



Nursing Students' Perception and Attitude towards OSCE exam

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Abstract

Introduction

The Objective Structured Clinical Examination (OSCE), introduced by Harden et al. in 1975, is a standardized method for assessing clinical competencies in nursing education. Despite its advantages, OSCE poses challenges such as high resource demands and the need for trained examiners. Understanding nursing students' perceptions and attitudes toward OSCE is essential, as it influences their learning experience and performance.

Objectives of the study

1. To assess the perception towards OSCE among nursing students.
2. To assess the attitude towards OSCE among nursing students.
3. To correlate the perception and attitude towards OSCE among nursing students.
4. To associate perception & attitude with selected demographic variables.

Methods

Quantitative research approach with a cross-sectional survey design was used. The population is nursing students of College of Nursing, Gulf Medical University. Total Enumeration Sampling technique was used and all nursing students from year 2, 3 & 4 were included. A Google survey was utilized to obtain consent, and collect the demographic data and tools to assess perception and attitude.

Results

Majority 126(84%) of students had a high perception of OSCE and most students 98(65.3%) had an excellent attitude toward OSCE, while 34.7% have a good attitude. A strong positive correlation (Pearson $r = 0.723$, $p < 0.001$) was found between perception and attitude. No significant association was found between perception, attitude and demographic variables except for Nationality showed a significant association with perception ($p = 0.023$)

Conclusion

The findings in this survey appear reassuring regarding students' perception and attitude about the validity, objectivity, comprehensiveness, and overall organization of OSCE as a method of evaluation

Key – OSCE, perception, attitude, nursing students



Introduction

There are several methods to assess clinical skills of medical & nursing students. Many of these assessment methods have the risk of being prejudiced and lack objectivity and structure, which is essential during examinations. With the intention of minimizing these limitations, Harden et al in 1975, introduced the objective structured clinical examination (OSCE), which has now become a standard assessment tool in undergraduate and postgraduate medical school training. It is also used in other fields such as nursing, dentistry, midwifery, and physiotherapy.¹

The objective structured clinical examination (OSCE) is a form of multi-station examination of clinical subjects. It is a modern type of examination often used in health sciences to assess clinical skills such as communication, clinical examination, Medical, and Nursing procedures/ prescriptions, exercise prescription, and Interpretation of results. Clinical assessment is a crucial part of Nursing. It helps in assessing nursing students; ensures competencies that are acts in the delivery of quality Nursing care.² OSCE is often used in undergraduate nursing education as a means to provide standardized and objective evaluation of clinical skills required for nurses' future professional activity. It aims to help students master different clinical skills and prepare them for an adequate response to specific problems through simulation of various practical scenarios. Students practice clinical skills in a safe and controlled environment under the supervision of a mentor. Since the mid-1970s, OSCE has been used to assess clinical skills of medical students. From then until today, it has been applied in evaluating different profiles including nursing students.^{3,4}

There are inadequacies in our curricula, and nursing faculties are facing challenges with clinical placements (both the number and quality of these placements); therefore, alternative methods of providing practice to students need to be considered. Simulated patient encounters and Objective Structured Clinical Examinations are two means to achieve needed practice in a safe environment. By using simulation, how students can practice and be evaluated within their clinical practice role in a safe, controlled environment. In addition, this practice can (a) enable students to increase the complexity of their understanding and their autonomy and (b) educate students about social accountability, health and gender equity, social justice, and human rights.^{4,5}

A transformative agenda comprising changes in the way students are taught fully harnessing the potential of information and communications technology (i.e., simulation) is necessary. Simulated patient encounters and Objective Structured Clinical Examinations are two means to achieve needed practice in a safe environment.⁵ While the OSCE has been found to be an effective method in clinical education and assessment, it may also induce high levels of anxiety in students due to its interactive nature. Several studies have documented that nursing students found the OSCE to be quite stressful, such that they were unable to perform well compared to their relative performance in the actual clinical environment. This is due to the pressure of observation by examiners as well as the time limit allocated for each skill.^{6,7} *Adequate preparation of students prior to the OSCE, determination of the appropriate time-frame for each station and encouragement of examiner's positive attitudes during the exam are recommended strategies for reducing OSCE-related stress and improving students' overall performance. Technical preparation, adequate orientation of examinee and examiners and redesigning of the skill laboratories for enhanced legitimacy are required for more efficient and effective conduction of the OSCE.*⁶



The nursing profession is characterized by the fact that a significant amount of time is spent on competency-related activities. The assessment of clinical competence is therefore an important issue in nursing education and the utilization of objective structured clinical evaluation for that purpose was considered to be very important in this study. Based on the above literature we see that there is a strong need to assess Nursing Students' Perception and Attitude towards Objective Structured Clinical Examination (OSCE)⁷.

A cross-sectional survey was conducted on final-year medical students, who participated in the final MBBS surgery. The study took place at the University of Ilorin, College of Health Science. The findings in this survey appear reassuring regarding students' perception about the validity, objectivity, comprehensiveness, and overall organization of OSCE in the department of surgery. The need to introduce OSCE early in the surgical curriculum is also underscored. The overall feedback was very useful and will facilitate a critical review of the process.⁷ A cross-sectional survey was conducted in Malaysia among bachelor of pharmacy students to assess the overall perception and acceptance of an objective structured clinical examination (OSCE), and to explore its strengths and weaknesses through feedback. The study concluded that students' perceptions and acceptance of the new method of assessment were positive. The survey further highlighted for future refinement the strengths and weaknesses associated with the development and implementation of an OSCE in the International Islamic University Malaysia's pharmacy curriculum.⁸ In a study conducted in Kuwait students reported that the OSCE was a positive experience as it provided them an opportunity to practice real life scenarios in a safe learning environment. The OSCE helped to identify the level of competency of students prior to graduation and areas to improve in the curriculum.⁹

A study was conducted in Beijing, China, to build an examination model relating to Fundamental Nursing based on OSCE, and put this examination model into practice, and then evaluate the reliability and validity of this examination model. The study concluded that OSCE is a reliable and valid assessment tool in <Fundamental Nursing. Meanwhile, it could inspire students' critical thinking and promote students' communication skills. Through successive application of OSCE in nursing education from the very beginning, it might also have some potential effect on the clinical performance.¹⁰ A Comparative cross-sectional study was conducted among 224 Female students (167 female students and 57 male students) in Egypt. The majority of respondents were identified to have positive attitudes towards OSCE as well as overall positive impression of the OSCE exam. OSCE is a reliable and valid assessment tool in the nursing profession. OSCE at the same time can inspire students' critical thinking and promote their communication skills. Through the continuous application of OSCE in nursing education from the beginning, it may have some potential impact on the clinical field.¹¹

Methods

Quantitative research approach with a cross-sectional survey design was used. The population is nursing students of College of Nursing, Gulf Medical University. Total Enumeration Sampling technique was used and all nursing students from year 2, 3 & 4 were included. A Google survey was utilized to obtain consent, and collect the demographic data and tools to assess perception and attitude.



Results

Description of selected Demographic Variables

Table 1: Frequency and percentage distribution of selected demographic variables (n=150)

Demographic Variables	Frequency	Percentage
Age		
under 18 years	9	6.0
18 - 21 years	87	58.0
>21 years	54	36.0
Gender		
Male	27	18.0
Female	123	82.0
Academic level		
2nd year	72	48.0
3rd year	37	24.7
4th year	41	27.3
English proficiency		
Beginner	12	8.0
Intermediate	76	50.7
Advanced	62	41.3
Nationality		
UAE	30	20.0
Asia	102	68.0
Australia	1	0.7
African	13	8.7
Others	4	2.7

Table 1 shows that 87(58%) came under age 18-21 years, 123(82%) were female, 72(48%) were from 2nd year, 76(50.7%) had intermediate English proficiency and 102(68%) were from Asia.

Description of perception regarding OSCE among nursing students.

Table 2: Frequency and percentage distribution of level of perception about OSCE among nursing students.

(n=150)

Level of perception	Frequency	Percentage
Low (0-18)	0	0.0
Medium (19-37)	24	16.0
High (38-55)	126	84.0

Table 2 shows that a total of 126(84.0%) of students showed a high perception (scores between 38-55), whereas 24(16 %) had a medium perception (scores between 19-37) and none of the participants exhibited low perception (scores between 0-18). This indicates that most students maintained a highly perception toward the OSCE examinations.

Description of attitude regarding OSCE among nursing students

Table 3: Frequency and percentage distribution of Attitude towards OSCE among nursing students.

(n=150)

Attitude	Frequency	Percentage
Poor (0-21)	0	0.0
Good (22-43)	52	34.7
Excellent (44-65)	98	65.3

Table 3 shows that a total of 98(65.3%) of students showed an excellent attitude (scores between 44-65), whereas 52(34.7%) had a good attitude (scores between 22-43) and none of the participants exhibited a poor attitude (scores between 0-21). This indicates that most students maintained a highly favourable attitude toward the OSCE examination.

Table 4: Mean and Standard Deviation of Perception and Attitude Towards OSCE

Variables	Mean	SD
Perception	43.22	6.216
Attitude	44.80	4.340

Table 4 shows that the Mean \pm SD of Perception towards OSCE is 43.22 ± 6.216 and Mean \pm SD of Attitude towards OSCE is 44.80 ± 4.340

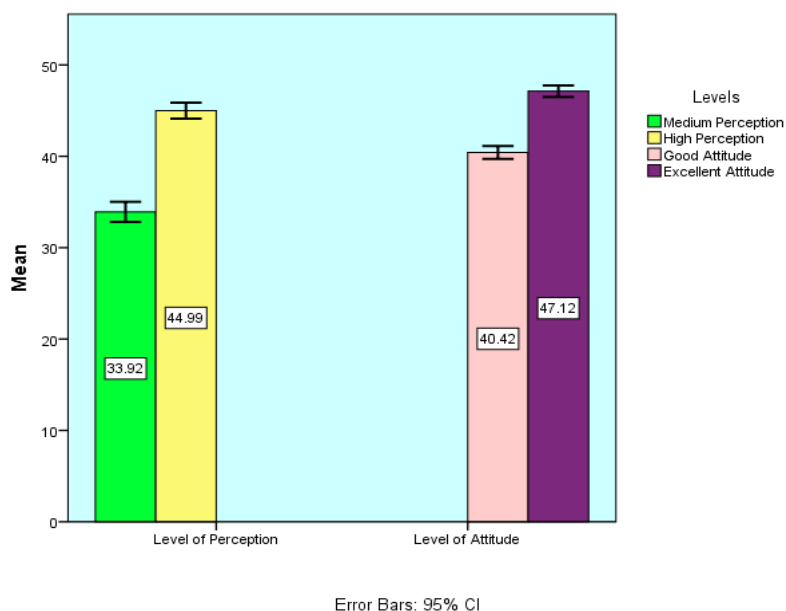


Figure 1: Compared mean levels of Perception and Attitude towards OSCE among nursing students

Figure 1 reveals the mean high and medium perception of 44.99 and 33.92 and excellent and good attitude of 47.12 and 40.42 respectively



Correlation between perception and attitude towards OSCE among nursing students

Table 5: Correlation between perception and attitude towards OSCE among nursing students.

Correlation parameters	Pearson R-value	P value
Correlation of Perception & Attitude towards OSCE	0.723	0.000 ***

***Significant at $p < 0.001$

Table 5 shows that there is a high and significant positive correlation ($r=0.723$, $p=0.00***$) between perception and attitude. This means that individuals with higher perception tend to also exhibit higher attitude towards OSCE.

Association of perception and attitude with selected demographic variables of nursing students

Table 6: Association of Perception about OSCE with selected demographic variable among nursing students.

Demographic Variables		Medium Perception		High Perception		Chi Square	
		f	%	f	%	χ^2	P value
Age	under 18 years	1	4.2	8	6.3	0.901	0.637 NS
	18 - 21 years	16	66.7	71	56.3		
	>21 years	7	29.2	47	37.3		
Gender	Male	4	16.7	23	18.3	0.034	0.853 NS
	Female	20	83.3	103	81.7		
Academic level	2nd year	10	41.7	62	49.2	1.166	0.558 NS
	3rd year	8	33.3	29	23.0		
	4th year	6	25.0	35	27.8		
English proficiency	Beginner	3	12.5	9	7.1	0.827	0.661 NS
	Intermediate	12	50.0	64	50.8		
	Advanced	9	37.5	53	42.1		
Nationality	UAE	4	16.7	26	20.6	11.384	0.023 **
	Asia	16	66.7	86	68.3		
	Australia	0	0.0	1	0.8		
	African	1	4.2	12	9.5		
	Others	3	12.5	1	0.8		

**Significant at $p < 0.05$

NS- Not significant

Table 6 shows reveals that there was no significant association between perception towards OSCE and most demographic variables such as age, gender, academic level, and English

proficiency. It shows that 2nd year had a better perception than 3rd & 4th year though not significant. However, a significant association was found between perception and nationality (0.023, $p < 0.05$), indicating that students from different national backgrounds had varying levels of perception about OSCE.

Association of Attitude towards OSCE with selected demographic variable among nursing students.

Table 7: Association of Attitude towards OSCE with selected demographic variable among nursing students.

Demographic Variables		Good Attitude		Excellent Attitude		Chi Square	
		f	%	f	%	χ^2	P value
Age	under 18 years	4	7.7	5	5.1	4.244	0.120 NS
	18 - 21 years	35	67.3	52	53.1		
	>21 years	13	25.0	41	41.8		
Gender	Male	12	23.1	15	15.3	1.390	0.238 NS
	Female	40	76.9	83	84.7		
Academic level	2nd year	24	46.2	48	49.0	0.779	0.677 NS
	3rd year	15	28.8	22	22.4		
	4th year	13	25.0	28	28.6		
English proficiency	Beginner	4	7.7	42	42.9	0.327	0.849 NS
	Intermediate	28	53.8	48	49.0		
	Advanced	20	38.5	8	8.2		
Nationality	UAE	8	15.4	22	22.4	3.672	0.452 NS
	Asia	36	69.2	66	67.3		
	Australia	1	1.9	0	0.0		
	African	6	11.5	7	7.1		
	Others	1	1.9	3	3.1		

NS- Not significant

Table 7 reveals that there was no significant association between attitude towards OSCE and demographic variables such as age, gender, academic level, and English proficiency. It shows that 2nd year had a better attitude though not significant.

Discussion

Findings related to Demographic Variables

In the present study 87(58%) came under age 18-21 years, 123(82%) were female, 72(48%) were from 2nd year, 76(50.7%) had intermediate English proficiency and 102(68%) were from Asia. A Comparative cross-sectional study was conducted in Egypt showed that among 224, students, 167 were female students and were 57 male students.¹¹

Findings related to perception towards OSCE among nursing students

The study revealed that a 126(84%) of students showed a high perception (scores between 38-55), whereas 24(16 %) had a medium perception (scores between 19-37) and none of the participants exhibited low perception (scores between 0-18). This indicates that most students maintained a highly perception toward the OSCE examinations. The Mean \pm SD of Perception towards OSCE was 43.22 ± 6.216 . The mean of high and medium perception was 44.99 and 33.92 respectively.

In a similar study in Egypt showed that students had a positive overall impression of the OSCE exam with a Mean and SD of 41.3 ± 12.7 .¹¹ A study was conducted among 300 nursing students at Puducherry, India, the mean perception score was 97.08 and 96.22 for the 3rd year and 4th year B. Sc Nursing Students respectively.³ A study in Jordan revealed that the mean perception score toward OSCE was 105.87 ± 22.02 , with a significant positive perception (82.2%) among faculty members ($p = 0.001$).¹²

Findings related to attitude towards OSCE among nursing students

In the present study a total of 98(65.3%) of students showed an excellent attitude (scores between 44-65), whereas 52(34.7%) had a good attitude (scores between 22-43) and none of the participants exhibited a poor attitude (scores between 0-21). This indicates that most students maintained a highly favorable attitude toward the OSCE examination. The Mean \pm SD of Attitude towards OSCE is 44.80 ± 4.340 . The mean of excellent and good attitude of 47.12 and 40.42 respectively. A study in Egypt revealed Students' attitudes towards the OSCE exam were rated on a mean and SD of 11 ± 3.45 .¹¹

Findings related to correlation between perception and attitude among nursing students.

In relation to correlation there was a significant high positive correlation ($r=0.723$, $p=0.00***$) between perception and attitude. This means that individuals with higher perception tend to also exhibit higher attitude towards OSCE.

A study in Egypt found positive correlation between the students' OSCE grade and their lab competency grade ($r = .445$, $P = <0.001$) and their clinical performance grade ($r = .503$, $P = <0.001$) grades. However, there was no relationship ($r = .085$, $P = .207$) between the students' OSCE grade



and their perception toward the OSCE exam. The majority of respondents were identified to have positive attitudes towards OSCE as well as overall positive impression of the OSCE exam.¹¹

Findings related to association of perception and attitude among nursing students with selected demographic variables

The present study reveals that there was no significant association between perception towards OSCE and most demographic variables such as age, gender, academic level, and English proficiency. It showed that 2nd year had a better perception than 3rd & 4th year though not significant. However, a significant association was found between perception and nationality (0.023, $p < 0.05$), indicating that students from different national backgrounds had varying levels of perception about OSCE. A similar study at Puducherry, India, the mean perception score was 97.08 and 96.22 for the 3rd year and 4th year B.Sc Nursing Students respectively.³ Among 3rd-year students, none of the demographic variables had shown a statistically significant association with the level of perception of the OSCE method of evaluation. Among the demographic variable of gender ($p = 0.042$) had shown statistically significant association with the level of perception of OSCE method of evaluation at $p < 0.05$ level among 4th-year B.Sc Nursing Students. It also revealed that there was no significant difference in the level of perception of the evaluation method of OSCE between 3rd year and 4th-year B.Sc. Nursing students. The study concluded that the majority of the students had an adequate perception of the OSCE method of evaluation.³ A similar study in Jordan observed a significance in perceptions based on gender, age group, educational level, and academic experience ($p < 0.05$). The study concludes that OSCE is an effective and objective method for assessing nursing students' clinical skills.¹²

In the present study relation to attitude baseline variables the study showed that there was no significant association between attitude towards OSCE and demographic variables such as age, gender, academic level, and English proficiency. It shows that 2nd year had a better perception though not significant. A study in Oman among nursing students revealed that 66.3% found the OSCE environment unpleasant, 64.4% felt time constraints were a challenge, and 33.1% reported OSCEs to be more stressful than traditional assessments. These findings suggest that while OSCEs are recognized for their objective and standardized evaluation, significant concerns remain regarding stress levels, time limitations, and resource availability.¹³

Conclusion

The present study findings have revealed that over all the students had a high perception and an excellent and good attitude towards OSCE. There was a positive correlation between perception and attitude. The findings in this survey appear reassuring regarding students' perception about the validity, objectivity, comprehensiveness, and overall organization of OSCE as a method of evaluation.

Acknowledgement

We acknowledge all nursing students who participated in the study.

Ethical Considerations

The study proceeded after permission from Institution Review Board from the University, consent was obtained and confidentiality maintained.

Conflict of Interest

There is no conflict of interest

Contribution of Authors

All authors have contributed to this research

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