

A Comparative Study to assess the Opinion and Level of Satisfaction of the Student Nurses regarding Objective Structured Clinical Examination (OSCE) and Traditional Method of Clinical Skills Assessment related to Antenatal Examination

Ritu Soni¹, Seema Rani², Somibala Thokchom³, Shilpi Sarkar⁴

Abstract

Objective: The objective of the study was to assess and compare the opinion and level of satisfaction of student nurses regarding objective structured clinical examination (OSCE) and traditional method of clinical skills assessment.

Methodology: By using a comparative descriptive design, the study was conducted in the Ruffaida College of Nursing and National Skills Training Centre-DAKSH, Delhi. A total of 68 student nurses were selected using purposive sampling technique and were randomly divided into OSCE group ($n_1=34$) and traditional group ($n_2=34$). Self-structured observation checklist and evaluation proforma were used to obtain the skills score of OSCE and traditional method respectively. Opinionnaire and satisfaction scale were used to assess the opinion and satisfaction of the subjects regarding OSCE and traditional method of clinical skills assessment.

Result: Findings revealed that the mean skills scores of OSCE group (56.67) were higher than the traditional group (35.40) with ($z=39.09$, $p<0.05$). Other findings showed that both the groups were having positive opinion 33 (97%), 31 (91%) and highest level of satisfaction 33 (97%), 32 (94%) regarding OSCE and traditional method respectively.

Conclusion: There was no significant difference in the opinion and satisfaction scores among the students related to OSCE and traditional method of clinical skills, although students scored higher when evaluated by OSCE than traditional method.

Keywords: Clinical skills, OSCE method, Traditional method, Antenatal examination, Student nurses

Introduction

Evaluating students' clinical performance is one of the most challenging responsibilities of a nursing instructor. However, the realization that students gain various incomparable experiences clinically present a dilemma in measuring both individual and program outcomes. It is therefore evident that a wide range of evaluative methods are necessary to assess

¹MSc. Nursing Student, ²Assistant Professor, ^{3,4}Tutor, Ruffaida College of Nursing, Jamia Hamdard.

Correspondence: Ms. Ritu Soni, Ruffaida College of Nursing, Jamia Hamdard.

E-mail Id: soni.2702@gmail.com

Orcid Id: <http://orcid.org/0000-0002-7699-9311>

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student nurse's clinical competence and greater emphasis should be placed on those methods which encourage the learning of clinical skills and concurrently provide an appropriate mechanism for assessing them.¹

Proper selection of a method of assessment can improve student's performance. Faulty methods of assessment can lead to wrong decisions that might be deleterious to the future activities of the students. Thus assessment techniques appear to have an impact on study strategies and to influence the performance of students. Nursing student's perception of clinical competencies can be measured using a variety of methods like written case studies, record of performance, different types of simulations, essays, and objective structured clinical examination.²

OSCE is an acronym for Objective Structured Clinical Examination. OSCE was developed in the University of Dundee in the early 1970s and later introduced by Dr. Ronald Harden and his colleagues in 1975. After some modification, it was described in detail in 1979.³ It is a form of assessment in which the student demonstrates clinical skills and underpinning knowledge, usually in simulated condition, which includes several "stations" in which examinees are expected to perform specific clinical tasks within a specified time period (5–30 min).⁴

Within the traditional practical exams for evaluating student's clinical performance, a student is assigned to an examiner who would observe her/his performance for the entire examination when providing nursing care to a patient in the clinical area.⁵

Amiri and Nickbakht⁷ conducted a study on satisfaction of students, faculty members and tutors in 2012. The purpose of the study was to investigate students' and examiners' opinions about the audiology exam in Iran on 52 people including students and faculty members. The test was divided into 10 sections and data was collected through a questionnaire after they participated in the test section. The findings of the study revealed that the majority of the students and examiners preferred OSCE than conventional method. Highest satisfaction in both the groups was related to the equipment and the lowest satisfaction was related to the time allotted to each test section.

Written test assesses only student's cognitive ability and cannot evaluate the student's actual behavior in clinical setting. OSCE is one of the best methods for student evaluation. It emphasizes on learning practical skills rather than the acquisition from books and notes of large volumes of factual information and as such provides a suitable tool for improvement of undergraduate education in nursing. Therefore, there is an imperative need to adopt implementing it and taking into consideration studying students' satisfaction with it in addition to assessing their clinical performance.⁶

Objectives of the Study

The objectives of the study were:

- To assess the clinical skills scores of student nurses by OSCE and traditional method of assessment related to antenatal examination
- To assess and compare the student nurses' opinion about assessment by OSCE and traditional method related to antenatal examination
- To assess and compare the student nurses' level of satisfaction regarding assessment by OSCE and traditional method related to antenatal examination

Methods and Material

The samples for the present study comprised of 68 B.Sc. (Hons) final year and P.B.B.Sc. final year student nurses of Rufaida College of Nursing, Jamia Hamdard, who have undergone maternal and child healthcare skills training at National Skills Training Centre – "DAKSH", Jamia Hamdard, and had been taught antenatal examination. The subjects were selected using total enumeration sampling technique and were randomly allocated into OSCE (34) and traditional group (34) using the lottery method. The tool was prepared by reviewing various literatures. The tool comprised of the following:

Part-I: Participant information sheet

It consists of four items, i.e., age in years, gender, previous marks in years and course.

Part-II: It consists of four tools.

Tool-1: Observational checklist to assess clinical skills by OSCE method. It consists of 6 stations, hand washing, weight monitoring and recording, blood pressure monitoring, urine testing for albumin and sugar, hemoglobin estimation and abdominal palpation and auscultation respectively.

Tool-2: Evaluation proforma to assess clinical skills by traditional method. It consists of 12 items.

Tool-3: Structured opinionnaire to determine the opinion of the subjects regarding assessment of clinical skills by OSCE and traditional method. It consists of 20 items, each with five alternative responses as strongly agree, agree, neutral, disagree and strongly disagree.

Tool-4: Satisfaction scale to determine the level of satisfaction of the subjects regarding assessment of clinical skills by OSCE and traditional method. It consists of 14 items each with five alternative responses as highly satisfied, moderately satisfied, neutral, less satisfied and unsatisfied. The tool was found to be valid with few corrections, which were duly incorporated and final draft of the tool was prepared. After obtaining formal approval from the

concerned authority, the pilot study was conducted in Rufaida College of Nursing, and National Skills Training Centre – “DAKSH”, Jamia Hamdard, New Delhi, on eight DGNM interns. Clinical skills of the OSCE and traditional group were assessed through observational checklist and evaluation proforma. Opinion and level of satisfaction regarding the OSCE and traditional method of assessment were assessed through the opinionnaire and satisfaction scale. The findings of the pilot study suggested that it was feasible to conduct the study. Thirty-four student nurses were assigned to each group who had undergone skill lab training at National Skills Training Centre – DAKSH and had been taught antenatal examination at Rufaida College of Nursing, New Delhi, selected using purposive sampling technique. Informed consent was taken from the study participants for participation in the study. Each study participant was given individual code number. Participant information sheet was filled by the study participants. In the first two weeks, clinical skills of Group 1 were assessed by OSCE and Group 2 was assessed by the traditional method of assessment by using structured checklist and evaluation proforma, respectively. In the third week, study participants were asked to fill the structured opinionnaire and satisfaction scale to assess the opinion and level of satisfaction regarding OSCE and traditional method. Comparison was done between both the groups’ opinion and level of satisfaction regarding OSCE and traditional method of assessment. The data was analyzed using

descriptive and inferential statistical methods. Descriptive statistics mean, percentage, frequency were used whereas inferential statistics Fisher exact test, Chi-square test and Z test were used. p value less than 0.05 was considered as statistically significant.

Results

Data presented in Tables 1, 2 and 3 shows that mean clinical skill score of study participants in OSCE (56.67) was higher than the traditional group (35.40). The calculated ‘Z’ value (39.09) was more than the table value of Z=1.96 at 0.05 level of significance, which indicated that there was a significant difference between mean clinical skill scores of OSCE and traditional group. In OSCE group 33 (97.1%) study participants had positive opinion and 1 (2.94%) was having negative opinion whereas in traditional group, 31 (91.17%) had positive opinion and 3 (8.8%) were having negative opinion. There was no significant difference between the opinion score of the study participants. Regarding level of satisfaction in OSCE group, 33 (97.1%) study participants were satisfied and 1 (2.94%) was unsatisfied whereas in traditional group 32 (94.11%) were satisfied and 2 (5.88%) were unsatisfied. To compare the level of satisfaction, Fisher’s exact test was applied and p-value was calculated as 0.834, which is more than 0.05 level of significance. This shows that there was no significant difference between the level of satisfaction of the study participants of both the groups.

Table 1. Mean, Standard Deviation, Mean Difference, and ‘Z’ Value of Clinical Skills Scores of Student Nurses in OSCE and Traditional Group Related to Antenatal Examination

Group	Possible Range of Score	Obtained Range of Scores	Mean Score	S.D.	Mean Difference	‘Z’ Test Value	p-value
OSCE group	0–60	50–60	56.67	2.28	21.27	39.09	0.0001*
Traditional group	0–60	30–40	35.40	2.22			

Z₍₆₆₎=1.96, *p<0.05, (Significant at 0.05 level of significance)

Table 2. Comparison of Frequency and Percentage of Student Nurses Related to Opinion regarding OSCE and Traditional Method

Category	Possible Range of Score	OSCE group		Traditional Group		Test Used	p-value
		Frequency	%	Frequency	%		
Positive opinion	60–100	33	97.1	31	91.17	Fisher exact test	0.834 Not significant
Negative opinion	20–60	1	2.94	3	8.8		

Table 3. Comparison of Frequency and Percentage Distribution of Student Nurses related to Level of Satisfaction regarding OSCE and Traditional Method

Category	Possible Range of Score	OSCE Group		Traditional Group		Test Used	p-value
		Frequency	%	Frequency	%		
Satisfied	43–70	33	97.1	32	94.11	Fisher exact test	0.3337 Not significant
Unsatisfied	14–42	1	2.94	2	5.88		

Discussion

In the present study, findings showed that there was a

significant difference between the mean clinical skills scores (56.67) of OSCE group and (35.4) of traditional group, i.e., scores of the study participants of OSCE group

were higher than the traditional group. Consistent to the present study, Eldarir et al.³ found in their study that there was high statistical significant difference between OSCE and traditional group ($p < 0.016$). Similarly, study conducted by Mondal et al.⁸ also showed that on comparing the two examination styles students did better in OSCE than in conventional examination with respect to mean total score ($p < 0.001$).

In the present study, the findings showed that both the groups in OSCE and traditional method had positive opinion 33 (97%) and 31 (91%) regarding OSCE and traditional method of clinical skills assessment respectively. In contrast to the findings of the present study, Raheel and Naeem⁹ found that a number of positive aspects of the OSCE exam were identified by students such as it provided practical and useful experience, perceived as having a positive impact on student learning and it evaluated a wide variety of clinical skills than conventional method. Another study conducted by Zare et al.¹⁰ also showed that 56.3% subjects stated that by OSCE they understood their weak and strong points, 87.5% showed highest positive opinions regarding OSCE than conventional method. Similarly, student nurses of both the groups were equally satisfied with OSCE (97%) as well as traditional method (94%) of clinical skills assessment.

In contrast to the present study findings, a study conducted by Lohakare¹¹ showed that the highest rate of satisfaction belonged to OSCE method in terms of course objectives, teaching level evaluation, increased decision-making ability than traditional method. Another study conducted by Ali et al.¹² also found that 75.9% state OSCE has been a fair assessment tool, 72.4% state it is comprehensive and with clear instructions (50%) and minimized the chances of failing (68.9%). Students' feedback confirmed their acceptance of OSCE as an evaluation tool for their clinical skills. Also the majority was satisfied with organization and administration of the OSCE.

The likely reason for similar opinion and level of satisfaction of two groups in the present study might be due to Hawthorne effect that all the students were aware of their participation in the study and wanted to present themselves in the best possible way.

Conclusion

The study revealed that there was no significant difference between the opinion and satisfaction scores among the student nurses related to OSCE and traditional method of assessment of clinical skills. But the clinical skill scores of OSCE group were higher than the traditional group. The study focused only on the evaluation regarding antenatal examination. Study participants' opinion and satisfaction scores might have been influenced by Hawthorne effect.

Conflict of Interest: None

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