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FULL PAPER

Simulation of mental status examination (MSE) on skills to interpret findings, self-confidence, and satisfaction with learning among nursing students: a randomized control pilot study

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A Randomized control pilot study was conducted to investigate the effect of simulation of the Mental Status Examination on skills to interpret findings, level of self-confidence, and satisfaction with learning among nursing students. Two nursing colleges were randomly allocated into interventional and control groups. The data has been obtained from the 20 nursing students of each group. Audio simulation has been administered to the experimental group and lecture method teaching has been administered to the control group. Pre-recorded Case Scenario Audiotapes are used to assess the skills to interpret the alteration in thought, perception, and cognition before the simulation. Student satisfaction and self-confidence in learning scale developed by the National League for nurses, Washington, is also used in this study. SPSS-21 was used to analyze the data and paired 't-test was done to identify the effectiveness of the simulation. The results reveal that both the experimental and control group teaching sessions were found to be significant since the p-value is <0.05. However, in the descriptive statistics experimental group students were more satisfied with the learning and felt more self-confident after the simulation-based teaching of the mental status examination. Thus, the audio-simulation technique was found useful in teaching the mental status examination.

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Introduction

Innovation in teaching methods is a vital factor for effective teaching. The simulation will depict real-life situations and so it helps the student to understand, interpret, and analyze the subject in a better way. Often students find it difficult to understand the mental status examination since, the diagnosis mimics the same, whereas the student should understand the differences accurately. The simulation will help the nursing students to develop skills to interpret the findings, self-confidence, and satisfaction with learning ability. This will also improve self-confidence and increase the satisfaction with learning.

Marie-Aude Piot *et.al* (2021) mentioned that simulation-based education is mostly considered as a highly technology-based tool because of its origin in aviation, which has been mirrored by its development in

technical-based medical specialties such as anaesthesiology, obstetrics, and surgery. This might motivate psychiatric educators to adopt this teaching strategy with students. Vital aspects of clinical educators might encounter diverse experiences where the communication processes have significant consequences, which is specifically true in psychiatry, according to simulation-based education. This can help the research participants investigate the severe effects that relationships and communication can have on an individual's health and their experiences in receiving treatment. As a result, simulation education is not just another technological innovation or a by-product, rather it is considered as a sophisticated pedagogical approach that has been deeply rooted in the holistic approach that has been promoted by the World Psychiatric Association in continuity with the medical tradition of the therapeutic praxis, as explained by the Greek philosophers, namely Socrates and Hippocrates, both of them emphasis on the patient as the whole person and relationship was mentioned to be the crucial means of care. In a setting inspired by performing arts, simulation-based education might encourage the learners to participate more intensely and personally. It also provides the chances for having out-group reflection and enhancement of knowledge that are remarkable in communities and groups as explained by the anthropologists, systemic approaches, and the experts involved in the mental health facilities. Simulation-based education is said to be a versatile cultural artifact which further creatively appropriated in response to the variety of learning demands in the variable contexts and cultures, both present and future.

Michelle Beckford (2013) focused on the decentralization of psychiatric concepts in undergraduate nursing education which has been advocated by both the American Psychiatric Nurses Association and the International Society of Psychiatric Nurses. The author created several simulation scenarios to meet the therapeutic communication and psychological needs in a wide range of patient care settings. Psychological well-being is vital in all areas of nursing practice in terms of rendering holistic patient care. An undergraduate nursing program must cover all aspects of mental health assessment and its intervention. The goal of this project was to develop an Undergraduate curriculum that would consider the mental health requirements of patients not just in acute care psychiatric facilities but also in medical-surgical specialties, maternity wards, and community settings. Durting the lifetime, mental health was a topic that would be included in the curriculum. The creation of instructional methods that lead to safe practice was one of the objectives. Additional scenarios will be constructed in the upcoming academic year, with a total of five simulations already created. Alcohol withdrawal, end-of-life care, post-traumatic stress disorder, postpartum depression, serotonin syndrome, benzodiazepine overdose, elder abuse, depression among veterans, and geriatric depression are the topics covered. Every case scenario includes the Quality and Safety Education for Nurses (QSEN) competencies. Providing safe care to the patient by identifying risk factors and using clinical decision-making to establish prioritized nursing interventions are the overall learning objectives for undergraduate nursing students to initiate and carry out an appropriate mental status assessment using therapeutic communication. The methodology with the appropriate assessment tools has been created to produce the pertinent documentation. Anecdotal comments and ten-question surveys have been administered before and after the simulation has been done to evaluate the learning objectives. Pre-tests, post-tests, and scenario creations were made with the use of Quality and Safety Education for Nurses (QSEN) skills. Following the simulation, students expressed their ability to

relate the didactic material to their clinical experiences.

Beryl Mansel and Keith Bradley-Adams (2017) stated that there should be the goal of nurse lecturers to design learning opportunities that link theory and practice. The Nursing and Midwifery Council advises that the educational programs created must prepare the nurses for practice and should offer a flexible as well as a blended approach to the learning process using the complete spectrum of contemporary teaching strategies and delivery techniques. The use of simulation as a teaching and learning tool was advised to strengthen the connection between theory and practice. For undergraduate students, studying mental health nursing, the primary author of this article created the simple mnemonic "I AM A STAR" to help them remember the elements of the mental state examination (MSE), a core observational assessment in mental health nursing. The I AM A STAR mnemonic and an observational simulation were utilized in the Mental Status Examination teaching workshop and have been described by them. The teaching workshop was imaginative, interesting, and well-received by the students. The I AM A STAR mnemonic is suggested by the authors as a helpful assessment tool for certified practitioners and nursing students.

Eric Lenouvel (2022), conducted the scoping review regarding the instructional design strategies to teach the mental status examination. A key component of the psychiatric clinical interview is the psychiatric mental status assessment. However, despite its significance, evidence-based instructional design has not received much attention. To find design techniques that have been applied for instructing the psychiatric interview and mental status evaluation to health professionals, this study analyses the literature from an instructional design viewpoint. Searches were conducted through various databases, reference books, and the grey literature to find pertinent articles from

all levels of education and occupations. The results were compiled and presented using a framework for instructional design and a cognitive task analysis. For data extraction and analysis, a total of sixty-one papers from seventeen nations covering six academic fields and three educational levels were found. Most studies were conducted in undergraduate psychiatric education, were from the United States of America, and were presented as case studies for instructional purposes. Few articles explained the curriculum's instructional design. The efficiency of various elements of instructional design was not compared in any of the experiments. At each task area (knowledge, skills, and attitudes) and at each stage of an instructional design process the learning activities were plotted. In most studies, role-playing exercises, and digital learning resources (videos and virtual patients in more recent publications) were used in conjunction with introductory seminars or lectures. To conclude, all task domains of the psychiatric interview and mental status evaluation need to be considered by psychiatry educators. There is currently a dearth of empirical research on the development of expertise and the use of instructional design frameworks in the health care setting.

The field of simulation education can also greatly benefit from and contribute to clinical educators in the field of psychiatry because they have extensive clinical experience in the intrapersonal, interpersonal, and relational dimensions of care as well as highly developed communication skills which can be applied from clinical work to the educational setting. Physicians and patients should interact with this potent pedagogical tool and the field of simulation education can profit from its continued development and use within mental health education.

An examination of the patient's mental health must be part of the nurse's overall physical evaluation of the patient. The assessment could happen right away or during

admission. The patient's overall awareness and response should be examined as part of the mental status examination. One may also consider the patient's orientation, intelligence, memory, judgment, and mental process. The patient's behavior and mood should be evaluated concurrently. When there are discernible anomalies in the mental status assessment, the patient care plans frequently need to be changed.

Yanchen Liu *et al.* (2022) conducted the study to determine the feasibility of detecting mental and cognition with the use of artificial intelligence-based mental status assessment. Artificial intelligence-based automated technologies that track mental health are few. An essential technique used by mental health professionals to evaluate mental health is the mental status evaluation (MSE). MSEs are currently only performed by licensed experts, which presents a challenge for patients in underserved and rural locations. As the first interactive MSE platform, we suggest an AI-based personal online mental state test (aiMSE). Users can utilize aiMSE to self-administer MSEs at home using just a camera microphone and a web browser. With the use of the multimodal picture, audio, and natural language processing algorithms, aiMSE can identify indications of anomalies in mental functioning and suggest that a mental health professional investigates them further. Our 14-person study provides evidence that it is possible to identify a variety of symptoms that are frequently present in individuals who have had changes in their mental or cognitive abilities.

Wai Hin Wan and Angie Ho Yan Lam (2019) conducted a literature review to explore the effectiveness of virtual reality-based simulation on the health professions education related to mental illness. The four databases were checked from 2007 to 2018 and 1034 articles have been identified in the database. Six articles have been included in the review. Findings show that there is a clear relation between the virtual simulation and the improvement of the individual's attitudes, empathy, and knowledge related to mental disease. The experiential learning of virtual reality-based simulation shows empathy and attitude in healthcare education. Virtual reality-based stimulation has a strong impact on the users' empathy. Need for future research studies require a more in-depth examination of the effect of empathy and attitude of individuals with a healthcare background and in teaching the wide range of mental disorders such as depression and anxiety disorder.

Need for the study

Andres Martin, Asaf Jacob, Robert Krause, and Doron Amsalem (2020), researched to explore the effectiveness of mental status examination. A patient's behavioral and cognitive information is gathered using a standardized process called a mental status examination (MSE). Like a physical examination, it offers a structure for the methodical collection of clinical data. The MSE is a fundamental skill of undergraduate medical education (UME) and a professional activity that can be trusted in clinical psychology. Video clips of fictitious patients showing three persons with schizophrenia, obsessive-compulsive disorder, and bipolar illness, respectively. For each disease, we used three brief video clips to show an increasing number of psychiatric symptoms. The nine video clips served as calibrated stimuli for learners who had to recognize the MSE's components using an online tool. Results reveal that 37 students volunteered to test this online exercise. When it came to the overall identification of MSE components, experienced learners outperformed novice ones (p.001). According to the ABC-STAMPS (appearance, behavior, cooperation; speech, cognitive process and content, affect mood, perceptions, and suicidality) rubric, they were able to recognize certain MSE components. Students were pleased with the formative

didactic exercise and educational complement provided by this video-based scoring tool, which was simple to apply in a UME setting.

Rocha Neto, Estellita-Lins, Lessa, and Cavalcanti (2019) highlighted the Narrative Review of Brazilian Descriptive Psychopathology regarding the Mental State Examination. Here, the Mental State Examination (MSE) is compared to a physical examination as a valid means of gathering objective data. Concerns about psychiatric clinics, nosology, and the dependability on diagnostic interview methods act as a source of good diagnostic strategy and seem to be emerging nowadays. Attempts taken to establish the worldwide diagnosis protocol have been either futile or divisive. This research examines the evolution of psychopathology, mental status assessment, and mental function in Brazilian psychiatry during the previous few decades. Research methods including searches, interviews, and narrative reviews were conducted to identify systematic methods for conducting mental status examination, mental functions, symptom clusters, data observation orientations, and records. Brazilian psychopathology textbooks were scrutinized to visualize if they provide access to consolidated knowledge on psychopathology evaluation. Results explored that there are Sixteen textbooks chosen from 49 years. The dominant trend in the Mental status examination was descriptive psychopathology with a phenomenological orientation. Concepts developed from several traditions, most of which lacked standard vocabulary, suggested some author disagreement. Although there were clear recommendations for patient observation and how to acquire objective data, MSE standardization efforts were lacking. The major mental status examination record strategy was a detailed description of mental function problems, with no agreement on how to summarize and record this data. In a report of the study, mental strata were grouped into "mental functions," and mental status examination subsets were frequently used. The following mental functions were considered by all authors: consciousness, perception, thought, memory, attention, orientation, and volition. Mental status examination proficiency is required for psychiatric competency. Official paperwork is vague when it comes to performance and recording criteria. MSE data was often collected using descriptive psychopathology. Over time, there was a change from thorough descriptive findings to an array of observed problematic features defined using a mental function checklist. Clinical practice and research recommendations should incorporate the establishment of trustworthy mental status examination procedures; yet, current psychiatry/neuroscience have overlooked it because of an overemphasis on interview methods. Better mental status examination procedures and bedside expertise in psychiatry are required, and they are dependent on the revival of psychopathological debates and semi-logical reasoning, which will allow the reintroduction of phenomenology-oriented "observational" techniques.

Tristan Gorrindo *et al.* (2013) explored the performance assessment tool using the simulation-based professional practice evaluation. Ongoing professional practice evaluation (OPPE) contains the competency-based quantitative evaluation of clinical performance. Healthcare institutions need to design assessments to measure the clinical competencies, which are scalable and found easy for clinicians. A psychiatry department implemented the web-based psychiatric simulation program on violence risk assessment as the tool. Out of 412 doctors at the psychiatry department, 410 doctors have completed the online simulation. Research participants have received the e-mail reminder along with instructions to use the online simulation session effectively. Computer simulation assessment tool was

used. Research participants visualized the introductory video and they were asked to perform the risk assessment. The action has been paired with the corresponding video with the standardized patient. Participants have been scored based on actions performed within the simulation (measure one) and the responses towards asking out the open-ended questions to integrate summative information from the simulation session (measure two). Results reveal that, out of 410 doctors, 93% passed Measure 1, 88% passed Measure 2, and 1.2% failed both measures. 18.3% of participants were referred for the focused professional practice evaluation (FPPE) after failing either Measure 1, Measure 2, or both. Overall, the web-based simulation and the e-mail engagement tool are said to be the scalable and best way to assess doctors in Ongoing professional practice evaluation and to identify those who require focused professional practice evaluation

Andres Martin *et al.* (2020) conducted a study to explore the effectiveness of teaching mental status examination using video clips of simulated mentally ill patients. Seventy-five medical and seventy-eight nursing students (one hundred and fifty-three students) have participated in this study. The intervention group has shown improved knowledge and competence in Mental status examination compared with the control group. Hence, the videos depict psychopathology to be an effective complement to teaching mental status examination on recognizing the signs and symptoms.

Treenut Pummanee *et al.* (2023) conducted a quasi-experimental study to explore the effectiveness of instructional videos for mental status examination on knowledge, level of self-satisfaction, and self-efficacy for mental status examination of patients among undergraduate nursing students. Here, case-based learning has been compared with traditional learning without applying the instructional video for mental status examination. Two-group pretest-post-test control group design has been adopted with third-year undergraduate nursing students on a psychiatric nursing practicum course divided into an experimental group (30 samples) and a control group (23 samples). The experimental group attended the instructional video for mental status examination with case-based learning through social media, namely "Facebook" while the control group received the traditional teaching method only. Data was analyzed using descriptive statistics, the Mann-Whitney U test, and the Wilcoxon Signed Rank Test. Results reveal the efficacy of instructional video for mental status examination was 78.5/81.3 which was higher than the criterion of 75/75. The median score of knowledge and self-efficacy in the experimental group were significantly higher after than before learning and there were statistically significantly higher knowledge and self-efficacy scores in the experimental group than the control group and nursing students' satisfaction was at a high level. This instructional video for mental status examination collaboration with case-based learning may be used to raise the students' knowledge and self-efficacy regarding the mental status examination. Furthermore, studies with repeated measure designs with a bigger sample size have been suggested.

Benjamin T. Griffeth, Bogan Brooks, and Adriana Foster (2017) developed the twelve Entrustable Professional Activities (EPA) to ensure the adequate skills of medical college graduates. They developed a tool to assess the mental status exams conducted by future psychiatry residents. The tool contains both a video of a psychiatrist who conducted an interview with a patient and the mental status exam rating sheet may be used when students present the mental status exam findings verbally or in writing mode. They included the feedback from the psychiatry educators in the annual meeting held at the Association for Medical Student Educators in Psychiatry. Results reveal that there was a significant

difference between the third- and fourth-year medical students in describing the cognitive exam. Overall, this tool allows for standardizing the mental status presentation done by senior medical students who need to specialize in vpsychiatry.

Machelle Skinner and Cristi Campbell (2019) conducted a study exploring the simulation effect on student perception of mental health and the survey responses related to mental health which predict the Assessment Technologies Institute (ATI) Mental Health Exam scores. A revised version of the Mental Health Nursing Education Survey was used to examine nursing students' (n=63) perception of mental health. Descriptive statistics described the sample population and responses to survey items. Independent t-tests analyzed the sample. Linear regression predicted outcomes on the ATI Mental Health Exam. Results reveal that the ATI Mental Health Exam was shown to significantly correlate with survey answers about anxiety (p =0.047) and safety (p =0.003). The sum of the replies to these survey statements may be used to predict a variation in ATI Mental Health Exam scores of 15.4%. According to this study, ATI Mental Health Exam scores rise when students receive mental health care and feel secure and less stressed. Students may become more at ease with mental health treatment thanks to simulation.

Rachel M. Voss and Joe M. Das (2022) state that the nurse should observe the patient's general demeanor, posture, and facial features while gathering a mental health history. They should also pay attention to general conduct, as well as the way that the brain works and what it is inclined toward. Communication prowess, memory, intellect, and judgment are further noteworthy factors. If the patient is suicidal or in danger of self-harm, one can also make that determination. Having tact is essential for nurses. In the chart, everything must be documented. At all times, it is critical to ensure the patient's and nurses' safety.

Hence, it is vital to teach the mental status examination to nursing students in an effective way with the use of simulation techniques. Here, the researcher adopted the audio-simulation teaching of mental status examination to explore its effectiveness.

Research objectives

1. To investigate the effect of simulation of mental status examination on skills to interpret findings.
2. To investigate the effect of simulation of mental status examination on self-confidence.
3. To investigate the effect of simulation of mental status examination on satisfaction with learning.

Hypothesis

H_1: Simulation-based teaching of mental status examination will improve the skills to interpret the findings, self-confidence and satisfaction with learning among nursing students.

Operational definition

Simulation: In this research study, the term, "simulation" refers to the practical-oriented training of mental status examination with the help of depicted reality-based situations.

Mental Status Examination (MSE): In this research study, the term, "mental status examination" refers to the assessment of a mentally ill patient thoughts, cognition, and perception

Critical thinking: In this research study, the term, "critical thinking" refers to the logical thinking technique with the use of analysis and interpretation of correct symptoms in mental status examination.

Knowledge: In this research study, the term, "knowledge" refers to the amount of information known after the simulation teaching technique.

Satisfaction with learning: In this research study, the term, "satisfaction with

learning" refers to the learners how far they are being satisfied after completing the learning process of mental status examination.

Variables of the study

Independent variable: "Simulation" is the independent variable in this research study.

Dependent variable: "Skills to interpret findings, self-confidence, and satisfaction with learning" is said to be the dependent variable in this research study.

Relationship between the variables: Simulation training may enhance the skills to interpret the findings of mental status examination, self-confidence, and satisfaction with learning the skills to interpret the mental status examination findings.

Methods/ instruments for data collection

Population of the study

Target Population: The Target Population of this research study is "Nursing Students".

Accessible Population: The accessible population of this research study is undergraduate nursing students who are pursuing B.Sc. The nursing course at Shivparvathi Mandradiar Institute of Health Science, Palyakottai, Tiruppur district, and Texcity College of Nursing, Coimbatore'

Research design: Regarding the research design, Pre-test Post-test Control group design has been adopted in this research study.

Sampling technique: Sampling is said to be the subset of the population. Regarding the sampling technique, "Convenient sampling method" has been adopted in this research study.

Sampling criteria: Undergraduate nursing students who are willing to participate in the study have been considered as samples. Since the research is based on a convenient sampling technique, there are no rigid sampling criteria to select the samples.

Questionnaire used in this research:

1. *To assess the required skills to interpret the findings of mental status examination:* Pre-recorded Case Scenario Audiotapes have been played to assess the skills to interpret the alteration in thought, perception, and cognition. Five short case scenarios in each section (thought, cognition, and perception) have been given to the participants online within the stipulated timings.

2. *To assess Student Satisfaction and self-confidence in Learning: a* scale developed by the National League for nurses, Washington, has been used for the assessment.

Validity and reliability of the questionnaire

Content validity has been obtained from five experts in the field of Psychiatric Nursing. Test-Retest Reliability test was done for the Pre-recorded audio based questions with the samples before the commencement of the Pilot Study and the score of Cronbach alpha was 0.81.

E. Franklin, Paulette, Burns, and Christopher S. Lee (2014) conducted a study to explore the psychometric properties of the student satisfaction and self-confidence in learning scale. Psychometric tests included item analysis, confirmatory, and exploratory factor analyses in randomly split subsamples, concordant and discordant validity, and internal consistency. The scales are found reliable.

Ethical considerations

Ethical consideration has been considered as the vital part of the research study. The well-structured research proposal has been applied to the Lincoln University College's Research Ethics Committee in Malaysia and the research study has been approved (Ref: PDF/LUCPDF20211223001/03/2022) on March 1st, 2022. Prior written permission has been obtained from the Principal of the College of Nursing, Shivparvathi Mandradiar Institute of Health Science, Palyakottai,

Tiruppur district, and Texcity College of Nursing, Coimbatore to conduct the research study on their nursing students. Information about the benefits of participation in this research study has been explained and informed consent has been obtained from the research participants in the Google Form to ensure the willingness of the research participants to participate in this study.

Data collection procedure

Using the Lottery method, the colleges have been randomized. Students belonging to Shivparvathi Mandradiar Institute of Health Science, Palyakottai, Tiruppur district have been allotted to the experimental group. Students belonging to Texcity College of Nursing, Coimbatore have been allotted to the control group. 40 nursing students have participated in the research. Hence, the 20 nursing students who belong to Shivparvathi Mandradiar Institute of Health Science, Palyakottai, Tiruppur district were in the experimental group, and 20 nursing students belonging to Texcity College of Nursing, Coimbatore were in the control group.

Research participants who belong to the experimental group have the pre-simulation session (Pre-test, introduction, orientation, and description of the session), simulation session (assessment of thought, perception, and cognitive function), and post-simulation assessment (post-test). Research participants who belong to the control group have the Pre-lecture session (pre-test, introduction, orientation, and description of the session), Lecture Session (assessment of thought, perception, and cognitive function), and post-lecture assessment (post-test).

Data was collected online using the Google form before and after the intervention (audio-based simulation training). The skills Questionnaire consists of three components such as assessment of thought, assessment of cognition, and assessment of perception. Fifteen questionnaires are present in the skills Questionnaire (five questionnaires in the thought assessment, five questionnaires in the assessment of cognition, and five questionnaires in the assessment of perception) The audio-based simulation training was delivered through an online platform using the pre-recorded audio teaching aids in the Google Meet for the participants who belong to the experimental group. Lecture method-based teaching the mental status examination has been done to the research participants who belong to the control group. The teaching session has been lasted for 45 Minutes. Post-tests were conducted after the audio simulation-based teaching in the experimental group and lecture method-based teaching session in the control group. In both experimental and control groups after the teaching session, a scale developed by the National League for Nurses, Washington, has been used for the assessment of student satisfaction and self-confidence in learning about the mental status examination.

Results and discussion

Descriptive statistics

Regarding the distribution of demographic variables in the experimental and control groups, the majority of the samples belong to the age group of 17-20 years. All the samples were females and pursuing a B.Sc. nursing course. Most of the samples (75%) do not have previous knowledge of mental status assessment in the experimental group and (80%) of them do not have previous knowledge of mental status assessment in the control group, as presented in Table 1.

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TABLE 1 Distribution of demographic variables in experimental and control Group

Demographic Variable	Experimental Group		Control Group	
	No. of Samples	Percentage	No. of Samples	Percentage
Age Group				
a. 17-20 Years	19	95	20	100
b. 20 -23 Years	1	5	0	0
Gender				
a. Male	0	0	0	0
b. Female	20	100	20	100
Studying Course				
a. Diploma in Nursing	0	0	0	0
b. Bachelor in Nursing	20	100	20	100
Previous Knowledge about the Mental Status Assessment				
a. Yes	5	25	4	20
b. No	15	75	16	80
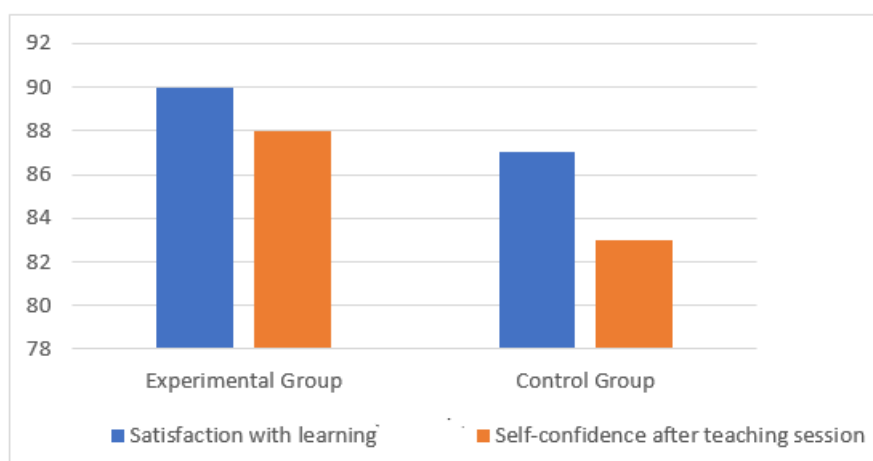
FIGURE1 Percentage Distribution of Results after the Teaching Session of Mental Status Examination

On average, 90% of samples in the experimental group are satisfied with learning and 88% of the samples have obtained self-confidence after the simulation session of the mental status examination whereas, 87% of Samples in the control group are satisfied with learning and 83% of samples have obtained self -confidence after the lecture session of mental status examination, as displayed in Figure 1.

Inferential Statistics

A paired t-test has been done in this research study to explore the effectiveness of audio-based Simulation teaching skills to interpret the findings of mental status examination. The results of the same is presented in Table 2.

The formula of the paired t-test is defined as the sum of differences in each pair divided by the square root of n times the sum of differences squared minus the sum of the squared differences, overall n-1. The formula for the paired t-test is as follow:

$$t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2) - (\sum d)^2}{n-1}}}$$

where,
- Σd is the sum of the differences.

- d is the difference between the values of a single pair, that is one deducted from the other.

Paired t-test was done to explore the effectiveness of the simulation session. The results reveal that both the experimental and control group teaching sessions were found to be significant since p-value is <0.05

In the present study, the effectiveness of teaching mental status examination using pre-recorded audio teaching aids along with the PowerPoint presentation. 40 Nursing students (20 students in the experimental and 20 students in the control group) participated in the study. The results reveal that both the experimental and control group teaching sessions were found to be significant since p-value is <0.05 However, on the descriptive statistics experimental group students were more satisfied with the learning and felt more self-confident after the simulation-based teaching the mental status examination.

TABLE 2 Results of paired t-test to investigate the effectiveness of simulation

Group	Score	Mean	n	SD	t	Sig.(2-tailed)
Experimental	Pre-test score	14.65	20	2.978	-4.219	.000
	Post-test score	18.05	20	1.638		
Control	Pre-test score	12.75	20	3.932	-9.129	.000
	Post-test score	17.75	20	3.354		

Recommendations

- A similar study needs to be conducted on a large scale as per the sample size calculation.
- Sequence of post-test may also be conducted after the simulation to determine the retention of skills interpretation on mental status examination among nursing students.

Conclusion

Quality of teaching will improve the learning process among students. Clinical learning is a vital aspect of the student nurses and this can be done through the learning which happens in their clinical postings and in the laboratories. Nurse educators who adopt innovative teaching methodologies will facilitate the learning process among students. Mental status examination among patients was mentioned to important clinical aspect of the Psychiatric Nursing subject. Mental status assessment components include mood, affect, cognition, thought, judgment, consciousness, memory, and insight. Simulation-based education was helpful as nursing students lack the chance to acquire skills in interpreting mental status assessments. Thus, the audio-simulation technique was found useful in teaching the mental status examination. This method of teaching enhances the self-confidence level of students and gives them good satisfaction with learning. Hence, H_1: Simulation-based teaching of mental status examination will improve the skills to interpret the findings, self-confidence, and satisfaction with learning among nursing students have been accepted.

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Conflict of Interest

The authors declare that there is no conflict of interest in this manuscript.

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