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To assess the knowledge and practice regarding active management of third stage of labour among staff nurses of obstetrical area in Haryana: A comparative study

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Abstract

Introduction: Active Management of Third Stage of Labour (AMTSL) as a prophylactic intervention is composed of a package of three components. WHO recommendations have supported AMTSL as a critical intervention for PPH prevention. Objective is to compare the level of knowledge and practice regarding AMTSL among staff nurses in civil hospital Rohtak and Panchkula.

Material and Method: Quantitative approach and comparative research design on 60 staff nurses by convenient sampling technique. Validated Structured knowledge questionnaire and observational checklist were used to collect the data.

Results: To assess the level of knowledge and practice regarding AMTSL 't' test was used. The knowledge level for Rohtak subjects was (18.07. \pm 5.017) whereas the knowledge level for Panchkula subjects was (12.67 \pm 4.708). With regard to practice level for Rohtak subjects was (8.77. \pm 1.755) whereas for Panchkula subjects was (7.17 \pm 1.510).

Conclusion: Rohtak staff nurses have significantly higher level of knowledge than Panchkula staff nurses whereas regarding practice Rohtak staff nurses had good practice as compare to Panchkula staff nurses.

Keywords: Active management, third stage of labour, assessment of knowledge, staff nurses

Introduction

The third stage of labour has traditionally been defined as the time between the birth of the baby and the delivery of the placenta and membranes. It is the third stage that is the most perilous for the woman because of the risk of postpartum haemorrhage (PPH). The third stage of labour typically lasts between 10 and 30 minutes; if the placenta fails to separate within 30 minutes after childbirth, the third stage is considered to be prolonged. If the third stage of labour lasts longer than 18 minutes, it is associated with a significant risk of PPH; and there is a six-fold increase in PPH when the third stage of labour lasts longer than 30 minutes^[1-3].

The main complication associated with the third stage of labor is post partum hemorrhage (PPH) which is generally described as blood loss greater than or equal to 500ml within 24 hours after birth, but in severe condition, blood loss is greater than or equal to 1000ml within 24 hours^[4].

Maternal mortality is unacceptably high. About 830 women die from pregnancy- or childbirth-related complications around the world every day. It was estimated that in 2015, roughly 3,03,000 women died during and following pregnancy and childbirth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented^[5].

Active Management of Third Stage of Labour (AMTSL) as a prophylactic intervention is composed of a package of three components: 1) administration of a uterotonic, preferably oxytocin, immediately after birth of the baby; 2) controlled cord traction (CCT) to deliver the placenta; and 3) massage of the uterine fundus after the placenta is delivered. WHO recommendations have supported active management of the third stage of labour (AMTSL) as a critical intervention for PPH prevention. AMTSL has become a central component of the PPH reduction strategies of governments around the world^[6].

Staff nurses should have both the privilege and responsibility of caring for women during labour and birth in hospital setting.

The goal during the third stage of labour is to promote that well-being of the women, her baby. Nurses caring for women during labour and birth have a mastery of appropriate technical skills, communicate and collaborate well to cope with emergency conditions [7].

Staff nurses are the first care provider to mother so, it is needed to reduce the maternal mortality rate. One of the way is to achieve reduction in maternal mortality, staff nurses should skillful in active management of third stage of labor [8].

Objectives of the study

1. To assess the level of knowledge & practice regarding active management of third stage of labour among staff nurses working in obstetrical unit of civil hospital Rohtak and Panchkula.
2. To compare the level of knowledge and practice regarding AMTSL among staff nurses working in obstetrical unit of civil hospital Rohtak and Panchkula.
3. To find out the association of knowledge and practice with selected demographic variables among staff nurses working in obstetrical unit of civil hospital Rohtak and Panchkula.
4. To develop self instructional module on AMTSL.

Operational definition

Assess: It refers to the measurement of knowledge and practice of staff nurses regarding active management of third stage of labor statistical measures.

Knowledge: Refer to the level of understanding of staff nurses regarding the active management of third stage of labor by their correct response to the questionnaire.

Practice: In this study, it refers to the series of skillful procedures and intervention performed during the third stage of labour by the checklist.

Staff nurses: In this study, it refers to registered nurses (with Diploma in nursing, B.Sc. nursing and M.Sc. nursing qualifications) working as staff nurses in obstetrical area.

Self-instructional module (SIM): In this study, self-instructional module refers to visual teaching aid that consists of information regarding AMTSL (active management of third stage of labour).

Hypothesis: There will be no significant association between knowledge & practice score in selected demographic variables.

Assumptions: Nurses with more working experiences will have better knowledge about AMTSL. The SIM may update the existing knowledge of staff nurses. The SIM may improve the existing practice of staff nurses.

Delimitations: The study is delimited to nurses who will be available at the time of data collection. And who will be willing to participate in the study.

Methodology

A non-experimental quantitative research design is used for this study. The study was conducted in civil hospital of district Rohtak and district Panchkula Haryana.

Target Population: staff nurses in obstetrical area in selected civil hospital of District Rohtak and District Panchkula, Haryana

Sample population and sampling technique

The sample consisted of 60 staff nurses, 30 staff nurses from civil hospital Rohtak and 30 staff nurses from civil hospital Panchkula. Purposive technique was adapted to the sample

Inclusion criteria

- Staff nurses who will be willing to participate in the study.
- Staff nurses who will be available during the time of data collection.
- Staff nurses who are working in obstetrical area.

Exclusion Criteria

- Staff nurses who will not be willing to participate in the study.
- Staff nurses with managerial responsibility.
- Staff nurses who will be not available during the time of data collection

Ethical clearance

The research was approved by institutional ethical committee. The principal medical officer and medical superintendent of the selected hospital was informed about the study and the formal approval was taken. A formal introduction was given to the participants and a written consent was taken to participate in the study. The confidentiality of the subjects and their response were assured.

Development of tool for data collection: A review of the literature, expert opinion and investigators experiences were the basis for construction of the tool for data.

Description of the tool

Self-structured questionnaire

Part 1: Distribution by demographic variables, it includes 6 questions it includes code no., age, sex, education, working experience and previous knowledge

Part 2: Structured questionnaire schedule regarding knowledge, it includes 30 multiple choice question to assess knowledge of staff nurses regarding AMTSL

Check list

Part 3: Checklist regarding active management of third stage of labour to assess the practice of staff nurses. 10 steps to include to assess the practice of staff nurses regarding AMTSL.

Scoring key

Each question has one correct and will be have a score of one mark, for wrong score will be zero. The total score will be zero. The total score will be allotted for this section is 30

Scoring procedure Questionnaire

Score	Criteria
0-10	Inadequate
11-20	Moderate
21-30	Adequate

Checklist

Score	Criteria
More than 65%	Good
50-65%	Average
Less than 50%	Poor

Pilot study

The pilot study was conducted in Civil Hospital Jhajjar and Civil Hospital Rohtak w.e.f. 6-2-2021 to 16-2-2021. The data was collected from 6 staff nurses of Civil Hospital of District Rohtak and District Jhajjar. On the first day of commencing the study, knowledge and practice was conducted by a structured knowledge questionnaire & checklist and after that self-instructional module distribution

was done within 45-50 minutes. The findings of the pilot study revealed that the tool was feasible, practicable and acceptable.

Procedure of data collection

- Informal consent was obtained from study participants.
- The data including demographic data, level of knowledge and practice regarding AMTSL using questionnaire and checklist was collected.
- The researcher distributed the self-instructional module containing some necessary information related to active management of third stage of labour to reinforce knowledge and practice of participants regarding AMTSL

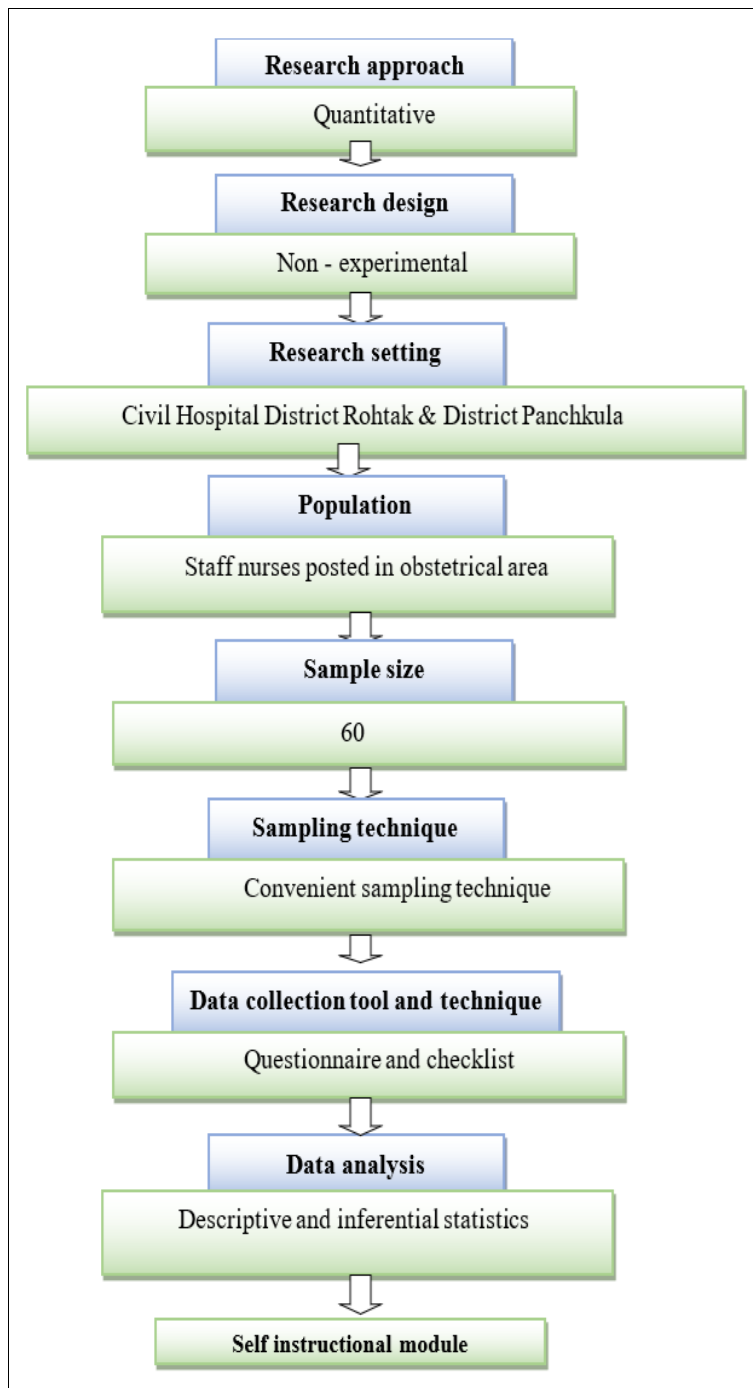


Fig 1: Research methodology

Result

Raw data collected was entered in the master sheet for the

statistical analysis. It was interpreted using descriptive and inferential statistics, presented on tables and diagrams.

Table 1: Frequency and Percentage Distribution of Subjects (Rohtak & Panchkula) according to Socio-Demographic Variables (N = 60)

Socio – Demographic Variables	Rohtak	Percentage	Panchkula	Percentage
	Frequency		Frequency	
Age in years				
21-30 year	17	56.7	18	60.0
31-40 year	11	36.7	11	36.7
41-50 year	2	6.7	1	3.3
51-60 year	0	0	0	0
Gender				
Male	0	0	0	0
Female	30	100	30	100
Qualification				
Diploma in nursing	16	53.3	17	56.7
B.Sc. Nursing	13	43.3	11	36.7
M.Sc. Nursing	1	3.3	2	6.7
Total number of working years in Labour room				
< 5 year	26	86.7	20	66.66
5-10 year	4	13.3	10	33.34
10-15 years	0	0	0	0
>15 year	0	0	0	0
Have you undergone any training programme on Active management of third stage of labour				
Yes	16	53.3	22	73.3
No	14	46.7	8	26.7

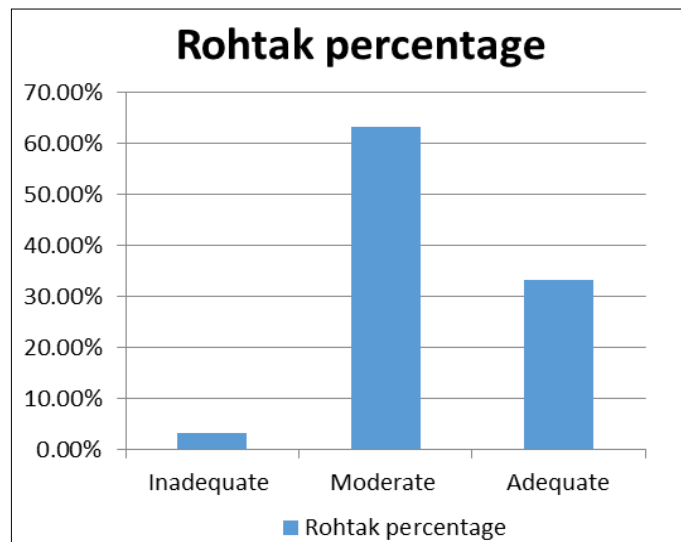


Fig 2: Percentage Distributions of Rohtak Subjects according to Knowledge level

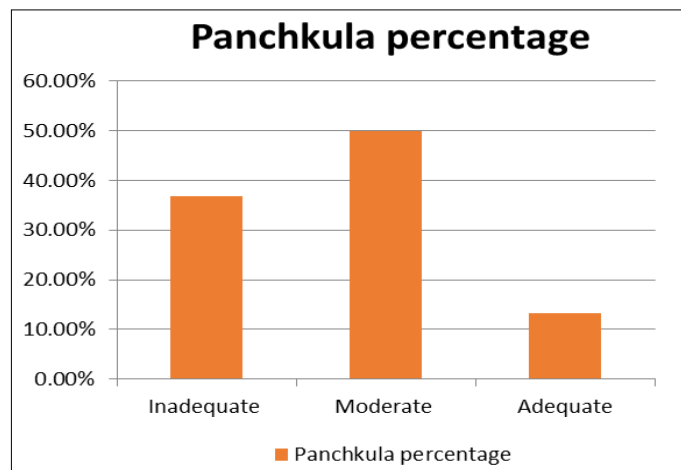


Fig 3: Percentage Distribution of Panchkula Subjects according to Knowledge level

Table 2: Knowledge score of Rohtak and Panchkula Subjects

Knowledge score	Mean	S.D.	N	Range	Maximum	Minimum	Variance
Rohtak Subjects	18.07	5.017	30	20	27	7	25.168
Panchkula Subjects	12.67	4.708	30	18	24	6	22.161

Maximum=30, Minimum=0

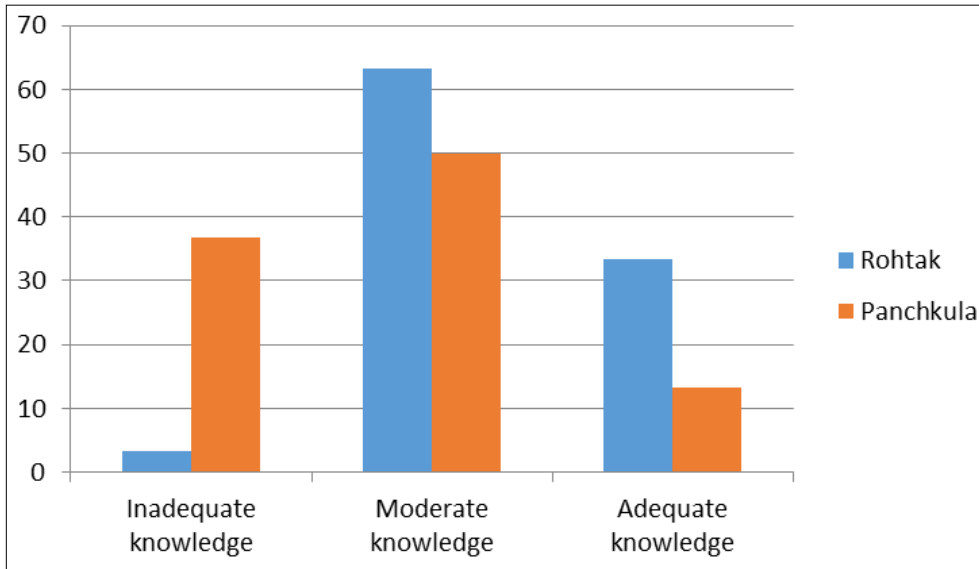


Fig 4: Percentage of knowledge level of Rohtak and Panchkula Subjects

Table 3: Comparison of knowledge level between Rohtak and Panchkula Subjects (N= 60)

Knowledge Score	Mean	Mean Difference	Standard Deviation	Independent 't' test	'p' Value
Rohtak	18.07	5.4	5.017	4.299 (df = 58)	0.000*
Panchkula	12.67		4.708		

Note- Level of Significance at 'p' value < than 0.05

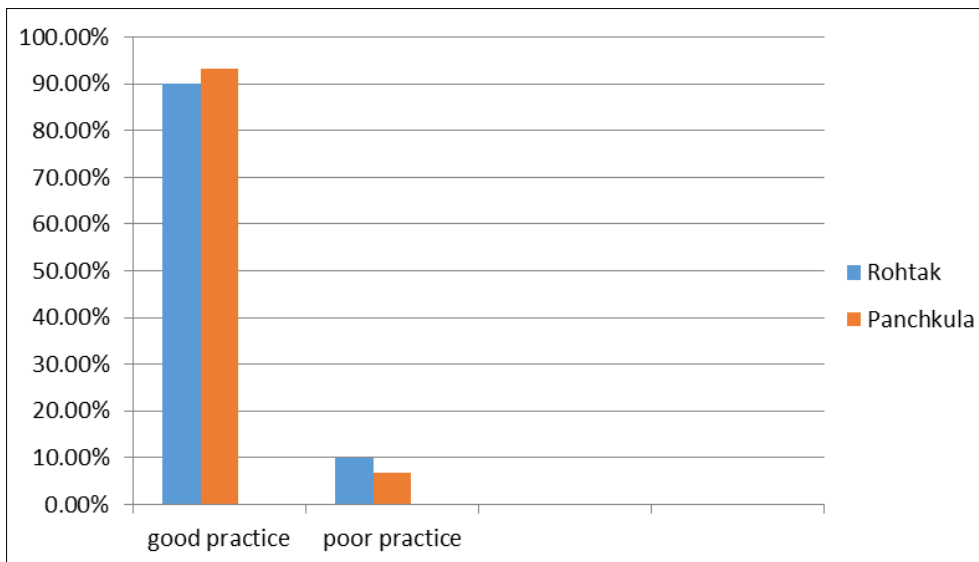


Fig 5: Percentage distribution of practice level of Rohtak and Panchkula Subjects

Table 4: Comparison of practice level between Rohtak and Panchkula Subjects (N= 60)

Practice level	Mean Practice Score	Mean Difference	Standard Deviation	Independent 't' test	'p' Value
Rohtak	8.77	1.6	1.755	3.784 (df = 58)	0.000*
Panchkula	7.17		1.510		

Note- Level of Significance at 'p' value < than 0.05

Table 5: Level of Association between knowledge level with selected socio-demographic variables of Rohtak subjects (N = 30)

Socio – Demographic Variables	Knowledge Level			Chi-Square Value	‘p’ Value
	Inadequate f (%)	Moderate f (%)	Adequate f (%)		
Age in years					
21-30 year	0(0)	12(70.6)	5(29.4)	2.33	0.675
31-40 year	1(9.1)	6(54.5)	4(36.4)	(df=4)	
41-50 year	0(0)	1(50)	1(50)		
Qualification					
Diploma in nursing	0(0)	10(62.5)	6(37.5)	3.841	0.428
B.Sc. Nursing	1(7.7)	9(69.2)	3(23.1)	(df = 4)	
M.Sc. Nursing	0(0)	0(0)	1(100)		
Total number of working years in Labour room					
< 5 year	0(0)	17(65.4)	9(34.6)	6.726	0.035*
5-10 year	1(25)	2(50)	1(25)	(df = 2)	
Have you undergone any training programme on Active management of third stage of labour					
Yes	1(6.3)	7(43.8)	8(50)	5.808	0.055*
No	0(0)	12(85.7)	2(14.3)	(df = 1)	

Note: Level of Significance at ‘p’ value < than 0.05

Table 6: Level of Association between knowledge level with selected socio-demographic variables of Panchkula subjects (N = 30)

Socio – Demographic Variables	Knowledge Level			Chi-Square Value	‘p’ Value
	Inadequate f (%)	Moderate f (%)	Adequate f (%)		
Age in years					
21-30 year	9(50)	8(44.4)	1(5.6)	7.821	0.098
31-40 year	1(9.1)	7(63.6)	3(27.3)	(df=4)	
41-50 year	1(100)	0(0)	0(0)		
Qualification					
Diploma in nursing	7(41.2)	8(47.1)	2(11.80)	3.099	0.541
B.Sc. Nursing	4(36.4)	6(54.5)	1(9.1)	(df = 4)	
M.Sc. Nursing	0(0)	1(50)	1(50)		
Total number of working years in Labour room					
< 5 year	8(40)	11(55)	1(5)	6.197	0.185
5-10 year	2(22.2)	4(44.4)	3(33.3)	(df = 2)	
Have you undergone any training programme on Active management of third stage of labour					
Yes	8(36.4)	12(54.5)	2(9.10)	1.457	0.483
No	3(37.5)	3(37.5)	2(25)	(df = 1)	

Note: Level of Significance at ‘p’ value < than 0.05

Table 7: Level of Association between Practice and selected socio-demographic variables of Rohtak subjects (n = 30)

Socio – Demographic Variables	Practice		Chi-Square Value	‘p’ Value
	Poor f (%)	Good f (%)		
Age in years				
21-30 year	2(11.8)	15(88.2)	0.291	0.865
31-40 year	1(9.1)	10(90.9)	(df=2)	
41-50 year	0(0)	2(100)		
Qualification				
Diploma in nursing	1(6.3)	15(93.8)	9.327	0.008*
B.Sc. Nursing	1(7.7)	12(92.3)	(df = 2)	
M.Sc. Nursing	1(100)	0(0)		
Total number of working years in Labour room				
< 5 year	3(11.5)	23(88.5)	0.513	0.474
5-10 year	0(0)	4(100)	(df = 1)	
Have you undergone any training programme on Active management of third stage of labour				
Yes	1(6.3)	15(93.8)	0.536	0.464
No	2(14.3)	12(85.7)	(df = 1)	

Note: Level of Significance at ‘p’ value < than 0.05

Table 8: Level of Association between Practice and Socio-Demographic Variables of Panchkula Subjects (n = 30)

Socio – Demographic Variables	Practice		Chi-Square Value	'p' Value
	Poor f (%)	Good f (%)		
Age in years				
21-30 year	2(11.1)	16(88.9)	1.429	0.490
31-40 year	0(0)	11(100)	(df=2)	
41-50 year	0(0)	1(100)		
Qualification				
Diploma in nursing	1(5.9)	16(94.1)	0.284	0.877
B.Sc. Nursing	1(9.1)	10(90.9)	(df = 2)	
M.Sc. Nursing	0(0)	2(100)		
Total number of working years in Labour room				
< 5 year	1(5)	19(95)	0.488	0.800
5-10 year	1(11.1)	8(88.9)	(df = 1)	
Have you undergone any training programme on Active management of third stage of labour				
Yes	2(9.1)	20(90.9)	0.779	0.377
No	0(0)	8(100)	(df = 1)	

Note: Level of Significance at 'p' value < than 0.05

Discussion

As per table 1, age of the subjects in Rohtak, majority 17 (56.7%) were in the age between 21 – 30 years. Similarly, in case of subjects from Panchkula majority 18 (60.0%) were also in the same age group. All the subjects from both groups were females 30 (100.0%). Qualification the subjects in the study depicts in both the groups 16 (53.3%) and 17 (56.7%) were from diploma in nursing education. Those who were with B. Sc (N) qualification were 13 (43.3%) and 11 (36.7%) respectively. Total number of working years in Labour room of the samples reveals, in samples from group one 26 (86.8%) were working for less than 5 year. In the group two majority of the subjects 20 (66.66%) were also working < than 5 year. Majority of the subjects in group one 16 (53.3%) had already undergone any training programme on Active management of third stage of labour. Where as in the group two 22 (73.3%) were also have already undergone any training programme on Active management of third stage of labour. These findings were supported by the study of Sufora Yaseen, Sibgat Fatima *et al.* 2021 and Shatha Mahmood Niazi 2020.

Figure 4 depicts percentage of knowledge level of Rohtak and Panchkula Subjects. Rohtak Samples, majority 19 (63.3%) were having moderate knowledge. Subjects with adequate knowledge were 10 (33.3%). In case of Panchkula samples knowledge majority 15 (50.0%) were having moderate knowledge. Subjects with inadequate knowledge were 11 (36.7%). Very few samples were with adequate knowledge. Similar findings were shown by Sumana Saha 2019 and Getu Engida wake, Grima Wogie (2018).

Table 3 depicts the mean knowledge score and S.D value for Rohtak subjects was 18.07. \pm 5.017. the mean knowledge score and S.D value for Panchkula subjects was 12.67 \pm 4.708. the mean difference score was 5.4. the independent 't' test score was 4.299 for the degree of freedom 58. The 'p' value was 0.000. This indicates there was a difference in level of knowledge among subjects in two groups.

As per figure 5, majority of the subjects from both the groups 27 (90.0%) and 28 (93.3%) were having good practice. Samples who were with poor practice was 3 (10.0%) and 2 (6.7%).

Table 4 shows the mean practice score and S.D value for Rohtak subjects was 8.77. \pm 1.755. the mean practice score and S.D value for Panchkula subjects was 7.17 \pm 1.510. the mean difference score was 1.6. the independent 't' test score was 3.784 for the degree of freedom 58. The 'p' value was 0.000, which as statistically significant at the level of

significance 0.05. This indicates there was a difference in level of practice among subjects in two groups.

Table 5 shows statistically significance association between level of knowledge and socio-demographic variable Total number of working years in labour room) in Rohtak samples. From table 7 we can find out statistically significant association between Qualification and level of practice in Rohtak subjects.

Table 6 and 8 shows that there is no statistically significant association between socio-demographic variables with level of knowledge and level of practice in Panchkula subjects.

Limitations: The study was confined to small number of subjects. The study was limited to assess the knowledge and practice regarding AMTSL. The study was limited to Civil Hospital Rohtak Staff nurses and Civil Hospital Panchkula staff nurses.

Recommendation: A similar study can be done on a large sample to validate and generalize the findings. The study can be done in different district and different states of India as the knowledge may vary. This study will be reference for research scholars. Evidence based nursing practice must take higher profile in order to increase awareness among staff nurses.

Conflict of Interest

Not available

Financial Support

Not available

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