

# EFFECTIVENESS OF OBJECTIVE STRUCTURED CLINICAL EXAMINATION AS A METHOD OF ASSESSMENT UPON SELECTED CLINICAL COMPONENTS IN CHILD HEALTH NURSING IN SELECTED NURSING COLLEGES, PONDICHERRY

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**ABSTRACT:** An experimental study conducted to identify the effectiveness of Objective Structured Clinical Examination on selected clinical components in child health nursing. The population for the present study comprised of B.sc (N) and DGNM students from various nursing colleges in puducherry. IV year B.SC (N), I year P.B.B.sc (N) and III year DGNM students who were fulfilling the inclusion criteria were selected with Stratified random sampling technique. Sample size was 392. In that total samples,196 samples were selected for experimental group and 196 samples for were selected for the control group. Ethical clearance obtained from institutional ethical committee and written consent obtained from the samples. Demographic details of Age, Gender, Religion, Year of study, Course of study, Study Institution, Exposure to information about OSCE and Source of information were collected. The Pretest did using the checklist for 10 procedures using OSCE method. OSCE Procedure checklist was explained to the experimental group students. The post test done after a week among both the groups proved that OSCE is an effective method which can be considered as a method of examination suitable to assess the skill performance of nursing students.

Keywords:

OSCE, Child Health Nursing, Procedure checklist

## INTRODUCTION:

Assessment of clinical competence is an integral requirement of health professional education. OSCE was introduced in 1975 as a standardized tool for objectively assessing clinical competencies. A Benchmark for clinical skills [Bartfay, et al 2004] .The traditional tool for assessment of nursing students has mainly consisted of written exams, bedside viva and clinical case presentations. These have focused on the 'knows' and 'knows how' aspects. ie. The focus has been on the base of the Miller's pyramid of competence. These methods have drawn a lot of criticism due to its lack of validity and reliability.

## STATEMENT OF THE PROBLEM:

Assess the effectiveness of objective structured clinical examination as a method of assessment upon selected clinical components in child health nursing in selected nursing colleges, Pondicherry

**OBJECTIVE:**

To identify the effectiveness of Objective Structured Clinical Examination on selected clinical components in child health nursing.

**METHODOLOGY:****Research Approach:**

Quantitative research approach was used to evaluate the effectiveness of OSCE.

**Research Design:**

True experimental study with pre-test and post-test design.

**Research Setting:** The setting for the study is Child health nursing laboratory, Indirani College of nursing. This setting contains the OSCE stations with the needed child health nursing procedures

**Population:** The population for the present study comprised of the nursing students from various nursing colleges in puducherry. It includes the B.sc (N) and DGNM students who have child health nursing as one of their study subject in the curriculum at the time of data collection. **Sample:** Samples includes the IV year B.SC (N), I year P.B.B.sc (N) and III year DGNM students who were fulfilling the inclusion criteria

**Sample size:** Sample size was 392. In that total samples,196 samples were selected for experimental group and 196 samples for were selected for the control group.

**Sampling techniques:** Samples were selected by Stratified random sampling technique.

**Variables:**

**Dependent Variable:** It is the clinical competence of nursing students in selected child health nursing procedures.

**Independent Variable:** It is the effectiveness of OSCE on selected clinical components in child health nursing.

**Inclusion Criteria:-**

1. Nursing students who have child health nursing as their study subject.
2. Students who are doing IV year B.Sc. (N), I year P.B.B.sc (N) and III year DGNM.
3. Nursing students studying in nursing colleges at Pondicherry.

**Exclusion Criteria:-**

1. Post graduate nursing students
2. Students doing Auxiliary Nurse Midwives course.
3. Students who are not available at the time of data collection.
4. Students who are not willing to participate in the study.

**DEVELOPMENT AND DESCRIPTION OF THE TOOL:****Section-a:**

**Demographic Variables:** It includes the components namely Age, Gender, Religion, Year of study, Course of study, Study Institution, Exposure to information about OSCE and Source of information.

**Section –b:** It comprises of OSCE stations for selected child health nursing procedures. The blue print of OSCE stations is as follows:

STATION	PROCEDURE	DOMAIN	TOOL
Station – 1	Recording Temperture	Skill	Checklist
Station – 2	Measuring Blood pressure	Skill	MCQ
Station – 3	Physical Examination	Skill	Checklist
	Resting station	----	-----

Station – 4	New born Resuscitation	Skill	Checklist
Station – 5	Kangaroo care	Skill	Checklist
Station – 6	Care of Baby in Phototherapy	Skill	Checklist
	Resting station	---	-----
Station – 7	Care of Baby in Radiant Warmer	Skill	MCQ
Station – 8	Anthropometric measurements	Skill	Checklist
Station – 9	History collection	Knowledge	Paper,pencil
Station– 10	Restraints	Skill	Checklist

Individual Checklist was constructed for each OSCE station to assess the clinical competencies of students in the OSCE stations.

## RESULTS AND DISCUSSION:

Data were analyzed using descriptive and inferential statistics.

**Table 1:** showed the distribution of samples in experimental and control group based on demographic variables.

**Table 2:** showed the distribution of samples based on the skill score between the pretest and post test among experimental group.

**Table 3:** showed the distribution of samples based on the skill score between the pretest and post test among control group.

**Table 4:** showed that there is a significant increase in the skill performance between the pretest and post test among experimental group.

**Table No.1:** Frequency distribution based on Demographic Variables:

n-392

Demographic variables		Group				Chi square test
		Experimental(n=196)		Control(n=196)		
		N	%	N	%	
Age	17 -18 years	0	0.0%	0	0.0%	$\chi^2=0.07$ P=0.78 NS
	18 -19 years	33	16.8%	31	15.8%	
	>19 years	163	83.2%	165	84.2%	
Sex	Male	28	14.29%	25	12.75%	$\chi^2=0.0$ P=1.00 NS
	Female	168	85.71%	171	87.24%	
Course of study	DGNM	36	18.36%	25	12.75%	$\chi^2=0.00$ P=1.00 NS
	B.SC (N)	146	74.49%	171	87.25%	
	P.B.B.Sc(N)	14	7.14%	-	-	
Year of study	III year DGNM	36	18.36%	25	12.75%	$\chi^2=0.00$

	III year B.SC (N)	146	74.49%	171	87.24%	P=1.00 NS
	P.B.B.Sc.(N)	14	7.14%	-	-	
Institution of study	ICON	74	37.75%	74	37.74%	$\chi^2=1.22$ P=0.05 S
	SMVNC	48	24.48%	48	24.48%	
	VINAYAGA MISSION CON	50	25.51%	100	25.51%	
	RAAK CON	24	12.24%	24	12.24%	

TABLE-4.1: DISTRIBUTION OF DEMOGRAPHIC VARIABLE(CONT.,)

Exposure to information regarding OSCE	Workshop/conference	5	2.6%	4	2.1%	$\chi^2=0.11$ P=0.94 NS
	Book/Journals	2	1.0%	2	1.0%	
	Previous examination	0	0.0%	0	0.0%	
	None of the above	189	96.4%	190	96.9%	
Place of living	Urban	62	31.6%	48	24.5%	$\chi^2=2.47$ P=0.12 NS
	Rural	134	68.4%	148	75.5%	
Religion	Hindu	179	91.3%	178	90.8%	$\chi^2=0.27$ P=0.88 NS
	Muslim	5	2.6%	4	2.0%	
	Christian	12	6.1%	14	7.2%	

Table No 2: Frequency and Percentage distribution of pre test and post test level of OSCE score in the Experimental group:

(n-196)

SNO	OSCE station	Group				Mean Difference	Student paired t-test (P<0.001)
		Pretest		Posttest			
		Mean score	%	Mean score	%		
1	Recording temperature using mercury thermometer	4.16	.49	9.03	.76	4.87	t=82.00 S
2	Measuring Blood Pressure	4.30	.74	9.18	.72	4.88	t=78.18 S
3	Physical Examination	4.05	.56	8.90	.68	4.85	t=97.00 S
4	New Born Resuscitation	4.17	.59	9.05	.76	4.88	t=84.00 S
5	Kangaroo Mother Care	4.11	.71	9.15	.73	5.04	t=84.43 S
6	Care of baby in Phototherapy	4.23	.56	8.87	.69	4.64	t=87.46 S
7	Care of baby in Radiant warmer	4.11	.63	9.03	.74	4.92	t=83.78 S
8	Anthropometric measurement	4.18	.59	9.07	.78	4.89	t=78.09 S

9	History collection	4.18	.62	8.87	.66	4.69	t=86.86 S
10	Restraints	4.26	.61	8.84	.68	4.58	t=80.60 S
	OVERALL	41.75	2.02	89.99	3.59	48.24	t=188.77 S

The above table shows the domain wise pre-test and post-test skill score comparison among experimental group nursing students. In **recording temperature using mercury thermometer** domain, pretest skill score was 4.16 and in posttest it was 9.03. The difference was 4.87. Considering **Measuring Blood Pressure** domain, in pretest skill score was 4.30 and in posttest it was 9.18. The difference was 4.88. In **Physical Examination** domain, in pretest skill score was 4.05 and in posttest it was 8.90. The difference was 4.85. Considering **New Born Resuscitation** domain, in pretest skill score was 4.17 and in posttest it was 9.05. The difference was 4.88.

Considering **Kangaroo Mother Care**, in pretest skill score was 4.11 and in posttest it was 9.15. The difference was 5.04. In **Care of baby in Phototherapy**, in pretest skill score was 4.23 and in posttest it was 8.87. The difference was 4.64. In **Care of baby in Radiant warmer**, in pretest skill score was 4.11 and in posttest it was 9.03. The difference was 4.92. Considering **Anthropometric measurement**, in pretest skill score was 4.18 and in posttest it was 9.07. The difference was 4.89. In **History collection domain**, in pretest skill score was 4.18 and in posttest it was 8.87. The difference was 4.69. Considering **Restraints**, in pretest skill score was 4.26 and in posttest it was 8.84. The difference was 4.58. **Overall**, in pretest skill score was 41.75 and in posttest it was 89.99. The difference was 48.24. This difference is large and it is statistically significant.

**Table No 4:-** Comparison of post-test level of Skill difference between the experimental and control group.

Group	Pretest		Posttest		Mean difference	Paired t-test
	Mean	SD	Mean	SD		
<b>Experiment</b>	41.75	2.02	89.99	3.59	48.24	t=156.36 p=0.001*** S
<b>Control</b>	41.45	2.19	41.85	2.18	0.40	t=1.78 p=0.07 NS
<b>Independent t-test</b>	t=1.41 p=0.15 NS		t=161.55 p=0.001*** S			

Considering experiment group skill score, in pretest they are having 41.75 mean score, in posttest they are having 89.99 skills score, difference is 48.24. This difference is large and significant. Statistically there is a significant difference between pretest and posttest skill score. Statistical significance was calculated using student paired t-test. This showed that OSCE was effective in increasing the skill of nursing students.

#### **Discussion:**

The main focus of this study was to test the effectiveness of OSCE upon selected clinical components in child health nursing. Totally 392 samples were selected as study samples. The post test in both the groups proved that OSCE is an effective method which can be considered as a method of examination suitable to assess the skill performance of nursing students.

**Conclusion:**

The present study concludes that OSCE method is effective in assessing the skill performance of nursing students upon selected clinical components in child health nursing.

**References:**

1. J Prof Nurs. 2017 Mar - Apr;33(2):119-125. doi: 10.1016/j.profnurs.2016.06.003. Epub 2016 Jun 18. Aronowitz T(1), Aronowitz S(2), Mardin-Small J(3), Kim B(4).
2. Nurse Educ Today. 2017 Feb;49:163-167. doi: 10.1016/j.nedt.2016.11.028. Epub 2016,Dec 7. Solà M(1), Pulpón AM(2), Morin V(3), Sancho R(4), Clèries X(5), Fabrellas N(6).
3. Iran J Nurs Midwifery Res. 2017 Jan-Feb;22(1):78-80. doi: 10.4103/ijnmr.IJNMR\_107\_16. Jelly P(1), Sharma R(1).
4. Emerg Nurse. 2017 Apr 13;25(1):16. doi: 10.7748/en.25.1.16.s20. McInulty L
5. Br J Nurs. 2016 Jun 23;25(12):681-7. doi: 10.12968/bjon.2016.25.12.681. Zhu X(1), Yang L(1)

