

## Research Article

# ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAM ON KNOWLEDGE REGARDING OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) AMONG NURSING STUDENTS

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### ABSTRACT

**Background:** The Objective Structured Clinical Examination (OSCE) is a widely accepted method for assessing clinical competence among nursing students. Despite its importance, many students lack adequate knowledge and confidence regarding OSCE due to limited exposure and insufficient preparation. Video Assisted Teaching Programs (VATP) have emerged as an innovative educational strategy to enhance students' understanding and preparedness for competency-based assessments. This study was conducted to evaluate the effectiveness of VATP on knowledge regarding OSCE among nursing students.

**Objectives:** To assess the pre-test level of knowledge regarding OSCE among nursing students. To evaluate the effectiveness of a Video Assisted Teaching Program on knowledge regarding OSCE among nursing students. To determine the association between pre-test knowledge scores and selected socio-demographic variables **Methodology:** A pre-experimental one-group pre-test and post-test research design was adopted. The study was conducted among 100 first-year B.Sc. Nursing students at Shridevi College of Nursing, Tumkur. Participants were selected using purposive sampling. Data were collected using a structured knowledge questionnaire consisting of 30 items related to OSCE. A pre-test was administered, followed by a Video Assisted Teaching Program on OSCE. The post-test was conducted seven days after the intervention. Descriptive and inferential statistics, including paired t-test and Fisher's Exact Test, were used for data analysis. **Results:** The pre-test mean knowledge score was  $21.13 \pm 6.01$ , whereas the post-test mean knowledge score increased to  $23.04 \pm 4.08$ . The mean difference was  $1.91 \pm 4.29$ . The calculated paired t-value was 4.447, which was statistically significant ( $p < 0.05$ ), indicating that the Video Assisted Teaching Program effectively improved students' knowledge regarding OSCE. Among the socio-demographic variables, residence showed a significant association with pre-test knowledge levels ( $p = 0.01$ ), while other variables such as age, gender, religion, parental education, and source of information showed no significant association. **Conclusion:** The study concluded that the Video Assisted Teaching Program was effective in enhancing knowledge regarding OSCE among first-year B.Sc. Nursing students. The intervention improved students' understanding of the OSCE process and may help reduce anxiety and increase confidence in clinical examinations. The findings support the integration of video-assisted teaching strategies into nursing education to strengthen clinical competency and preparedness for objective structured assessments.

**Keywords:** Video Assisted Teaching Program, Objective Structured Clinical Examination (OSCE), Knowledge, Nursing Students, Clinical Competence, Nursing Education.

### INTRODUCTION

Since it was introduced as a mode of students' assessment in medical school in 1975, by Haden and Gleeson the objective structured clinical examination (OSCE) has become a standard method of assessment in both undergraduate and postgraduate students. Originally described as 'a timed examination in which medical students interact with a series of simulated patients in stations that may involve history-taking, physical examination, counseling or patient management, the OSCE examination has been broadened in its scope and has undergone a lot of modification to suit peculiar circumstances. In the United Kingdom, United States, Canada and indeed most reputable colleges of medicine the OSCE is the standard mode of assessment of competency, clinical skills, and counseling sessions satisfactorily complementing cognitive knowledge testing in essay writing and objective examination.<sup>(1)</sup>

Nursing education is a dynamic and evolving field that demands the integration of theoretical knowledge with clinical skills to ensure the delivery of safe and effective patient care. In current scenario, there has been a growing emphasis on competency-based education in

nursing, where students are expected not only to acquire knowledge but also to demonstrate clinical proficiency, critical thinking, and decision-making abilities. Traditional methods of teaching and evaluation, such as written examinations and oral viva, often fail to adequately assess practical skills and real-life clinical performance. This has led to the adoption of more structured and objective methods of evaluation, among which the Objective Structured Clinical Examination (OSCE) has gained significant importance.

The Objective Structured Clinical Examination (OSCE) is a modern assessment tool widely used in nursing and medical education to evaluate clinical competence in a standardized and objective manner. It consists of a series of stations where students are required to perform specific tasks within a stipulated time. These tasks may include history taking, physical examination, clinical procedures, communication skills, and interpretation of data. Each station is designed with predetermined criteria and checklists to ensure fairness and uniformity in assessment. OSCE not only tests knowledge but also evaluates psychomotor and affective domains, making it a comprehensive method of assessment.

Despite its advantages, many nursing students experience anxiety and lack of confidence while preparing for OSCE. This may be due to inadequate exposure, insufficient understanding of the examination format, or lack of proper guidance. Traditional teaching methods,

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such as lectures and demonstrations, may not fully prepare students for the dynamic and practical nature of OSCE. Therefore, there is a need for innovative teaching strategies that can enhance students understanding and preparedness for such competency-based evaluations.

One such innovative approach is the use of video-assisted teaching programs. Video-assisted teaching is an audio-visual method of instruction that combines visual and auditory stimuli to facilitate learning. It allows students to observe procedures, clinical scenarios, and demonstrations repeatedly, thereby improving comprehension and retention. In the context of nursing education, video-assisted teaching can effectively bridge the gap between theoretical knowledge and clinical practice. It provides a realistic representation of clinical situations, helping students to visualize and understand complex procedures and concepts.

The use of video-assisted teaching in nursing education has gained popularity due to its numerous advantages. It provides to different learning styles, enhances learner engagement, and promotes self-directed learning. Students can revisit the content at their own pace, which is particularly beneficial for mastering clinical skills. Moreover, video demonstrations of OSCE stations can provide clarity on expectations, time management, communication techniques, and procedural steps. This can significantly reduce anxiety and improve students' confidence during examinations.

Several studies have highlighted the positive impact of video-assisted teaching on knowledge and skill development among nursing students. These studies suggest that students who receive video-based instruction demonstrate better understanding, higher retention, and improved practical performance compared to those taught using traditional methods alone. Furthermore, video-assisted teaching has been found to increase student satisfaction and motivation, making learning more effective and enjoyable.

However, despite the growing evidence supporting the use of video-assisted teaching, its implementation in nursing education is not yet universal. There is a need for further research to evaluate its effectiveness in specific areas, such as OSCE preparation. Understanding its impact can help educators design better teaching strategies and improve the quality of nursing education.

In the present study, aims to assess the effectiveness of a video-assisted teaching program on knowledge regarding OSCE among nursing students. This study is expected to provide valuable insights into the role of innovative teaching methods in enhancing student learning outcomes. The findings may also contribute to the development of structured educational programs that can better prepare nursing students for competency-based assessments.

## NEED FOR THE STUDY

Nursing education aims to prepare students to provide safe, competent, and evidence-based care in diverse clinical settings. Level of OSCE knowledge with the increasing complexity of healthcare systems, there is a growing demand for nursing graduates who are not only knowledgeable but also clinically skilled and confident in performing procedures. Traditional teaching and evaluation methods often emphasize theoretical knowledge, which may not adequately prepare students for real-life clinical situations. This gap highlights the need for effective teaching-learning strategies that can enhance both knowledge and practical competence among nursing students.

The Objective Structured Clinical Examination (OSCE) has been widely adopted as a reliable and valid method for assessing clinical competence in nursing education. It provides a structured and objective approach to evaluate various domains, including cognitive, psychomotor, and affective skills. Despite its advantages, many nursing students face challenges in understanding the OSCE format, expectations, and evaluation criteria. Studies have reported that students often experience anxiety, lack of confidence, and inadequate preparation for OSCE, which may negatively impact their performance.

One of the major reasons for these challenges is the limitation of conventional teaching methods, such as lectures and demonstrations, which may not provide sufficient exposure to practical scenarios. These methods are often teacher-centered and may not actively engage students in the learning process. As a result, students may find it difficult to translate theoretical knowledge into clinical practice, especially in structured examinations like OSCE. Therefore, there is a need to adopt innovative and student-centered teaching approaches that can improve skill; **video-assisted teaching programs** have emerged as an effective educational strategy in nursing and medical education.

Video-assisted teaching provides visual and auditory stimulation, which enhances learning by improving attention, comprehension, and retention. It allows students to observe clinical procedures and scenarios repeatedly, thereby reinforcing learning and promoting better understanding. Moreover, video-based learning supports self-paced and independent learning, which is essential for mastering complex clinical skills. The use of video-assisted teaching is particularly relevant in the context of OSCE preparation. Video demonstrations of OSCE stations can help students understand the structure, sequence, and expectations of the examination. It also provides clarity on procedural steps, communication techniques, and time management, which are critical components of OSCE performance. By visualizing real-life scenarios, students can develop confidence and reduce anxiety associated with the examination.<sup>(2)</sup>

The qualitative, exploratory study on Nursing students' experiences with the objective structured clinical examination (OSCE). Investigating nursing students' views towards OSCE to reach a higher standard of clinical evaluation. A qualitative, exploratory study was conducted for final year nursing students. Data were collected with semi-structured interviews. After 25 interviews, data saturation was achieved. The interviews were verbatim transcribed and analyzed according to qualitative content analysis based on Graneheim and Lundman method. To achieve trustworthiness, the methods proposed by Lincoln and Guba were used. The result shows that, Two main themes emerged during data analysis were: 1- management problems, that includes 3 categories: 1) supervisor's behaviour, 2) time management, 3) facilities, and educational problems including three categories of 1) simulation, 2) educational background, 3) question design which are key factors in conducting a more rational evaluation. These results could be effective in improving clinical evaluation and educational programs. Conclusion of the study was using more student-centered methods in teaching and providing facilities to bring students to the real world of the profession can help them to improve their ability in clinical decision making.<sup>(3)</sup>

In the present context, where competency-based education is gaining importance, it is crucial to explore innovative methods that can bridge the gap between theory and practice. Video-assisted teaching has the potential to serve as an effective tool in this regard. However, its effectiveness needs to be systematically assessed to justify its integration into the nursing curriculum.

## THE STUDY OBJECTIVES

- To assess the pre-test level of knowledge regarding OSCE among nursing students.
- To evaluate the effectiveness of a Video Assisted Teaching Program on knowledge regarding OSCE among nursing students.
- To determine the association between pre-test knowledge scores and selected socio-demographic variables.

**METHODOLOGY:** A pre-experimental one-group pre-test and post-test research design was adopted. The study was conducted among 100 first-year B.Sc. Nursing students at Shridevi College of Nursing, Tumkur. Participants were selected using purposive sampling. Data were collected using a structured knowledge questionnaire consisting of 30 items related to OSCE. A pre-test was administered, followed by a Video Assisted Teaching Program on OSCE. The post-test was conducted seven days after the intervention. Descriptive and inferential statistics, including paired t-test and Fisher's Exact Test, were used for data analysis. **Results:** The pre-test mean knowledge score was  $21.13 \pm 6.01$ , whereas the post-test mean knowledge score increased to  $23.04 \pm 4.08$ . The mean difference was  $1.91 \pm 4.29$ . The calculated paired t-value was 4.447, which was statistically significant ( $p < 0.05$ ), indicating that the Video Assisted Teaching Program effectively improved students' knowledge regarding OSCE. Among the socio-demographic variables, residence showed a significant association with pre-test knowledge levels ( $p = 0.01$ ), while other variables such as age, gender, religion, parental education, and source of information showed no significant association.

## RESULTS

### SECTION-I: SOCIODEMOGRAPHIC VARIABLES.

Table No 1: Fisher's exact test for association of study findings with selected demographic variables.

Demographic Variables	Level of Knowledge			P-Value
	Inadequate Knowledge	Moderately Adequate Knowledge	Adequate Knowledge	
N=30				
<b>1.Age</b>				
a.18 Yrs	03	07	33	0.448
b.19 Yrs	09	09	39	
<b>2. Gender</b>				
a. Male	06	07	21	0.239
b. Female	06	09	51	
<b>3.Religion</b>				
a. Hindu	06	08	28	0.820
b. Christian	05	08	38	
c. Muslims	01	00	07	
d. Others	00	00	01	
<b>4. Residence</b>				
a. Rural	06	13	21	0.01
b. Urban	06	03	51	
<b>5. Education Status of Father</b>				
a. Illiterate	00	00	01	0.928
b. Primary Education	05	04	21	
c. Secondary Education& Higher education	03	07	24	
d. Pre-University	04	05	25	
e. Graduate	00	00	01	
<b>6.Education Status of Mother</b>				
a. Illiterate	00	00	01	0.511
b. Primary Education	01	01	19	
c. Secondary Education& Higher education	05	05	23	
d. Pre-University	06	10	29	
e. Graduate	00	00	01	
<b>6. Source of Information</b>				
a. Mass Media	03	09		0.06
b. Radio	00	00	47	
c. Health Personnel	01	02	01	
d. Friends	08	05	01	
			23	

Table - 2 Mean, Standard Deviation, Median, and Range of B.Sc Nursing student's Knowledge scores.

n= 100

Group Variable	Pre-Test				Post-Test			
	Mean	SD	Median	Range	Mean	SD	Median	Range
Knowledge Scores of Samples	21.13	±06.01	25	05 -25	23.04	±04.048	25	06 - 26

The data presented in Table 2 shows the Knowledge scores of Samples, during Pre-test the Knowledge scores ranged from **05-25** with Mean **21.13**, Median **25** with Standard deviation **±06.014**, after Post-Test the Knowledge scores ranged from **06 – 26** with Mean **23.04**, Median **25** and Standard deviation was **±04.084**.

### c). Comparison of the Levels of Knowledge scores among Samples before and After Intervention.

In order find the levels of Knowledge scores among B.Sc Nursing students from selected Nursing Colleges from city, the data is collected and tabulated below.

Table – 3 Frequency, percentage distribution of Samples according to levels of Knowledge

n=100

Groups	Inadequate Knowledge	Moderately Adequate Knowledge	Adequate Knowledge
	f (%)	f(%)	f (%)
Pre-Test	16 (16%)	14 (14 %)	70 (70 %)
Post-Test	12 (12 %)	16 (16 %)	72 (72 %)

The data presented in the table - 03 shows that the levels of Knowledge at Pre-Test and Post-Test among Samples. During Pre-Test, majority **70 (70%)** had **Adequate Knowledge** followed by **14 (14%)** had **Moderately Adequate knowledge** while **16 (16%)** had **Inadequate knowledge** among B.Sc Nursing students from selected Nursing colleges of the city.

## Section 2: Inferential Statistics

### a). Findings related to the effect of Video assisted teaching on Knowledge levels among B.Sc Nursing students from selected Nursing colleges of the City.

In order to find the significant difference in Knowledge scores among B.Sc Nursing students before and after Video assisted therapy on Knowledge on OSCE, Paired t-test was computed, the findings are as follows. The following Hypotheses were stated.

**H<sub>1</sub>**: There is significant difference between the mean pre-test of Knowledge and mean post-test level of test Knowledge among first year B.Sc Nursing students.

Table No – 04

N = 100

Groups	Mean	Std.Deviation	Std.Error Mean	't'	df	P-Value
Pre-test – Post-Test on Knowledge of Samples	01.91	±04.294	0.4294	04.447	99	0.000

**t'**<sub>(99)</sub> = 1.984, P<0.05

The data presented in table.no-04 shows the impact of Video assisted teaching on Knowledge among Samples, the Mean score was **01.91** with standard deviation **± 04.294** and standard error mean of **0.429**, paired t-test was computed in order to find significant difference in mean scores before and after intervention, the calculated 't' was **04.447** which was higher than the table value ( $t_{(99)} = 1.984$ ) and the P-value was lower than 0.05 indicating Video assisted teaching was successful in enhancing knowledge among the samples. Hence Research Hypothesis is accepted and null hypothesis is rejected.

### b). Findings related to association between the levels of Knowledge and selected demographic variables of samples among B.Sc nursing students from selected Nursing colleges of the City.

To find out the association between the level of knowledge and selected personal variables, age, gender etc the findings of the study is tabulated below, the following Hypotheses is stated.

**H<sub>2</sub>**: There is significant association between pre-test levels of knowledge with selected demographic variables among B.Sc first year nursing students.

## DISCUSSION

The present study was conducted to assess the effectiveness of a Video Assisted Teaching Program (VATP) on knowledge regarding Objective Structured Clinical Examination (OSCE) among first-year B.Sc. Nursing students. The findings revealed that the mean pre-test knowledge score was 21.13, which increased to 23.04 in the post-test. The calculated paired t value (4.447) was statistically significant at  $p < 0.05$ , indicating that the Video Assisted Teaching Program was effective in improving the knowledge of nursing students regarding the improvement in post-test scores may be attributed to the visual and auditory learning opportunities provided through video-assisted teaching. Videos enable students to observe clinical procedures, understand examination patterns, and repeatedly review concepts, thereby enhancing comprehension and retention. The findings of the present study are consistent with previous studies that reported positive effects of video-based learning on knowledge acquisition and clinical skill development among nursing students. The use of video demonstrations helps bridge the gap between theoretical learning and practical application, which is essential for competency-based assessments such as OSCE.

The study also found that most students had adequate knowledge regarding OSCE even before the intervention; however, a significant increase was observed after the teaching program. This suggests that structured educational interventions can further strengthen students' preparedness and confidence for clinical examinations. Among the socio-demographic variables, only residence showed a significant association with the level of knowledge, while age, gender, religion, parental education, and source of information did not show significant associations.

Overall, the findings support the effectiveness of Video Assisted Teaching Programs as an innovative and learner-centered educational strategy. Incorporating such teaching methods into nursing curricula can enhance students' understanding of OSCE, improve examination performance, and promote clinical competence among future nursing professionals.

## CONCLUSION

This study has shown that Video Assisted Teaching Program on OSCE was effective in increasing the level of knowledge among the 1st year Nursing students. It would help the students to acquire better understanding and updates the knowledge on OSCE in order to enhance the clinical skill competence in their Nursing Profession.

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