Effectiveness of OSCE vs. Traditional Method on Knowledge and Skill Regarding Cranial Nerve Assessment

Dr. Prof. Anitha Rajendrababu¹ & Mrs. Suja J. K²
¹Principal, Rajalakshmi College of nursing ²Professor, Rajalakshmi College of nursing.

Abstract: A comparative study to assess the effectiveness of objective structured clinical examination versus traditional method on knowledge and skill regarding cranial nerve assessment among 3rd year B.Sc. nursing students in Rajalakshmi College of Nursing, Chennai. Non – probability (purposive) sampling technique was used to collect data from 40 students of 3rd B.Sc Nursing studying in Rajalakshmi College of Nursing. A quasi-experimental post-test design only was chosen for the study. The sample were categorized into two group (experimental and control group) based on their previous academic performance equally into two group to prevent bias among them. Two methods of evaluation such as OSCE and traditional method was used for data collection. The knowledge and skill of cranial nerve assessment was assessed through 10 questionnaire and global rating scale in traditional method of evaluation for 20 samples (control group) and in OSCE 10 stations was arranged to assess the knowledge and skill through 5 questionnaires and checklist for other 20 samples (experimental group). Those collected data was analyzed on the basis of objective and testing of hypothesis by using descriptive and inferential statistics.

It was concluded that OSCE method was effective in assessment of clinical competency and theoretical knowledge.

1. Introduction

Cranial nerve assessment is the technique of assessing twelve cranial nerve. This assessment helps to find out the normal cranial nerve functioning, any deviations, or abnormalities. It is important that we should have good knowledge and skill for caring the patients with neurological abnormalities or neurological disorder. Cranial nerve examination involves a number of steps. Nurse should know which nerve is tested next and what must be perform for that nerve.

The traditional tools for assessment of medical students have mainly consisted of written exams (essay types, multiple choice, and short-answer type questions), bedside viva and clinical case presentation. These have focused on the “knows” and “knows how” aspects, i.e., the focus has been on the base of the miller’s pyramid of competence’ these methods of assessment however have drawn a lot of criticism over the years because of their inability to evaluate the top levels of the pyramid of competency in a valid and reliable manner.

To obviate the drawbacks of conventional clinical evaluation, objective structured clinical examination (OSCE) was first introduced by Harden in 1975, as a more objective, valid, and reliable tool of assessment. In an ideal OSCE, all domains of competencies are tested, especially the process part: the examination is organized to examine all students on identical content by the same examiners using predetermined guidelines; and a systemic feedback is obtained from both students and the teachers. OSCE is meant to test the “shows how” level of the miller’s pyramid.

Puravpatel, et al.,(2005) Aimed to document the incidence of cranial nerve injuries in head injuries, to correlate incidence with radiological findings, to assess recovery time with respect to signs and symptoms at initial presentation and to stress the importance of clinical examination in head injuries. They studied 794 consecutive cases of head injuries patients from May 2002 to November 2004. One hundred patients were found to have cranial nerve injuries and were included in this study. Clinical examination of cranial nerve was done meticulously on a daily basis. Patients were followed up at monthly interval for six months of time duration.

2. Materials and Methods

Research design used in this study a quasi-experimental post-test design only was chosen for the study. The sample were categorized into two group (experimental and control group)
based on their previous academic performance equally into two group to prevent bias among them. Two methods of evaluation such as OSCE and traditional method was used for data collection. The knowledge and skill of cranial nerve assessment was assessed through 10 questionnaire and global rating scale in traditional method of evaluation for 20 samples (control group) and in OSCE 10 stations was arranged to assess the knowledge and skill through 5 questionnaires and checklist for other 20 samples (experimental group) The tool used for this study was planned teaching Programme, demographic variable Performa and structured questionnaire to assess the knowledge on polycystic ovarian syndrome among adolescent girls.

The tool consists of two sections.

**SECTION I** This section consists of demographic data of adolescent girls studying in Rajalakshmi College of nursing

**SECTION II** This section consists two tools 1) -tool for OSCE- knowledge questionnaire to assess the knowledge of cranial nerve assessment each correct answer will be given a score of 1 and wrong answer will be given a score of 0. Observational check list to assess the skill of cranial nerve assessment

Tool for traditional method- knowledge questionnaire to assess the knowledge of cranial nerve assessment each correct answer will be given a score of 1 and wrong answer will be given a score of 0. Global rating scale to assess the skill of the cranial nerve assessment

Data collection was done for the period of one week. The permission was obtained from the chair person and Principal of Rajalakshmi College of nursing to conduct the study. The sample of the study consists of 40 nursing students, 20 students will be evaluated by OSCE and 20 students will be evaluated by traditional method of evaluation.

The samples who met the inclusion criteria were selected based on Non- probability purposive sampling technique. The investigator met the samples and explained the purpose of study. Researcher assured the confidentially and anonymity and consent was obtained from the samples.

3. Results and Discussion

The 3rd objective is to compare the objective structured clinical examination and traditional method of evaluation.

<table>
<thead>
<tr>
<th>Group</th>
<th>comparison</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>‘Z’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional OSCE</td>
<td>Post test (knowledge)</td>
<td>7.1</td>
<td>1.92</td>
<td>186.021</td>
</tr>
<tr>
<td>Traditional OSCE</td>
<td>Post test (skill)</td>
<td>8.05</td>
<td>1.74</td>
<td>0.118</td>
</tr>
</tbody>
</table>

Table 3.1 represents the Mean and standard deviation of post-test level of knowledge and skill in experimental and control group.

In traditional group the knowledge mean value is 7.1 and standard deviation is 1.92 and skill mean value is 8.05 and standard deviation is 1.74.

In OSCE group the knowledge mean value is 24.4 and standard deviation is 0.98 and skill mean value is 16.4 and standard deviation is 1.39.

Coovadia HM , (2010) conducted a comparative study on traditional assessment with objective structured clinical examination. A total of 170 fifth year medical students were assessed. The validity of OSCE were compared with three aspect of traditional assessment such as tutor’s mark, clinical assessment and multiple choice questions. The findings revealed that OSCE is more reliable and valid and it measures aspect of both clinical competence and theoretical knowledge. Traditional assessment found subjective and help the student upgrade more often than OSCE.

Abir, et al., (2012) aims to study purpose of studying the validity and reliability of OSCE in assessing nursing students’ skills showed that students considered OSCE as a very positive experience but at the same time stressful. Also in this study it has been mentioned that OSCE is a valid and reliable method for examining clinical skills of nursing students and is more accurate than the traditional method.

4. Conclusion

The t-value of OSCE and traditional group is 5.6. The above test conclude that OSCE is more effective to assess the level of knowledge and skill compared to the traditional method of evaluation. It revealed that the role of a nurse is to find out the best way in assessing the right method of evaluation that plays a considerable role in getting the appropriate results and making the right judgement. It is recommended to utilize the OSCE for this purpose is not to underestimate (or) deny the importance of assessing competency components such as critical thinking skills, interpersonal /communication skills and certainly not to deny the needs to ensure the
nursing students are able to view the patients as a whole.

5. References

5. Anandakrishna N. Objective structured clinical practical examination, journal of postgraduate medicine 1993; 39: 82.