Knowledge and Practice regarding First-Aid Management of Obstetrical Emergencies among Staff Nurses and CHO's in Selected Health Centres in Selected District of Haryana.

Nisha, Mrs. Sunita Kumari

M.Sc. Nursing, Rohtak

Professor, College of Nursing, Rohtak

Email id: sambharwal.nish@gmail.com

Abstract:

Introduction: Obstetric emergencies are life threatening medical conditions that occur in pregnancy or during or after delivery or labor and it is the leading cause of maternal and perinatal mortality and morbidity which comprises 46% of maternal mortality in worldwide. The emergency conditions of pregnancy that threaten the wellbeing of both mother and child may occur during labor and after delivery (in post-partum period). The active and appropriate management by health care personnel may lead to decrease mortality. Obstetrical emergencies tend to be unpredictable, stressful, and can cause ethical dilemmas because two lives are at stake. Obstetrical emergencies challenge the skills and expertise of the staff.

Aim: To assess the knowledge and practice regarding First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse, to find out the association of knowledge and practice of First-Aid Management of Obstetrical Emergencies with selected demographic variables among CHO's and Staff nurses in selected Health centre in Rohtak District of Haryana.

Methods: The study was conducted using Descriptive under Cross- sectional research design on 100 Staff Nurses and CHO's, which are enrolled in study by Convenience sampling technique. Knowledge was assessed by structured questionnaire and practice checklist by using practice checklist. Statistical analysis of data was done by using descriptive and inferential statistic.

Result: Out of 100 Staff Nurses and CHO's 46(46%) had average knowledge followed by 54(54%) had good knowledge of obstetrical emergencies, and pre-existing knowledge mean is 20.08 and standard deviation is 2.343. In practice checklist Staff Nurses and CHO's 16(16%) had average practice followed by 84(84%) had good practice of obstetrical emergencies, and pre-existing practice the mean is 16.10 and standard deviation is 1.817. There is no significant association found between knowledge and practice with their selected demographic variables at 0.05 level of significance.

Conclusion: The study concludes that Staff Nurses and CHO's has the good knowledge and good practice regarding the First-Aid Management of Obstetrical Emergencies and there is no significant association between the Knowledge and Practice with the selected demographic variables at 0.05 level of significance.

Keywords: First- Aid Management, Obstetrical Emergencies, Staff Nurses, CHO's, Knowledge and Practice.

BACKGROUND OF THE STUDY

An "OBSTETRIC EMERGENCY" is defined as an obstetric complication which is serious and often dangerous in nature, developing suddenly or unexpectedly and demanding attention to save lives. Obstetric Emergencies are life threatening medical conditions that occur in pregnancy or during or after delivery or labour and it is the leading cause of maternal and perinatal mortality and morbidity which comprises 46% of maternal mortality in worldwide. The emergency conditions of pregnancy that threaten the wellbeing of both mother and child may occur during labour and after delivery (in post-partum period). The active and appropriate management by health care personnel may lead to decrease mortality. Obstetrical emergencies tend to be unpredictable, stressful, and can cause ethical dilemmas because two lives are at stake. Obstetrical emergencies challenge the skills and expertise of the staff.[1]

As per World Health Organization "Obstetrical Emergencies" are the leading causes of maternal mortality, particularly in developing countries due to lack of awareness, poverty, illiteracy, poor transport facilities, inadequate equipment/staffing. Though measures to reduce maternal mortality have decreased the rate reduce maternal mortality have decreased the rate worldwide but still the rates are high in developing countries according to WHO.[2]

In 2010, the United Nations launched the Global Strategy for women's and Children's health. The initiative focused on global safety in maternity care and resulted in a dramatic decrease in maternal deaths worldwide. Globally, there were an estimated 289,000 maternal deaths in 2013, a decline of 45% from 1990(World Health Organization,2013).[3]

India's maternal mortality ratio (MMR) was 103 in 2017-2019 as compared to 113 in 2016-2018 according to the special bulletin on MMR released by the Registrar General of India on March 14, 2022; 130 or more maternal deaths per one lakh live births indicates very high MMR.[4]

The maternal mortality ratio (MMR), expressed as maternal deaths per 100,000 live births over a given period, is a major measure of quality of obstetric care. According to World Health Organization (WHO) estimates, it varies up to 100-fold, from approximately 10 in developed countries to approximately 1,000 in least developed. Obstetric complications can neither be predicted nor be prevented but can be managed by timely provision of life saving services. Maternal death is usually the result of inadequately or inappropriately managed complications arising during pregnancy and childbirth.[5]

Psychological conditions Pregnancy and childbirth are times of high psychological stimulation. Any pre-existing psychological disorder may be exaggerated at this time and requires treatment. Many women go through mood swings (blues) in relation to childbirth, which can usually be managed by sympathetic support. If postnatal depression persists for a week or so, mild antidepressants may be needed, and the Edinburgh postnatal depression questionnaire may be helpful in diagnosing the condition. If the condition continues, formal psychiatric help is needed.[6]

PROBLEM STATEMNET:

"A study to assess the knowledge and practice regarding First-Aid Management of Obstetrical Emergencies among CHO's and Staff nurses in selected Health centre in selected District of Haryana".

OBJECTIVE:

1. To assess the knowledge regarding First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse in selected Health centre in selected District of Haryana.
2. To assess the practice regarding First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse in selected Health centre in selected District of Haryana.
3. To find the association of knowledge and practice of First-Aid Management of Obstetrical Emergencies with selected demographic variables among CHO's and Staff nurses in selected Health centre in Rohtak District of Haryana**.**

ASSUMPTIONS:

- CHO's and Staff nurses may have some knowledge and practice regarding First-Aid Management of Obstetric emergencies.
- Self-structed question is approved test for assessment of knowledge and practice of CHO's and Staff nurses.
- Obstetric emergencies are preventable and treatable phenomena.
- Maternal Mortality and morbidity may be decrease which occur due to Obstetric emergencies.

RESEARCH METHODOLGY:

- **Research Approach**-Descriptive research approach.
- **Research design-** Cross- sectional research design.
- **Study setting-** Civil Hospital, CHC's and PHC's
- **Study population: -** 100
- **Sampling technique-** Convenience sampling technique
- **Population-** Staff Nurse's and CHO's
- **Tool of Study-** for the assessment of knowledge a structured knowledge questionnaire was prepared and for the assessment of practice a checklist was prepared.

SECTION A- Frequency and percentage of Staff Nurses and CHO's as per their socio- demographic characteristics.

Table No.1: Frequency (f) and percentage (%) wise distribution of Staff nurses and CHO's according to their selected demographic variables.

N= 100

S. No	Variables	Frequency (f)	Percentage (%)
1.	**Age in years**		
1.1	22-28 years	39	39%
1.2	29-34 years	42	42%
1.3	35-40 years	16	16%
1.4	Above 41	3	3%
2.	**Gender**		
2.1	Male	15	15%
2.2	Female	85	85%
3.	**Educational Qualification**		
3.1	Diploma in Nursing	18	18%
3.2	Bachelor of Science in Nursing (B.Sc. Nursing)	64	64%
3.3	Master of Science in Nursing (M.Sc. Nursing)	6	6%
3.4	B.A.M. S	12	12%
4.	**What is your current role/job title?**		
4.1	Community Health Officer (CHO)	35	35%
4.2	Staff Nurse	65	65%
5.	**Type of Health Centre:**		
5.1	Primary Health Centre	30	30%
5.2	Community Health Centre	30	30%
5.3	Civil hospital	40	40%

6	**Experience (In years):**		
6.1	Fresher (Less than 1 year)	22	22%
6.2	1-5 years	41	41%
6.3	6-10 years	19	19%
6.4	more than 11 years	18	18%
7.	**How often do you encounter obstetrical emergencies in your work?**		
7.1	Rarely	46	46%
7.2	Occasionally	50	50%
7.3	Frequently	4	4%
7.4	Very frequently	0	0
8.	**Have you received any specialized training in obstetric emergencies?**		
8.1	Yes	74	74%
8.2	No	26	26%

Description of table No.1: Showing the frequency and percentage distribution of demographic characteristics of samples Staff Nurses and CHO's. Total number of participants were 100.

Majority of the samples found in age group 28-34 years, mostly the staff was female staff, the highest educational status was B.Sc. Nursing, maximum current job were staff nurses, belong to health centre civil hospital, with maximum experience 1-5 years, occasionally encounter obstetrical emergencies and has received specialized training.

SECTION -B

ASSESSMENT OF KNOWLEDGE

Table No. 2. Assessment of knowledge regarding the Obstetrical emergencies First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse in selected Health centres in selected District of Haryana.

N=100

Level of knowledge	Range of score	Pre- existing Knowledge	
		Frequency	Percentage
Poor knowledge	0-10	00	00%
Average knowledge	11-20	46	46%
Good knowledge	21-30	54	54%

Description of the table: 2-The table shows that out of 100 Staff Nurses and CHO's 46(46%) had average knowledge followed by 54(54%) had good knowledge of obstetrical emergencies.

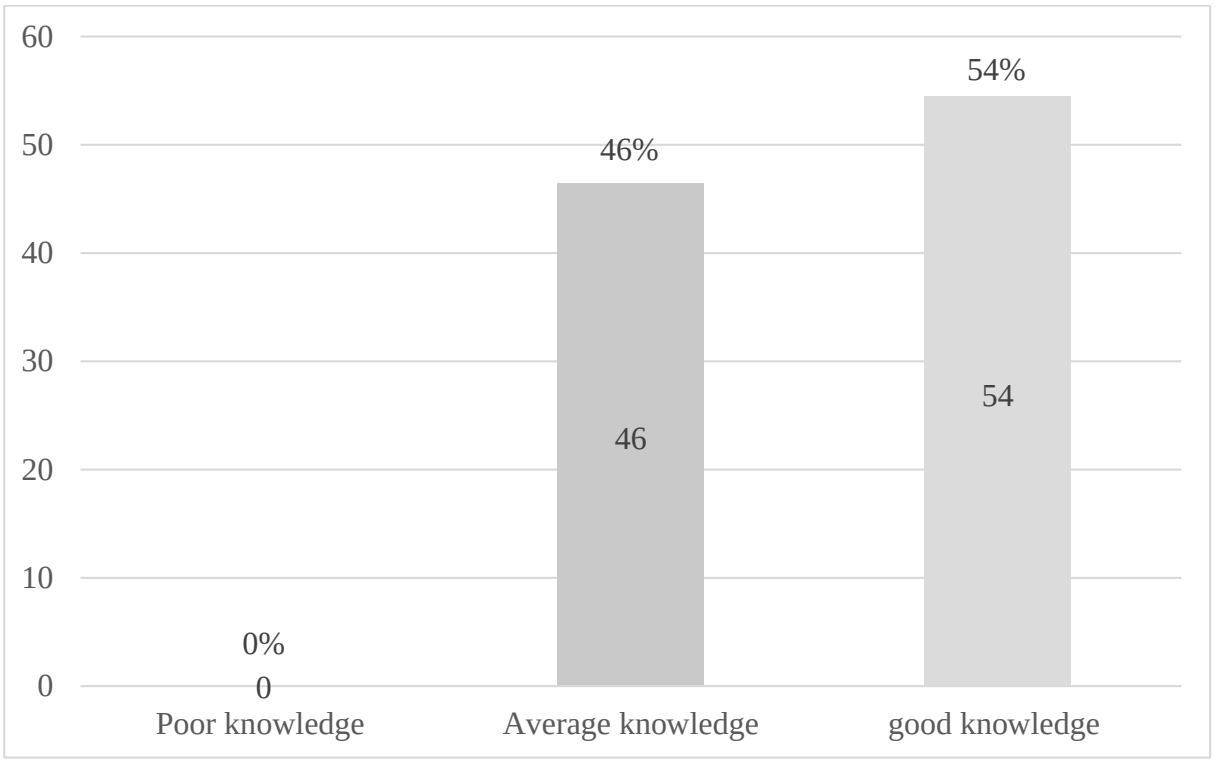

Figure No 1: The bar chart shows that out of 100 Staff Nurses and CHO's 46(46%) had average knowledge followed by 54(54%) had good knowledge of obstetrical emergencies.

Table No. 3: Mean, Median, Mode, Standard deviation of knowledge score of Staff nurses and CHO's regarding First-Aid Management of Obstetrical emergencies.

N=100

Area of analysis	Mean	Median	Mode	Standard deviation
Pre-existing knowledge	20.08	21.00	22	2.343

Description of table no. 3 Data depicted in table no 5 shows that in pre-existing knowledge the mean is 20.08, median is 21.00, mode is 22 and standard deviation is 2.343 respectively.

SECTION-C

Table no. 4: Showing practice to check first-aid management of obstetrical emergencies

N=100

S. No	PRACTICES	Frequency (f)	Percentage (%)
1.	**ANTENATAL**		
1.1	Do you check weight, Hb and fetal growth at every visit?	100	100%
1.2	Do you advice antenatal mother to take 100 iron tablets?	100	100%
1.3	Do you provide left lateral position and high flow oxygen administer via a non-breath mask to APH women?	100	100%
1.4	Do you assess the HCG level of women having ectopic pregnancy before administering the Methotrexate?	70	70%
1.5	Do you admit the patient to the hospital for assessment and management of APH if the bleeding is in large amount or small amount?	70	70%
1.6	Do you check the high factors (swelling, B.P., Seizures, etc.) on every visit of antenatal mother?	96	96%
1.7	Do you assess the abortion sign in the mother who is bleeding in 1st trimester?	77	77%

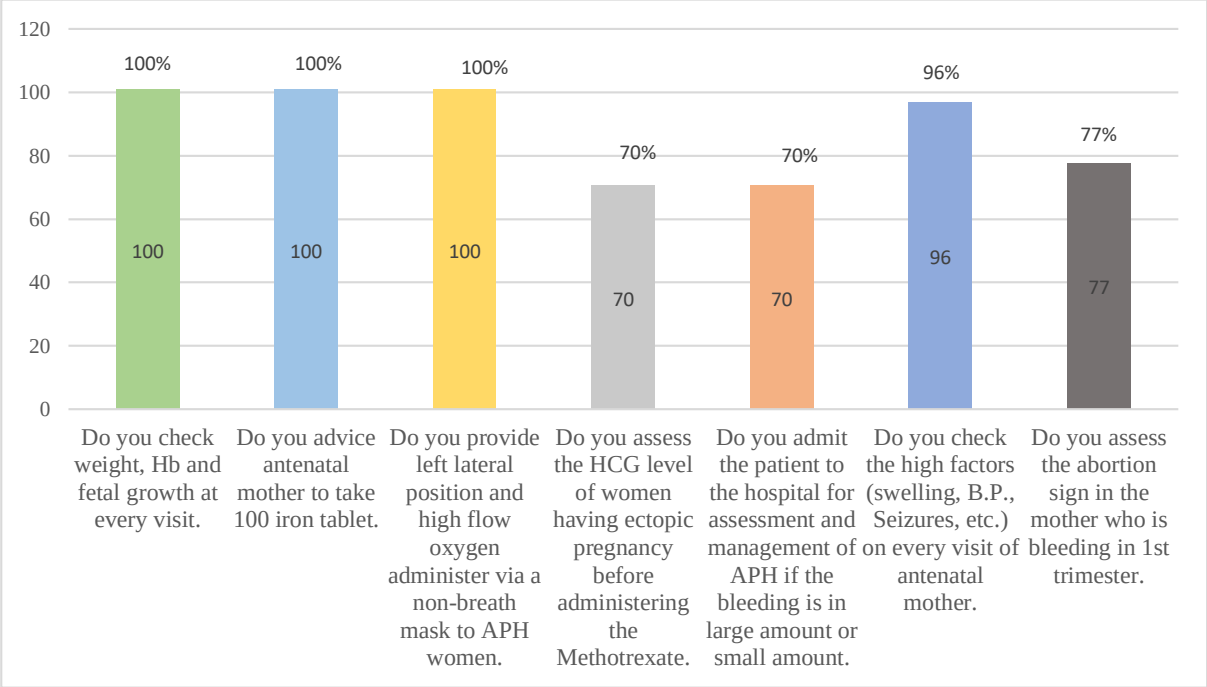

Figure No. 2: The bar graph shows that out of 100 the frequency and percentage of Staff Nurses and CHO's the checklist of antenatal practice, 100(100%) Staff Nurses and CHO's check the weight, Hb and fetal growth at every visit, advice antenatal mother to take 100 iron tablet and provide left lateral position and high flow oxygen administer via a non-breath mask to APH women, 96(96%) Staff Nurses and CHO's check the high factors (swelling, B.P., Seizures, etc.) on every visit of antenatal mother, 77(77%) Staff Nurses and CHO's assess the abortion sign in the mother who is bleeding in 1st trimester, and 70(70%) Staff Nurses and CHO's asses the HCG level of women having ectopic pregnancy before administering the Methotrexate and admit the patient to the hospital for assessment and management of APH if the bleeding is in large amount or small amount.

2.	**INTRANATAL**		
2.1	Do you give 5gm of MgSo4 I/M on each buttock before Referred to higher level of health centre to a mother with sign of severe Pre- eclampsia?	100	100%
2.2	Do you check B.P., Urine output, Knee Reflex and RR before and after administration of MgSo4?	100	100%
2.3	Do you provide fundal massage to the mother when the uterus soft and relaxed?	100	100%
2.4	Do you plot the partograph when mother is having 4 cm cervical dilatation (active stage) according to WHO guidelines?	100	100%
2.5	Do you plot the partograph when the cervical dilatation is 5 cm and towards the left side of the alert line according to the labour guide?	13	13%

2.6	Do you follow the respectful maternity care in the labour ward?	73	73%
2.7	Do you keep the restitution trolley ready in the labour room?	100	100%

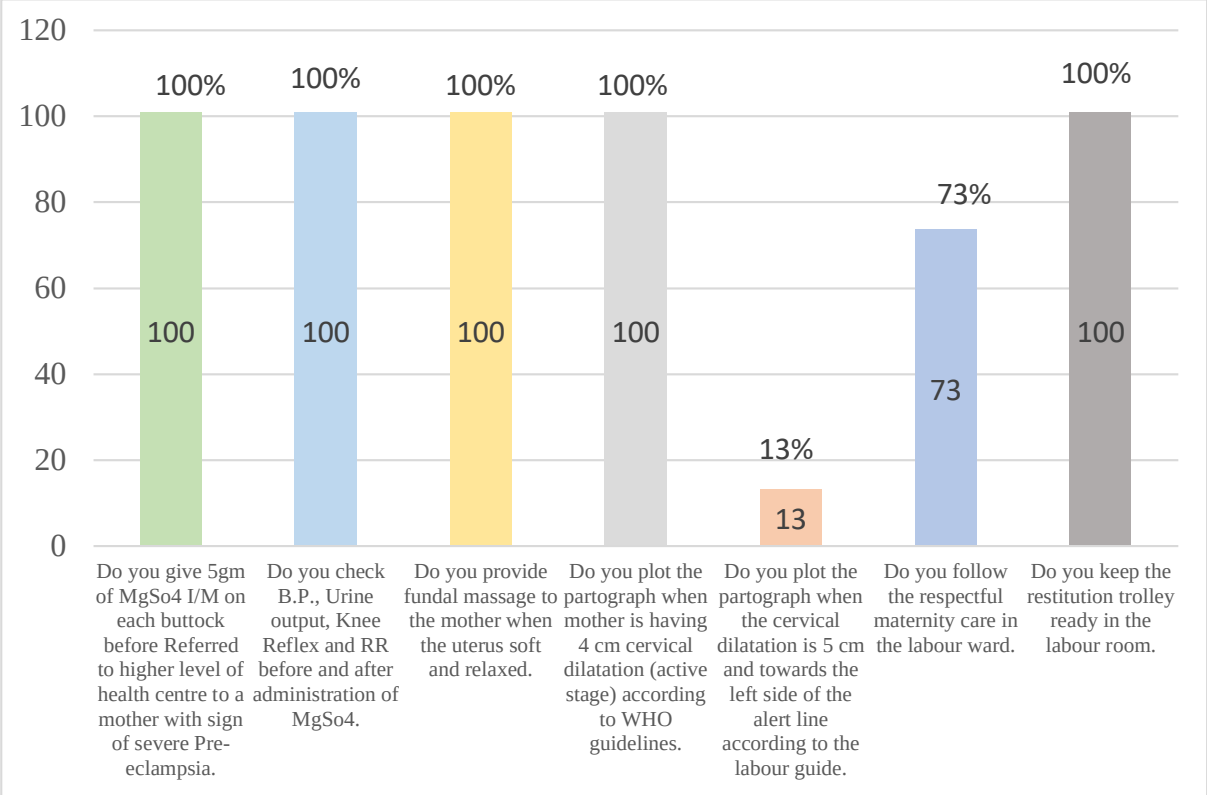

Figure No. 3: The bar graph shows that out of 100 the frequency and percentage of Staff Nurses and CHO's the checklist of Intranatal practice, 100(100%) Staff Nurses and CHO's give 5gm of MgSo4 I/M on each buttock before Referred to higher level of health centre to a mother with sign of severe Pre- eclampsia, check B.P., Urine output, Knee Reflex and RR before and after administration of MgSo4, provide fundal massage to the mother when the uterus soft and relaxed, plot the partograph when mother is having 4 cm cervical dilatation (active stage) according to WHO guidelines and keep the restitution trolley ready in the labour room, 73(73%) Staff Nurses and CHO's follow the respectful maternity care in the labour ward and 13(13%) Staff Nurses and CHO's plot the partograph when the cervical dilatation is 5 cm and towards the left side of the alert line according to the labour guide.

3.	**POSTNATAL**		
3.1	Do you perform the abdominal examination and vaginal examination at every 15 min after the 1 hour of the delivery?	38	38%
3.2	Do you check the fundal height, abdominal examination, and vaginal examination until mother stay in hospital?	53	53%
3.3	Do you keep MgSo4, Inj. Calcium gluconate, Inj. Naloxone and Oxygen supply ready in the post Eclampsia unit?	67	67%
3.4	Do you check the post Eclampsia severity symptoms in the eclamptic mother such as blurred vision, headache, seizures etc?	86	86%
3.5	Do you check the "4Ts" during the PPH condition that is Tone, Trauma, Tissues, Thrombin?	74	74%
3.6	Do you the assess the newborn for the danger's signs like hyperthermia, hypothermia etc?	93	93%

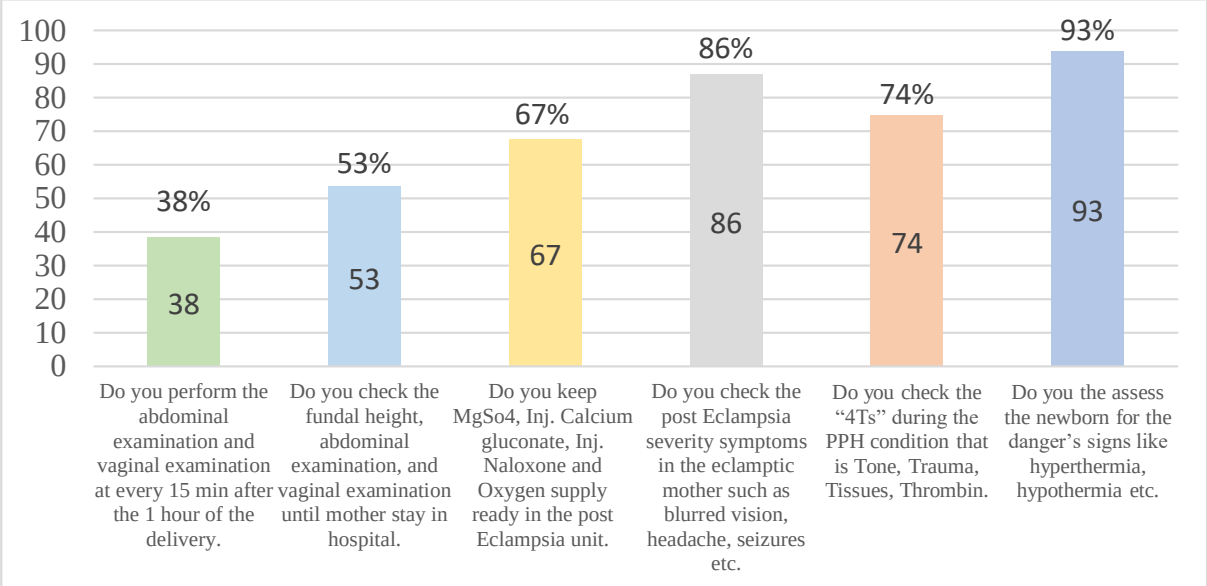

Figure No. 4: The bar graph shows that out of 100 the frequency and percentage of Staff Nurses and CHO's the checklist of postnatal practice, 93(93%) Staff Nurses and CHO's assess the newborn for the danger's signs like hyperthermia, hypothermia etc, 86(86%) Staff Nurses and CHO's check the post Eclampsia severity symptoms in the eclamptic mother such as blurred vision, headache, seizures etc, 74(74%) Staff Nurses and CHO's check the "4Ts" during the PPH condition that is Tone, Trauma, Tissues, Thrombin, 67(67%) Staff Nurses and CHO's keep MgSo4, Inj. Calcium gluconate, Inj. Naloxone and Oxygen supply ready in the post Eclampsia unit, 53(53%) Staff Nurses and CHO's check the fundal height, abdominal examination, and vaginal

examination until mother stay in hospital and 38(38%) Staff Nurses and CHO's perform the abdominal examination and vaginal examination at every 15 min after the 1 hour of the delivery.

ASSESSMENT OF PRACTICE

Table No. 5: Assessment of practice regarding the Obstetrical emergencies First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse in selected Health centres in selected District of Haryana.

N=100

Level of practice	Range of score	Pre- existing	Practice
		Frequency	Percentage
Poor practice	0-6	00	00%
Average practice	7-13	16	16%
Good practice	14-20	84	84%

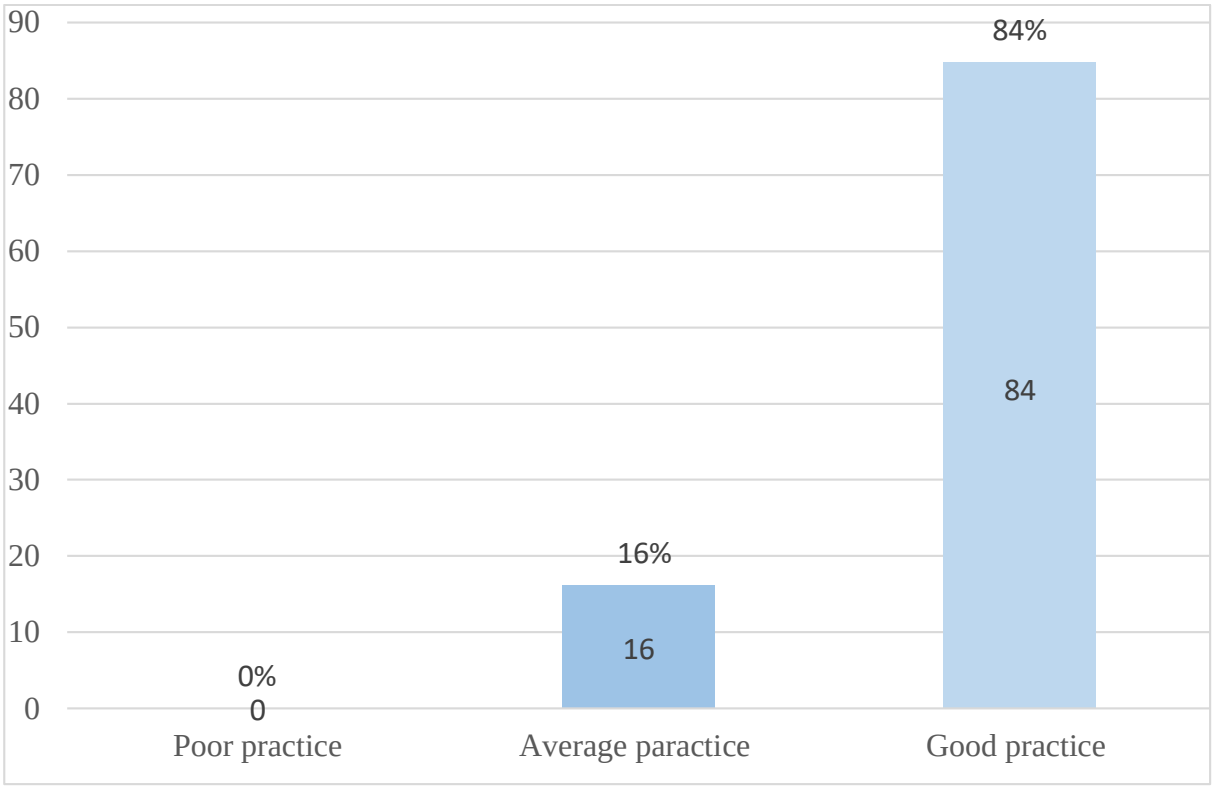

Figure No. 5: The bar chart shows that out of 100 Staff Nurses and CHO's 16(16%) had average practice followed by 84(84%) had good practice of obstetrical emergencies.

Table No. 6: Mean, Median, Mode, Standard deviation of practice score of Staff nurses and CHO's regarding First-Aid Management of Obstetrical emergencies.

N=100

Area of analysis	Mean	Median	Mode	Standard deviation
Pre-existing practice	16.10	16	17	1.817

Description of table no.6 Data depicted in table no. 15 shows that in pre-existing practice the mean is 16.10, median is 16, mode is 17 and standard deviation is 1.817 respectively.

SECTION-D

Table No. 7: To determine the association of knowledge regarding the First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse.

N=100

Demographic Variable		**Association of knowledge regarding the First-Aid Management of Obstetrical emergencies among Staff Nurses and CHO's.**							
Variables	**Options**	**Poor**	**Average**	**Good**	**Chi test**	**P value**	**Table value**	**Df**	**Results**
Age in years	a) 22-28 b) 29-34 c) 35-40 d) Above 41	00 00 00 00	18 22 5 1	21 20 11 2	2.284	.516	7.82	3	*Not* significant
Gender	a) Male b) Female	00 00	5 41	10 44	1.140	.286	3.84	1	*Not* significant
Educational Qualification	a) Diploma in Nursing b) B.Sc. Nursing c) M.Sc. Nursing	00 00 00	7 34 2	11 30 4	4.192	.241	7.82	3	*Not* significant

	d) BAMS	00	3	9					
Current role/job title	a) CHO'S b) Staff Nurses	00 00	16 30	19 35	0.002	.966	3.84	1	*Not* significant
Type of Health Centre	a) Primary health centre b) Community health centre c) Civil hospital	00 00 00	17 11 18	13 19 22	2.442	.295	5.99	2	*Not* significant
Experience (In years)	a) Fresher (less than 1 year) b) 1-5 years c) 6-10 years d) more than 11 years	00 00 00 00	10 18 13 5	12 23 6 13	6.327	.097	7.82	3	*Not* significant
Encounter obstetrical emergencies in your work	a) Rarely b) Occasionally c) Frequently d) Very frequently	00 00 00 00	28 16 2 00	18 34 2 00	8.066	0.861	5.99	2	Significant
Received any specialized training in obstetric emergencies	a) Yes b) No	00 00	32 14	42 12	0.871	.351	3.84	1	*Not* significant

Table shows that in level of knowledge group there was no significant association with their selected demographic variables like age (in years), gender, educational qualifications, current job/title, type of health centre, experiences and any specialized training received in obstetric emergencies except the encounter obstetrical emergencies in

workplace. A chi square test was used to determine the significance of the knowledge with the selected demographic variables at 0.05 level of significance. Hence hypothesis H_0 is accepted.

Table No. 8: To determine the association of practice regarding the Obstetrical emergencies First-Aid Management of Obstetrical Emergencies among CHO and Staff nurse.

N=100

Demographic Variables		**Association of practice regarding the First-Aid Management of Obstetrical emergencies among Staff Nurses and CHO's.**							
Variables	**Options**	**Poor**	**Average**	**Good**	**Chi test**	**P value**	**Table value**	**Df**	**Results**
Age in years	e) 22-28 f) 29-34 g) 35-40 h) Above 41	00 00 00 00	4 8 4 00	35 34 12 3	2.78	.426	7.82	3	*Not* significant
Gender	a) Male b) Female	00 00	3 13	12 72	0.210	.647	3.84	1	*Not* significant
Educational Qualification	e) Diploma in Nursing f) B.Sc. Nursing g) M.Sc. Nursing h) BAMS	00 00 00 00	5 10 0 1	13 54 6 11	3.532	.317	7.82	3	*Not* significant
Current role/job title	a) CHO'S c) Staff Nurses	00 00	3 13	32 52	2.211	.137	3.84	1	*Not* significant

Type of Health Centre	a) Primary health centre d) Community health centre e) Civil hospital	00 00 00	4 5 7	26 25 33	0.236	.889	5.99	2	*Not* significant
Experience (In years)	a) Fresher (less than 1 year) b) 1-5 years c) 6-10 years d) more than 11 years	00 00 00	3 3 5 5	19 38 14 13	5.754	.124	7.82	3	*Not* significant
Encounter obstetrical emergencies in your work	a) Rarely b) Occasionally c) Frequently d) Very frequently	00 00 00 00	5 8 3 00	41 42 1 00	11.261	0.004	5.99	2	Significant
Received any specialized training in obstetric emergencies	a) Yes b) No	00 00	9 7	65 19	3.119	.077	3.84	1	*Not* significant

Table shows that in level of practice group there was no significant association with their selected demographic variables like age (in years), gender, educational qualifications, current job/title, type of health centre, experiences and any specialized training received in obstetric emergencies except the encounter obstetrical emergencies in workplace. A chi square test was used to determine the significance of the knowledge with the selected demographic variables at 0.05 level of significance. Hence hypothesis H_0 is accepted.

IMPLICATION OF THE STUDY

The finding of the study implications for nursing education, nursing practice, nursing administration, and nursing research.

Nursing Practice:

- **Enhanced patient care:** Nurses and CHO's can integrate knowledge and practice to provide better and effective care to the Antenatal, Intranatal, and postnatal mothers.
- **Early detection and intervention:** Nurses and CHO's can play a crucial role in early identification of Obstetrical Emergencies and reduce maternal complications.

Nursing Education:

- **Curriculum Development:** Nursing and CHO's can incorporate findings from this study into obstetric curricula to ensure that future nurses and CHO's are equipped with up-to-date knowledge and practice in managing obstetric emergencies.
- **Clinical Training:** Clinical scenarios based on the study can be integrated into nursing education programs to provide students with hands-on experience in assessing and managing obstetrical emergencies.

Nursing Research:

- **Further Exploration:** This study can serve as a foundation for further research exploring additional practice checklists based on Antenatal, Intranatal, and Postnatal Obstetrical emergencies.
- **Intervention studies:** Future research can focus on developing and evaluating interventions aimed at reducing obstetrical emergencies and improving maternal outcomes.

Nursing Administration:

- **Policy Development:** Administrators can use finding to inform the development of health centres policies and protocols for the screening, diagnosis, and management of obstetrical emergencies, ensuring standardized and evidence- based care.
- **Resources Allocation:** Knowledge and Practice of obstetric emergencies can guide administration in allocating resources such staffing, equipment, and facilities to effectively address the needs of antenatal, intranatal, and postnatal mothers at risk.

RECOMMENDATIONS:

After analysis of the data, the following recommendations are made by the researcher:

- The study can be replicated on large sample, there by findings can be generalized to a large population.
- A comparative study can be conducted in different districts of Haryana regarding the knowledge and practice of First-Aid Management of Obstetrical emergencies.
- Education can be provided to the Staff Nurses and CHO's regarding the First-Aid Management of Obstetrical emergencies.
- Timely screening for Obstetrical emergencies can reduce the mortality and morbidity rate of the mothers.

LIMITATION:

- The study was limited to Staff Nurses and CHO's in civil hospital, CHC, PHC of Rohtak district.
- The study was limited to assess the knowledge and practice of Staff Nurses and CHO's regarding the Frist- Aid Management of Obstetrical emergencies
- The study was limited to the 100 sample only.
- The data was collected by using the convenience sampling technique.

CONFLICT OF INTEREST:

The authors declare no conflicts of interest.

SOURCE OF FINDING:

Self

ETHICAL CLEARENCE:

- A written consent was obtained from participants before starting data collection.
- Commitment was given to each participants that the confidentiality of each individual will be maintained.

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