure of competence (partially competent), and none of the participants were fully competent. Following the intervention, there was a substantial decrease in the percentage of participants who are not considered competent (5.3%), along with an increase in the number of participants who now have achieved a level of competency (46.7% - partially competent, 48% competent). The results show that the level of change in the distribution of competency is statistically highly significant ($\chi^2 = 114.389$, $p < 0.001$) and demonstrate that the improvement observed in participants' competency levels is unlikely to have occurred by random chance.

Figure 4. Comparison of the Observation-Based Communication Skill Checklist level

Figure 5 depicts that nearly all participants (84%) had moderate knowledge before they took part in the program, while only 13.3% had adequate knowledge, and only 2.7% had very adequate knowledge. After finishing the education intervention, most participants' knowledge levels had improved to a higher classification category. The numbers indicate that the number of participants who had moderate knowledge decreased to 8%, and the number of those who had adequate and higher levels of knowledge increased to 64% and 28%, respectively. Results of Chi-Square testing indicate that there was a statistically significant difference between group knowledge levels before and after the education

intervention, thereby providing evidence of the added effectiveness of the education intervention ($\chi^2 = 87.679, p < 0.001$).

Figure 5. Comparison of the knowledge assessment scale level

Table 4 illustrates a statistically significant improvement in nurses' case history scores after the Implementation of the program. Before the Implementation, 90.7% of the nurses were classified as not competent, 9.3% partially competent, and none were fully competent. Following implementation, a significant increase in the number of competent nurses was observed at 57.3%, as well as a notable increase in partially competent nurses at 28.0%, while the percentage of nurses classified as not competent dropped to 14.7%. The change in the distribution of competency levels among the nurses between pre- and post-implementation was found to be very statistically significant ($\chi^2 = 91.127, p < 0.001$). In addition, the mean case history scores of the nurses increased significantly from 25.6 ± 4.6 before implementation to 42.8 ± 11.3 after implementation ($p < 0.001$), confirming both statistically and practically meaningful gains in nurses' ability to perform a case history after participation in the program.

According to Fig. 6, the intervention appears to have significantly improved the nurses' ability to conduct an accurate and complete assessment of the patient's clinical history. Before the intervention, 90.7% of the nurses assessed were rated as "not competent," and the remaining 9.3% were rated as only partially competent; none of the assessed nurses were rated as fully competent at baseline. After the intervention, the majority of the nurses assessed (57.3%) were rated as competent, 28.0% were rated as partially competent, and the number of nurses rated as "not competent" dropped dramatically to 14.7%. There was a highly significant difference between pre- and post-intervention for nurse competency; the chi-square statistic was 91.127 with a corresponding p-value < 0.001 , indicating the strong effect of the intervention in improving nurses' assessment and clinical decision-making capability.

Figure 6. Comparison of the nurses' case history level

Table 5 demonstrates the relationship between nurses' demographic data and their level of knowledge after the intervention; however, there was no statistically significant relationship between nurses' level of knowledge and the demographic characteristics of their age, sex, or place of employment ($p > .05$). Therefore, this result means that the effect of the intervention on nurses' knowledge acquisition was similar among all demographic groups. On the other hand, marital status is significantly related to nurses' knowledge level ($\chi^2 = 7.217, p = 0.027$); married nurses were more likely to have either adequate or highly adequate knowledge levels than any other demographic group. The level of education was strongly correlated with nurses' post-intervention knowledge levels ($\chi^2 = 25.586, p < 0.001$); nurses with higher degrees (Master's and PhDs) scored higher than nurses with lower educational backgrounds. In addition, the amount of time nurses had worked as a nurse was also related to their knowledge outcome ($\chi^2 = 11.949, p = 0.003$); nurses who had worked for ten or more years had a much higher chance of having a high degree of adequate knowledge than those who had worked less than 10 years. There was also a borderline relationship between attending a communication workshop and nurses' level of knowledge ($p 0.050$); however, attending a history-taking workshop or reporting problems with patients

did not indicate a relationship with a nurse's post-intervention knowledge level ($p > 0.05$). The study found that educational level and experience are significant factors contributing to the maximum level of knowledge gained by a nurse after an educational intervention.

Table 5

Association between the demographic characteristics of the study sample and knowledge assessment scale level (Post – intervention)

	Moderate knowledge		Adequate knowledge		Highly adequate knowledge		Chi – square / Fisher's exact test	
	n	%	n	%	n	%	χ^2	P
Age (Years)								
25–35	3	50.0	25	52.1	7	33.3		
36–46	2	33.3	15	31.3	10	47.6		
> 46	1	16.7	8	16.7	4	19.0	2.266	0.687
Gender								
Female	3	50.0	24	50.0	13	61.9		
Male	3	50.0	24	50.0	8	38.1	0.861	0.650
Marital status								
Married	6	100.0	29	60.4	18	85.7		
Single	0	0.0	19	39.6	3	14.3	7.217	0.027*
Educational level								
Diploma	3	50.0	11	22.9	0	0.0		
Bachelor	3	50.0	33	68.8	10	47.6		
Master	0	0.0	4	8.3	8	38.1		
PhD	0	0.0	0	0.0	3	14.3	25.586	< 0.001**
Current working place								
Inpatient departments	3	50.0	26	54.2	10	47.6		
Outpatient clinics	3	50.0	22	45.8	11	52.4	0.261	0.877
Years of experience								
5–9	6	100.0	30	62.5	6	28.6		
10 or more	0	0.0	18	37.5	15	71.4	11.949	0.003*
Workshops (History Taking)	3	50.0	18	37.5	11	52.4	1.466	0.481

	Moderate knowledge		Adequate knowledge		Highly adequate knowledge		Chi – square / Fisher's exact test	
	n	%	n	%	n	%	χ^2	P
Workshops (Communication)	5	83.3	18	37.5	6	28.6	5.978	0.050
Problems with patients	0	0.0	7	14.6	1	4.8	2.258	0.323

Table 6 shows the association of different demographic characteristics of nurses and competency in communication skills (as measured by an observation-based checklist) following the post-intervention (intervention-based) period, is displayed in Table 6. There were no statistically significant relationships identified between age, gender, marital status, present place of employment, participation in a prior history-taking workshop, participation in a communication workshop, or reported issues encountered when working with patients ($p > 0.05$), suggesting that all subgroups were equally likely to demonstrate an increase in communication skills due to receiving the intervention. However, there was a statistically significant association between level of education and communication competency ($\chi^2 = 30.496$, $p < 0.001$), with the majority of nurses with bachelor's, master's, and Ph.D. degrees being classified as competent in communication skills, while all nurses with only a diploma were classified as either not competent or only partially competent. Additionally, the number of years' experience was associated with nurses' level of communication skill ($\chi^2 = 12.304$, $p = 0.002$), as nurses with 10 or more years' experience were more likely to achieve full competence in communication than nurses with 5 to 9 years' experience. Overall, these results indicate that educational preparation and work experience each increase the likelihood that the intervention can translate into observable competency in communication skills.

Table 6

Association between the demographic characteristics of the study sample and Observation-Based Communication Skill Checklist level (Post – intervention)

	Not competent		Partially competent		Competent		Chi – square / Fisher's exact test	
	n	%	n	%	n	%	χ^2	P
Age (Years)								
25–35	2	50.0	17	48.6	16	44.4		
36–46	1	25.0	11	31.4	15	41.7		
> 46	1	25.0	7	20.0	5	13.9	1.259	0.868
Gender								
Female	4	100.0	19	54.3	17	47.2		
Male	0	0.0	16	45.7	19	52.8	4.053	0.132
Marital status								
Married	2	50.0	24	68.6	27	75.0		
Single	2	50.0	11	31.4	9	25.0	1.224	0.542
Educational level								
Diploma	4	100.0	10	28.6	0	0.0		
Bachelor	0	0.0	19	54.3	27	75.0		
Master	0	0.0	6	17.1	6	16.7		
PhD	0	0.0	0	0.0	3	8.3	30.496	< 0.001**
Current working place								
Inpatient departments	2	50.0	21	60.0	16	44.4		
Outpatient clinics	2	50.0	14	40.0	20	55.6	1.727	0.422
Years of experience								
5–9	4	100.0	25	71.4	13	36.1		
10 or more	0	0.0	10	28.6	23	63.9	12.304	0.002*
Workshops (History Taking)	2	50.0	13	37.1	17	47.2	0.830	0.660
Workshops (Communication)	3	75.0	14	40.0	12	33.3	2.685	0.261
Problems with patients	1	25.0	2	5.7	5	13.9	2.156	0.340

Table 7 presents that while the nurses' demographics do not impact post-intervention case history competency, these variables do correlate to some degree within each group of nurses. No statistically significant relationship was shown between age, gender, marital status, workplace, and participation in workshops related to taking histories and communicating with patients and case history competency, and improvements in case history performance across the demographic groups were similar ($p > 0.05$). However, education did have a strong, statistically significant relationship with case history competency ($\chi^2 = 40.722$, $p < 0.001$) in that a greater number of nurses who obtained their degrees at the bachelor's level or higher exhibited case history competency, while most of the diploma RNs lacked this competency. The years of experience nurses have also had a significant relationship with their case history competency level ($\chi^2 = 12.429$, $p = 0.002$), with respect to those who had been in the field for ten or more years compared to those who had been in the field for five to nine years, with those having more experience being more likely to achieve full competency. Nurses who are experiencing patient-related problems have also demonstrated a significant correlation with the level of case history competency ($\chi^2 = 9.006$, $p = 0.011$) in that nurses with fewer patient-related problems have a greater level of competency with case histories. Overall, the findings suggest that educational preparation, the number of years of experience, and the clinical challenges nurses face have a substantial influence on post-intervention case history competency.

Table 7

Association between the demographic characteristics of the study sample and nurses' case history level
(Post – intervention)

	Not competent		Partially competent		Competent		Chi – square / Fisher's exact test	
	n	%	n	%	n	%	χ^2	P
Age (Years)								
25–35	5	45.5	11	52.4	19	44.2		
36–46	2	18.2	7	33.3	18	41.9		
> 46	4	36.4	3	14.3	6	14.0	4.323	0.364
Gender								
Female	7	63.6	14	66.7	19	44.2		
Male	4	36.4	7	33.3	24	55.8	3.415	0.181
Marital status								
Married	8	72.7	16	76.2	29	67.4		
Single	3	27.3	5	23.8	14	32.6	0.547	0.761
Educational level								
Diploma	9	81.8	5	23.8	0	0.0		
Bachelor	2	18.2	12	57.1	32	74.4		
Master	0	0.0	4	19.0	8	18.6		
PhD	0	0.0	0	0.0	3	7.0	40.722	< 0.001**
Current working place								
Inpatient departments	5	45.5	13	61.9	21	48.8		
Outpatient clinics	6	54.5	8	38.1	22	51.2	1.187	0.553
Years of experience								
5–9	11	100.0	13	61.9	18	41.9		
10 or more	0	0.0	8	38.1	25	58.1	12.429	0.002*
Workshops (History Taking)	5	45.5	6	28.6	21	48.8	2.410	0.300
Workshops (Communication)	3	27.3	9	42.9	17	39.5	0.771	0.680

	Not competent		Partially competent		Competent		Chi – square / Fisher's exact test	
	n	%	n	%	n	%	χ^2	P
Problems with patients	4	36.4	1	4.8	3	7.0	9.006	0.011*

Figure 7 illustrates the standardized coefficient plot, which illustrates how each predictor affects nurses' ability to complete a history correctly. At the top of the list of positive predictors are history-taking workshop training (Beta = 0.279, $p = 0.032$), knowledge assessment scores (Beta = 0.223, $p = 0.040$), and observation of nurse communication skills (Beta = 0.166, $p = 0.043$). All these predictors show strong positive effects on case history performance by nurses. Therefore, it appears that both structured training and demonstrated skill will have a substantial impact on improving nurses' ability to develop and implement accurate case histories.

Negative predictors were associated with patient-related problems (Beta = -0.333, $p = 0.007$). These negative factors indicate that issues with patients will significantly hinder a nurse's ability to effectively take patients' histories. Other predictors, such as age, marital status, education level, number of years of experience, and communication workshop attendance, were found to be non-significant, indicating that general demographic and wider-ranging professional experience do not contribute as much as targeted training or skills development does. Overall, the standardized effect sizes from the plot demonstrate that the most substantial effects (both positive and negative) are associated with structured and targeted professional training or communicative medical workshops as predictors of case history performance by nurses. Therefore, comparisons of effect sizes among predictors will enable easy visualization of the magnitude of each effect size, with the greatest negative effect sizes for patient issues and the greatest positive effect sizes for history-taking workshops.

Figure 7. **Standardized coefficients (Beta) of predictors on nurses' case history performance.**

Each predictor is represented by a marker showing the Beta value, which allows comparison of effect sizes across variables. Green markers indicate statistically significant predictors ($p < 0.05$), while gray markers are non-significant. Beta values and p-values are labeled next to each point for clarity. The dashed vertical line at 0 distinguishes positive vs. negative effects.

The analyses from Multiple Linear Regression shown in Table 8 indicate that gender, nurse's case history level, and the memory of knowledge and communication abilities had the highest effect on the model in both scenarios. Age, marital status, education level, work location, years of experience, workshop participation, and patient-related difficulties were all factors associated with sociodemographic and professional characteristics; however, they were not statistically significant predictors of the models.

Table 8
Multiple Linear Regression Models Predicting Knowledge Assessment Scale and Observation-Based Communication Skill Checklist

Predictor	Knowledge Assessment Scale			Observation-Based Communication Skill Checklist		
	B (SE)	β	p	B (SE)	β	p
Constant	59.949 (5.024)	—	< 0.001**	25.527 (4.085)	—	< 0.001**
Age (Years)	0.935 (1.345)	0.129	0.489	-0.285 (1.072)	-0.053	0.791
Gender	-2.865 (1.234)	-0.265	0.024*	2.129 (1.013)	0.268	0.040*
Marital status	1.270 (1.496)	0.107	0.399	-1.204 (1.181)	-0.138	0.312
Educational level	-0.249 (0.816)	-0.033	0.762	-0.283 (0.644)	-0.051	0.662
Current working place	1.635 (1.260)	0.152	0.199	0.040 (1.004)	0.005	0.969
Years of experience	1.064 (1.968)	0.098	0.591	-0.652 (1.590)	-0.082	0.683
Workshops (History Taking)	0.886 (1.301)	0.081	0.498	0.554 (1.035)	0.069	0.594
Workshops (Communication)	-2.276 (1.171)	-0.206	0.056	-0.945 (0.956)	-0.116	0.327
Problems with patients	-0.694 (2.089)	-0.040	0.741	-1.411 (1.665)	-0.110	0.400
Observation-based communication skill checklist	3.256 (0.996)	0.358	0.002*	—	—	—
Knowledge assessment scale	—	—	—	2.600 (0.855)	0.371	0.003*
Nurses' case history level	2.292 (0.854)	0.312	0.009*	2.490 (0.790)	0.309	0.016*

Gender emerged as a statistically significant predictor in the Knowledge Assessment Scale regression model with a negative standardized coefficient. This implies there is a statistically significant difference between male and female nurses' Knowledge Assessment Scale scores. In addition, Observational-based Communication Skills were significantly associated with Knowledge Assessment Scale Scores, meaning that those who displayed stronger observable communication skills also possessed greater overall theoretical knowledge. Finally, the nurse's case history level was a statistically significant

predictor of knowledge, emphasizing the role of clinical documentation and competency in obtaining and retaining theoretical knowledge.

Similarly, in the model predicting the Observation-Based Communication Skill Checklist, gender remained a significant predictor, while higher knowledge assessment scores were strongly associated with superior communication performance. Nurses' case history level also emerged as a significant predictor of communication skills, indicating that structured clinical reasoning and systematic patient assessment enhance observable communication behaviors during patient encounters.

Discussion

The purpose of this quasi-experiment was to examine the potential impact of an educational program based upon the principles of Simulation Training as a tool to enhance the communication and assessment skills of psychiatric nurses; therefore, the nurse-patient relationship is structured, patient-centered and therapeutic; this was accomplished by providing trained psychiatric nurses with the necessary knowledge and skills to enhance their ability to interact with patients in a structured and meaningful way. The results indicate that the quality of the simulation training intervention was extremely successful, resulting in statistically significant ($p < 0.05$) and clinically significant improvement in knowledge of psychiatric mental health, the ability to effectively communicate with patients in a structured manner, and the successful completion of patient assessments.

Effectiveness of the Simulation-Based Educational Intervention

Overall, improvement was shown in all areas examined because of participating in the simulation-based educational intervention (Cohen's $d = 0.99-3.20$), providing evidence of the educational and statistical significance of the simulation-based educational intervention. There was a substantial increase in overall communication skill scores following the intervention; the mean communication skill score was 9.2 ± 3.2 at baseline, to 32.8 ± 3.4 following the intervention; therefore, the simulation training program was associated with a significant increase in the quality of the therapeutic communication of psychiatric nurses in the context of the psychiatric setting. There was also a statistically significant shift in the distribution of the knowledge of psychiatric mental health (before intervention and after intervention); therefore, there was evidence of the simulation-based educational intervention having a significant positive effect on the overall level of learning among the nurse participants [27].

The findings of this study support much of the existing research literature that demonstrates that simulation-based educational interventions have a positive impact on the development of the skills necessary to provide care to individuals with psychiatric conditions (for example, clinical reasoning, therapeutic engagement, and communication) [28, 29]. In addition, simulation-based training and reflective practice have been shown to facilitate the development of durable, practice-relevant skillsets relative to traditional didactic approaches to training [30, 31].

Interpretation Through Communication Competence and Experiential Learning Theories

The observed results of this study are consistent with communication competence theory, which outlines the relationship between knowledge, behavioral abilities, and contextual appropriateness. A higher understanding of communication theory among nurses translates into improved ability to communicate effectively. This indicates that there is a bidirectionality in knowing about how to communicate and doing so in the field of psychiatric nursing.

According to Kolb's experiential learning theory [21], active participation, guided reflection, and scenario-based practice have been the primary contributors to the success of the program. The use of simulations allowed for the progression through the experiential learning cycle from an abstract knowledge base to actual clinical behavior. Furthermore, these findings support the notion that experiential and reflective methods of teaching are very effective in mental health nursing due to the emphasis placed on relational and communication skills [32].

Role of Clinical Reasoning and Case History Competence

Additionally, the role of clinical reasoning and case history competency was identified as a significant variable predicting the performance of nurses across individual regression models [33]. Therefore, clinical reasoning is an integral part of the success of psychiatric nursing (34). Specifically, the process of taking a patient's history consists of systematic data collection, psychosocial assessment, the generation of hypotheses, and therapeutic communication. When compared to those nurses who did not have as much competency in taking the patient's history, the nurses with higher case history competency had improved communication and knowledge outcomes (35). Thus, structured and systematic clinical reasoning has a positive effect on both cognitive and behavioral performance [36]. The regression models indicated that Case History Competency (CHC) was the best predictor of performance. CHC is closely related to clinical reasoning in psychiatric nursing practice. A nurse who has developed CHC will have better results when conducting a thorough psychosocial assessment and developing a therapeutic communication style, as well as generating hypotheses about their patient's condition [35]. As a result, nurses who develop a high level of CHC will demonstrate increased levels of communication skills and knowledge than nurses who do not develop these skills. This indicates that nurse education that utilizes structured clinical reasoning enhances cognitive and behavioral performance.

Additionally, the research showed that competencies focused on improving specific areas/examples of nursing practice (e.g., simulation-based workshops) produced more favorable results than demographics. Therefore, implementing education with the intent to create specific competencies related to psychiatric nursing improves the competency of nurses in those areas [15–19]; [37].

Cultural, Professional, and Organizational Context

The general social, organizational, and cultural context revealed that the lack of knowledge and/or skills of nurses before the intervention was attributed not only to the educational deficit but also to many other contextual factors. During the observational research study, it was observed that the nurses did not engage in any therapy and that several nurses could be found in a room where patients were being treated, but they did not actually participate in providing care to the patients.

It should also be noted that the sociocultural context of Saudi Arabia is unique; this is a Country where Cultural factors, hierarchical nature of the health care system, physicians' dominance over decision-making, and the negative connotations of mental health issues have all impeded the desire of nurses to be fully engaged with their patients during Psychiatric Nursing Care [37]. In addition to the above issues, nurses who were not registered with a formal Psychiatric Practice, being contracted employees, may have struggled with role confusion, low self-confidence, and minimal professional investment in the practice of Psychosocial Care and/or advanced Therapeutic Communication [38, 39].

Inconsistent Application of Competencies in Routine Practice

Although post-intervention improvements were substantial, competencies were not consistently applied in routine practice, aligning with transfer-of-training theory [40, 41]. Skills acquired in simulation require ongoing practice, reflective reinforcement, organizational support, and role modeling to translate into sustained clinical behavior. The large pre–post improvements reflect both the effectiveness of the intervention and baseline disengagement, indicating that simulation-based training can reorient nurses' professional understanding, framing communication and history-taking as intentional, therapeutic acts rather than optional tasks.

Social- and Gender-based Characteristics

Researchers found that societal and gender-based characteristics had a significant impact on the learning outcomes of participants in this project. They also found that other sociodemographic factors (e.g., age, employment status, and professional experience) did not have any significant influence on learning outcomes. Therefore, the results support the application of experiential learning through simulation [42].

Implications for Future Education and Practice

Simulation is an effective educational strategy for enhancing the knowledge and skills of psychiatric nurses. Therefore, educational institutions, employers, and the regulatory bodies should work together to create an environment that is conducive to the continuous development of simulation-based psychiatric nursing education. Each organization should also work collaboratively with other organizations and stakeholders to build an environment that is supportive of these educational practices. Cultural,

professional, and organizational barriers must be addressed together with the provision of organized, structured training.

Limitations and Future Directions:

Limitations of the current study include a single site where all participants were Saudi nurses who were fairly like each other, which limits the ability to generalize findings. Not all participants were working as licensed psychiatric nurses. The level of able participation may also have affected nurses' use of the skills they learned. Future research should include multi-site studies, longitudinal studies to determine how long-lasting the improvements are from using this educational intervention, and patient reporting of outcomes, as well as "real-life" outcomes in practice.

Future research should focus on using different simulation methods, such as digital simulations or blended simulations, and incorporate mentorships or reinforcement strategies to help ensure skill transfer occurs. In addition to these suggestions, evaluating the impact of simulation-based intervention on patient outcomes, levels of therapeutic engagement, and quality of care would provide more support about the clinical relevance and educational applicability of simulation-based educational interventions. This study was quasi-experimental and evaluated how well a structured educational program could help psychiatric nurses improve their ability to communicate with patients using structured history-taking processes. Findings of the study indicate that this education program provided strong and consistent evidence that the program was very effective in increasing Psychiatric Nurses' knowledge, communicating competently with patients, and performing adequate case histories. The intervention had statistically significant and clinically meaningful results, demonstrating improvements in all areas of professional performance by educators.

Conclusion

The results of this quasi-experimental study suggest that simulation-based clinical training may be an effective method for enhancing nurses' communication skills and their ability to collect patient histories in psychiatric settings. By conceptualizing nurse–patient interactions as structured, therapeutic, and patient-focused processes, the intervention led to statistically significant enhancements in nurses' knowledge and self-assessed skills related to clinical communication. These findings underscore the importance of experiential learning, active engagement, and reflective practice in facilitating the application of theoretical knowledge to clinical settings.

Nevertheless, the consistent use of these skills in real-world scenarios may be affected by organizational, professional, and contextual factors that were not addressed in this study. Despite these considerations, simulation-based training emerges as a promising approach for advancing psychiatric nursing education and promoting recovery-oriented care. Further research employing randomized designs and extended follow-up periods is advised to assess the sustainability and generalizability of these outcomes.

Recommendations

- An integration of Simulation-Based Training provides opportunities for developing clinical competency in Psychiatric Nursing via Communicating & Taking History, which could be included within both: Psychiatric Nursing Curriculum and the Continuing Professional Development Program of Psychiatric Nursing.
- Support from an Organization will provide the resources needed to provide an environment of growth related to training opportunities and mentoring, Supervision, and Providing Reinforcement for Therapeutic Competencies within daily practices.
- Clarifying the Role & Recognizing the Professional Contributions of Psychiatric Nurses will enable the development and continued use of Skills Developed from Training & Education in this area; therefore, clarifying a Scope of Practice, providing a framework for the Competency Evaluation within a Defined Scope of Practice will promote the Sustainability of Competencies Gained Through Training & Education in this area.
- Conducting Longitudinal and Multicenter Research Studies will allow for the Assessment of the Continuity of Skills and allow for the ability to reproduce results and obtain additional data from Diverse Nursing Populations and Settings; therefore, allowing for enhancing the External Validity of the Study Results from the Simulation Training Program Developed for Psychiatric Nurses.
- Integrating Blended Learning and Digital Learning approaches into Psychiatric Nursing Training may provide Access and Increased Flexibility to Training Opportunities while still maintaining the Quality of the Training Developed in a Simulation Environment.
- Patient-Centered Outcomes Measurement (PCOM) consists of three aspects: Patient-Reported Outcome Measures, Patient Engagement through the Therapeutic Process, and Clinical Impact of Nurses' Competencies from Training. These three aspects collectively show that increased Nurse Competency is correlated with improved Quality of Care for Patients.
- Continuous Reflective Practice fosters ongoing reflection, peer feedback, and case discussions in clinical teams, and aids in helping nurses retain and further develop their communication and history-taking skills.
- Longitudinal Research is necessary to measure whether nurses who gain knowledge and communication competency continue to do so over the long term, and how those knowledge and communication competency increases and impact the delivery of psychiatric care in practice. Additionally, longitudinal research should explore how experience, organizational culture, and motivation can influence and therefore help to maintain the application of these competencies.

Declarations

Ethics Approval and Consent to Participate

Ethical approval for the study was granted by the Institutional Review Board of the King Abdullah International Medical Research Center (KAIMRC), followed by additional authorization from the Saudi

Arabian Ministry of Health in Jeddah, Saudi Arabia (Approval No. A01960). The Ministry's approval was facilitated through the Erada Complex to support data collection. All participants provided written informed consent before enrollment, and the study was conducted in accordance with the Declaration of Helsinki. The researchers ensured that the study's benefits outweighed any associated risks. Participants' autonomy was respected, data were managed responsibly, and results were reported with meticulous care. Post-study support for participants was also considered, and all data collection documents were securely stored on the premises of the MNGHA. By adhering to these ethical guidelines, the study maintained its integrity and facilitated the proper conduct of scientific research.

Consent for Publication

Not applicable. No person's data is included in any form in the manuscript.

Availability of Data and Materials

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Competing Interests

The authors declare that they have no competing interests.

Funding

This study received no financial support from any funding agency. No external funder was involved in the study design, data collection, data analysis, interpretation of the findings, or preparation of the manuscript.

Clinical trial number: not applicable.

Authors' Contributions

- Prof Amal Khalil conceptualized and designed the study, supervised data collection, and drafted the manuscript.
- MS Rawan Fahad and Mr. Mohammed Alharthi contributed to the development of the educational intervention, data analysis, and interpretation.
- MS Shrooq Alghadali and Waad Almehmadi assisted with data collection, statistical analysis, and manuscript editing.
- Mr. Mohammed Alharthi acts as a facilitator during data collection and simulation-based training and helps prepare hospital rooms and check nurses' and simulated patients' availability during data collection
- All authors read and approved the final manuscript.

Acknowledgements

The authors wish to thank the nurses who participated in this study and the staff at the Erada complex

of mental services for their support during the implementation of the educational program. We also acknowledge the support of King Saud bin Abdulaziz University for Health Sciences in facilitating this research. Bottom of Form

References

1. Alshammari F, Pasay-an E, Gonzales F, Torres S. Nurses' perceptions of role ambiguity and job satisfaction in Saudi hospitals. *J Nurs Manag.* 2020;28(3):587–95. doi:10.1111/jonm.12941
2. Amoah VMK, Anokye R, Boakye DS, Acheampong E, Budu-Ainooson A, Okyere E, et al. A qualitative assessment of perceived barriers to effective therapeutic communication among nurses and patients. *BMC Nurs.* 2019; 18:1–8.
3. Kwame A, Petrucka PM. Communication in nurse-patient interaction in healthcare settings in sub-Saharan Africa: A scoping review. *Int J Afr Nurs Sci.* 2020; 12:100198.
4. <https://www.sciencedirect.com/science/article/pii/S2214139119301490>
5. Lorena S, Rojo-Moreno L, Sanchez J. Recovery-oriented approaches in psychiatric nursing practice. *Perspect Psychiatr Care.* 2020;56(4):935–942.
6. Cannity KM, Banerjee SC, Hichenberg S, Leon-Nastasi AD, Howell F, Coyle N, Zaider T, Parker PA. Acceptability and efficacy of a communication skills training for nursing students: Building empathy and discussing complex situations. *Nurse Educ Pract.* 2021 Jan; 50:102928. doi: 10.1016/j.nepr.2020.102928. Epub 2020 Nov 19. PMID: 33310509; PMCID: PMC10332407.
7. Mesić J. Važnost i primjena psihološke njege u svakodnevnom radu medicinskih sestara [master's thesis]. University North, University Centre Varaždin, Department of Nursing; 2020. Available from: <https://urn.nsk.hr/urn:nbn:hr:122:404384>
8. Moldawsky RJ et al. Is the psychiatric history losing its relevance? *Perm J.* 2020;24. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7417075/> Molina Y, Choi SW, Cella D, Rao D. The impact of patient-centered communication on treatment outcomes. *Int J Nurs Stud.* 2020; 109:103623.
9. Novais T, Duarte J, Silva S, et al. Therapeutic communication in psychiatric nursing: Challenges and clinical implications. *Arch Psychiatr Nurs.* 2022; 36:72–78.
10. Novais F, Ganança L, Barbosa M, Telles-Correia D. Communication skills in psychiatry for undergraduate students: A scoping review. *Front Psychiatry.* 2022;13:972703. Available from: <https://www.frontiersin.org/articles/10.3389/fpsy.2022.972703/full>
11. Valsaraj PB, KY D, Al Gharibi K, Qutishat M. Faculty-led action research on simulation-based learning: Enhancing mental health nursing competency in undergraduate education at a public university in Oman. *Int J Ment Health Nurs.* 2025;34(1):e70006. doi:10.1111/inm.70006
12. Adamson KH, Prion S. Questions regarding substitution of simulation for clinical. *Clin Simul Nurs.* 2021;50:79–80. doi:10.1016/j.ecns.2020.06.014

13. Aebersold M. Simulation-based learning: No longer a novelty in undergraduate education. *Online J Issues Nurs.* 2018;23(2). doi:10.3912/OJIN.Vol23No02PPT39
14. Alexander L, Coyte B, Evans A, Dickson J, Guinea S, Foster K. The educational value of mental health simulation in undergraduate Bachelor of Nursing education: An integrative review. *Clin Simul Nurs.* 2023;84:101459.
15. Ayaz O, Ismail FW. Healthcare simulation: A key to the future of medical education—A review. *Adv Med Educ Pract.* 2022; Page range unknown (301–308).
16. Ayed A, Khalaf IA, Fashafsheh I, Saleh A, Bawadi H, Abuidhail J, Thultheen I, Joudallah H. Effect of high-fidelity simulation on clinical judgment among nursing students. *Inquiry.* 2022; 59:469580221081997.
17. Shorey S, Ang E, Yap J, Ng ED, Lau ST, Chui CK. A virtual counseling application using artificial intelligence for communication skills training in nursing education: development study. *J Med Internet Res.* 2019;21(10):e14658. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6913997/>
18. Sheldon LK, Ellington L. Application of a model of communication for nurses. *J Nurs Scholarsh.* 2020;52(3):279–87.
19. Williams J, Imamura M, Meng Y, et al. Social determinants of health and cardiovascular disease outcomes. *JAMA Cardiol.* 2021;6(3):368–374. doi:10.1001/jamacardio.2020.6341
20. Živanović D, et al. Psychiatric nursing and therapeutic communication. *J Psychiatr Ment Health Nurs.* 2023.
21. Knowles MS, Holton EF, Swanson RA. *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development.* 8th ed. London: Routledge, 2015.
22. Kolb DA. *Experiential Learning: Experience as the Source of Learning and Development.* 2nd ed. Upper Saddle River (NJ): Pearson Education; 2015.
23. Peplau HE. *Interpersonal Relations in Nursing: A Conceptual Frame of Reference for Psychodynamic Nursing.* New York: Springer Publishing Company; 1997.
24. Khalil AI. *Knowledge Assessment Scale for Psychiatric Nursing Practice* [unpublished instrument]. Jeddah (SA): King Saud bin Abdulaziz University for Health Sciences; 2025.
25. Chauhan, A., Begum, J., & Saiyad, S. Validated checklist for assessing communication skills in undergraduate medical students: bridging the gap for effective doctor-patient interactions. *Advances in Physiology Education*, 2023. 47(4), 871-879. <https://journals.physiology.org/doi/full/10.1152/advan.00140.2023>
26. Khalil IA. *Manual of Psychiatric Nursing Competencies.* Published by Horizon Research Publishing, 2880 ZANKER RD STE 203, SAN JOSE, CA 95134, USA. ISBN: 978-1-943484-19-5. Copyright © 2018 Horizon Research Publishing Co., LTD. 2018
27. Kipps S. Sexual history taking in primary care. *Pract Nurs.* 2021;32(8):308–11.

28. Cant RP, Cooper SJ. Use of simulation-based learning in undergraduate nurse education: An umbrella systematic review. *Nurse Educ Today*. 2017; 49:63–71. doi: 10.1016/j.nedt.2016.11.015
29. Cleary M, Horsfall J, O'Hara-Aarons M, Hunt GE. Mental health nurses' perspectives on therapeutic engagement. *Int J Ment Health Nurs*. 2019;28(1):123–32. doi:10.1111/inm.12523
30. Happell B, Platania-Phung C, Scholz B, Bocking J, Horgan A, Manning F, et al. Changing attitudes: The impact of mental health nursing education on undergraduate nursing students. *J Clin Nurs*. 2021;30(1–2):e1–e12. doi:10.1111/jocn.15542
31. Hall K, Kiegaldie D, Skues J. The impact of simulated participant simulation on enhancing mental health knowledge, skills, and attributes in Diploma of Nursing students. *Nurse Educ Today*. 2025; 104:101755.
32. Sheldon LK, Ellington L. Application of communication skills training in nursing education: A review. *Patient Educ Couns*. 2020;103(10):2023–30. doi: 10.1016/j.pec.2020.06.003
33. Kaçmaz A, Durmaz H, Yilmaz M. Psychiatric nursing competencies and professional development needs. *J Psychiatr Nurs*. 2019;10(3):191–8.
34. Kaçmaz ED, Çam MO. Review of caring nurse-patient interaction for nurses caring for psychiatric patients. *J Psychiatr Nurs*. 2019;10(1):65–74. Available from: [https://jag.journalagent.com/phd/pdfs/PHD-83702-RESEARCH_ARTICLE-KACMAZ\[A\].pdf](https://jag.journalagent.com/phd/pdfs/PHD-83702-RESEARCH_ARTICLE-KACMAZ[A].pdf)
35. Almutairi AF, McCarthy A, Gardner GE. Understanding cultural competence in a multicultural nursing workforce: Registered nurses' experience in Saudi Arabia. *J Transcult Nurs*. 2015;26(1):16–23. doi:10.1177/1043659614523992
36. Īmante D, Kokare M, Baranova S, Surikova S. Transferring results of professional development into practice: A scoping review. *Educ Sci*. 2025; 15:95. doi:10.3390/educsci15010095
37. Yadeta TA, Mohammed A, Alemu A, Behir K, Balis B, Letta S. Utilization of continuous professional development among health professionals in East Ethiopia: a multi-health facility-based cross-sectional study. *BMC Med Educ*. 2024;24(1):61. doi:10.1186/s12909-024-05036-7
38. Gutierrez-Puertas L, Marquez-Hernandez VV, Gutierrez-Puertas V, Granados-Gamez G, Aguilera-Manrique G. Educational interventions for nursing students to develop communication skills with patients: a systematic review. *Int J Environ Res Public Health*. 2020;17(7):2241. Available from: <https://www.mdpi.com/1660-4601/17/7/2241>
39. Foronda C, MacWilliams B, McArthur E. Interprofessional communication in healthcare: An integrative review. *Nurse Educ Pract*. 2016; 19:36–40. doi: 10.1016/j.nepr.2016.04.005
40. Happell B, Platania-Phung C, Scott D. Mental health nursing education challenges. *Int J Ment Health Nurs*. 2021;30(3):681–90.
41. INACSL Standards Committee. Healthcare simulation standards of best practice™: Simulation design. *Clin Simul Nurs*. 2021; 58:14–21. doi: 10.1016/j.ecns.2021.08.009
42. Al-Omary H, Soltani A, Stewart D, Nazar Z. Implementing learning into practice from continuous professional development activities: a scoping review of health professionals' views and experiences. *BMC Med Educ*. 2024;24(1):1031. doi:10.1186/s12909-024-06016-7

Figures

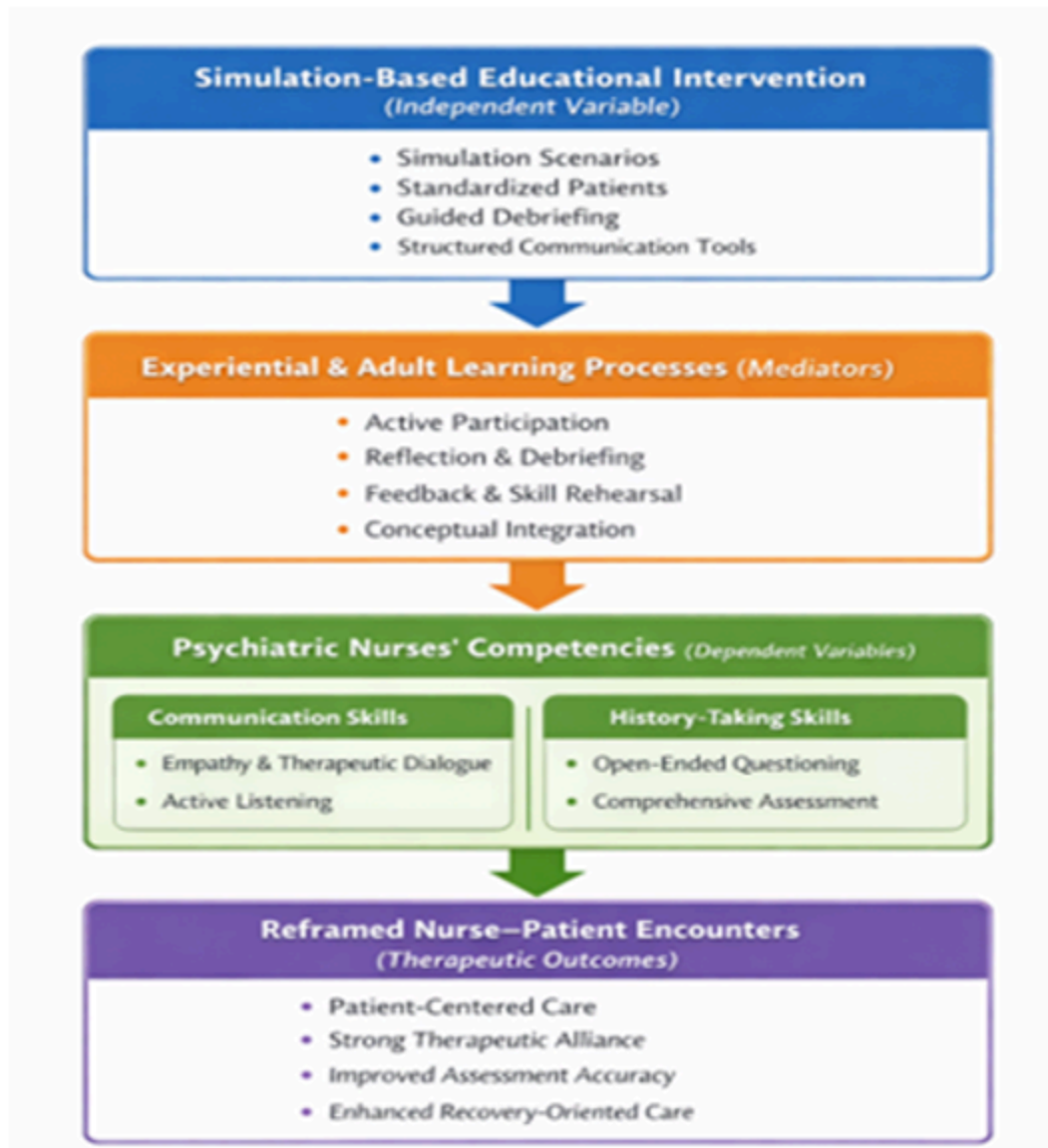


Figure 1

Application of theoretical framework on the study variables

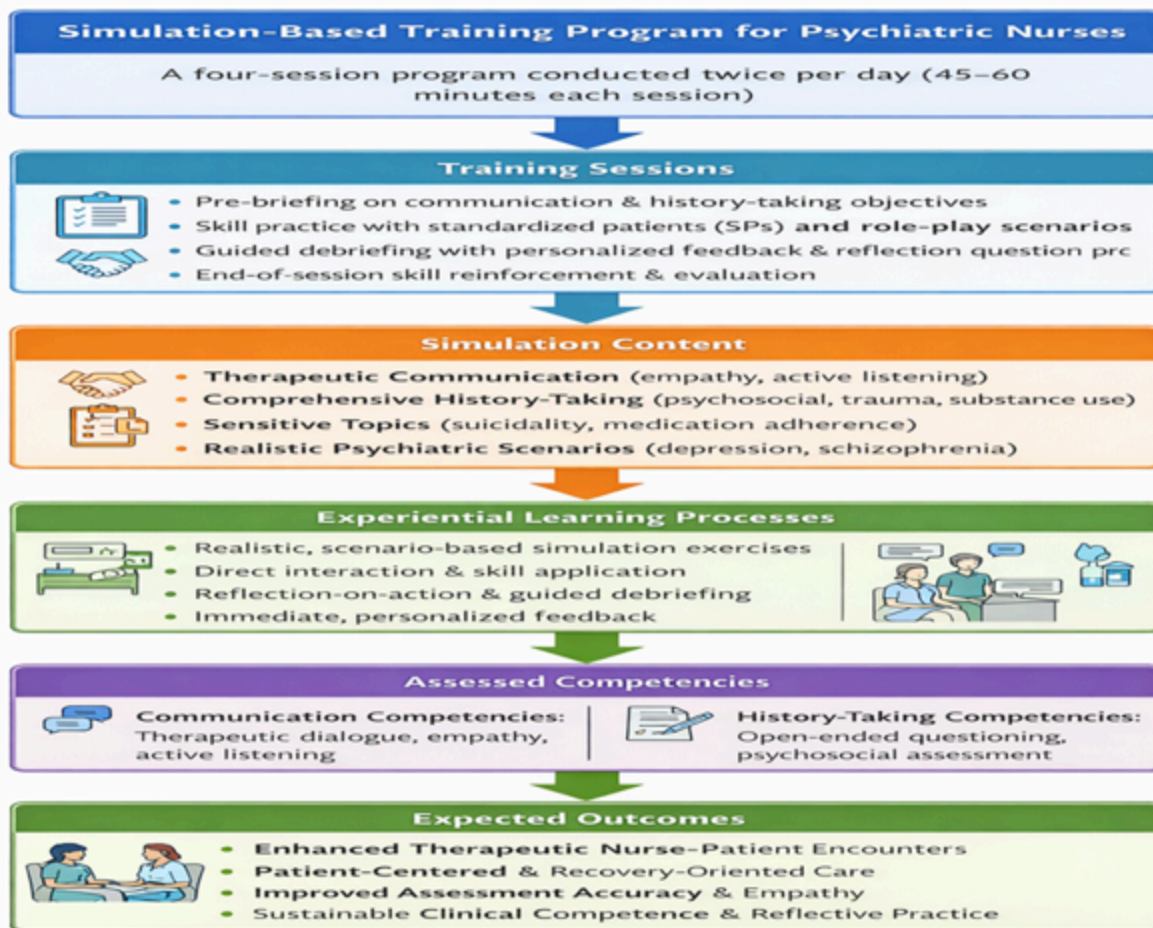


Figure 2. Simulation-Based Training Program Overview

Figure 2

summarizes the simulation-based program

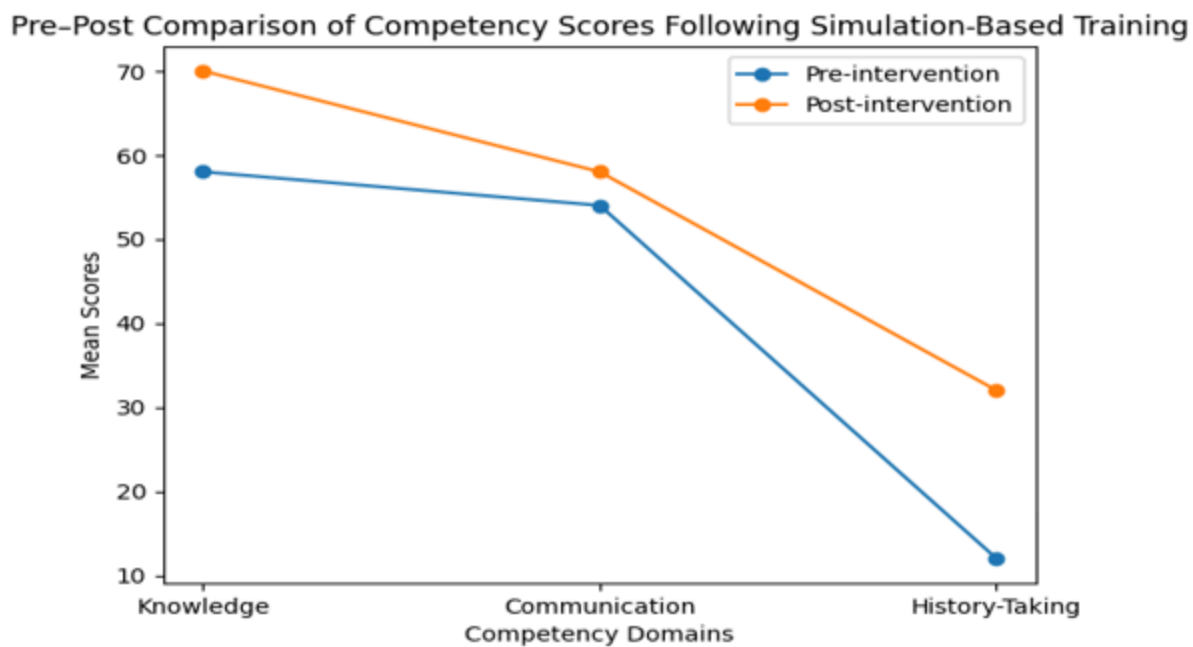


Figure 3

Comparison of Total Mean Scores Pre- and Post-Intervention Across Knowledge, Communication Skills, and History-Taking Competencies

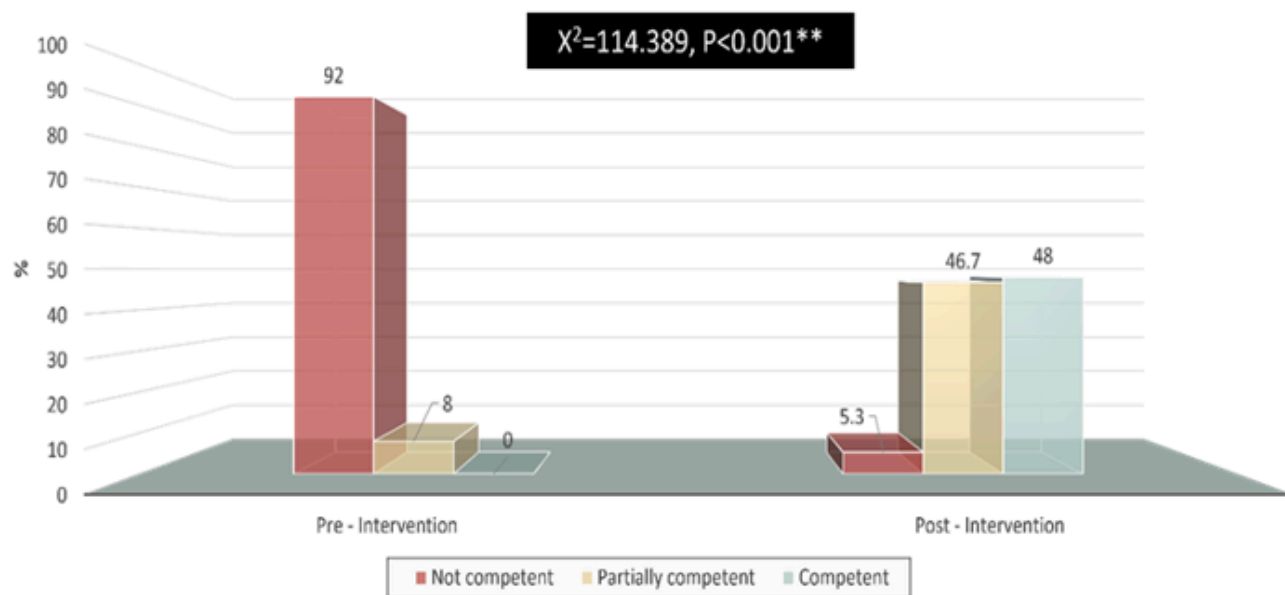


Figure 4

Comparison of the Observation-Based Communication Skill Checklist level

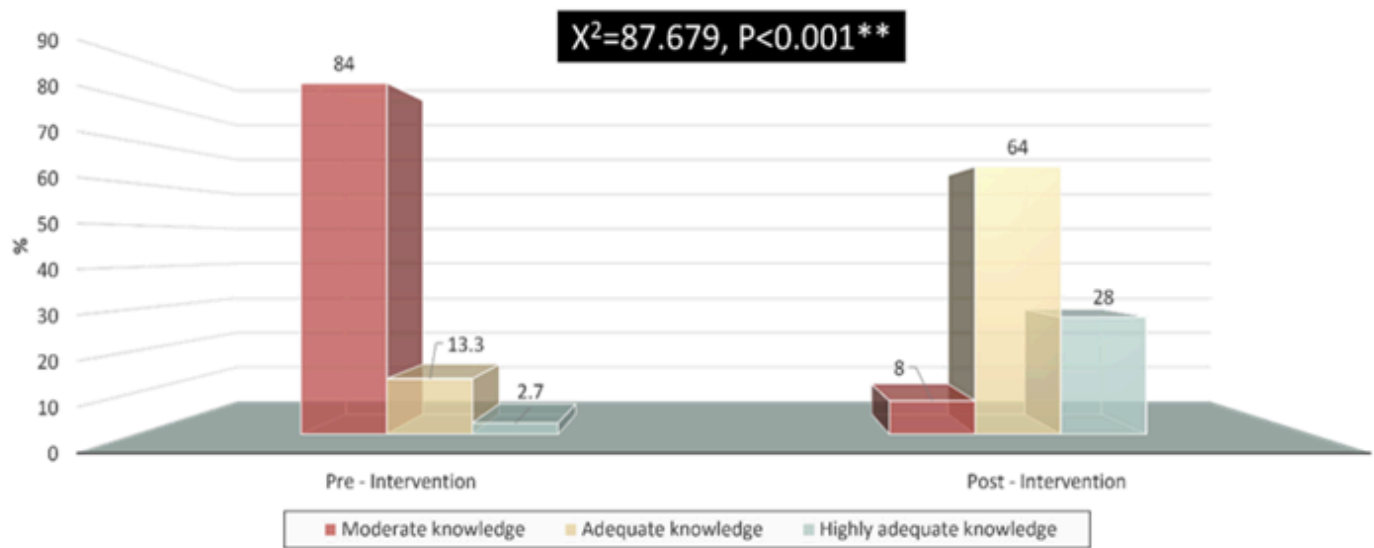


Figure 5

Comparison of the knowledge level among participants

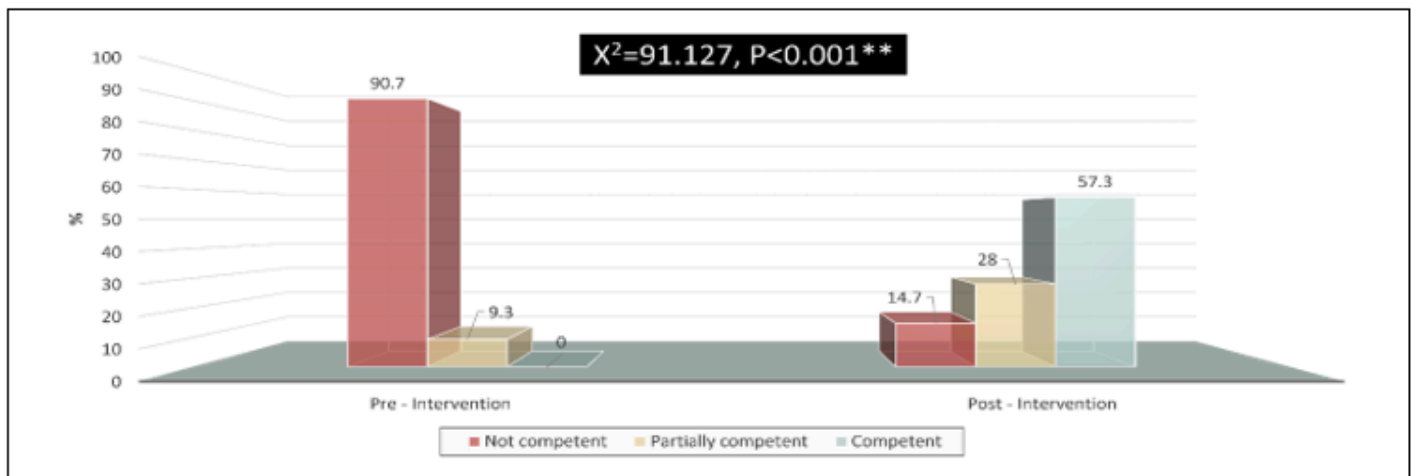


Figure 6

Comparison of the nurses' case history level

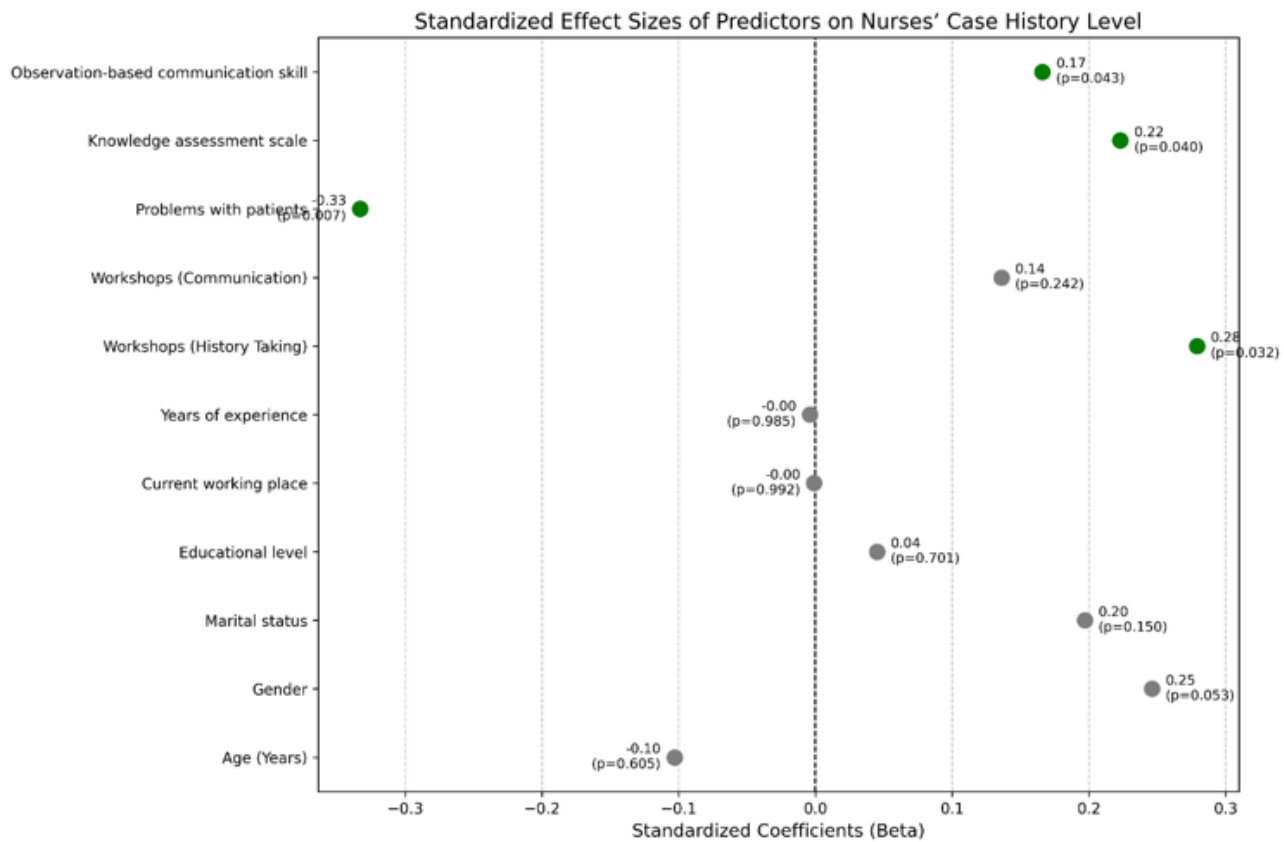


Figure 7

Standardized coefficients (Beta) of predictors on nurses' case history performance.

Each predictor is represented by a **marker showing the Beta value**, which allows comparison of effect sizes across variables., **Green markers** indicate statistically significant predictors ($p < 0.05$), while gray markers are non-significant., **Beta values and p-values** are labeled next to each point for clarity. The **dashed vertical line at 0** distinguishes positive vs. negative effects.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Knowledgeassessmentscale.pdf](#)