ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 11, Issue, 08, pp.6239-6245, August, 2019

DOI: https://doi.org/10.24941/ijcr.36281.08.2019

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

CLINICAL SKILLS IN NURSING: OSCE/OSPE-A SCOPING SYSTEMATIC REVIEW TO DEVELOP GUIDELINES FOR IMPLEMENTATION

***Abin Varghese and Gigini George**

Bhopal memorial Hospital And Research Centre, India

ARTICLE INFO

Article History:
Received 16th May, 2019
Received in revised form
20th June, 2019
Accepted 11th July, 2019
Published online 31st August, 2019

Key Words:
OSCE/OSPE, Assessment, Nursing.

ABSTRACT

Background: The OSCE assessment tool has been used in the medicine field long back to assess the competence of students but currently it has been extensively used in nursing field to appraise the clinical competence of nursing students. **Method**: A systematic review was conducted to bring out the perception on OSCE from faculty and students and the complexities associated with it. An extensive review of nursing literature through different databases was conducted by 2 independent reviewers. **Results:** The faculty and students perceived OSCE as an effective tool for competency assessment among nursing students and a better evaluation tool over the Traditional Clinical Exam. The various attributes of OSCE; objectivity, skill mix, and well structured format were appreciated but the complexities in OSCE ; time allotted at different stations, student anxiety and the implementation cost were addressed as barriers. **Conclusion**: Guidelines for the conduct of OSCE has been developed from the review.

Corresponding author: **Abin Varghese**

Citation: Abin Varghese and Gigini George, **2019.** "Clinical skills in Nursing: OSCE/OSPE-A scoping systematic Review to develop guidelines for implementation", *International Journal of Current Research*, 11, (08), 6239-6245.

INTRODUCTION

The appraisal of clinical competence is an elemental issue in clinical health education: appraisal of clinical practice is long-standing and receives extraordinary attention in nursing education (Mater *et al.,* 2014). The concept of clinical competence needs to be elaborated. The competence has been defined in a holistic way by Australian Nurses and Midwifery Council (2005) as a "combination of skills, knowledge, attitudes, values and abilities that underpin effective and/or superior performance in a profession. Indeed the complex nature of competence most often pose a challenge to determine and segregate the effective assessment strategies that are able to measure all the attributes by maintaining validity, reliability and objectivity" (http://www.edcan.org). The key dimensions of competence in nursing education comprises mainly of the cognitive, affective and psychomotor domains. The psychomotor domain predominantly envisages the development of clinical skills with regard to the nursing profession(Brosnan *et al.,* 2006). However, objective evaluation of clinical competence in nursing students remains a major challenge for nurse educators due to limited sites for clinical placements, varying clinical hours, and no consistent assessment of practice tools (Crookes *et al.,* 2010). Furthermore the students clinical experiences are not equivalent because of varying exposure to different patients making it difficult to measure individual and program outcomes (Rentschler *et al.,* 2007). The clinical assessment strategies in nursing education has undergone heightened evolutions throughout the years beginning from the pre-1971 as classroom-based exhibit of practical skill, which was highly criticized due to concerns about transferability to real clinical situations, to the use of behavioral checklists in the 1970s, to continuous clinical assessment in the 1980s (Redfern *et al.,* 2002). The Objective Structured Practical/Clinical Examination (OSPE/OSCE) has earned popularity as a measure of clinical skills since its development in the 1970s (Bartfay *et al.,* 2004; El Nemer *et al.,* 2009). Objective structured clinical examination (OSCE) was introduced by Drs. Harden and Gleeson in 1975 as a method to evaluate the clinical competence of medical students at Dundee University, Scotland, United Kingdom. Even though OSCE originated from medical education, it has been used generously in nursing education worldwide (Shadia *et al.,* 2010). The main objectives of the OSCE model are to evaluate students' transfer of classroom and laboratory learning experiences into simulated clinical practice, and to objectively assess their clinical performance (Mc William *et al.,* 2012).Moreover the three domains of educational objectives: cognitive, affective and psychomotor can be assessed by OSCE. OSCEs serve as a platform where the students can demonstrate their mastery of clinical competencies by applying acquired knowledge to a given situation (Franklin *et al.,* 2005). The mode of conducting OSCE varies in different nursing institutions however a common pattern consisting of a circuit or series of short

assessment tasks (stations), each of which is assessed by an examiner using a predetermined, objective marking scheme is being utilized all over (Bartfay *et al.,* 2004). Student performance is assessed by examiners against checklist of detailed objective criteria relating to skill components (Brosnan *et al.,* 2006). The OSCE stations can be skill or knowledge assessment: The various competencies that can be checked includes a)infection control b)Health and safety-management of Needle stick injury, slips, trips, falls and so on. c) Resuscitation- CPR/defibrillation scenarios d)fire safety skills e)Medicines management f) Nasogastric tube placement g)Correct use of medical devices h)blood transfusion i)interpersonal or communication skills j)Professionalism k)practice based learning (www.nursingtimes.net/vol).

The number of OSCE examination stations vary from 12 – 15 or even 20 stations with an exit time ranging from 5-10 minutes per station. For credibility and objectivity, all the students to perform the examination gather, wait and start from a large hall and exit from an opposite door at the end of the assessment. It is thus expected that candidates yet to be examined should not have contact with those already examined. Candidates are earlier briefed on the movement in the examination hall and advised to switch off / stay without their phones until end of the exams (Boursicot *et al.,* 2005). Some stations in the OSCE use standardized patients (SPs), actors who use a script to pose as patients during a student encounter designed to create a real-world simulation. OSCE encounters are structured, well reasoned, and focused directly on meeting the competencies needed to ensure quality practice. SPs purposefully pretend to have a medical condition in order to provide nursing students with realistic, accurate, dynamic, and interactive training experiences (Adamo *et al.,* 2003; Mac Donald *et al.,* 2004). Interviews with SPs and physical examinations allow students to demonstrate assessment and the planning, implementation, and/or evaluation of care given in response to a single patient encounter (Eva *et al.,* 2004). The use of SPs can decrease stress for students, promoting a more relaxed environment for learning and evaluation (Bramble *et al.,* 1994). The modified version of OSCE includes the Observed Structured Practical Examination (OSPE) which is a performance based assessment used for the summative assessment of practical knowledge and skills (Soliman *et al.,* 2014). In particular the features of OSCE/OSPE includes a)A broad range of clinical skills are included in the assessment with adequate sampling of skills and content b)Short stations with time not exceeding 4-5 minutes c)numerous stations ranging from 12-20 d)Highly focused stations e)Pre-structured checklist/marking schemes e)objectivity in scoring f)Use of SPs/models for acute cases g) Decreased patient/examiner input thus increasing the validity of examination (Osaji *et al.,* 2005).The objective of the current study was to explore feasibility assessment of clinical competence of nursing students using OSCE.

MATERIALS AND METHODS

Inclusion and Exclusion Criteria: The following inclusion criteria was used to retrieve the OSCE literature: studies done from 2005 to 2017, published in English with full text availability, Nursing students and faculty members as study participants, OSCE/OSPE being the central theme. The exclusion criterion included review articles, opinion studies, unpublished research articles.

Search Strategy: Two independent reviewers screened the title, abstract; keywords of each reference identified by the search through different data bases such as PUBMED. ERMED, CINAHL, Google Scholar, JGATE, PROQUEST by using the key words-OSCE/OSPE, Nursing with further retrieving of the article by subjecting them to the inclusion and exclusion criteria. Differences in opinion of the reviewers were resolved by mutual discussion and the potential articles were retrieved with full text (figure 1). The outcome from different studies reveals that OSCE is an effective tool for the assessment of competencies among nursing students from the viewpoint of faculty and students. Majority of studies have used researcher developed questionnaire to get feedback and evaluation regarding OSCE from faculty and students. The traditional final examination was ranked as unsatisfactory by more than two third of the students with a mean of 25.3±18.1 while OSCE was ranked as very satisfactory to satisfactory by more than half of the students with a mean score of 49.8±18.3 which shows the negative perspective of students ‘regarding the traditional final examination (Delavar *et al.,* 2013). A major proportion of students displayed their positive feeling towards OSCE (Renee *et al.,* 2017). Participants documented feeling “much more positive” and “happy” about this style of assessment after they had completed it, they felt it was “fair” and they had “achieved” something.

The different attributes encircling OSCE had a favorable response from the students with respect to the clarity of the instructions on the exam(57%), the sequence of OSCE stations, the reflection of the tasks taught, well structured format(58%), realistic scenario(57%) and suitable time for each station (Alla *et al.,* 2016; Eman *et al.,* 2014). Furthermore an impressive percentage of more than three fourth of the nursing students felt OSCE should be part of clinical standardized teaching and an effective way to test nursing competencies (Nahed *et al.,* 2014; Wajed *et al.,* 2014; Abeer *et al.,* 2013). The objective nature of the OSCE assessment method has been highlighted in many studies in contrast to the old system of examination which is subjected to examiner bias. All the students face the same kind of questions and case scenarios maintaining the objectivity, reliability and validity of the assessment tool (Amira *et al.,* 2017; Eman 2014).Moreover the comprehensive nature of OSCE makes it a worthwhile assessment strategy whereby a wide variety of knowledge and skills can be assessed at the appropriate level (Abeer *et al.,* 2013). The various themes emerged from the qualitative studies includes; a) Student Anxiety b) Student, Nurse educator and environment Preparedness c)Assessment duration d) The Effectiveness of This Style of Assessment(e) Feelings Toward the OSCE (f) Assessor Interaction and (c) Skill mix (Evelyn *et al.,* 2008; Renee *et al.,* 2017).The anxiety of students has been a major concern in many of the studies included in the review. A good evaluation tool should always be stress free even though any kind of examination can be stress inducing in a moderate amount irrespective of the mode of examination. The majority of students assessed in different areas such as pediatric, obstetric, fundamental, medical surgical and critical care nursing (69%) in a study felt OSCE as a stress free exam (Amira *et al.,* 2017). However a considerable number of studies has brought out the stressful nature of OSCE felt by students with varying percentages such as fifty five, fifty and seventy (Alla *et al.,* 2016; Franklin *et al.,* 2005; Delavar *et al.,* 2013). In particular a reason being pointed out for the stressful nature of OSCE was the first time exposure of the students to OSCE assessment (Alla *et al.,* 2016).

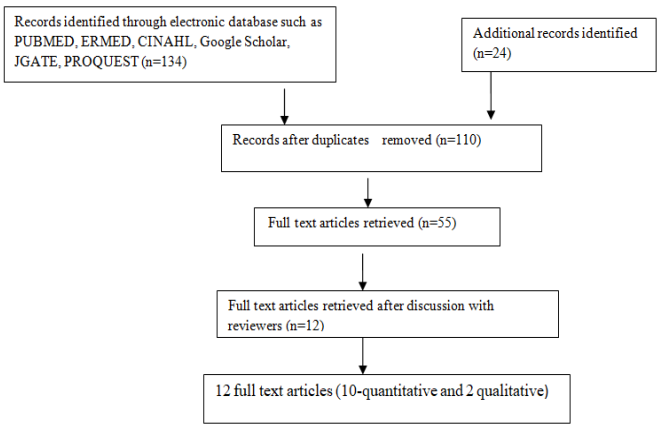

Fig. 1. Flow chart showing literature search for OSCE

Indeed the student anxiety emerged as a major theme from the qualitative study. Over half of the sample (n = 69) documented feeling "nervous" or "anxious" regarding the impending OSCE. The interaction between students and assessors had a role in contributing stress to the students. More than two thirds of the sample (n = 82) commented positively on the interactions between themselves and the RN assessing them. Words such as "supportive," "kind," and "understanding" were frequently mentioned in participant comments. However, not all assessor interactions were viewed in a positive way. Ten participants' comments were negative in terms of their allocated assessor, as they felt the attitude of the assessor resulted in them becoming more "nervous" and "stressed" (Renee *et al.,* 2017). The preparation of students in various arenas such as awareness of the skills under review, access to the marking criteria, opportunities to view skill stations, and reassurance from the facilitator before and during the OSCE assessment has been felt relaxing by the students. The time alloted to students at different stations was a major concern in almost all the studies. The participants from qualitative studies had mixed views about the time allotted to each station. Some participants felt 30 min per station was excessive, while others felt they required the allocated time to observe students' perform the skill and to complete the checklist (Evelyn *et al.,* 2008). Furthermore only 31.5 percent agreed on adequacy of time per station, and twenty six students requested to increase the time alloted to each station. The clinical instructors commented on having more parallel stations so that many students can be evaluated at a time. Comments from some clinical instructors further stated that: 'need to provide more time for students', 'some stations takes more than planned and some takes less', while other suggested that: 'procedures/competency that requires a longer time should be separated from those procedures that require less time'. Moreover a time limit of six minutes per station was felt unsatisfactory by students (Delavar *et al.,* 2013).

DISCUSSION

The current systematic review has addressed various concerns set forth by the assessment tool- OSCE from the perspective of nursing students and faculty. The popularity of OSCE resulted from concerns that were raised about the traditional clinical and oral examinations used for assessing clinical competence. The concerns were triggered by the discovery of low correlations between examiners mark allocation, which resulted in unacceptable reliability. However, change in some parts of the world took long to occur due to a general lack of an optional assessment method for clinical competence (Rushforth *et al.,* 2007; Levettte *et al.,* 2010)).The study included in the review done by Eman Ali, *et al* (2014) revealed that there was a statistically significant difference between the mean of Traditional Clinical Exam (TCE) score and the mean of Objective Structured Clinical Exam (OSCE) score and accepted normal distribution curve of the student's grades. The findings are congruent with Mondal *et al*. (2012) who compared the two examination styles and showed that students fared better in objective structured clinical examination than in conventional examination with respect to mean total score ($p < 0.001$) as well as mean percentage score (Mondal *et al.,* 2012). The OSCE assessment has vanquished TCE in terms of its uniformity in the method of assessment and is being supported by studies in the review done by Alla *et al.,* 2013,Amira *et al.,* 2017 and Eman Ali *et al.,* 2014 whereby 90 percentage,64 percentage and 79 percentage of participants agreed on the objective nature of OSCE respectively. It is also emphasized in the article by Rushforth, 2007, that "In an OSCE, all students are assessed using exactly the same stations with the same marking scheme to make the assessment of clinical skills more objective rather than subjective". The evaluation of nursing students during a practical examination carries high variability in terms of the opportunities for assessment and the skills of the examiners in the traditional clinical exam. This means some students face more difficult examinations than other students which raises questions of the uniformity of in-situ exams. These observations would indeed support the suggestion that a multimethod approach offered by OSCE to assess the different domains of competence.

The all-inclusive nature of OSCE has been very well appreciated in the study by Evelyn, 2008 in the review where the findings indicate that; "Every student should be assessed performing a range of skills and the skills assessed should be the same for every student. This ensures equitability and provides assessors with greater confidence in the OSCE process" (Hala *et al.,* 2012). McWilliam and Botwinski ,2010, further, stated that "evaluation of nursing students' clinical competencies in a wide array of situations is essential to the educational process because students are exposed to various patient health issues in the clinical area." Mitchell *et al.,* (2009) & MC William *et al.* (2010) added that " to ensures acceptable reliability and content validity of the examination, a recurring recommendation in the literature is to include a larger number of short stations". The time limit allocated to different stations was a major attribute edged out by many studies in the review (Hala *et al.,* 2012;Evelyn *et al.,* 2008;Delavar *et al.,* 2013).The students and faculty had different view points on the time allocated to various stations. The findings are congruent with study done by Awaisu *et al.* (2007) who found about 46 percentage dissatisfied with time allocated per station and explained that it was practically difficult to allocate different time limits at different stations during the OSCE. The difficulties on the part of the students in managing time during OSCE stations might be related to different factors including student's immaturity, lack of training in time management (Ward *et al.,* 2006).In particular the cognitive and psychomotor domains assessed in nursing education varies from simple to complex so the time limit for different stations should be based on the complexity of the domains assessed. Furthermore the study by Alnier, 2003 stated "duration of a station should depend on the nature of the skill". Preparation and familiarization with the OSCE process is recognized as a significant issue within the literature.

Table 1. Summary of reviewed articles

Author And year of publication	Country	Objectives of study	Methodology			Outcome
			Design/ Approach	Participants	Tools	
Amira MS, 2016	Egypt	To evaluate the performance and feedback of undergraduate nursing students about OSPE.	Descriptive Cross-Sectional	400 nursing students	The OSPE feedback questionnaire by Pakhale et al. (23)	Students perceived OSPE as more organized, objective, structured, valid, and less anxious.
Chongloi N et al. 2016	India	To determine nursing students' attitudes towards OSPE.	Descriptive Cross sectional	252 undergraduate nursing students	OSPE attitude questionnaire with 28 item likert Scale	Students felt that OSPE was fair, useful, good, effective, exciting, interesting, practical and skill oriented
Alla AA, et al,2016	Sudan	Student's Perception about OSCE in the Basic Nursing Course.	Descriptive cross sectional	60 first year B.Sc students	Pierre et al OSCE evaluation questionnaire(26)	The OSCE appears to be useful due to its objectivity and fairness. Stress could be decreed logically and familiarizing the students with the condition and limitation of the OSCE through practice during the condition.
Wajed H,2014	Saudi Arabia	To explore faculty's' perceptions towards OSCE	Descriptive cross sectional Study	20 Faculty members	Self developed questionnaire	Overall, OSCE was perceived very positively and welcomed by the faculty members.
Nahed MA, 2014	Egypt	Students' perception toward OSCE as a training and evaluative tool.	Quasi experimental	150 nursing students	Self developed questionnaire on students' perception of OSCE as an evaluation tool and training tool	60% agreed OSCE as a good evaluative tool.
Beckham,2013	USA	Examined the relationship between family nurse practitioner (FNP) students' scores on (OSCE) and faculty assessment of clinical skills.	Retrospective longitudinal design	52 family nurse practitioner students	Standardized scoring tool	OSCEs found to be effective in family nurse practitioner course.
Eman Ali ,2014	Saudi Arabia	Comparison of clinical performance by using OSCE and Traditional Clinical Examination	Quasi experimental	100 students	Adapted Pierre et al OSCE feedback questionnaire	Students preferred OSCE as a valid and reliable method of assessment.
Hala M M, etal, 2012	Saudi Arabia	To evaluate and analyze the perception of students as well as clinical instructors about OSCE.	Survey	73 nursing students and 16 clinical instructors.	Self developed clinical Instructors' Perception Questionnaire and modified Pierre et al questionnaire	Students were satisfied with OSCE as an assessment strategy and appreciated the administration and structure Clinical instructors percieved OSCE as effective in evaluating competencies.
Evelyn Byrne et al,2008	Ireland	Nurse educators' experiences and perspectives of assessing students' clinical competence using an OSCE.	Qualitative study utilizing Focused Group interview.	11 nurse educators	Focused group interview	Overall, nurse educators experiences and perspectives were very positive on OSCE.
Renee B et al, 2017	Australia	Qualitative evaluation of the first implementation of a medication administration OSCE	Qualitative	102 nursing students	Pre and Post OSCE questionnaire with comments section.	The The participants valued the OSCE experience and it gave students confidence in their capabilities for medication management.
Delavar MA et al,2013	Iran	To compare the perspectives of the students regarding the OSCE and traditional examination.	Descriptive cross sectional	52 midwifery nursing students	Self developed questionnaire	The students' perspective regarding the OSCE system was ranked as very satisfactory to satisfactory by more than half of the students over traditional clincal examination. (p=0.001).
Abeer Eswi, et al,2013	Saudi Arabia	To assess the Saudi nursing student's perception and feedback about OSCE examination	Descriptive exploratory Design	80 nursing student	Pierre OSCE evaluation questionnaire	Majority of students percieved OSCE as a realistic, fair tool assessing a wide range of learned materials.

Table 2. OSCE planning and implementation phases

Serial No.	Steps
1.	Enlisting the competencies in different domains across specialities (knowledge, skill and attitude) as per the curriculum.
2.	Development of cases/questionnaire based on identified competencies(Faculty discussion)
3.	Validating the cases and questionnaires (complexity should be assessed-Single skill and mixed skills assessed at various stations)
4.	Development of evaluation tools such as checklist and rating scale(should not be lengthy, Easy to administer)
5.	Planning for the venue-Big class room or simulation laboratory and setting time for different sations(Time based on skill assessed)
6.	Planning for the resources (faculty, support staff, simulated patients, stationery and other practical equipments)
7.	Training of simulated patients with written script.
8.	Mock OSCE(Formative evaluations to be done with OSCE)
9.	Conduct OSCE
10.	Evaluate students and faculty feed back
11.	Develop an OSCE bank of cases and scenarios for each individual institute

Comments related to preparation by the participants in the study by Renee *et al.* 2017 centred on the online availability of assessment information in the form of a step-by-step guide to OSCE processes, as well as the presentation of the marking criteria (Renee *et al.,* 2017). Moreover the study by Evelyn B, 2007 indicated that the students were appropriately prepared for the OSCE in light of the measures that were put in place prior to the examination such as, Students' access to the marking criteria which is supported by Anderson (2002); Evelyn *et al.,* (2008); Anderson *et al.,* (2002). The Nurse educator plays a significant role in the setting of OSCE environment and is an indispensable part of OSCE assessment. All the studies included in the review has highlighted the role of nurse educator in OSCE and is supported by studies done by Brosnan *et al* 2006 and Boursicot 2005 indicating the positive impact of the co-ordinator or facilitator on the OSCE process. The criteria of a good examination includes a relaxed environment for the students which will be percieved as a stress free milieu. The stressful nature of OSCE has been brought out by Franklin, 2005; Alla, 2016 and Delavar, 2013 in the review. There are multiple reasons for the stress experienced by nursing students undergoing OSCE. In one hand, possible explanation provided by Benseñor (2004), is that it becomes very embarrassing when student expertise in analyzing a clinical situation is assessed by an observer inside the room verifying if he/she is doing the right thing.

The presence of an observer may, in these cases, be a stressful situation. In the other hand, students expressed considerable concern that the time allocated to performance was inadequate and remarked that they were stressed by the lack of enough time to deal with the scenario in some stations (Bensenor 2004). Troncon (2004) explained: "it is conceivable that student stress could be related to fears concerning possible failure, and it could also originate from local cultural factors as students might tend to perceive assessment procedures and tests as something aiming only at rewarding a few students and punishing others". Tabatabaie (2005) reported that lack of practice at being examined in the OSCE format might also contribute to both the dissatisfaction with the time available and the perceptions of the OSCE as a highly stressful examination, particularly in competences not previously assessed in the 'traditional' examination. Finally, Iqbal *et al.* 2009 added that reasons for stress may also include receiving inadequate prior instructions, the newness of the format to students and their inexperience with it. Indeed the use of OSCE as a summative assessment has created stress among students so it would be preferable to use OSCE in the midterm exam as a preparation stage for students before the final OSCE. The role of standardised patients in reducing stress has been brought by Kurz *et al.* 2009 and Mc Laughlin *et al.* 2006.

Despite the stressful experience, students still view OSCEs as a valuable learning tool (Rennie *et al.,* 2006). Moreover any kind of examination can induce stress in students, OSCE is considered to be one of the assessment strategy that can allow students to exhibit their competencies in full potential (Ali *et al.,* 2012) . The cost economics associated with OSCE carries important implication in terms of its application in various nursing institutions. Budgeting and costs of the OSCE fall into the following major categories: standardized patient training and performance costs, examiner costs, support staff costs, supplies, space and equipment, catering, and psychometric analysis costs (Hodges *et al.,* 2002; Wallace *et al.,* 2002). The major barriers faced by facilitators in many studies in conducting OSCE were a lack of adequate real standardized patients and a lack of OSCE laboratories. Rushforth (2007) recommended that conducting OSCE requires adequate human resources. The personnel required standardized patients, examiners, scenario and checklist designers, and related executive faculty. All the personnel and faculty require full and detailed preparation before OSCE implementation. The poor student performance on the nursing OSCEs can be attributed to a number of nonstudent-related factors, including poor design of the nursing OSCE station (e.g., case scenarios, inadequately trained standardized patients, and gaps or deficits in curricular programming). All such factors need to be considered before the remediation process can be designed. Abeer *et al.,* 2013, in the review highlighted the student's suggestion for improvement of OSCE, 60 percentage of the students suggested that OSCE should be applied in all nursing clincal examination across the specialities, 28.75 percentage demanded clear instructions and 11.25 percentage mentioned revision related to all competencies and training for OSCE just before the examination (Abeer *et al.,* 2013).

Conflict of interest: The authors report no conflict of interest and the authors alone are responsible for the content of article. No funding has been recieved for the conduct of study.

Implications for Practice: The following guidelines can be summarized from the systematic review for the OSCE assessment (Table 2). Further research needs to be carried out in the various attributes of OSCE especially the cost effectiveness of OSCE, comparison of standardized patients and senior nursing students as simulated patients, effectiveness of video OSCE over the current OSCE method and correlation of OSCE with other methods of evaluation.

Conclusion

The assessment of competence through OSCE among nursing students has increased popularity among nurse educators over

the last decade considering the various advantages of OSCE such as: assessment of clinical competence for large samples of students, the examiner can specify in advance what has to be assessed, the use of checklist and rating scales encourages a more objective assessment, large number of examiners for each student and all students have the same, nearly identical patients, constructive criticism can be given in a more relaxed and neutral way than on a unit. The benefit of OSCE as observed by Rentschle *et al.,* 2005, is that it provides a formative evaluation for both students and the educational institute. Moreover the OSCE provided a platform where the students get exposure and opportunity to experience many more clinical situations than would be available in the natural clinical setting and receive feedback (positive and negative) about their clinical performances and helps to review their strengths and weaknesses. However the various limitations associated with OSCE are: The chances of easy fatigue that can be experienced by observer / examiner since the performance of several candidates need to be recorded as per lengthy check list, special care in organizing time for each station, breaking clinical skills into individual competencies is artificial and not meaningful and the huge cost involved in the resources needed for OSCE (Osaji *et al.,* 2005; Annabel 2007; Rentschler *et al.,* 2007). The nurse educators should be facilitators of learning and should utilize the innovative methods of evaluation-OSCE/OSPE for the graduate nurses and can nurture the real spirit of learning. It is envisaged that this article will help in the recognition of OSCE in the nursing curriculum.

REFERENCES

1. Mater, E., Ahmed,E., El Sayed, A., *et al.,* 2014. The impact of the Objective Structured Clinical examination Approach for Clinical Evaluation Skills on the Student's Performance in Nursing College. *World Journal of Medical Sciences* 11 (4), 609-613.
2. Australian Nursing and Midwifery Council., 2005. National competency standards for the registered nurse. http://www.edcan.org
3. Brosnan, M., Evans, W., Brosnan, E., *et al.,* 2006. Implementing objective structured clinical skills evaluation (OSCE) in nurse registration programmes in a centre in Ireland: A utilization focused evaluation 26 (2), 115-122.
4. Crookes, PA., Brown, RA., 2010. The development of a pre-registration nursing competencies assessment tool for use across Australian universities. Sydney, Australia: Australian Government, Office for Learning & Teaching. http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1724&context=hbspapers
5. Rentschler, D., Eaton, J., Cappiello, J., *et al.,* 2007. Evaluation of undergraduate students using objective structured clinical evaluation. *Journal of Nursing Education* 46,135-139.
6. Redfern, S., Norman, I., Calman, L.,2002. Assessing competence to practice in nursing: A review of the literature. *Research Papers in Education* 17(1),51-77
7. Bartfay., Rombough, WJ., *et al.,* 2004. The OSCE approach in nursing education: objective structured clinical examinations can be effective vehicle for nursing education and practice by promoting the mastery of clinical skills and decision-making in controlled and safe learning environments. Can Nurse 100(3),18-25.
8. El Nemer, A., Kandeel, N.,2009. Using OSCE as an assessment tool for clinical skills: nursing students' feedback. *Aust J Basic Appl Sci* 3(24),65-72.
9. Shadia, AE., Hanaa, AE., Hewida, AH., *et al.,* 2010. An introduction of OSCE versus traditional methods in nursing education: Faculty capacity building and students perspectives. *Journal of American Science* 6, 1002-1014.
10. McWilliam, PL., Botwinski, CA.,2012. Identifying strengths and weaknesses in the utilization of Objective Structured Clinical Examination (OSCE) in a nursing program. *Nursing Education Perspectives* 33,35-39.
11. Franklin, P., 2005. OSCEs as a means of assessment for the practice of nurse prescribing. *Nurse Prescribing* 3(1),14-23.
12. Bartfay, WJ., Rombough, R., Howse, E., *et al.,* 2004. Evaluation The OSCE approach in nursing education. *The Canadian Nurse* 100(3),18-23.
13. Brosnan, M., Evans, W., Brosnan, E., *et al.,* 2006. Implementing objective structured skills evaluation (OSCE) in nurse registration programmes in a centre in Ireland: A utilisation focused evaluation. *Nurse Education Today* 26, 115–122.
14. www.nursingtimes.net/vol 108 no.8/Nursing Times
15. Boursicot, K., Roberts, T., 2005. How to set up an OSCE. The clinical teacher 2(1),16-20.
16. Adamo, G.,2003. Simulated and standardized patients in OSCEs: Achievements and challenges. Medical Teacher 25(3), 262-270.
17. MacDonald, W., 2004. Standardized patients: Training and program issues. Paper presented at the meeting of Standardized Patient Training of the University of New Hampshire, Durham.
18. Eva, K., Rosenfeld, J., Reiter, H., Norman, G.,2004. An admissions OSCE: The multiple miniinterview. Medical Education 38(3), 314-326.
19. Bramble, K., 1994. Nurse practitioner education: Enhancing performance through the use of the Objective Structured Clinical Assessment. *Journal of Nursing Education* 33, 59-65
20. Soliman, H., Sheble, A., Shrief, W.,2014. Effectiveness of Simulation training on clinical Nursing Education and competence: Randomized Controlled Trial. *International Journal of Advanced Research.* 2(4),387-393.
21. Osaji Teresa, A., Opiah Margret, M.,Onasoga Olayinka, A.,2005 A tool for objectivity in general nursing examination in Nigeria. *J Res Nurs Midw* 4(3), 47-52.
22. Amira, MS., Nagwa, IA., 2017. Feedback of undergraduate nursing students about objective structured practical examination *Journal of Nursing Education and Practice* 7(3), 1925-4040.
23. Pakhale, S., Mahajan, A., Fating, A., *et al.,* 2012. Study of student's perception regarding increasing objectivity during practical examination in anatomy. *International Journal of Health Science and Research* 2(4),48-5.
24. Chongloi, N., Thomas, P., Hansaram, *et al.,* 2017. Attitudes of undergraduate nursing students toward Objective Structure Practical Examination: An Exploratory study, *International Journal of Nursing Sciences* 4(1),68-72.
25. Alla, AA., Mohammed, K. 2016. The Objective Structured Clinical Exam (OSCE): A Qualitative Study evaluating Nursing Students Experience, *International Journal of Science and Research* 5(3),2319-7064.
26. Pierre R, Wierenga A, Barton M, *et al.* 2004. Student evaluation of an OSCE in pediatric at the University of the

West Indies, Jamaica. *BMC Medical Education*. 4 (22): 1-7.
27. Wajed H, Sabeeb ZA. 2014. Perception of nursing faculty members on the use of objective structured clinical examinations to evaluate competencies. *International Journal of Science and Research,* 6(IV):21-26.
28. Nahed MA, 2Dr. Lila HO, Mervat HS *et al*. 2014. Effect of training by using objective structured clinical examination "OSCE" on the outcome of clinical training of nursing students enrolled in psychiatric and mental health nursing course, *International Journal of Current Research.* 6(9):8839-8846.
29. Beckham ND. 2013. Objective structured clinical evaluation effectiveness in clinical evaluation for family nurse practitioner students. *Clinical Simulation in Nursing* 9 (10):453-459.
30. Eman Ali 2014. The Impact of the Objective Structured Clinical Examination Approach for Clinical Evaluation Skills on the Student's Performance in Nursing College. *World Journal of Medical Sciences* 11 (4): 609-613.
31. Hala MM. Bayoumy,Yousri H. 2012. Objective Structured Clinical Examination (OSCE) – Based Assessment in Nursing: Students' and Clinical Instructors' Perception. *Journal of American Science*, 8(9):523-540.
32. Evelyn B, Siobhan S. 2008. Lecturers' experiences and perspectives of using an objective structured clinical examination, *Nurse Education in Practice* .8: 283–289.
33. Renee B,Maria M, Roy A. 2017. Introduction of undergraduate nursing students to an objective structured clinical examination. *J Nurs Educ.* 56(4):231-234.
34. Delavar MA, Salmalian H, Faramarzi M. 2013. Using the objective structured clinical examinations in undergraduate midwifery students *Journal of Medicine and Life*. 6(1);76-79.
35. Abeer E, Amany S. Badawy. 2013. OSCE in Maternity and Community Health Nursing: Saudi Nursing Student's Perspective. *American Journal of Research Communication* 1(3): 143-162.
36. Rushforth H E. 2007. Objective structured clinical examination (OSCE): Review of literature and implications for nursing education. *Nurse Education Today.* 27(5):481-490.
37. Levette JT, Gersbach J, Arthur C. 2010. Implementing a clinical competence assessment model that promotes critical reflection and ensures nursing graduates' readiness for professional practice. *Nurse Education in Practice.*11: 64-69.
38. Mondal R, Sarkar S, Nandi M *et al*. 2012. Clinical Examination (OSCE) and Conventional Examination (CE) As a Formative Evaluation Tool in Pediatrics in Semester Examination for Final MBBS Students. *Kathmandu Univ Med J.* 37(1):62-5.
39. Mc William P, Botwinski C. 2010. Developing a Successful Nursing Objective Structured Clinical Examination. *Journal of Nursing Education,* 49(1): 36-41.
40. Mitchell ML, Henderson A, Groves M, *et al* (2009). The objective structured clinical examination (OSCE): optimising its value in the undergraduate nursing curriculum. Nurse Education Today, 29(4): 398–404.
41. Alinier G. 2003. Nursing students' and nurse educators' perspectives of objective structured clinical examination incorporating simulation. *Nurse Education Today*. 23:419–426.
42. Awaisu A, Mohamed MHN, Al-Efan, QAM. 2007. Perception of pharmacy students in Malaysia on the use of objective structured clinical examinations to evaluate competence. *American Journal of Pharmaceutical Education,* 71(6): 1-8.
43. Ward H, Willis A. 2006. Assessing advanced clinical practice skills. *Primary Health Care Journal*, 16 (3): 22–24.
44. Anderson M, Stickley T.2002. Finding reality: the use of objective structured clinical examination (OSCE) in the assessment of mental health nursing students interpersonal skills. *Nurse Education in Practice.* 2: 160–168.
45. Brosnan M, Evans W, Brosnan E, *et al*. 2006. Implementing objective structured skills evaluation (OSCE) in nurse registration programmes in a centre in Ireland: *A utilisation focused evaluation. Nurse Education Today* .26:115–122.
46. Boursicot K, Roberts T. 2005. Practical Teaching – how to set up an OSCE. *The Clinical Teacher*. 2 (1):16–20.
47. Benseñor EM. 2004. How to evaluate the acquisition of clinical skills at medical school: A tough question. *Sao Paulo Medical Journal.* 122(1):12-17.
48. Troncon LE. 2004. Clinical skills assessment: limitations to the introduction of an "OSCE" (Objective Structured Clinical Examination) in a traditional Brazilian medical school. *São Paulo Medical Journal*. 122(1):12-17.
49. Imani M. and Tabatabaie, H. 2005. Is OSCE successful in pediatrics? *Journal of Medical Education*, 6(2): 153-158.
50. Iqbal M, Khizar B. Zaidi Z. 2009. Revising an objective structured clinical examination in a resource limited. Pakistani medical school. *Education for Health*. 22(1): 1-9.
51. Kurz J., Mahoney K., Plank L. and Lidicker J. 2009. Objective structured clinical examination and advanced practice nursing students. *Journal of professional nursing.* 25 (3): 186 – 191.
52. Mclaughlin K, Gregor L, Jones A and coderre S. Can standardized patients replace physicians as OSCE examiners? *BMC medical education J*. 2006; 6 (12): 1 – 5.
53. Rennie A, Main M. 2006. Student midwives' views of the objective structured clinical examination. *British Journal of Midwifery.* 14 (10): 602–607.
54. Ali G, Mehdi A, Ali H. 2012. Objective structured clinical examination OSCE as an assessment tool for clinical skills in Sohag University: Nursing Students' perceptive. *Journal of Environmental Studies.* 8: 59-69.
55. Hodges B, Hanson M, McNaughton N, *et al* 2002. Creating, monitoring, and improving a psychiatry OSCE: A guide for faculty. *Academic Psychiatry,* 26, 135-161.
56. Wallace J, Rao R, Haslam R. 2002. Simulated patients and objective structured clinical examinations: Review of their use in medical education. *Advances in Psychiatric Treatment,* 8, 342-350. doi:10.1192/apt.8.5.342
57. Annabel, J 2007. Students' perceptions of the OSCE: a valid assessment tool? *British Journal of Midwifery,* 15(1).
58. Rentschler, Eaton J, Cappiello J. 2007. Evaluation of Undergraduate Students Using Objective Structured Clinical Evaluation. *J Nurs Educ.* 46 (3): 135-139.

****