

# A Study to Assess the Efficacy of Objective Structured Clinical Evaluation in Evaluating the Skills on Labour Care among Staff Nurses after Labour Care Training Programme at SMVMCH, Puducherry

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## ABSTRACT

Labour care begins with the onset of labour and ends after the woman is delivered. The labor and delivery nurse is trained to handle the necessary monitoring of the mother during all the stages of childbirth. The problem statement of the present study is to Assess The Efficacy Of Objective Structured Clinical Evaluation In Evaluating The Skills On Labour Care Among Staff Nurses After Labour Care Training Programme. The objectives of this study were 1. To assess the level of skills among staff nurses on labour care. 2. To evaluate the skills acquired by staff nurses by using objective structure clinical evaluation after the labour care training programme. 3. To associate the level of skills on labour care among staff nurses with their selected demographic variables .The pretest level of skills on labour care before labour care training programme reveals the level of skills among staff nurses (first stage labour). In that, In pre-test 36 (72%) of staff nurses were with partially competent skills and 14(28%) were with incompetent skills. The In post-test, 47 (94%) of staff nurses were with competent skills and only 3(6%) staff nurses were with partial competent skills. During second stage of labour the level o skills among staff nurses. In that, In pre-test 32(64%) of staff nurses were with partially competent skills and 18(36%) were with incompetent skills. In post-test, 21 (42%) of staff nurses were with competent skills and 29(58%) staff nurses were with partial competent skills. During third stage of labour the level of skills among staff nurses. In that, in pre-test 16(32%) of staff nurses were with partially competent skills and 34(68%) were with incompetent skills. In post-test, 39 (78%) of staff nurses were with competent skills and 11(22%) staff nurses were with partial competent skills. During fourth stage of labour the level of skills among staff nurses. In that, In pre-test 31(62%) of staff nurses were with partially competent skill and 19(38%) were with incompetent skill. In post-test, 37 (74%) of staff nurses were with partially competent skill , 10( 20%) staff nurses were with incompetent skills and 3(6%) staff nurses were with competent skill. The study concluded that after giving the labour care training programme among staff nurses regarding labour care using Objective structured clinical examination checklist, there was good improvement in the level of skill.

**Keywords:** Labour care, structured clinical evaluation, training programme, labor and delivery nurse

## INTRODUCTION

Parturition is derived from the Latin word “*parturire*” which means the act of

bringing forth or being delivered. Parturition or labour is a physiological process during which the products of conception that is the

fetus, membranes, umbilical cord and placenta, are expelled outside of the uterus. Labour is achieved with changes in the biochemical connective tissue and with gradual effacement and dilatation of the cervix as a result of rhythmic uterine contractions of sufficient frequency, intensity, and duration.

Labour is divided into four stages. The first stage starts from the onset of true labour pains and ends with full dilatation of the cervix. The second stage starts from the full dilatation of cervix and ends with expulsion of the fetus from the birth canal. The third stage begins after the expulsion of fetus and ends with expulsion of the placenta and membranes. The fourth stage is the stage of early recovery; it begins after the expulsion of placenta and membranes lasts for one hour.

#### **NEED FOR THE STUDY:**

Worldwide, about 140 million women give birth every year. The less attention is paid on labor care and child birth process. In order to improve the quality of care the clinical interventions need to be done to make women feel safe, comfortable and positive about the labor experience. A new WHO guideline, contains 56 evidence-based recommendations detailing both the clinical and non-clinical care is needed throughout labour and immediately afterwards for women and for newborns. One of the key recommendations in the guideline recognizes that every birth is unique, while some labour progress quickly, others don't and unnecessary medical interventions should be avoided if the woman and her baby are in good condition. (WHO, Feb 15, 2018)

#### **Problem Statement:**

“A Study to Assess the Efficacy of OSCE Evaluation in Evaluating the Skills on Labour Care among Staff Nurses after Labour Care training programme at SMVMCH, Puducherry.”

#### **OBJECTIVES:**

- To assess the level of skills among staff nurses on labour care.

- To evaluate the skills acquired by staff nurses by using objective structure clinical evaluation after the labour care training programme.
- To associate the level of skills on labour care among staff nurses with their selected demographic variables.

## **RESEARCH METHODOLOGY**

### **RESEARCH APPROACH:**

A quantitative research approach is adopted for this present study.

### **RESEARCH DESIGN:**

Pre experimental one group pre test & post test research design is adopted for the present study.

### **STUDY VARIABLES:**

Independent Variables: Labour care training programme.

Dependent Variables: Skills of staff nurse regarding labour care based on OSCE.

### **SETTING OF THE STUDY:**

The study was conducted at Sri Manakula Vinayagar Medical College and Hospital, which is 1050 bedded multispecialty hospital. It is located 23 Kms far away from Puducherry.

### **POPULATION:**

The population for the present study includes all registered Staff nurses who got licensed to practice their profession.

### **SAMPLE:**

The sample for the present study were all the staff nurse who are working in antenatal ward, postnatal ward, labour room, OG OPD, labour OT and labour post operative ward and paediatric unit at Sri Manakula Vinayagar Medical College and Hospital.

### **SAMPLING TECHNIQUE:**

Purposive sampling technique is adopted for the study.

### **SAMPLE SIZE CALCULATION:**

Sample size was 50 staff nurses.

### **CRITERIA FOR SAMPLE**

#### **SELECTION:**

**Inclusion Criteria:** Staff nurses

- Working at antenatal ward, postnatal ward, OPD, Labour post-operative ward, Labour OT, labour room and paediatric unit.

- Irrespective of their years of working experience.
- Available at the time of data collection.

**Exclusion Criteria:** Staff nurses

- Who are working in administrative position such as Nursing Superintendent, Deputy Nursing Superintendent and Assistant Nursing Superintendent.
- Staff nurse working in other wards apart from MCH unit.

**TOOLS AND INSTRUMENTS:**

**Development of Data Collection Instruments:**

The data collection tool consists of 2 sections namely:

Section A: Socio-Demographic Data

Section B: Objective Structured Clinical Examination

**Description of Data Collection**

**Instruments:**

Section A: Demographic variables which includes Age, Sex, Religion, Education, Marital status, area of working, Years of

Experience, Income, Previous Exposure to OSCE method etc and Labour Care Training Programme.

Section B: This section consists of checklist is used to assess the skills of the staff nurses in all the station.

**Score Interpretation:**

Scoring is based on the performance done by the staff nurse. If yes means 1 mark, and No means 0 marks.

**RELIABILITY OF THE TOOL:**

Reliability of research instrument is defined as the extent to which the instrument yields the same results on repeated measures.

After validation, the tool was subjected to test for its reliability. The reliability coefficient of the whole test was estimated by the software name statistical package for the sciences (SPSS) cronbach alpha reliability formula it was found to be  $r = 0.760$ , which indicated that the tool was highly reliable.

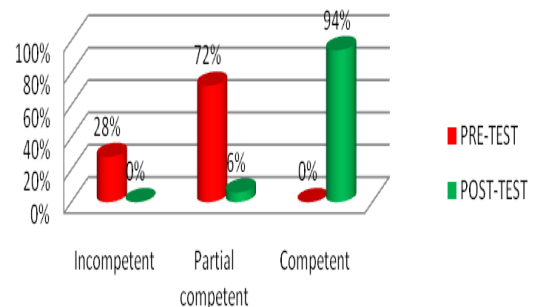
**STUDY FINDINGS**

**Table 1: Level of skills (first stage of labour) among staff nurses regarding labour care before and after labour care training programme. (N = 50)**

LEVEL OF FIRST STAGE OF LABOUR	PRE-TEST		Mean standard deviation	POST-TEST		Mean standard deviation
	n	%		n	%	
Incompetent (1-19)	14	28	23.4±7.54	0	0	48.4±5.41
Partial competent (20-39)	36	72		3	6	
Competent (40-58)	0	0		47	94	
Total	50	100		50	100	

Table 1: reveals the level of skills among staff nurses (first stage labour). In that, In pre-test 36 (72%) of staff nurses were with partially competent skill and 14(28%) were with incompetent skill. The mean score inPre-test was 23.4 with standard deviation of 7.543.

In post-test, 47 (94%) of staff nurses were with competent skill and only 3(6%) staff nurses were with partial competent skill. The mean score in post test was 48.4 with standard deviation of 5.417.



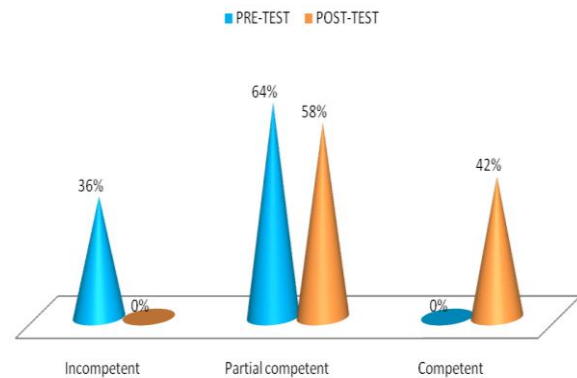
Cylindrical diagram showing the level of skills among staff nurses before and after labour care training programme (first stage of labour)

**Table 2: Level of skills (second stage of labour) among staff nurses regarding labour care before and after labour care training programme. (N = 50)**

LEVEL OF SECOND STAGE OF LABOUR	PRE-TEST		Mean standard deviation	POST-TEST		Mean standard deviation
	n	%		n	%	
Incompetent (1-19)	18	36	5.14±1.60	0	0	7.72±1.79
Partial competent (20-39)	32	64		29	58	
Competent (40-58)	0	0		21	42	
Total	50	100		50	100	

Table 2: reveals the level of skills among staff nurses (second stage). In that, in pre-test 32(64%) of staff nurses were with partially competent skill and 18(36%) were with incompetent skill. The mean score in Pre-test was (5.14±1.603).

In post-test, 21 (42%) of staff nurses were with competent skill and 29 (58%) staff nurses were with partial competent skill. The mean score in post test was 7.72 with standard deviation of 1.76.



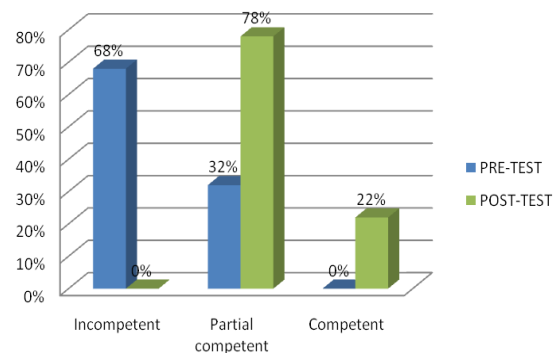
Cone diagram showing the level of skills among staff nurses before and after labour care training programme (second stage of labour)

**Table 3: Level of skills (Third stage of labour) among staff nurses regarding labour care before and after labour care training programme. (N = 50)**

LEVEL OF THIRD STAGE OF LABOUR	PRE-TEST		Mean standard deviation	POST-TEST		Mean standard deviation
	n	%		n	%	
Incompetent (1-19)	34	68	6.30±2.47	0	0	12.7±2.56
Partial competent (20-39)	16	32		39	78	
Competent (40-58)	0	0		11	22	
Total	50	100		50	100	

Table 3: reveals the level of skills among staff nurses (Third stage of labour). In that, In pre-test 16(32%) of staff nurses were with partially competent skill and 34(68%) were with incompetent skill. The mean score in Pre-test was (6.30±2.476).

In post-test, 39 (78%) of staff nurses were with competent skill and 11(22%) staff nurses were with partial competent skill. The mean score in post test was 12.7 with standard deviation of 2.567.



Bar diagram showing the level of skills among staff nurses before and after labour care training programme (Third stage of lab)

**Table 4: Level of skills (Fourth stage of labour) among staff nurses regarding labour care before and after labour care training programme. (N = 50)**

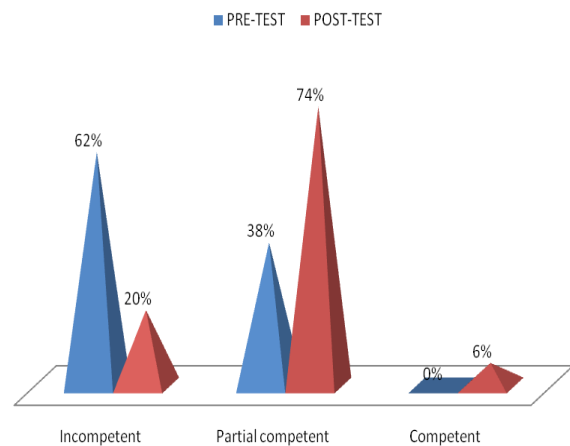
LEVEL OF THIRD STAGE OF LABOUR	PRE-TEST		Mean standard deviation	POST-TEST		Mean standard deviation
	n	%		n	%	
Incompetent (1-19)	31	62	13.0±4.44	10	20	17.7±5.10
Partial competent (20-39)	19	38		37	74	
Competent (40-58)	0	0		3	6	
Total	50	100		50	100	

Table 4: reveals the level of skills among staff nurses (fourth stage). In that, In pre-test 31 (62%) of staff nurses were with partially competent skill and 19(38%) were with incompetent skill. The mean score in Pre-test was (13.0±4.440).

In post-test, 37 (74%) of staff nurses were with partially competent skill, 10 (20%) staff nurses were with incompetent skills and 3 (6%) staff nurses were with competent skill. The mean score in post test was 7.72 with standard deviation of 1.76.

Cone diagram showing the level of skills among staff nurses before and after labour

care training programme (Fourth stage of labour)



This section reveals the findings regarding the effect of labour care training programme on improving skills of staff nurses by comparing the Mean scores before and after intervention.

**Table 5: Mean comparison of level of skills (first stage of labour) among staff nurses before and after giving intervention. (N=50)**

COMPARISON OF FIRST STAGE OF LABOUR	MEAN	STANDARD DEVIATION	't' VALUE	'p' VALUE	CRONBACH'S ALPHA RELIABILITY
Pre-test	23.48	7.543	-16.563	.019*	.759
Post-test	48.42	5.417			

\*-p < 0.05 significant

Table 5: reveals the mean comparison of pre test and post test level of skills regarding labour care among staff nurses. In that, the pretest mean score is 23.48 and the post test mean score is 48.2. The paired t test was done to find whether there was significant different between pre test and post test assessment of skills. The significant P value indicated that there was a significant improvement in the level of skills among

staff Nurses, regarding labour care. This showed that the intervention was significantly effective in improving the level of skills among staff nurses.

The reliability score of OSCE checklist used in first stage of labour is 0.759 , which was reliable and hence the tool OSCE method was found to be reliable and acceptable in assessing the skills on labour care among staff nurses.

**Table -6: Mean comparison of level of skills ( second stage of labour ) among staff nurses before and after giving intervention. (N=50)**

COMPARISON OF SECOND STAGE OF LABOUR	MEAN	STANDARD DEVIATION	't' VALUE	'p' VALUE	CRONBACH'S ALPHA RELIABILITY
Pre-test	5.140	1.603	-9.676	.005*	0.680
Post-test	7.720	1.796			

\*-p < 0.05 significant

Table 6: reveals the Mean comparison of pre test and post test level of skills regarding labour care among staff nurses. In that, the pretest mean score is 5.140 and the post test mean score is 7.720. The paired t test was done to find whether there was significant different between pre test and post test assessment of skills. The significant P value

indicated that there was a significant improvement in the level of skills among staff Nurses, regarding labour care. This showed that intervention was significantly effective in improving the level of skills among staff nurses.

The reliability score of OSCE checklist used in second stage of labour is 0.680, which



was reliable and hence the tool OSCE method was found to be reliable and acceptable in assessing the skills on labour care among staff nurses.

**Table -7: Mean comparison of level of skills (Third stage of labour) among staff nurses before and after giving intervention. (N=50)**

COMPARISON OF THIRD STAGE OF LABOUR	MEAN	STANDARD DEVIATION	't' VALUE	'p' VALUE	CRONBACH'S ALPHA RELIABILITY
Pre-test	6.380	2.328	-16.69	.005*	0.612
Post-test	12.760	2.567			

\*-p < 0.05 significant

Table -7 reveals the Mean comparison of pre test and post test level of skills regarding labour care among staff nurses. In that, the pretest mean score is 6.380 and the post test mean score is 12.760. The paired t test was done to find whether there was significant different between pre test and post test assessment of skills. The significant P value indicated that there was a significant improvement in the

level of skills among staff Nurses, regarding labour care. This showed that intervention was significantly effective in improving the level of skills among staff nurses.

The reliability score of OSCE checklist used in third stage of labour is 0.612 , which was reliable and hence the tool OSCE method was found to be reliable and acceptable in assessing the skills on labour care among staff nurses.

**Table -8: Mean comparison of level of skills (fourth stage of labour) among staff nurses before and after giving intervention. (N=50)**

COMPARISON OF FOURTH STAGE OF LABOUR	MEAN	STANDARD DEVIATION	't' VALUE	'p' VALUE	CRONBACH'S ALPHA RELIABILITY
Pre-test	13.00	4.440	-6.703	.001**	0.681
Post-test	17.70	5.100			

\*-p < 0.05 significant and \*\*\* - P < 0.001 Highly Significant.

Table 8 reveals the Mean comparison of pre test and post test level of skills regarding labour care among staff nurses. In that, the pretest mean score is 13.300 and the post test mean score is 17.70. The paired t test was done to find whether there was significant different between pre test and post test assessment of skills. The significant P value indicated that there was a significant improvement in the level of skills among staff Nurses, regarding labour care. This showed that intervention was significantly effective in improving the level of skills among staff nurses.

The reliability score of OSCE checklist used in fourth stage of labour is 0.681, which was reliable and hence the tool OSCE method was found to be reliable and acceptable in assessing the skills on labour care among staff nurses.

## CONCLUSION

After giving the labour care training programme among staff nurses regarding labour care, the evaluation of skills gained was assessed by using Objective structured

clinical examination checklist .Which show there was an good improvement in the level of skills. Hence the labour care training programme can be made as a protocol for the staff nurses and it can be implemented for all the staff nurses in order to reduce the maternal and neonatal death rate regarding stages of labour .And the OSCE method Clinical Evaluation was found be more reliable and feasible in evaluating the skills acquired by staff nurses. Hence the OSCE can be made as a standard protocol or clinical evaluation in all settings.

## REFERENCES

1. Basavanthappa,(2006) "The textbook of midwifery and reproductive health nursing," 1st edition published by Jaypee.
2. Dutta D.C,(2004)"Text Book of Obstetric",6th edition published by Hiralal Konar
3. Dilip Kumar dutta (2007) "Text book of Postpartum haemorrhage. published by Jaypee Brothers

4. Daftary Shirish N (2005) “the textbook of obstetrics and gynecology” 1st edition published by B.I . Publication
  5. Elizabeth Marie,(2010)” The textbook of midwifery for nurses”,1st edition 2010 published by CBS publishers
  6. Geoffrey Chamberlain. (1995) Obstetrics by ten teachers.16th edition Arnold London.
  7. Gray Cunningham & Norman.(2001). Obstetrics. 1st edition New York: McGraw Hill
  8. Martin (2014) Text book of maternity nursing, 19 the edition, published by Wolters Kluwer
  9. Myles,”(2009)the textbook of midwives, 5th edition, Elsevier Publication.
- NET REFERENCES
1. URL:[Http://Www.Aggarwalgroup.Co.Uk/News.Html](http://Www.Aggarwalgroup.Co.Uk/News.Html)
  2. URL:[Http://Www.Thehindu.Com/2007/08/24/Stories/2007082453121100](http://Www.Thehindu.Com/2007/08/24/Stories/2007082453121100).
  3. <http://kylenorton.healthblogs>.

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