



Objective Structured Clinical Examination: An Evaluation of Radiography Students' Perception and Preference.

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ABSTRACT

Assessment of clinical training is of great importance when evaluating the learning outcomes expected of radiography students especially with increasing number of students enrolled and difficulties associated with the use of the traditional clinical assessment method for radiography student's clinical examination. The lack of objectivity, inability to test students' communication skills, the tendency of favouritism, non-standardization of the expertise of examiners as evaluators, and influence by the nature of the student's interaction with the examiner among others are the challenges of the traditional clinical assessment (TCE) methods compared to Objective Structured Clinical Examination (OSCE). The study is aimed at evaluating Radiography students' perception and preference for OSCE, as a clinical assessment method. The outcome of the study will be used during curriculum planning to motivate the adoption by Radiography training institutions and educational policy makers. A prospective cross-sectional survey approach was adopted and the participants were asked to complete a self-administered questionnaire at the end of the examination. A total of 124 participants were recruited into this study and accurately filled the questionnaire employed. Students' perception and preference to the OSCE were investigated. Eighty percent (80%) of the respondents showed higher preference of the OSCE organization, nature of examination, composition, scoring and expectation compared to the TCE. Eighty Seven Percent (87%) of the study population perceived that OSCE has good orientation and favourable perception to the attributes, organization and validity rate of the OSCE against the TCE. The study participants had favourably preference and perception over OSCE scores. The study results show that the majority perceived and preferred the OSCE as a valuable practical experience. About 85% believed that the OSCE tested appropriate skills, provided a true measure of essential clinical skills in radiography and opted for it to remain as an examination method in the department. Students' feedback on perception and preference suggest that the OSCE was a valuable tool and served to encourage its implementation within the undergraduate curriculum.

INTRODUCTION

Globally, radiography education has undergone enormous changes in order to produce a more effective teaching and clinical assessment methods (Pascual et al., 2011). These changes are evident in the curriculum, teaching methods, and even assessment methods (Sluming, 1996). An example is the development of a Bachelor's degree curriculum and transformation from the diploma curriculum in Nigeria. Most of these changes are however not unique to the radiography department alone, but rather, they appear as a response in the cycle of the re-engineering process in medical teaching and even healthcare (England, 2018). Boggis *et al.* (2010) described the need for students to participate in different clinical settings to practise radiography, and recommended that experienced radiographers should be involved in the clinical practice as they offer an important teaching resource. The Objective Structured Clinical Examination (OSCE) is one of those methods which have evolved as an assessment method of the clinical skills of the students and involve several structured clinical evaluation sessions (Almohiy and Davidson, 2011). Objective Structured Clinical Examination (OSCE) has been widely used and increasingly being used since it was developed. Research has shown that it is an effective evaluation tool to assess practical skills (Sloan et al. 1995). In many instances, the OSCE process has been adapted to test students from different healthcare related disciplines (Guillaume, 2013).

In assessment of the theoretical knowledge, multiple choice questions (MCQs) and written essays are usually employed while for clinical skill assessment, long cases and short cases are traditionally employed alongside with observation of practical activities and viva (Agarwal et al., 2010). Internationally, some universities, especially in the European, Asian and North American continents, have introduced the use of Objective Structured Clinical Examination (OSCE) in their assessment methods. Other methods of assessment include: worksheets, written assignments, oral and poster presentations, research exercises and self-reflective statements (Agarwal et al., 2010). Clinical assessment methods are holistic approaches and systematic methodologies for making inferences about the learning and development of students, a process by which teachers judge whether the learning outcomes of the courses are met (Agarwal et al. 2010). Generally, student's assessment helps in identifying the deficiencies in the students' knowledge and the lacunae in the training program.

Shailesh, (2011) defined Objective Structured Clinical Examination (OSCE) as 'an established, reliable, and effective multi-station test for the assessment of practical professional skills in an objective and transparent manner'. It was introduced by Harden et al. (1975) in a Scottish medical school in order to avoid the many disadvantages of the traditional method of assessment of clinical skills and since then, it has found increasing acceptance in

several medical disciplines chiefly because of its objectivity in assessment. Internationally, since Harden et al. (1975) introduced OSCE, several universities have adopted it as a form of assessment in their health – related departments. In Nigeria, it has been formally adopted by the nursing, medical and dental councils and is being used by several universities including Nnamdi Azikiwe University.

Almohiy and Davidson (2011), McDougall (2017), and Shailesh, (2011), all noted that this kind of traditional clinical assessment reduces the validity, objectivity, and reliability of clinical assessment methods. Several other drawbacks of the traditional method are that there may be unequal difficulty levels due to lack of uniformity in patient characteristics; all the important skills may not be tested; unequal time may be available to perform the procedures; and at times, patients may exhibit unease and noncooperation. Students too, have their grievances about this method, viz. feeling that what they did well went unobserved while other students were getting away with mistakes and perceiving a lack of clarity about what skill is being tested and the level of performance expected. Several studies (Agarwal et al. 2010; Dennehy et al., 2008; Harden et al. 1975; Marshall and Harris 2000; Morag et al. 2001) have reported OSCE as a better tool in assessing the competence of the students including problem-solving ability, critical thinking, and communication skills.

Based on these, it is believed that the OSCE method may also have a positive impact if applied in the assessment of radiography students within Nnamdi Azikiwe University and other radiography training institutions in Nigeria to create an enhanced student centred learning, perception and approaches needed to maximize learning output and enhance teacher satisfaction. The aim of the study is to evaluate Radiography students' perception and preference of Objective Structured Clinical Examination (OSCE), as a clinical assessment of method.

MATERIALS AND METHODS

A cross-sectional survey approach was adopted and the participants completed a self-administered questionnaire at the end of the OSCE examination. The study was conducted within the department of Radiography and Radiological Sciences, Faculty of Health Sciences and Technology, Nnamdi Azikiwe University, Nnewi Campus, Nnewi, Anambra State, Nigeria. The study population included all registered, eligible radiography students in their 5th year of study during the 2018/19 academic session, who participated in the Objective Structured Clinical Examinations of the 2018/19 academic session and Traditional Clinical Examination of 2017/18 Session at the department of radiography and radiological sciences, Nnamdi Azikiwe University. Selected Participants must have undergone clinical placement during the second semester of 2018/19 academic session, had practical experience of the traditional

clinical examination during the 2017/18 Session and Objective Structured Clinical Examination during the 2018/19 Session. After data collection, one hundred and twenty one (124) students accurately and voluntarily completed and returned the questionnaire. The study instrument was an adapted, culled and modified forty items, seven sectioned well-structured questionnaire assessing data of demographics, students' perception and preference of OSCE under the following domains using a four point scale as follows: from strongly disagree (score of 1) to strongly agree (score of 4). The sections focused on attributes, organization and validity rate of OSCE. The study questionnaire was revised and validity by expert's opinion. The questionnaire was distributed to and completed by a group of practising radiographers who are postgraduate students at Nnamdi Azikiwe University, Nnewi Campus on two separate occasions. The reliability coefficient of the scale used for this research was 0.724. A reliability coefficient greater than 0.70 confirms that the scale used in the study is reliable (Hair *et al.*, 2006). Ethical approval was received from the faculty of health science ethical review committee for the research study.

The data was analysed in line with the study objectives using the statistical package SPSS version 21 and presented in tables, figures and charts.

RESULTS:

In total, 124 participants were recruited into this study and accurately filled this questionnaire employed to evaluate Radiography students' perception and preference of Objective Structured Clinical Examination (OSCE), as a clinical assessment of method.

There are more females, 68(54.83%) than males, 56(45.16%). All respondents were in their final year of Bachelor's Degree in Radiography program at the Department of Radiography, Nnamdi Azikiwe University.

Perception of attributes of OSCE among respondents in this study

The results in table 1 shows that more than half (60%) of the respondents agree that they are aware of the nature of the OSCE, a little less than first percentile (22.6%) strongly agreed, while 11.3% and 5.6% disagree and strongly disagreed of not being aware of the nature of OSCE respectively. Knowledge area covered by OSCE examination indicates that 29% strongly agree there is a wide knowledge, 54% also agree while 16.1% and 0.8% does not agree and strongly agree of the wide knowledge gap area respectively. On the account of having more time for OSCE, about 46.8% is of the opinion that the OSCE requires more time while 29% strongly agrees; more so 19.4% and 4.8% does not think more time is needed with OSCE respectively.

Consequently, about 47.6% of the respondents seems not to hold the believe that the OSCE examination compensates students in some areas, about 25.8% strongly do not think that the OSCE examination compensates students in some areas while a couple (25.8%) of respondents holds the opinion the OSCE examination do compensates students in some areas. Similarly, about 46.8% are not aware of the amount of information contained in the OSCE examination while 21% holds a strong opinion that they don't know, and about 28.2% knows about the information contained in the OSCE examination. (See table 1 for details).

Table 1: Perception of attributes of OSCE by the participants

Item	Responses (%, n)			
	Strongly Agree	Agree	Disagree	Strongly Disagree
I am aware of the nature of the examination	28 (22.6)	75 (60.5)	14 (11.3)	07 (5.6)
There is wide knowledge area covered by the OSCE examination	36 (29.0)	67 (54.0)	20 (16.1)	01 (0.8)
I think that there is need for more time at OSCE stations	36 (29.0)	58 (46.8)	24 (19.4)	06 (4.8)
I think that the instructions given for the OSCE examination are clear	24 (19.4)	77 (62.1)	19 (15.3)	04 (3.2)
I perceive that the OSCE examination is well structured and sequenced	42 (33.9)	57 (46.0)	22 (17.7)	03 (2.4)
I am of the opinion that OSCE examination increase the chance of failing	37 (29.8)	67 (54.0)	19 (15.3)	01 (0.8)
I perceive that the OSCE is more stressful than other examination	02 (1.6)	29 (23.4)	61 (49.2)	32 (25.8)
I am aware that the OSCE allow students to compensate in some areas	01 (0.8)	32 (25.8)	59 (47.6)	32 (25.8)
I believe the OSCE highlights areas of weakness during the examination process	34 (27.4)	57 (46.0)	27 (21.8)	06 (4.8)
I think that the OSCE examination is more intimidating	33 (26.6)	71 (57.3)	16 (12.9)	04 (3.2)
I am aware of the level of information for the OSCE	05 (4.0)	35 (28.2)	58 (46.8)	26 (21.0)
I believe there is a wide range of clinical skills covered by the exam	31 (25.0)	74 (59.7)	14 (11.3)	05 (4.0)
I am of the opinion that the OSCE is fair	28 (22.6)	73 (58.9)	19 (15.3)	04 (3.2)

Perception of organization among respondents indicates that 41.9% and 45.2% agree and strongly agrees that OSCE have good orientation before examination respectively while 12.9% of the respondents do not agree the OSCE have good orientation before examination.

More than half (57.3%) of the respondents perceive that the quality of OSCE exam environment; rooms, set-up and lightening were adequate and another 26.6% holds a stronger opinion while about 16.1% do not think the quality of the OSCE exam environment are adequate. Similarly, about 46% agrees and 43.5% strongly agrees that there were available good equipment such as simulators used for OSCE examination while 10.5% holds a contrary view. (See table 2 for details)

Perception of validity rate of OSCE among respondents shows about one half (50%) believes the OSCE scores provide true measure of essential clinical skills in radiology while 33.1% also holds a stronger believes. More so, about 16.9% do not

believe that the OSCE scores provide measures of essential clinical skills in radiology. On the account of OSCE scores a reflection of performance level at exam 59.7% of the respondents agrees to this school of taught while 22.6% holds a stronger opinion and 17.7% of the study participants do not believe OSCE scores is a reflection of performance level at exam.

The participants perception of the OSCE being of a practical experience holds strong opinion among one half (54%) of the study population and another 29% strongly agrees the OSCE is a practical experience while 16.9% do not perceive the OSCE is a practical experience. About 46.8% agrees and 29% strongly agrees that student's personality bias will not affect OSCE scores while 24.2% believes that the student's personality bias will not affect OSCE scores. Similarly, 46% agrees and 33.9% strongly agrees that an examiner bias will not affect OSCE examination while 16.1% do not think an examiner bias will affect OSCE scores. (See table 3 for details).

Table 2: Perception of organization of OSCE by the participants

Item	Responses (%, n)			
	Strongly Agree	Agree	Disagree	Strongly Disagree
I had a good orientation of OSCE before examination	56 (45.2)	52 (41.9)	16 (12.9)	0 (0.00)
There is a proper announcement of venue and known to students before the OSCE	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.00)
I am aware that timetables were available and known to students before the OSCE	36 (29.0)	67 (54.0)	20 (16.1)	01 (0.8)
There was good revision of clinical procedures before OSCE	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.00)
I believe that the staff respond to questions related to OSCE before and after the examination	34 (27.4)	57 (46.0)	27 (21.8)	06 (4.8)
I perceive that the quality of OSCE exam environment, rooms, set-up, lightening etc were adequate	33 (26.6)	71 (57.3)	16 (12.9)	04 (3.2)
There was availability good equipment including simulators to be used for the OSCE examination	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.00)
I am of the opinion that the examiners are friendly	34 (27.4)	62 (50.0)	22 (17.7)	06 (4.8)
I am aware that the OSCE results were released on time	56 (45.2)	52 (41.9)	16 (12.9)	0 (0.00)

Table 3: Perception of validity rate of OSCE by the participants

Item	Responses (%, n)			
	Strongly Agree	Agree	Disagree	Strongly Disagree
I believe the OSCE scores provide true measure of essential clinical skills in radiography	41(33.1)	62(50.0)	18 (14.5)	03 (2.4)
I believe OSCE scores reflected envisage performance level at exam	28 (22.6)	74 (59.7)	15 (12.1)	07 (5.6)
I perceive the OSCE is a practical experience	36 (29.0)	67 (54.0)	20 (16.1)	01(0.8)
I think that students personality bias will not affect OSCE scores	36 (29.0)	58 (46.8)	24 (19.4)	06 (4.8)
I think that students gender bias will not affect OSCE scores	24 (19.4)	77 (62.1)	19 (15.3)	04 (3.2)
I think that an examiner bias will not affect OSCE scores	42 (33.9)	57 (46.0)	22 (17.7)	03(2.4)

The preference of OSCE attributes among respondents in this study

The results in table 4 shows that 46% agree that and 30.6 strongly agrees that OSCE examination is fair than TCE, while 23.4% does not agree that the OSCE examination than the TCE. On the account that there is a wide knowledge area covered in OSCE than TCE indicates that more than half (59.7%) of respondents agrees to this school of thought, 25% holds strongly to this idea while 15.3% of the study population holds a contrary opinion.

The opinion that more is needed at OSCE stations than TCE indicates that 41.9% of the respondents agrees to this idea and another 45.2% strongly agrees to this idea while quite a few 12.9% have a contrary view that no additional time were needed at OSCE stations than TCE. Similarly, more than half (54.8%) of the respondents would rather say that OSCE examination is well administered than TCE, 19.4% strongly holds to this view, 20.2% disagrees and 5.6% strongly disagrees. (See table 4.4 for details).

Table 4: Preference of OSCE attributes by the participants

Item	Responses (% , n)			
	Strongly Agree	Agree	Disagree	Strongly Disagree
I agree that OSCE examination is more fair than TCE	38 (30.6)	57 (46.0)	25 (20.2)	04 (3.2)
I fancy that there is wide knowledge area covered in OSCE than TCE	31 (25.0)	74 (59.7)	14 (11.3)	05 (4.0)
I would rather say that more time is needed at OSCE stations than TCE	56 (45.2)	52 (41.9)	16 (12.9)	0 (0.00)
I would rather say that OSCE examination is well administered than TCE	24 (19.4)	68 (54.8)	25 (20.2)	07 (5.6)
I would rather say that the OSCE examination is very stressful than TCE	02 (1.6)	28 (22.6)	61 (49.2)	33 (26.6)
I prefer to say that the OSCE Examination is well structured and sequenced than TCE	37 (29.8)	67 (54.0)	19 (15.3)	01 (0.8)
I prefer to say that the OSCE examination increased chance of failing than TCE	02 (1.6)	31 (25.0)	60 (48.4)	31 (25.0)
I fancy that the OSCE less stressful than TCE	28 (22.6)	74 (59.7)	15 (12.1)	07 (5.6)
I like the fact that OSCE allows students to compensate in some areas than TCE	36 (29.0)	67 (54.0)	20 (16.1)	01 (0.8)
I would say that the OSCE highlights areas of weaknesses than TCE	24 (19.4)	77 (62.1)	19 (15.3)	04 (3.2)
I prefer to say that the OSCE examination is more intimidating than TCE	02 (1.6)	29 (23.4)	61 (49.2)	32 (25.8)
I Cline towards students awareness of the level of information needed in an OSCE exam than TCE	42 (33.9)	57 (46.0)	22 (17.7)	03 (2.4)
I think preferably there is wider range of clinical skills covered in OSCE than TCE	37 (29.8)	67 (54.0)	19 (15.3)	01 (0.8)

4.5 Preference of OSCE organization among respondents in this study

One half (50%) of the study population and another 33.1% agrees and strongly agrees to the opinion that orientation exercise of OSCE is preferable to TCE before examination while 16.9% do not agree to having preference to orientation exercise of OSCE to TCE before examination. About 50% of the study respondents have preference for the revision of clinical procedures before OSCE than the TCE,

another 29% holds a stronger opinion to this view while 24.2% of the participants do not have preference with regards to the revision of clinical procedures before OSCE than TCE.

More than half (54%) of the respondents seem to love the idea that the use of simulators were in use in OSCE to TCE, another 29.8% holds strongly to this view while 16.1% do not think that the use of simulators in OSCE is better off to TCE. (See table 5 for details).

Table 5: Preference of OSCE organization

Item	Responses (% , n)				Total (% ,n)
	Strongly Agree	Agree	Disagree	Strongly Disagree	
I prefer the orientation exercise of OSCE to TCE before examination	41 (33.1)	62 (50.0)	18 (14.5)	03 (2.4)	
I favour the announcement of venues and information made known to students during the OSCE than TCE	28 (22.6)	74 (59.7)	15 (12.1)	07 (5.6)	
I think preferably that the OSCE timetables were available and known to students than TCE	36 (29.0)	67 (54.0)	20 (16.1)	01 (0.8)	
I prefer the revision of clinical procedures before OSCE than the TCE	36 (29.0)	58 (46.8)	24 (19.4)	06 (4.8)	
I incline to the fact that staff answered queries related to OSCE and TCE	24 (19.4)	77 (62.1)	19 (15.3)	04 (3.2)	
I fancy that the quality of OSCE rooms i.e set-up, lightening etc more than better than rooms and set-up facilities for TCE	42 (33.9)	57 (46.0)	22 (17.7)	03 (2.4)	
I like the presence and use of equipment including simulators present during OSCE to TCE	37 (29.8)	67 (54.0)	19 (15.3)	01 (0.8)	

4.6 Preference of OSCE validity Rate among Respondents in this study

The study participants had favourably (46%) preference over OSCE scores as they provide true measure of essential clinical skills in radiography and another 27.4% holds stronger opinion to this view while 26.6% of the respondents do not think same way. Similarly, more than half (54%) of the respondents believes that the OSCE scores are

better standardized than TCE and 29% of the study respondents holds stronger view while 16.9% do not think that OSCE scores are better standardized procedure to TCE. More so, more than half (57.3%) of the study participants strongly suggest that the examiner bias will not affect OSCE scores than TCE and with 26.6% holding a stronger view towards this thoughts while 16.1% believes that examiner bias will eventually affect OSCE scores compare to TCE. (See table 6 for details)

Table 6: Preference of OSCE validity rate by the participants

Item	Responses (% , n)				Total (% ,n)
	Strongly Agree	Agree	Disagree	Strongly Disagree	
I prefer favourably the OSCE scores as they provide true measure of essential clinical skills in radiography than TCE	34 (27.4)	57 (46.0)	27 (21.8)	06 (4.8)	
I incline to say that OSCE scores are better standardized than TCE	36 (29.0)	67 (54.0)	20 (16.1)	01 (0.8)	
I would rather say that OSCE is a more better practical experience than TCE	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.0)	
I desire that personality bias will not affect OSCE scores than TCE	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.0)	
I desire that gender bias will not affect OSCE scores than TCE	54 (43.5)	57 (46.0)	13 (10.5)	0 (0.0)	
I desire that examiner bias will not affect OSCE scores than TCE	33 (26.6)	71 (57.3)	16 (12.9)	04 (3.2)	

DISCUSSION

OSCE is gradually being recognized and adapted by medical faculties all over the world.(Pierre PB, 2004, Rasoulia M, 2007. Barman. A. 2005).Since its

inception in the 1970s, its use is spreading to other continents including Africa and particularly Nigeria. Dissatisfaction with previous methods of clinical assessment by both teachers and students led to a search for a more appropriate method and the

creation of OSCE by Harden and colleagues in 1975.(Barman. A, 2005)

The students felt the OSCE covers a wider range of topics than the TCE and allows them to make up for any areas they may have performed poorly. This is true to the extent that the student does not mix up the answers with the wrong questions. This is important as some complained of feeling stressed by the OSCE and not having enough time at the stations. This is similar to other studies where a few students made similar complaints, but most students did not perceive these as a problem. The pitfall is that unlike in the TCE where a student can be safely guided out of trouble, in the OSCE the examiners do not communicate with the students and so cannot correct an erring student.

A technique of student assessment has a huge impact on their study strategies, their performance and general attitude towards a subject. Faulty methods of assessment can lead to wrong decisions on the part of the examiners on the one hand and to the future activity of students including the welfare of the community whom they will serve in the future on the other hand. The students in this report, as in other reports, felt that OSCE was easier to pass and less difficult than TCE. Whether this implies that an easier and less difficult method of examination leads to the promotion of weak students who would have otherwise failed if a more difficult and challenging method of assessment was used is yet to be ascertained. This is also important because in real life, patients are not usually standardized, valid, reliable or objective but vary in all these areas from one patient to another and depend on the ethnicity (language barriers), gender and even religion of the doctors attending to them.

A study described OSCE as making students to manage patients in bits rather than as a whole individual and that study felt that OSCE is less holistic and is a shortcut of the real scenario of clinical practice, unlike TCE. The OSCE type employed in our institution is highly modified and standardized because it consists of various examination methods packaged into one. It will also be useful if the teaching methods can be reassessed with the intent to prepare students to sit for the OSCE.

The study findings indicate that more than half (60%) of the respondents agree that they are aware of the nature of the OSCE, a little less than first percentile (22.6%) strongly agreed. Studies by Entwistle et al and Ramsden in 1983 and 2001 respectively shows that over time student's have desired to achieve the highest possible grades by using well-organized and conscientious study methods and effective time management (Entwistle & Ramsden, 1983; Entwistle et al., 2001). Knowledge area covered by OSCE examination indicates that 29% strongly agree there is a wide knowledge, 54% also agree. According to study results, knowledge acquisition cannot be over emphasized, Ohagwu and colleagues have opined that Clinical skill acquisition begins during the third year of study Radiography programme and this training involves formal tutoring and practices (Ohagwu et al., 2016). The results

show that 46.8% is of the respondent's opinion that the OSCE requires more time while 29% strongly agrees to the same opinion. Instruction given for OSCE examination was seen by more than half (62.1%) of the respondents to be clear, 19.4% strongly agrees that the OSCE examination is clear. A study by Agarwal and colleagues (2010) reflects our results that the OSCE examination is clear and the clinical assessment methods are holistic in its approaches, inferences are made from systematic methodologies and the learning outcomes achieved. Similarly, radiography education has undergone enormous changes to become a globally effective training and clinical assessment tool (Pascual et al., 2011). Many (54%) of the respondent have opined that the OSCE examination have the chance of failing, 29.8% strongly holds the opinion that the OSCE examination is a failure while 15.3% do not hold such opinion that the OSCE examination increase the chance of failing.

We observed that perception of organization among respondents indicates that 41.9% and 45.2% agree and strongly agrees that OSCE have good orientation before examination respectively. According to the study by Abir. H and Mona Al-Sheikh (2017), they also found that the OSCE was fair examination tool compared to the traditional method among study respondents, more so, another set of study participants opined that OSCE provides a true measure of clinical skills (Lawrence and Selvan, 2019). However a study conducted three years earlier holds a similar opinion among student as over 91% of the respondents felt the OSCE examination was easier to pass compared to TCE (Ameh et al. 2014). Similarly 46% of the study participants believe that there was maximum revision of clinical procedures before OSCE while 43.5% holds a stronger opinion and 21.8% of the respondents disagrees that there are good revision of clinical procedures before OSCE.

Our study indicates that one half (50%) of the respondents believes the OSCE scores provide true measure of essential clinical skills in radiology while 33.1% also holds a stronger believes. Similarly, a study by Lawrence and Selvan indicates that the OSCE examination provides a true measure of clinical skills (Lawrence and Selvan, 2019). On the account of OSCE scores a reflection of performance level at exam 59.7% of the respondents agree to this school of thought while 22.6% holds a stronger opinion According to the study by Abir.H and Mona Al-Sheikh (2017) the OSCE was a fair examination tool compared to TCE among study respondents.

Our findings show that 46% agreed and 30.6% strongly agrees that OSCE examination is fair than TCE. Other studies show a similarity; the OSCE was a fair examination tool compared to TCE among study respondents (Abir. H and Mona Al-Sheikh, 2017). On the account that there is a wide knowledge area covered in OSCE than TCE indicates that more than half (59.7%) of respondents agrees to this school of thought, 25% holds strongly to this idea.

The study results shows that respondents have the opinion that orientation exercise of OSCE is preferable to TCE before examination, about 50% of

the study respondents have preference for the revision of clinical procedures before OSCE than the TCE, another 29% holds a stronger opinion to this view. According to Agarwal and colleagues (2010) OSCE examination is clear and the clinical assessment methods are holistic in its approaches. Similarly, OSCE has gained global recognition through effective training (Pascual et al., 2011).

More than half (54%) of the respondents seem to love the idea that the use of simulators were in use in OSCE to TCE, Studies done by Hatry in 199 and Poister in 2003 indicates that the number and type of assessment tool used depend on the organization's ability to collect data, the information's usefulness to decision-makers, and the indicators' relevance to the mission of the program (Hatry, 1999; Poister, 2003).more so, to track every activity becomes paramount (Thiel & Leeuw, 2002), and that together the indicators support the management process of the individual organization using them (Poister, 2003).

As observed the study participants had favourably (46%) preference over OSCE scores as they provide true measure of essential clinical skills in radiography and another 27.4% holds stronger opinion. Similarly, more than half (54%) of the respondents believes that the OSCE scores are better standardized than TCE and 29% of the study respondents holds stronger view. Almohiy and Davidson (2011) in their study in Australia opined that (82%) of the respondents indicated that the OSCE was an effective test of their radiography skills and knowledge, and believed that they were able to evaluate and care for a patient during the OSCE. Similarly, a study in India observed OSCE examination tool to be fairly valid and reliable tool for formative assessment (Lele, 2011). More so, more than half (57.3%) of the study participants strongly suggest that the examiner bias will not affect OSCE scores than TCE and with 26.6% holding a stronger view towards this thoughts. A study by Ameh and colleagues indicates that quite a good number of respondents (86.5%) felt students' personality, ethnicity and gender will not affect OSCE scores (Ameh et al. 2014).

CONCLUSION

The OSCE had adequate student support. It provided a pleasant learning experience for the students and it enhanced their practical skills. The participants believed that it tested appropriate skills; the OSCE scores provide a true measure of essential clinical skills in radiography and opted for it to remain as an examination method in the department. Students' feedback on perception and preference suggest that the OSCE was a valuable tool and served to encourage its use in the undergraduate curriculum.

Recommendations

1. There is need to extend this assessment to other end users especially the teachers.
2. To ascertain the effectiveness of the OSCE assessment tool, there is need for more visibility and scope of use among other disciplines
3. The sample population used may not be a true reflection of the entire students perception, hence there is need to increase the sample population in future studies.

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