

Feasibility and acceptability of self and peer evaluation in Objective Structured Practical Examination (OSPE)

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Abstract

Background: Objective Structured Practical Examination (OSPE) is being widely used in the assessment of clinical performance of students in healthcare profession. **Objective:** This study was conducted to find out the feasibility and acceptability of Self and Peer-Evaluation in Objective Structured Practical Examination (OSPE) in Psychiatric nursing among Nursing Students. **Methods:** A cross sectional, descriptive correlational study was conducted at Apollo College of Nursing, Chennai among 84 students of 3rd Year B.Sc Nursing in Psychiatric Nursing subject. Students were selected by using purposive sampling technique. OSPE consisting of 7 stations (using the predetermined check lists for each station) was conducted. Feedback was obtained from the students and teachers involved in evaluation, immediately after completing the evaluation by using 12 items feedback questionnaire. Data was analyzed by using Descriptive (Mean, frequency, percentage) and Inferential (t-test) statistics. **Results:** Self and Peer evaluation in OSPE in Psychiatric nursing among Nursing Students, was feasible to conduct. Most of the students and all the teachers have accepted these methods on its various aspects. Total mean acceptability scores of students and teachers were 40.43±6.33, 45.79±2.72/48 and 42.43±7.37, 44.64±1.76/48 in self and peer evaluation respectively. **Conclusion:** Students' and teachers' feedback are essential to implement any teaching learning activities including evaluation. Self and Peer Evaluation were feasible to conduct and well accepted by the students and teachers.

Keywords: acceptability, feasibility, Objective Structured Practical Examination (OSPE), peer evaluation, self evaluation

Introduction

Evaluation is an integral part of education which plays a crucial role in predicting the future performance of the students in any discipline. Clinical evaluation is one of the complex tasks of teachers and a challenge for nursing and other health professions.^{1,2} There are several means of evaluating students' clinical performance. However, in India most of the institutions are

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still using the same conventional practical examination, adapted long time ago. It is well known fact that conventional or traditional practical examination has several problems such as lack of reliability, validity, objectivity and outcome. Further, the subjectivity involved in this examination also affects the scores awarded by different examiners and performance of the candidates.^{3,4}

Objective Structured Clinical/Practical Examination (OSCE/OSPE) is an alternative

approach to the traditional practical examination. The OSCE/OSPE is an approach to student assessment in which aspects of clinical competence are evaluated in a comprehensive, consistent and structured manner, with close attention to the objectivity of the process.⁵ The OSCE was introduced by Harden in 1975.⁶ Since its inception, the OSCE has been increasingly used to provide formative and summative assessment in various disciplines worldwide.⁷ However its use in nursing particularly in India is limited due to several reasons such as lack of training and awareness among teachers, resistance for change, lack of resources including teachers (evaluators) etc. Thus there is necessity of introducing OSPE as part of clinical evaluation system, by overcoming the difficulties which are possible.

Present days, nursing education is moving towards developing student centered curriculum, with an increasing tendency to use self and peer assessment.⁸ Self and peer evaluation positively affects students' motivation and helps students to generally appraise their global performance.⁹ Self and peer assessments are being increasingly used in higher education to help students learn more efficiently. Self-assessment develops the self-judgmental ability of students through analysis of their own work.¹⁰ Often, the results of self and peer-evaluation are accumulated and considered at the same time.¹¹

Self and peer assessments also can be used with other assessment methods to improve its accuracy and holistic perspective. However these methods are not explored much by health professionals in general and in nursing particularly. There is not much evidence to support and models to implement these methods to practice in nursing. Success of any method of evaluation depends upon its feasibility and acceptability by the consumers (Students and teachers). Thus the purpose of this study was to assess the feasibility of self and peer evaluation and acceptability by the students and teaches on these methods. The result of this study provides

the foundation for further work in implementing the self and peer evaluation in OSPE as an integral part of clinical evaluation in nursing.

Methods

A cross sectional, descriptive correlational study was conducted at Apollo College of Nursing, Chennai, affiliated to Tamil Nadu Dr M. G. R Medical University involving 3rd Year B. Sc Nursing students in the subject of Psychiatric Nursing.

Approval of the study was obtained from the Institutional review board and Principal of Apollo College of Nursing. Eighty four female students and 14 teachers have participated in the study (Apollo College of Nursing admits only female students in Nursing). Students and teachers were selected by using purposive sampling technique. An OSPE - is a method of practical examination comprised of a series of stations through which all candidates rotate on a timed basis. In each station, the candidate is faced with a client, or simulated client, task or problem to perform specific functions. Candidate is assessed by the examiner using predetermined set criteria with check list and scoring key.

Training of teachers, students and simulated patients

For the OSPE in psychiatric nursing, the evaluation team consisted the teachers of department of the psychiatric nursing and other teachers who were available at the time of conducting OSPE and consented to be a part of OSPE team. All the faculties were trained on OSPE before conducting exam. Students were well informed on OSPE one week prior to the actual OSPE. In the beginning of the training session, students were again oriented about the nature of the OSPE and the process of the examination.

Fourteen second year post basic B.Sc Nursing students acted as simulated patients. Simulated patients were explained about the purpose and process of OSPE and their role as simulated patients.

Administration of the OSPE

In this study alternative approach in OSPE was used. OSPE consisted of seven stations, (five manned and two unmanned stations) in assessment of patients with psychiatric problems.

The OSPE answer book was prepared for the students for each station. Observation check lists were prepared for all the selected clinical competencies for each station and provided to the examiners after clear instructions. A standardized predetermined marking system was used in marking all OSPE answer booklets. There was a time keeper for maintaining the time and ringing bell accordingly for exchanging the role and moving into next station.

In manned stations, simulated patients were used. In unmanned stations situation or the tasks were given where the students had to respond in an answer booklet. Each manned station was further divided into fourteen sub-stations so that fourteen students could perform simultaneously in one station.

Eighty-four students of the class were divided into three groups. Each group of students was further divided into two, of fourteen students each so that when half of the group assessed the patients, the other half were peer evaluators. Thus, at each sub-station, there was a teacher-evaluator, a student-evaluator, a simulated patient and the student to be evaluated. Each student was allotted five minutes per station for performance (4 min) and evaluation (1 min). Once a student completed the performance at a station, she took the role of peer evaluator for the next five minutes, thus spending about ten minutes at each station.

Group I performed at station-1 and waited for the other two groups to complete activity at station-1. It took about 2 minutes for setting up the next station. The whole sequence was repeated for station-2 and so on. The total time spent for each manned station was about 32 minutes for all three groups together. Thus, it took about 160

minutes for all the groups to complete the five manned stations. During the waiting time, each group was also able to perform at the unmanned station and submitted the written answer papers for peer evaluation with check lists and guidelines. Teacher evaluation for unmanned station was done immediately after the exam using predetermined checklists. Thus, overall to conduct OSPE with seven stations, for a class of 84 students with 14 teachers, 2 hours and 40 minutes was required.

Thus OSPE was conducted which was rated by three evaluators (self, peer and teacher). Major components of the stations included history collection and mental status Examination. Enough space was provided between the stations for free movement. Each station carried five marks. Thus the total obtainable score was 0- 35 for each student.

At the end of the OSPE, 12 items 5 points acceptability (feedback) rating scale, responses ranging from strongly agree-4, to strongly disagree -1, (No score was given to the response-can't say) was provided to the students and teachers involved in evaluation to assess the acceptability of the self and peer evaluation in OSPE in Psychiatric nursing. Thus obtainable score of the questionnaire was ranged between 12 and 48. Reliability- (Split-half method) of the tool was 0.87 and 0.84 for self and peer evaluation respectively.

Data was analyzed by using descriptive (mean, standard deviation, frequency and percentage) and Inferential statistics (Independent 't' test). SPSS version 16 was used for the analysis.

Results

OSPE in Psychiatric Nursing was conducted for 84 third year B. Sc. Nursing students with 100 % response rate. Mean age of the students was 20 yrs. All of them were females as Apollo College of nursing admits only female candidates in Nursing.

Feasibility

After the implementation of self and peer evaluation, it was found to be feasible to conduct in future as a part of formative evaluation. There were no extra costs incurred in implementing these methods. Considering the lack of funds to pay for the simulated patients, investigators have requested fourteen second year Post Basic B. Sc Nursing students to act as simulated patients. Since it was also a learning experience for them, as Psychiatric Nursing is one of the subjects in their curriculum they have enthusiastically volunteered to act as simulated patients. All the teachers of psychiatric nursing department and other interested faculties available at the time of data collection consisted of teacher's evaluation team. All other arrangements and logistic supports were made by team of administration staff. College exam hall was utilized with prior permission for conducting the examination. In terms of time, it took two hours and forty minutes to complete the whole examination for 84 students with 7 stations OSPE. Thus it

was possible to implement the self and peer evaluation without extra expenditure.

Acceptability

With regard to students' views, (Table 1), majority of the students agreed on various aspects of self and peer evaluation such as comfort during exam (100, 98%), as learning experience (98, 95%), interesting (94, 98%), motivates for further learning (98, 99%), identifying weak areas (93, 100%) in self and peer evaluation respectively. Most of them also felt that exam was less stressful (80, 86%) assessment was fair. The assessment increases ability to critically analyze one's performance (93, 96%) which could be introduced in other subjects (88, 93%) and incorporated in formative assessment (94, 93%). They also positively viewed that, these methods makes them feel responsible for one's own learning (95, 95%), and help to gain confidence in facing the exams in future (98, 98%).

Table 1: Frequencies and Percentage of Students' Views on Self and Peer Evaluation

| S.No | Items | Self-Evaluation-Agree | | Peer Evaluation-Agree | |
|------|---|-----------------------|-----|-----------------------|-----|
| | | f | % | f | % |
| 1 | This method of evaluation makes one feel more Comfortable. | 84 | 100 | 82 | 98 |
| 2 | This method of evaluation is less stressful. | 67 | 80 | 72 | 86 |
| 3 | It was a good learning experience. | 82 | 98 | 80 | 95 |
| 4 | It can be incorporated into the formative evaluation. | 79 | 94 | 78 | 93 |
| 5 | It was a fair assessment. | 78 | 93 | 78 | 93 |
| 6 | This method increases ability to critically analyze one's performance | 78 | 93 | 81 | 96 |
| 7 | It is interesting. | 79 | 94 | 82 | 98 |
| 8 | It makes one feel responsible for one's own learning. | 80 | 95 | 80 | 95 |
| 9 | It can be introduced in all the subjects. | 74 | 88 | 78 | 93 |
| 10 | This experience motivates to learn further. | 82 | 98 | 83 | 99 |
| 11 | It helps to identify one's weak areas. | 78 | 93 | 84 | 100 |
| 12 | This method helps to gain confidence in facing the exams in future. | 82 | 98 | 82 | 98 |

With regard to teachers' acceptability, all of them (100%) viewed positively(responses as on all these 12 aspects in self and peer evaluation which indicated high acceptability of teachers on these methods of evaluation. (Responses

such as agree and strongly agree were clubbed together).

When acceptability scores between students and teachers were compared in self and peer evaluation, there was statistically significant

difference between students and teachers in self-evaluation (P=0.000). However, no statistically significant difference between students and teachers in peer evaluation (P=0.08) was founding this study (Table 2).

Table 2: Acceptability scores of Students and Teachers on Self and Peer Evaluation

| Method of Evaluation | Students' score ± SD | Teachers' score ± SD | 't' value | P value |
|----------------------|----------------------|----------------------|-----------|---------|
| Self-Evaluation | 40.43 ± 6.33 | 45.79 ± 2.72 | 5.34 | 0.000 |
| Peer Evaluation | 42.43 ± 7.37 | 44.64 ± 3.62 | 1.76 | 0.08 |

Discussion

The purpose of this study was to determine the feasibility and acceptability of self and peer evaluation among Psychiatric nursing third year B. Sc Nursing students. After the implementation of self and peer evaluation, it was found to be feasible to conduct in future as a part of formative evaluation. There were no extra costs incurred in implementing these methods as the available resources including the manpower of the institution was utilized for conducting these assessments. All the students and teachers have enthusiastically participated in the study as it was a new learning experience for them. It was also a great fun, humorous activity, and excellent teaching learning activity for students and teachers as well. Through these methods even team spirit was initiated and sustained throughout the process. In terms of time, it took only two hours and forty minutes to complete the whole Examination for 84 students with 7 stations OSPE. In case of Traditional practical Examination it would usually require 4-5 days to complete whole practical exam for 84 students. It indicates the fact that, even though OSPE with self and peer evaluation needs meticulous systematic organization it is feasible and desirable to implement with the team efforts, with the available resources and limited time.

Regarding Acceptability of the students, table 1, indicates that the OSPE with self and Peer evaluation is well accepted by the teachers and students. Majority of the students overwhelmingly viewed positively on almost all the aspects of these methods. These findings are consistent with findings of study conducted by Pierre et al (2005) where they have reported

acceptance of students on self-evaluation in OSCE in child health.¹²

The entire teachers' team involved in evaluation demonstrated excellent levels of acceptance on self and peer evaluation in OSPE.

When acceptability scores between students and teachers were compared in self and peer evaluation, there was statistically significant difference between students and teachers in self-evaluation (P=0.000). However, no statistically significant difference between students and teachers in peer evaluation (P=0.08) was found in this study (Table 2). It indicated the fact that even though majority of the students were very confident on peer evaluation, few students were uncertain about self-evaluation, which is demonstrated by responding in uncertain columns. Whereas it is interesting to note that, none of the teachers was uncertain about any of these items. This would have been the reason for difference in acceptability scores between students and teachers on self-evaluation even though majority of the students viewed positively on all the attributes of evaluation. This also indicates that some of the students even when they highly accept their peer as evaluators they are bit uncertain about value of their participation in evaluation. However when students' feedback is viewed independently, they have demonstrated high acceptability with acceptability scores 40.43±6.33/48 (84%) and 42.43±7.37/48 (88%) in self and peer evaluation respectively.

It is well recognized that assessment is catalyst for both curriculum change and student learning.¹² In this study, students and teachers recognized the value of these methods in OSPE evaluation. In addition self and peer assessment skills are needed to develop critical thinking.¹³ It is suggested that even if we do not employ the results of self- and peer- final evaluation score, in order to increase precision and responsibility in students to expand critical thinking, punctuality, communication skills improvement, self-learning and respect to others, self and peer-evaluation to be considered as clinical activities for students.¹⁴

However there are limited published studies on self and peer evaluation in Nursing particularly in OSPE, even though there are studies

available in other disciplines. Though, these findings cannot be generalized due to lack of supporting evidence, this study laid foundation for conducting self and peer evaluation in future. Further replication of the studies and dissemination of the findings will be helpful in generalization and utilization of the results.

Conclusion

The findings highlight the need for including self and peer evaluation as part of clinical evaluation in OSPE. High level of acceptance of students and teachers on self and peer evaluation also underscores the necessity of implementing these methods in others subjects also. It is also significant that no single evaluation method will meet all the criteria of evaluation. Thus to evaluate clinical competence, different methods are required. In this regard, the feasibility and acceptability results of these study shows that self and peer evaluation methods can very well included as a part of clinical evaluation particularly in OSPE.

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