

# Descriptive Survey on Impact of Skills Training on Knowledge and Practice Regarding Active Management of the Third Stage of Labor among Staff Nurses Undergone Skills Training in Selected Hospitals, West Bengal

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**Abstract:** A descriptive survey was conducted to identify the impact of skills training on knowledge and practice regarding active management of third stage of labor among staff nurses in selected hospitals, West Bengal. The objectives of the study were to assess the knowledge level on AMTSL among staff nurses, to identify the practices on AMTSL, to determine relationship between knowledge and practices on AMTSL, to find out the association between knowledge and selected demographic variables and to find out association between practices and selected demographic variables. The variables were knowledge and the practice of AMTSL. Conceptual framework was based on L. Von Bertalanffy's General System's Model (input, process and output). Descriptive survey design was adopted to collect data from 50 staff nurses by purposive sampling technique with the help of structured questionnaire and observation checklist. The findings indicate that 68% staff nurses had fair knowledge regarding AMTSL, 14% had good knowledge, 72% of staff nurses had fair practice scores, 18% had good practice scores; practices after delivery of placenta was the best area during delivery. The correlational analysis suggests that knowledge was positively correlated with practices ( $r=0.09$ ) among staff nurses, which signifies that practice of AMTSL is dependent on knowledge of staff nurses. The result revealed that there was significant association between practice and age of staff nurses [ $\chi^2$  df (1) =4.1;  $p<0.05$ ]. Considering the findings, some recommendations were made for future research such as the study can be replicated on large sample size. Based on the present study findings it was found that the knowledge and practices of staff nurses regarding AMTSL were fair. This study has some implication in nursing practice, administration and research.

**Keywords:** Impact, Skills training, Third stage of labor, Knowledge, Practice.

## 1. Introduction

According to Bello, millions of dollars have been provided in the name of professional development, but the quality of these programs goes virtually unchallenged. Reviewed literature has indicated that the goal of health care delivery site

is to provide high quality services to the community it serves. Although there are various factors that support good performance in the workplace, skills and knowledge are critical in improving quality of care. Literature also reveals that even the best training does not always result in improved performance unless follow up of implementation of the training is done. Maternal mortality rate in India is now 130 per 100000 live births. The most common causes are postpartum bleeding (15%), complications from unsafe abortion (15%), hypertensive disorders of pregnancy (10%), postpartum infection (8%), and obstructed labor (6%). Other causes include blood clots (3%) and pre-existing conditions (28%). Active management of third stage of labor is frontline to prevent post-partum hemorrhage related maternal morbidity and mortality. Since 2007, WHO recommendations have supported active management of the third stage of labor (AMTSL) as a critical intervention for PPH prevention. AMTSL has become a central component of the PPH reduction strategies of governments around the world. Review of literature shows that there is a huge gap of good practice of active management of the third stage of labor among obstetric care providers that needs serious attention to improve quality care and client satisfaction in delivery care service. Active management involves the health care providers intervening in the process through three interrelated but independent processes, prophylactic administration of an uterotonic agent, controlled cord traction with counter traction to aid the delivery of the placenta and uterine massage.

## 2. Research Methodology

### A. Setting of the Study

Study was conducted at Uluberia S.D, Hospital, Baruipur Sub-division and Superspeciality Hospital, Barasat District Hospital, B.N. Bose Sub-division Hospital, Hooghly District

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$$= \frac{3 \cdot 84 \times 0.25}{0.01}$$

$$= 96$$

**B. Demographic Variables**

- Age
- Professional qualification
- Working experience at labor room
- No. of delivery conducted in service period
- Date of In-service Skills Lab training

**C. Research Variables**

- The knowledge of staff nurses regarding AMTSL
- The practice of the staff nurses regarding AMTSL

**D. Research Design**

Descriptive survey research design.

**E. Sample**

Staff nurses undergone in-service skills training and working at the labor room.

**F. Sample Size**

50 staff nurses undergone in-service skills training and working at the labor room.

**G. Power Analysis**

$$n = \frac{z^2 pq}{d^2}$$

$$= \frac{(1 \cdot 96)^2 \times 0.5 \times 0.5}{(0.1)^2}$$

Here,

n= number of samples, z= standard normal deviate at 95% confidence level =1.96, p= prevalence rate=50% (as prevalence rate is not known) =0.5, q= 1-P= 1-0.5=0.5, d=degree of accuracy required=margin of error= 10%=0.1.

**H. Sampling Technique**

Non-probability purposive sampling technique was adopted to select the staff nurses.

**I. Ethical Consideration**

- Permission was taken from Ethical committee, IPGMER, SSKM Hospital, Kolkata-20.
- Written consent was taken from participants.

**J. Validity**

The tools were validated by 7 experts among those 2 are Gynecologist and 5 are from nursing field for establishment of content validity of the tools.

**K. Reliability**

The reliability of tool II was calculated by Cronbach’s alpha reliability formula. The r value is 0.77. The reliability of tool III was calculated by Inter-rater formula. The r value is 0.99. So, both the tools were reliable.

Table 1  
Data collection tools and techniques

Tool No.	Name of the tool	Variables to be measured	Technique
Tool I	Semi structured Interview Schedule	Demographic variable	Interviewing
Tool II	Structured Knowledge Questionnaire	Knowledge of AMTSL	Paper-pencil test
Tool III	Observation Checklist of Govt of India	Practices of AMTSL	Observation

Table 2  
Frequency and percentage distribution of staff nurses according to age, professional qualification and working experience in labor room (n=50)

Sample characteristics	Frequency	Percentage (%)
<b>Age (in years)</b>		
24-29	24	48
30-34	11	22
35-39	8	16
40 or more	7	14
<b>Professional qualification</b>		
B.Sc. & more	14	28
GNM	36	72
<b>Working experience (in years) in labor room</b>		
≥5	10	20
<5	40	80

Table 3  
Frequency and percentage distribution of staff nurses according to the number of delivery conducted during service period and time of skills training (n=50)

Sample characteristics	Frequency	Percentage (%)
<b>No. of delivery conducted in service period</b>		
>300	28	56
100-300	18	36
<100	4	8
<b>Skill training time</b>		
More than 1 year	14	28
Within 1 year	36	72

### 3. Data Analysis and Interpretation

Data presented in table 2 showed that 48% staff nurses were in the age group of 24-29 years, 22% of them belonged to the age group 30-34 years, 16% staff nurses were in the age group of 35-39 years, and only 14% staff nurses were 40 or more years of age. It also shows that 72% staff nurses were with GNM qualification, 28% were qualified B.Sc. Nursing and more, 80% staff nurses had less than 5 years working experiences and 20% of them had at and above 5 years of working experience in labor room.

Data presented in table 3 showed that majority 56% of staff nurses conducted above 300 deliveries in service period and most 72% of them had their skills training more than one year ago.

Table 4

Mean, Median, Standard deviation of knowledge score of staff nurses regarding active management of third stage of labor (n=50)

Variables	Range	Mean	Median	Standard deviation
Knowledge	26-40	35	36	3.7

Data presented in table 4 showed that knowledge score of staff nurses varied from 26-40. The mean was 35, median 36 and SD was 3.7 which depicts that knowledge scores are mildly dispersed. Mean and median were nearly same.

Table 5

Knowledge score of staff nurses regarding active management of third stage of labor

Knowledge	Score	Frequency	Percentage (%)
Good	40	7	14
Fair	32-38	34	68
Poor	<32	9	18

Maximum score-40, minimum score-0

Data presented in table 5 showed that 14% of staff nurses had good knowledge regarding active management of third stage of labor, 68% of staff nurses had fair knowledge regarding the same and 18% of them had poor knowledge.

Table 6

Mean, Median, Standard deviation, of practice score of staff nurses regarding active management of third stage of labor (n=50)

Variables	Range	Mean	Median	Standard deviation
Practice	3-8	5	5	1.4

Data presented in table 6 showed that practice score of staff nurses varied from 3-8. The mean was 5, median 5, SD was 1.4 which revealed that practice scores are mildly dispersed. Mean and median were same.

Table 7

Practice score of staff nurses regarding active management of third stage of labor (n=50)

Practice	Score	Frequency	Percentage (%)
Good	7 or more	9	18
Fair	4-6	36	72
Poor	≤3	5	10

Maximum score-11, minimum score-0

Data presented in table 7 showed that majority 72% of staff nurses had fair practice score, 18% had good practice score and 10% had poor practice score.

Table 8

Mean, Median, Standard deviation, Mean percentage of area wise practice score of staff nurses regarding active management of third stage of labor

Variables	Range	Mean	Median	SD	Mean %
Before delivery of placenta	0-1	0.2	0	0.4	20
During active management of third stage of labor	1-3	2.2	2	0.5	33.33
After delivery of placenta	1-4	2.6	2	0.75	65

Data presented in table 8 showed that before delivery practice score of staff nurses varied from 0-1. The mean was 0.2, median 0, SD 0.4 which indicates that practice scores are mildly dispersed and mean percentage was 20.

It also showed that during active management of third stage of labor, practice score of staff nurses varied from 1-3. The mean was 2.2, median 2, SD 0.5 which indicates that practice scores are mildly dispersed and mean percentage was 33.33.

It also showed that, after delivery of placenta, practice score of staff nurses varied from 1-4. The mean was 2.6, median 2, SD 0.75 which presents that practice scores are mildly dispersed and mean percentage was 65.

Mean and median was nearly same in all the areas. Practices after delivery of placenta ranked 1.

Table 9

Area wise practices of staff nurses regarding active management of third stage of labor (n=50)

Practice score	Scores	Frequency	Percentage (%)
<b>Before delivery of placenta</b>			
Good	1	10	20
Poor	0	40	80
<b>During active management of third stage of labor</b>			
Good	3	16	32
Fair	2	30	60
Poor	≤1	4	8
<b>After delivery of placenta</b>			
Good	4	7	14
Fair	3	15	30
Poor	≤2	28	56

Data presented in table 9 showed that majority 80% of staff nurses had poor practice score in the area before delivery of placenta, in the area during active management of third stage of labor majority 60% of staff nurses practice score was fair and in the area of after delivery of placenta, majority 56% of staff nurses practice score was poor.

Table 10  
Relationship between knowledge level and practice of AMTSL (n=50)

Variables	r	t
Knowledge Practices	0.09	55.13*

t (df 49) = 1.677 p < 0.05

Data presented in the table 10 indicated that calculated 'r' value between knowledge and practice was 0.09 which indicates that there was a weak positive correlation. The calculated 't' value was 55.13 which was higher than tabulated value at 0.05 level of significance which means there is significant relationship between knowledge and practices of staff nurses.

Therefore, it can be concluded that practice of AMTSL is dependent on the knowledge of staff nurses.

Table 11  
Association between practice of staff nurses regarding active management of third stage of labor and age (n=50)

Variables	Practice score		Total	Chi-square
	≥Median	<Median		
Age of the staff nurses				
≥30 years	11	15	26	4.1
<30 years	17	7	24	

$\chi^2$  df (1) = 3.84 p < 0.05

Data presented in table 11 revealed that, 11 staff nurses, out of 26 aged at and above 30 years and 17 staff nurses, out of 24, aged less than 30 years had their practice score at and above median. It also showed that 15 staff nurses, out of 26 aged at and above 30 years and 7 staff nurses, out of 24, aged less than 30 years had their practice score below median.

Chi-square value computed to find out the association between practice of staff nurses regarding active management of third stage of labor and age was 4.1 which was more than table value at 0.05 level of significance. So, it can be said that, there was significant association between practice of staff nurses and age.

#### 4. Conclusion

Based on the present study findings it was found that the knowledge and practices of staff nurses regarding AMTSL were fair. It was also found that there was a weak positive correlation between knowledge and practice of AMTSL. Practice of AMTSL and age was significantly associated.

#### 5. Implication

##### 1) In nursing practice

The result of the study had shown that there is huge gap of good practice of active management of third stage of labor among nurses with in-service Skills lab training that needs serious attention to improve quality of care and client

satisfaction. So, there is a need to upgrade the nurse's knowledge through consistent and sustainable trainings, supportive supervision of practice on AMTSL, mentoring and regular monitoring by the experts in their practice and evaluation session to establish compliance with standards to have good active management of third stage of labor.

##### 2) In nursing education

The finding of this study can be helpful to develop a skill-based curriculum in midwifery. The nursing curriculum planner and the educators should give emphasis on competency-based education, simulation and skills training support for the development of midwifery practice.

##### 3) In nursing administration

The findings of the study may provide useful information to the nursing administrators and planners to provide attention for development of competency-based training programme and evaluative session to support effective maternity care.

##### 4) Implication of study findings: in nursing research

There is a need for conducting nursing researches on different midwifery practices.

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