

## **A comparative study of OSCE and traditional methods of evaluation in nursing: A narrative review**

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### **Abstract**

**Introduction:** Objective Structured Clinical Examination (OSCE) is a modern type of examination used in health sciences and it has been widely used in the assessment of students' clinical performance and skills competency. The Traditional method refers to a traditional way of evaluating a practical skills and knowledge of the students as in essay type i.e, written form, viva, procedure or history collection of the client.

**Aim:** The aim of this narrative review is to find information on the effectiveness of OSCE versus Traditional methods of evaluation.

**Methodology:** Types of studies- Descriptive- Comparative study, Quasi-experimental design- one group pre-test post-test design.

**Types of participants:** Nursing students.

**Setting:** Nursing Colleges.

**Outcome:** This narrative review result shows that OSCE method is an effective method for evaluation compare to a Traditional method.

**Keywords:** Objective structured clinical examination, traditional evaluation method, nursing

### **Introduction**

Assessment is vital in nursing education as it assesses the student's knowledge and skills. Objective Structured Clinical Examination (OSCEs) is a type of test which is used to assess an individual's clinical performance and skills. In an OSCE method, the individual is assessed and evaluated in accordance with various stations like interview, physical examination and provision of treatment to a patient (Elakkuvana, Nima, 2017) [1].

Objective Structured Clinical Examination (OSCE) is a form of performance based testing used to measure candidate's clinical competence. During an OSCE, candidates are observed and evaluated as they go through a series of stations in which they interview, examine and treat standardized patients who represent with some type of medical problem. The OSCE is an approach to the assessment of clinical competence in which the competence are assessed in a planned or structured way with attention being paid to the objectivity of the examination. (Marliyya Z, 2011) [2].

Traditional methods of evaluation are the methods which are used conventionally to produce a written document like exams paper, quiz, long essays etc. These methods are used in the Nursing practical examination to evaluate the students. The traditional methods of evaluation are used to assess the practical skills in terms of the viva, or oral practical examination which has various limitations. The

students are usually given a single task in the traditional exam to perform their skills practically which are evaluated based on the criteria of that task. In a traditional exam, students are given a single practical or clinical task to perform and their skills are tested solely on the basis of that particular task. Vivas are used in assessing the communication skills and theoretical knowledge which are not structured and lack objectivity. Due to this a lot of bias occurs and fail to evaluate the students fairly. Therefore, the traditional method creates a lot of biases, unstructured and lacks reliability (Shahzad A, Saeed *et al.* 2017).

A Descriptive comparative research study was done on 50 nursing students to find out the effectiveness of OSCE versus traditional method. The samples were first introduced to traditional method followed by OSCE. The knowledge questionnaire were used as a tool for traditional method and OSCE stations and rating scale were used in order to collect data and for checking the level of satisfaction. It was revealed that the average marks scored by the students in OSCE (18.74±4.395) were higher as compared to Traditional method (13.81±3.814) which was statistically significant. It further revealed that majority 74.4% of the students had strongly agreed that OSCE is fairer in comparison to Traditional method. It was concluded that OSCE was found to be a more effective assessment tool than traditional method (Saima Habeeb, Marfa Banoo, 2019) [4].

A comparative study was done on OSCE versus TEM with the use of an observational check list regarding antenatal care and opinionnaire on the usefulness of OSCE and traditional evaluation method (TEM) in order to assess the clinical skills and to get the opinion from the samples. The study revealed that the mean score of OSCE (65.4) was more than TEM (46.02) and the difference was statistically significant ( $P < 0.001$ ). It further shows that the students' opinion regarding the usefulness of OSCE was higher than traditional evaluation method (TEM). The study concluded that implementing OSCE will overweight the advantages of the TEM (Jelly, Sharma, 2017).

A comparative study was done to assess the knowledge regarding ABG analysis among B.Sc. Nursing on the effectiveness of OSCE versus Traditional method (essay type). For Traditional method the knowledge questionnaire was used as a research tool and OSCE stations were used to collect data. Rating scale was used for checking the level of satisfaction. The result of the study shows that 42.5% of the B Sc. Nursing students had good level of knowledge towards OSCE and 62% had average knowledge towards traditional method. Most of the students i.e. 65% agree with OSCE method in comparison of 30% of traditional method. The Mean score is 4.8 and 2.8 whereas the standard deviation 2.28 and 1.45 for both OSCE and Traditional method is  $2.8 \pm 1.45$ . There has been a significant difference between the mean scores of OSCE and traditional method ( $z=4.04$ ). The study concluded that OSCE method is more effective than traditional method (Simaranjit, 2017) [5].

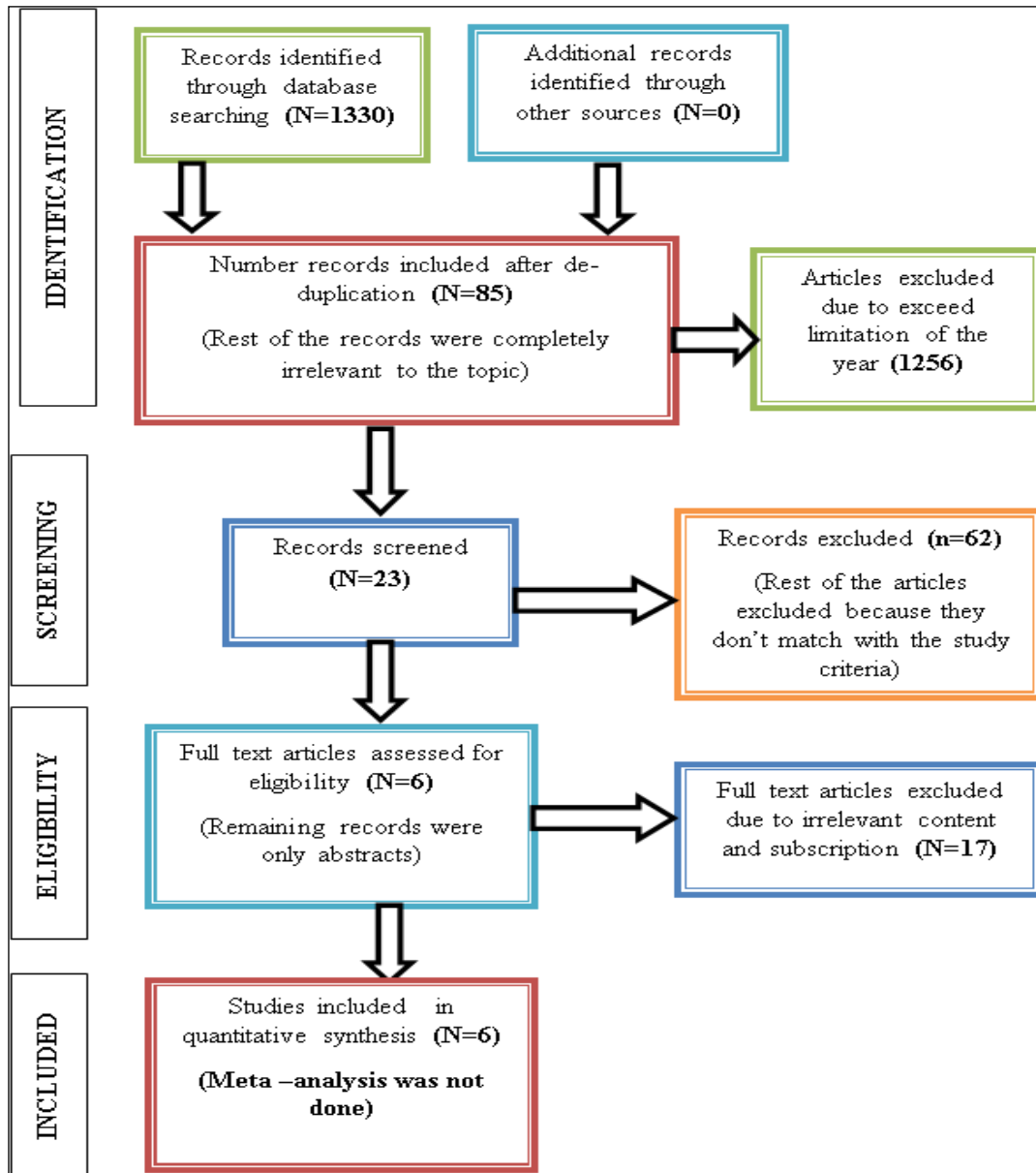
A Comparative Study was done in 2017 on 68 student Nurses to assess the student's opinion and satisfaction level regarding OSCE and Traditional Method of assessment related to Antenatal Examination in Ruffaida College of Nursing and National Skills Training Centre-DAKSH, Delhi. The study result shows that the mean score of the OSCE group (56.67) were higher than the traditional group (35.40) with ( $z=39.09$ ) at  $p<0.05$  level of significance. It further revealed that 97% in relation to 91% had positive opinion, 97% in relation to 94% had highest level of

satisfaction regarding OSCE and traditional method respectively. The study concluded that the opinion and satisfaction scores of the students was no significant difference related to OSCE and traditional method of clinical skills (Ritu, Seema *et al.* 2017) [6].

A study was conducted in 2015 on 70<sup>th</sup> year B Sc. Nursing students to examine the efficacy of Objective Structured Clinical Examination tool for improving B.Sc. Nursing students' antenatal examination. It was conducted in the University of Menoufia, Egypt. The result of the study shows that the mean and SD of OSCE before and after interventions shows that  $55.56 \pm 8.66$ ,  $113.74 \pm 14.54$ ,  $98.90 \pm 7.26$ ,  $75.64 \pm 8.12$  and  $21.56 \pm 3.62$  respectively compared with  $26.01 \pm 9.67$ ,  $58.50 \pm 19.77$ ,  $63.67 \pm 15.18$ ,  $41.96 \pm 15.23$  and  $14.89 \pm 3.46$ . The study concluded that before intervention there was statistical significant improvement in final B. Sc. Nursing students' antenatal examination practices skills in post test than pretest (Magda, Amal, 2015) [7].

A quasi experimental study was done to compare the effectiveness of OSCE versus traditional clinical student's achievement at maternity Nursing. Implementation of the OSCE was carried out on 190 students enrolled in maternity Nursing course- Cairo University. Students' achievement and perspectives were investigated. The results indicated that, there was high statistical significant differences between OSCE and traditional methods in the first and second trial ( $p < 0.016$ ), and ( $p < 0.000$ ) respectively. The highest rate of satisfaction belonged to OSCE methods of evaluation as the students reported that OSCE measured course objectives (70.6%), enhanced teaching level (71.6%), related theory to practice (71.6%), increased decision making ability (70.5%), enhanced methods of evaluation (70%), and made exam well developed (72%), than the traditional method. The mean score of students' opinion was  $(28.1 \pm 9.6)$ . The study concluded that the OSCE can be used as an appropriate method in evaluating nursing clinical skills (Eldarir, Shadia, *et al.* 2010).

**Materials and methods**



**Fig 1:** Prisma flow diagram of narrative review

**Findings**

The systematic search was done by formulating the terms OSCE and Traditional methods of evaluation in relation to the integrative with all it's synonyms and also according to search database. A manual PUBMED and Google scholar searches was done through Google search engine. An addition of 5 articles were found in the database. Initial search recovers 1330 articles over which 1256 articles were rejected due to irrelevancy. 85 articles were selected manually and 51 articles were rejected as a result of replication in the database. Replication was removed and reviewed 23 articles for acceptability. 17 more studies were rejected because of unreachable of the full text. Hence 6 articles were screened which includes comparative study.

**Discussion**

These findings were supported by a Descriptive-comparative study which was conducted by Simaranjit Kaur

in B Sc. Nursing students on the effectiveness of OSCE versus traditional methods of evaluation. It was reported that the Mean score was 4.8 and 2.8 whereas the standard deviation was 2.28 and 1.45 for both OSCE and Traditional methods of evaluation. There has been a significant difference between the mean scores of OSCE and traditional method ( $z=4.04$ ). The study concluded that OSCE method is more effective than traditional method and suggested that OSCE method should be used as a method of evaluation as it was more effective than traditional method of evaluation in Nursing.

**Conclusion**

There was a significant difference between OSCE method and traditional methods among the Nursing students. Therefore, OSCE method should be encouraged to use in Nursing education, service as a method of evaluation.

**Source of funding:** Self-funding

**Ethical Clearance**

- Prior permission was obtained from the internal ethical committee of Sharda University.
- Informed written consent was taken from each participant under the study. Objective of the study was maintained with honesty, privacy confidentiality and anonymity.

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