A Study to assess the knowledge on the use of Partograph among staff nurses working in selected hospitals of Haridwar, Uttarakhand

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Abstract : According to the report in 2013 approximately 289000 women died while pregnant or giving birth. Maternal mortality ratio averages 230 per 100,000 live births in developing countries. In India Sample registration system estimates maternal mortality for the year 2011 is about 130 per 100000 live births, in early neonatal mortality rate is about 25 per 1000 live birth.The nation will be shaped and moulded into a healthier and a stronger one, if its mother & children are strong and healthy. In Uttrakhand AHS estimates maternal mortality ratio is about 165 deaths per 100,000 live births. Most of these deaths are preventable with complication leading to death include hypertensive disorder, hemorrhage, obstructed, prolonged labour & infection. Skilled care during childbirth is one of the proven health care interventions which can reduce 50 to 60% maternal death. Obstructed labour, which is a major cause results from prolonged, ignored labour. A goal of MDG 5(Millennium development goal 5) is to reduce maternal mortality and have a skill at birth of the child is remarkable to any family. The aim of the study to assess the knowledge on the use of partograph among staff nurses working in selected hospitals of Haridwar, Uttarakhand".

Material and the methods - A non-experimental test design was used for the study. A total 30 staff nurses working in selected hospitals of haridwar, Uttarakhand were selected through convenience non-probability sampling technique. The data was collected through self-structured questionnaire on labour, partograph & its component. The tool was developed in two parts, the part first deal with the 5 questions of demographic variables and the part two consist of 20 knowledge questions on labour, partograph & its component.

Results the study concluded that out of 30 samples, majority of subjects 59.0% was having inadequate knowledge, 31% had moderate knowledge and 11% have adequate knowledge. Tests mean score was 2.65 with 1.68 SD. The test'$\chi 2$' value of 4.25 at 3.5 df at 0.05 level of significance. The chi square depicts that there is significant association between knowledge of staff nurses with selected demographic variables.

Conclusion- Partograph is considerd as variable tool in the the improvement of maternity service by allowing medwife and obstreticial to display intra[partum details in pictorial method . On the basis of the findings, it is recommended that such type of program should be conducted on time to time for all staff nurses who are working in hospitals so that they can practice preventive approaches.

Key words – Partograph,labour monitoring, hospitals.

Introduction

The WHO, Maternal Child Health and Family Planning Programme, Geneva, 1989, states that the tragedies of obstructed labour and rupture of the uterus contain one of the five major causes of maternal mortality and morbidity in growing countries. The partograph was designed by Philpott in 1971 in Harare, Zimbabwe. The observations which are go-through on the woman during labour and the accurate recording of these observations are known as the monitoring of labour. WHO started the partograph in 1987 as a safe motherhood initiative following a multicentre trial in South Asia that involved 35,484 women (WHO, 1994).

The partograph or partogram has been established as the "gold standard" labor monitoring tool universally. It has recommended by the WHO for use in active labor. The function of the partograph is to monitor the progress of labor and identify and intervene in cases of abnormal labor. Even though the partograph has been utilized for over four decades in obstetric practice, reports of obstructed labor and its serious maternal and fetal sequelae have questioned the efficacy of the partograph at times. Moreover, evidence of efficacy of partograph is equivocal as suggested by a Cochrane review. However, some of the trials studied in this Cochrane review have limitations with respect to the settings, population studied and conduct of labor. The partograph is an "easy-to-use" tool, but if not used correctly it will affect the final outcome.

The observations that are routinely write-down on the partograph are the progress of labour which includes 4 hourly monitoring of cervical dilatation, descent of the fetal head, abdominal palpation of fifths of head felt over the pelvic brim and hourly uterine contractions; the fetal wellbeing that includes hourly fetal heart rate monitoring, 4 hourly checking of whether membranes are intact or ruptured and the state of liquor and moulding of the foetal skull; the maternal wellbeing which are pulse and blood pressure that are monitored and recorded hourly while temperature and urinalysis (volume, protein, ketones) are being monitored and recorded 4 hourly.

This is a device that is designed for the purpose of regulating, guiding or administering a process. Within this study context, the "partograph", as a tool, has been sketched to guide the management of labour with the purpose of identifying complications that may arise. The partograph provides a framework for assessing maternal and foetal condition and labour progress during labour. If mother's well-being is advocated, certainly the foetal condition is also compromised and labour may not be allowed to continue to

save life of both. Maternal condition is observed through checking of blood pressure which helps to detect pre eclampsia and eclampsia. Pulse rate is observed to detect dehydration or sepsis during labour. Temperature checking helps to identify raised temperature which indicates sepsis. Urine output is checked to exclude proteinuria and dehydration but also to keep bladder empty. A full urinary bladder obstructs foetal head descent. Foetal condition is monitored to assess the well-being of the foetus. If foetal condition is settlement, even if the mother is healthy, normal labour may also be discontinued by an intervention to save the life of the baby. FHR monitoring is figured to identify babies being at risk of running short of oxygen (hypoxic). State of membranes show the risk of baby and mother to arising infections if ruptured for long. The state of colour of liquor can tell whether the foetal life is settled or not. The health worker would forecast vaginal delivery if there is no excessive moulding and caput. Labour progress is captured through monitoring cervical dilatation which tells whether labour is precipitated, normal or prolonged. Triggered and prolonged labours are potential risks of PPH.

Objective

1. To assess the level of knowledge about partograph among Staff Nurses.
2. To determine the association between the level of knowledge on the use of partograph among Staff Nurse working in selected hospitals and their demographic variable.

Methodology

A non-experimental test design was used for the study. A total 30 staff nurses working in selected hospitals of haridwar, Uttarakhand were selected through convenience non-probability sampling technique. The data was collected through self-structured questionnaire on labour, partograph & its component. The tool was developed in two parts, the part first deal with the 5 questions of demographic variables and the part two consist of 25 knowledge questions on labour, partograph & its component. Socio Demographic profile part was developed to collect information regarding sample characteristics. It consists of 5 items of socio demographic variables such as age, gender, education, occupation, and number of years in service. There was no scoring of any of the demographical variable. Self-Structured Knowledge questionnaire part consists of 25 questions of partograph and its component. Each item has four options with one correct answer with a score of one, thus the total score is twenty five in section II. The respondents were instructed to place a tick mark against the most suitable single answer.

Statistical analysis

Computation of frequencies and percentage was done for the analysis of social demographical variables. For assessing the knowledge regarding partograph among 30 staff nurses arithmetic mean and S.D. was calculated to find out the relationship of knowledge with socio demographic variables among staff nurses non parametric chi square test was applied for P value <0.5. Frequency and percentage distribution was used for analyzing demographic variables. Mean and standard deviation was used for analyzing the test knowledge score regarding use of partograph. Chi square was used to find out the association between the knowledge score with their selected demographic variables.

Ethical consideration

The ethical clearance was obtained from research committee of Arihant college of nursing. Written permission was obtained from the administrative authority of Arihant College of nursing. Informed consent was obtained from the subjects orally and written from after explaining about the purpose of the study and maintaining confidentiality of the collected data. No ethical issues were raised during the study.

Criteria for evaluation

Table no.1 Percentage distribution of the staff nurses according to the selected demographical variables

TABLE - 1

Demographic variables		No. of samples	%
Age	<29	15	50.0%
	30-39	7	23.3%
	40 and >	8	16.0%
Gender	Male	2	6.7%
	Female	28	93.3%
Education	GNM	15	50.0%
	Bsc Nursing	7	23.3%
	Post Basic Nursing	8	26.7%
Years in service	1-5 years	20	66.7%
	6-10 years	4	13.3%
	11 and above	6	20.0%

The above table shows that most of the samples (50%) were in the age group <29 years, 23.3% were in age group of 30-39 and 16.0% were in age group of >40 years. Most of the sample 93.3% was female and 6.7% were male. 50% samples have passed GNM, 23.3% were Bsc nursing and 26.7% were Post basic nursing. 66.7% samples have 1-5 year experience, 20.0% have 11 and

above years' experience and only 13.3% have 6-10 years' experience. Analysis of the percentage of knowledge of the staff nurses on different aspects of partograph

Table no.2 Analysis of the percentage of knowledge of the staff nurses on different aspects of partograph.

TABLE- 2

Components	No. of questions	Min – Max score	Knowledge score		
			Mean score	Mean %	SD
Labour	4	1-4	2.17	54%	1.05
Partograph	6	1-6	2.57	43%	1.57
Fetal components	5	1-5	2.47	49%	1.52
Maternal components	10	1-10	3.40	34%	2.59

The table shows that, staff nurses had more knowledge (54%) on the labour component of the partograph and comparatively less knowledge (34%) in the maternal component of the partograph. They had moderate knowledge 43% on partograph and 49% on fetal component.

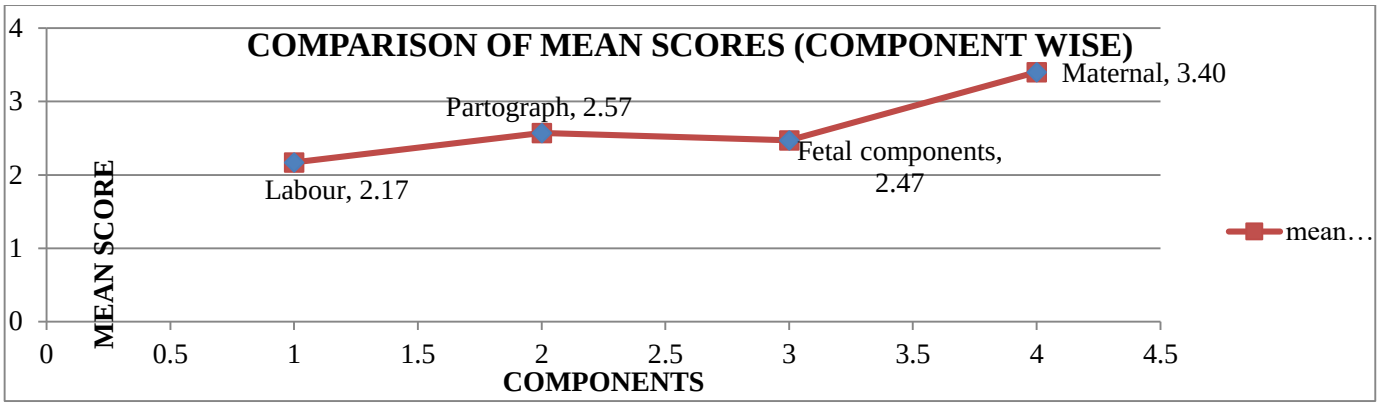
Table no.3 Deals with association between selected demographic variables and level of knowledge of Partograph

TABLE -3

Demographic variables		Level of Knowledge						Chi-Square Value	Significance
		Inadequate		Moderate		Adequate			
		N	%	N	%	N	%		
Age	<29	9	60%	5	33%	1	7%	**χ^2 =5.214 df=4 P=**	**Significant (P<0.05)**
	30-39	2	29%	3	43%	2	29%		
	40 and >	6	75%	2	25%	0	0%		
Gender	Male	2	100%	0	0%	0	0%	**χ^2 =1.232 df=2 P=**	**Significant (P<0.05)**
	Female	26	93%	1	4%	1	4%		
Education	GNM	8	53%	5	33%	2	13%	**χ^2 =2.17 df=4 P=**	**Significant (P<0.05)**
	Bsc Nursing	2	29%	3	43%	2	29%		
	Post Basic Nursing	4	50%	4	50%	0	0%		
Years in service	1-5 years	13	72%	2	11%	3	17%	**χ^2 =8.39 df=4 P=**	**Significant (P<0.05)**
	6-10 years	2	33%	4	67%	0	0%		
	11 and above	3	50%	2	33%	1	17%		

From the above table, it is evident that there is significant association between the knowledge of the staff nurses with the demographic variables namely age, gender, educational qualification, years of experience and exposure to in- service education. There is significant association between the knowledge of the staff nurses with the all demographic variable "age"," gender"," educational qualification" and "years of experience and exposure to in- service". Further, the paired Chi square test was used to find the significant difference between the demographic variables in knowledge scores in all the components of partograph. Above table shows that the χ 2 values obtained for all the components were significant at P<0.05. Hence there is significant difference between the knowledge scores in all the components of partograph,

Figure –1: Comparison between mean scores for all components



Area wise distribution of mean percentage of knowledge scores of the staff nurses shows that among the four areas, the highest mean score was obtained for the domain "Maternal" which was 3.40 and the lowest mean percentage was obtained for the domain "Labour" which was 2.17.

Discussion

There is an urgent need to make the partograph more user-friendly. Effective supervision by health-care workers/managers with training and clinical experience in partograph use is necessary for sustaining successful implementation. Competent use of the partograph can save maternal and fetal lives by ensuring that labor is closely monitored and that life-threatening complications such as obstructed labor are identified and treated

This study shows that, 47% of them had adequate knowledge, showed that staff nurses have adequate knowledge regarding partograph, 13% of the staff nurses had inadequate knowledge, and 40% of them had moderately adequate knowledge. Area wise analysis of component of partograph as knowledge in labour was 54% with SD 1.05, general knowledge about partograph was 43% with SD 1.57, knowledge in fetal component of partograph was 49% with SD 1.52 and

The above study shows that knowledge about maternal component was 34% with SD 2.59. There was a significant association was found between knowledge of staff nurses regarding partograph with selected demographic variables like age, gender, educational qualification and year of services. Hence the null hypothesis was accepted.

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