

# Assess the knowledge and practice regarding OSCE/OSPE in view of conducting a practical examination with OSCE/OSPE among final year BSc(N) students in Bishop's College Of Nursing at Dharapuram.

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**Abstract:** The OSCE is an approach of clinical competence in which the competences are assessed in a planned or structured way with attention being paid to the objectivity of the examination. **Objectives :** The objectives of the study are to assess the knowledge on OSCE/OSPE, to assess the practice on OSCE/OSPE in view of conducting a practical examination, to find the correlation between post-test knowledge and practice score on OSCE/OSPE and to find out the association between the post-test knowledge on OSCE/OSPE with their selected demographic variables. **Methods:** The research design was pre experimental one group pre-test, post- test design. Pre-test was conducted by using structured questionnaire which took 30 minutes for each student. Power point presentation regarding OSCE/OSPE was given. A practical examination was conducted with three workstations. Post test was conducted after 5 days of intervention and the data was analyzed. . **Results and Conclusion:** The mean pre-test knowledge score is 10.6 (SD+ 4.11) and post-test knowledge score is 12.6 (SD+3.53) respectively. The post- test mean score was higher than the pre-test mean score. The 't' value ( 2.01) is not significant at P<0.05 level. The finding of the study revealed that the administration of STP increases the knowledge and improves the skill in performing OSC/OSPE .

**Key Words:** Objective Structured Clinical Examination, Objective Structured Practical Examination, Workstations, Practical Examination.

## 1. INTRODUCTION:

“Assessment is at the heart of students Experience”  
-Brown and Knight (2000)

Examinations influence learning strategies of students. Realising the skills the domain is difficult to test with in either written or oral examination format. It was figured that in order to provide useful information on the student abilities as compared with the competencies being measured and in order to be consistent with curriculum goals and objectives, so new format of examination is adopted as OSCE/OSPE employing Standardised Patient (SP) who can offer the best tool for assessing skills even in the basic sciences.

The conventional clinical and practical examination is best with several problems. Although the marking should depend only on student variability, patient variability and examiner variability significantly affects scoring. The subjectivity involves may reduce the correlation co-efficient between marks allotted by different examiners for the same candidates performance be as low as 0.25.

Objective structured clinical examination / Objective structured practical examination is an assessment tool in which the components' of clinical competence such as history taking, physical examination, simple procedures, interpretation of lab result, patient management problems, communication , attitude etc. are tested using agreed check lists are rotating the students round a number of stations some which have observes with check list.

The OSCE is an approach of clinical competence in which the components of competences are assessed in a planned or structured way with attention being paid to the objectivity of the examination. It is a method of assessment where a student's competence is tested objectively rather than subjectively and the areas tested are carefully planned by examiners. OSCE is a form of multi-station examination for clinical subjects first described by Harden et al from Dundee (1975). It was first reported from Dundee and Glasgow. It was first adopted in North America in a wide spread manner. Then widely adopted in U.K in 90s. The OSPE examination ideally consists of about 15-20 workstations for the examination of a particular course. Number of stations may be reduced according to the higher number of students

to be evaluated. In order to maintain validity of exam, the time for each station should not be less than 4 minutes. The students are rotated through all stations and have to move to the next station at the bell.

Problem Based Learning includes OSCE/OSPE is now an accepted component of medical school programme in many parts of the world such as USA, Canada, UK, Middle East Asia and Africa Including South Africa.

## 2. OBJECTIVES:

- To assess the demographic variables of final year BSc (N) students.
- To assess the knowledge on OSCE/OSPE among final year BSc (N) students.
- To assess the practice on OSCE/OSPE in view of conducting a practical examination among final year BSc (N) students.
- To find the correlation between post-test knowledge and practice score on OSCE/OSPE among final year BSc (N) students.
- To find out the association between the post-test knowledge on OSCE/OSPE among final year BSc (N) students with their selected demographic variables.

## 3. HYPOTHESES:

H<sub>1</sub>: There will be significant relationship between knowledge and practice score in view of conducting a practical examination with OSCE/OSPE among final year BSc (N) students.

H<sub>2</sub>: There will be significant association between post knowledge score of OSCE/OSPE among final year BSc (N) students with selected demographic variables.

## 4. LITERATURE REVIEW:

### 4.1 FEATURES OF OSCE/OSPE

- Stations are short and numerous.
- Stations are highly focused; candidates are given very specific instructions.
- It emphasis in the application of knowledge rather than the recall of knowledge.
- 5 minutes is more for a single station.
- Stations of 18-20 in 2 hours will give high reliability.
- The observer assess using check list.
- The examination covers a broad range of clinical skills much wider than a conventional examination.
- The standardized patients will be skillfully educated, preparatory stations are provided for students to get idea about the station.
- Each student should attend all the stations.
- Rest stations are also available.

- N.Anathakrishnan (1993)

### 4.2 PROCESS OF OSCE/OSPE

The steps and process of OSCE/OSPE are given as follows,

#### a) REGISTRATION

- Show the examination invitation card (on identification card)
- Be reminded about the exam rules.
- Receive the exam envelope which contains ID badge, stickers, Pencil, a notebook (or) clipboard, pen.

#### b) ORIENTATION:

The second step is orientation. The orientation should be given regarding.

- Exam format, procedures and policies.
- Introduced to the team and team leader.
- Instructed about the starting station and how to proceed.
- The students should clarify the doubt in this stage itself.

#### c) ESCORTING TO EXAM POSITION:

This is the exam time. The students will be escorted to the station. The students should start the exam after a bell (or) buzzer announcement.

**d) STATION INSTRUCTION TIME:**

Station instruction time is allotted to read the instruction about the station situation, patient and required task. The instructions should be read carefully at the next bell buzzer enter the room.

**e) THE ENCOUNTER:**

The student should start performing the task with standardized patient. This is a 5-20 minute. Perform the required tasks. Stop at the next bell/buzzer.

**f) POST ENCOUNTER PERIOD:**

This is a question period. All OSCES will not possess post encounter periods. Some will have one (or) two minutes of the encounter period assigned to an oral question asked by the examiner inside the exam room. At the next long bell/buzzer, the first station ended as well as the next station has started.

**g) REPEAT STEPS 4 TO6:**

Steps d to f will be repeated until at the stations are covered. In this some rest stations can also be given.

**h) EXAM ENDED:**

After ending (on attending) all the work stations, the students will be escorted back to the dismiss area. The students will be asked to handle back all what they have received on registration period. The students should ask to stay without outside contact for some time for exam security reason.

- Hart (2001).

**5. MATERIALS:**

Materials consist of two parts

**Part I**

It consists of demographic variables such as the age, medium studied in XII standard and academic performance.

**Part II**

Structured knowledge questionnaire was used to assess the knowledge regarding OSCE/OSPE. It has 25 multiple choice questions. Each question has four options out of which one option was correct.

**Part III**

Structured practice checklists consist of 15 dichotomous questions with 8 positive and 7 negative statements.

**6. METHOD:**

**6.1 RESEARCH APPROACH**

The research approach used for the study was pre experimental research approach.

**6.2 RESEARCH DESIGN**

The research design was pre experimental one group pre test post test design.

**6.3 SETTING OF THE STUDY**

The study was conducted in Bishop's College of Nursing at Dharapuram.

**6.4 SAMPLE SIZE**

The sample size consists of 30 samples of IV year BSc (N) students who met the inclusion criteria are selected for the study.

**6.5 SAMPLING TECHNIQUE**

Random sampling technique (lottery method) was used to select the samples.

**6.6 DATA COLLECTION PROCEDURE**

A formal approval was obtained from the principal and class coordinator. Verbal consent was obtained from the final year BSc (N) students by explaining the purpose of the study before collecting the data. Information obtained was kept confidential. Pre-test was conducted by using structured questionnaire which took 30 minutes for each student. Power point presentation regarding OSCE/OSPE was given. A practical examination was conducted with three workstations. Workstation of pelvis with 15 statements, workstation of skull with 10 statements and workstation of questionnaire with 10 statements. Post test was conducted after 5 days of intervention and the data was analyzed.

## 7. ANALYSIS:

The Collected data were analyzed and tabulated using descriptive and inferential statistics and interpreted as by the objectives of the study, under the following headings.

### Comparison of pre-test and post test knowledge scores.

n=30

S.NO	VARIABLES	MEAN	STANDARD DEVIATION	't' VALUE	TABLE VALUE	INFERENCE
1.	Pre test	10.6	4.11	2.01	2.048	NS
2.	Post test	12.26	3.53			

df=28

P<0.05

The table depicts that the computed 't' value suggest that there is a not significant difference between pre-test and post-test knowledge.

### Correlation between post test knowledge, practice scores among students regarding OSCE/OSPE.

n=30

S.NO	VARIABLES	MEANS SCORE	TABLE VALUE
1.	Knowledge	0.969	0.36
2.	Practice		

df=28 Inference : Significant

The table depicts that there is a positive correlation (r=0.969) of knowledge and practice regarding OSCE/OSPE.

## 8. DISCUSSION:

- The data analysis showed that the mean pre-test scores of knowledge regarding OSCE/OSPE is 10.6(SD 4.11) and post- test mean score is 12.26 (SD 3.53). The post- test mean score is higher than the mean pre-test score. The 't' value was 2.01 which was not significant at(P<0.05).

This study was consisted with the study findings of Loan et al(2002) who reported that the OSCE result was high (0.91) and the performance varied significantly after training(P<0.0001)

- The data analysis should that the mean post- test knowledge score is 12.26 and practice score is 3.53. The standard derivation for post- test knowledge score is 3.58. The co-efficient of correlation is 0.96 and it is significant. So the hypothesis revealed that the knowledge and practice are positively correlated.
- Chi square values were calculated to find out the association between post- test knowledge scores regarding OSCE/OSPE with their selected demographic variables. The study reveals that there is no association between the demographic characteristics like age, medium and academic performed.

The study concluded by Pathiyil et al (2002) concluded that the demographic variables like age. 41 male (58.6%) and 21 female (41.4%) reveals more strong agreement over OSCE by male students (P=0.169) and female (P=0.044) and English medium was more favourable (p=0.004) other medium (P=0.022).

## 9. FINDINGS:

While comparing the pre-test and post-test knowledge score the data analysis showed that the mean pre-test scores of knowledge regarding OSCE/OSPE is 10.6(SD 4.11) and post- test mean score is 12.26 (SD 3.53). The post- test mean score is higher than the mean pre-test score. The 't' value was 2.01 which was not significant at(P<0.05).

While assessing the correlation between post-test knowledge scores, the data analysis shows that the mean post- test knowledge score is 12.26 and practice score is 3.53. The standard derivation for post- test knowledge score is 3.58. The co-efficient of correlation is 0.96 and it is significant. So the hypothesis revealed that the knowledge and practice are positively correlated.

Chi square values were calculated and it revealed that there is no association between the demographic characteristics like age, medium and academic performed.

## 10. RECOMMENDATIONS:

- Similar study can be replicated in larger samples thereby findings can be generalized to a large population.
- Comparative study can also be done between the effectiveness of other traditional practical examination in improving the practical skills.
- Longitudinal study can be conducted by using OSCE/OSPE.

## 11. CONCLUSION:

The finding of the study revealed that the administration of STP increases the knowledge and improves the skill in performing OSC/OSPE .

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