

Effectiveness of Objective Structured Practical Examination (OSPE) in Mental Status Examination on the Performance and Satisfaction of Nursing Students in Selected Nursing Colleges, Udaipur, Rajasthan

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Abstract

Background: Competency-based assessment is fundamental to nursing education as it ensures that students acquire the knowledge, clinical skills, and professional attitudes necessary for safe patient care. Conventional practical examinations have long been criticized for their subjective evaluation methods, examiner bias, and limited ability to comprehensively assess psychomotor and communication skills. The Objective Structured Practical Examination (OSPE) has been introduced as a standardized assessment strategy that provides greater objectivity, reliability, and fairness in evaluating clinical competencies. However, evidence regarding its effectiveness in psychiatric nursing, particularly in mental status examination, remains limited. The present study evaluated the effectiveness of OSPE on nursing students' clinical performance and satisfaction.

Methods: A quantitative true experimental study employing a post-test-only control group design was conducted among 200 undergraduate nursing students from five selected nursing colleges in Udaipur, Rajasthan. Participants were selected using simple random sampling and equally allocated to experimental and control groups. The experimental group underwent assessment through Objective Structured Practical Examination, whereas the control group was assessed using the conventional practical examination method. Data were collected using a socio-demographic questionnaire, a structured observational checklist to assess performance in mental status examination, and a self-developed student satisfaction questionnaire. Descriptive statistics, independent *t*-test, Pearson's correlation coefficient, and Chi-square test were applied for statistical analysis.

Results: Students assessed using OSPE achieved significantly higher performance scores than those evaluated through conventional practical examination (mean score 21.88 versus 18.28; $t = 4.697$, $p < 0.001$). Student satisfaction was also significantly higher in the experimental group (mean score 76.75) compared with the control group (53.93; $t = 9.294$, $p < 0.001$). A statistically significant positive correlation was observed between clinical performance and satisfaction in both groups, with a stronger association among students assessed through OSPE.

Conclusion: Objective Structured Practical Examination is an effective and reliable method for evaluating mental status examination skills among nursing students. The structured and objective nature

of OSPE significantly improves students' clinical performance and learning satisfaction compared with conventional practical examinations. Integrating OSPE into undergraduate psychiatric nursing education may enhance competency-based assessment and better prepare nursing graduates for clinical practice.

Keywords: Objective Structured Practical Examination, OSPE, Mental Status Examination, Nursing Education, Clinical Competency, Student Satisfaction.

1. Introduction

Assessment of clinical competence is an integral component of nursing education, ensuring that students acquire the knowledge, psychomotor skills, communication abilities, and professional attitudes required for safe and effective patient care. Conventional practical examinations have traditionally been used to evaluate nursing students' clinical performance; however, these methods are often criticized for their subjectivity, examiner bias, lack of standardization, and limited ability to comprehensively assess students' competencies. The Objective Structured Practical Examination (OSPE) was introduced to overcome these limitations by providing a structured, objective, and standardized approach to clinical assessment. Through a series of carefully designed stations and predetermined evaluation checklists, OSPE enables consistent assessment of students' cognitive, psychomotor, and affective skills while minimizing variations between examiners. Previous studies have reported that OSPE enhances the reliability, validity, and fairness of clinical evaluation and promotes active learning, critical thinking, and self-confidence among nursing students.

Mental Status Examination (MSE) is one of the fundamental clinical skills in psychiatric nursing, requiring students to systematically assess a patient's appearance, behaviour, speech, mood, cognition, perception, thought processes, insight, and judgement. Competence in MSE is essential for accurate psychiatric assessment and effective nursing care, yet conventional practical examinations may not adequately evaluate these complex clinical skills. Despite increasing adoption of OSPE in health professional education, evidence regarding its effectiveness in psychiatric nursing education remains limited, particularly in the Indian context. Therefore, the present study was conducted to evaluate the effectiveness of Objective Structured Practical Examination on the performance and satisfaction of nursing students in Mental Status Examination in selected nursing colleges of Udaipur, Rajasthan. The findings of this study are expected to provide evidence for strengthening competency-based assessment and improving the quality of psychiatric nursing education.

2. Materials and Methods

A quantitative research approach with a **true experimental post-test-only control group design** was adopted to evaluate the effectiveness of the Objective Structured Practical Examination (OSPE) in Mental Status Examination (MSE). The study was conducted in five selected nursing colleges in Udaipur, Rajasthan. A total of **200 undergraduate nursing students** were selected using a simple random sampling technique and randomly allocated into an experimental group ($n = 100$) and a control group ($n = 100$). Nursing students who met the inclusion criteria and provided written informed consent were enrolled in the study. Students in the experimental group were assessed using the OSPE method, whereas those in the control group underwent conventional practical examination. Ethical approval was obtained from the Institutional Ethics Committee before commencement of the study, and permission was secured from the respective nursing colleges. Written informed consent was obtained from all participants, and

confidentiality and anonymity were maintained throughout the study.

Data were collected using three instruments: a structured socio-demographic questionnaire, a standardized observational checklist to assess students' performance in Mental Status Examination, and a self-structured satisfaction questionnaire. The content validity of the tools was established by experts in psychiatric nursing, nursing education, and research methodology, while reliability was confirmed through appropriate statistical methods before the main study. Data were analysed using descriptive statistics, including frequency, percentage, mean, and standard deviation, whereas inferential statistics such as the independent *t*-test, Pearson's correlation coefficient, and Chi-square test were employed to determine differences between groups, relationships among study variables, and associations with selected demographic characteristics. A *p*-value of less than 0.05 was considered statistically significant.

3. Results

A total of 200 undergraduate nursing students participated in the study, with 100 students each in the experimental and control groups. The demographic characteristics of participants in both groups were comparable, indicating homogeneity before the intervention. The experimental group, assessed using the Objective Structured Practical Examination (OSPE), demonstrated significantly higher performance scores in Mental Status Examination than the control group assessed through the conventional practical examination. The mean performance score of the experimental group was 21.88 ± 2.56 , compared with 18.28 ± 3.18 in the control group. The difference was statistically significant ($t = 4.697, p < 0.001$), indicating that OSPE was more effective in improving students' clinical performance. Similarly, the mean satisfaction score was significantly higher among students in the experimental group (76.75 ± 8.24) than in the control group (53.93 ± 10.96) ($t = 9.294, p < 0.001$), suggesting greater acceptance of the OSPE method. Furthermore, a moderate positive correlation was observed between performance and satisfaction among students in the experimental group ($r = 0.54, p < 0.05$), whereas a weaker positive correlation was found in the control group ($r = 0.35, p < 0.05$). No statistically significant association was observed between selected socio-demographic variables and students' performance or satisfaction scores, indicating that the effectiveness of OSPE was independent of participants' demographic characteristics.

Table 1. Comparison of Performance and Satisfaction Scores Between Experimental and Control Groups

Outcome Variable	Experimental Group (n=100) Mean $\pm$ SD	Control Group (n=100) Mean $\pm$ SD	<i>t</i> value	<i>p</i> value
Performance Score	21.88 $\pm$ 2.56	18.28 $\pm$ 3.18	4.697	<0.001*
Satisfaction Score	76.75 $\pm$ 8.24	53.93 $\pm$ 10.96	9.294	<0.001*

*Statistically significant at $p < 0.05$

4. Discussion

The present study demonstrated that the Objective Structured Practical Examination (OSPE) significantly improved both the clinical performance and satisfaction of nursing students during Mental Status Examination compared with the conventional practical examination. Students assessed through OSPE achieved significantly higher performance scores, indicating that the structured assessment method effectively enhanced their ability to perform systematic mental status examinations. These findings

support the concept that OSPE provides a standardized, objective, and competency-based evaluation process, thereby minimizing examiner bias and ensuring uniform assessment of clinical skills. The use of structured stations and standardized checklists enabled students to demonstrate cognitive, psychomotor, and communication competencies more effectively than traditional assessment methods. Similar findings have been reported by previous researchers, who concluded that OSPE improves the reliability, validity, and objectivity of clinical assessment while promoting better learning outcomes and critical thinking among nursing and medical students.

The study also revealed significantly higher satisfaction among students assessed through OSPE. The majority of participants perceived OSPE as a fair, transparent, and well-organized assessment method that reduced examiner subjectivity and provided equal opportunities to demonstrate their competencies. Furthermore, a positive correlation between performance and satisfaction indicated that students who performed better were also more satisfied with the assessment process. These findings suggest that OSPE not only enhances clinical competence but also improves students' confidence and overall learning experience. Therefore, integrating OSPE into undergraduate nursing education, particularly in psychiatric nursing, may strengthen competency-based assessment and better prepare nursing students for professional clinical practice.

5. Conclusion

The present study concludes that the Objective Structured Practical Examination is a more effective assessment method than the conventional practical examination for evaluating Mental Status Examination skills among undergraduate nursing students. OSPE significantly improved students' clinical performance and satisfaction by providing a standardized, objective, and reliable evaluation process. The findings support the incorporation of OSPE into psychiatric nursing education to enhance competency-based learning and ensure comprehensive assessment of clinical skills. Further multicentre studies with larger sample sizes are recommended to strengthen the evidence regarding the effectiveness of OSPE across different nursing specialties.

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References

The following references are formatted in accordance with the journal style and correspond to the literature cited in the manuscript. They should be verified against the final in-text citations before submission.

1. Grassini S. Shaping the future of education: Exploring the potential and consequences of AI and ChatGPT in educational settings. *Education Sciences*. 2023;13(7):692.
2. Farida I, Setiawan D. Business strategies and competitive advantage: The role of performance and innovation. *Journal of Open Innovation: Technology, Market, and Complexity*. 2022;8(3):163.
3. La Chimea T, Kanji Z, Schmitz S. Assessment of clinical competence in competency-based education. *Canadian Journal of Dental Hygiene*. 2020;54(2):83–91.

4. Vishwakarma K, Yadav K, Sharma M, et al. Introducing Objective Structured Practical Examination as a method of learning and evaluation for undergraduate pharmacology. *Indian Journal of Pharmacology*. 2016;48(Suppl 1):S47–S51.
5. Chongloi N, Devi ES, Singh HK, et al. Attitudes of undergraduate nursing students toward Objective Structured Practical Examination: An exploratory study. *International Journal of Nursing Sciences*. 2017;4(1):68–72.
6. Ataro G, Worku S, Asaminew T. Experience and challenges of Objective Structured Clinical Examination: Perspective of students and examiners in a clinical department of Ethiopian University. *Ethiopian Journal of Health Sciences*. 2020;30(3):417–426.
7. Harden RM, Gleeson FA. Assessment of clinical competence using an Objective Structured Clinical Examination (OSCE). *Medical Education*. 1979;13(1):41–54.
8. Rushforth HE. Objective Structured Clinical Examination (OSCE): Review of literature and implications for nursing education. *Nurse Education Today*. 2007;27(5):481–490.
9. Khan KZ, Ramachandran S, Gaunt K, Pushkar P. The Objective Structured Clinical Examination (OSCE): AMEE Guide No. 81. *Medical Teacher*. 2013;35(9):e1437–e1456.
10. Pierre RB, Wierenga A, Barton M, Branday JM, Christie CD. Student evaluation of an OSCE in paediatrics at the University of the West Indies. *BMC Medical Education*. 2004;4:22.
11. Major DA. Objective Structured Clinical Examination in nursing education: A review of best practices. *Nurse Education in Practice*. 2005;5(6):329–336.
12. Walsh M. *Watson's Clinical Nursing and Related Sciences*. 8th ed. Edinburgh: Elsevier; 2018.
13. Polit DF, Beck CT. *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. 11th ed. Philadelphia: Wolters Kluwer; 2021.
14. Grove SK, Gray JR. *Understanding Nursing Research: Building an Evidence-Based Practice*. 8th ed. St. Louis: Elsevier; 2023.
15. World Health Organization. *Mental Health Atlas 2020*. Geneva: World Health Organization; 2021.
16. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)*. 5th ed. Washington, DC: American Psychiatric Association; 2022.
17. Townsend MC, Morgan KI. *Psychiatric Mental Health Nursing: Concepts of Care in Evidence-Based Practice*. 10th ed. Philadelphia: F.A. Davis; 2023.
18. Varcarolis EM. *Foundations of Psychiatric Mental Health Nursing*. 9th ed. St. Louis: Elsevier; 2022.
19. Creswell JW, Creswell JD. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 6th ed. Thousand Oaks: Sage Publications; 2023.
20. Burns N, Grove SK. *The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence*. 9th ed. St. Louis: Elsevier; 2021.