A Study to Assess the Effectiveness of IEC Intervention on Knowledge Regarding Utilization of Partograph among Selected GNM- 3rd Year Student of Mni. Muzaffarnagar" UP

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Abstract: *An important development in the management of labour was the introduction of the partogram. Friedmen discovered partograph in 1954. It is modified by Hugh Philpott in 1972 to identify abnormally slow labour. A partograph is a representation of the changes that occur in labour, including cervical dilatation, fetal heart rate, maternal pulse, blood pressure and temperature. It also shows a numerical record of features such as urine output and the volume and type of intravenous infusions (including oxytocin drips). It is therefore possible at a glance to identify deviations from normal in any of these variables. A partograph is graphical records of the observations made of women in labour and also check the progress of labour and salient conditions of the mother and fetus.* Method: *The research approach adopted for the study was evaluative with one group pre-test post-test design was used to assess the knowledge regarding partograph .The sample consisted of 50 student nurses , who are available at the time of study. Non probability purposive sampling method was used for the selection of samples. The instrument for the data collection was structured knowledge questionnaire. Part A: Consists of socio- demographic data. Part B: Consists of 20 items (structured knowledge questionnaire) to assess the knowledge regarding partogarph. The data obtained was analyzed by using descriptive and inferential statistics in terms of frequency, percentage, mean, standard deviation paired 't' test .* Results: *The mean post-test knowledge score (15.5) of the GNM. Students was higher than their mean pre-test knowledge score (13.3). There was reduction in the standard deviation from pre-test (2.215) to post-test (1.81). The mean post- test knowledge score (27.3%) of student nurses on partograph was higher than the mean pre-test knowledge score (13.3%) with the mean difference of 8.3% The obtained mean difference was found to be statistically significant evident from the obtained t value (1.73%) .*

Keywords: Effectiveness, Knowledge, Partograph, ICE, GNM, 3rd year students

1. Introduction

An important development in the management of labour was the introduction of the partogram. Friedmen discovered partograph in 1954. It is modified by Hugh Philpott in 1972 to identify abnormally slow labour.[1]A partograph is a representation of the changes that occur in labour, including cervical dilatation, fetal heart rate, maternal pulse, blood pressure and temperature. It also shows a numerical record of features such as urine output and the volume and type of intravenous infusions (including oxytocin drips). It is therefore possible at a glance to identify deviations from normal in any of this variables.

A partograph is a graphical record of the observations made of a women in labour and also check the progress of labour and salient conditions of the mother and fetus.

Components of the Partograph

Part I : Fetal Condition (at top)
This part of the graph is used to monitor and assess fetal condition
1) Fetal heart rate (pinard's stethoscope instrument use for check fetal heart rate normal fetal heart rate is 140 to 160 b per min)
2) Membranes and liquor
3) Moulding the fetal skull bones
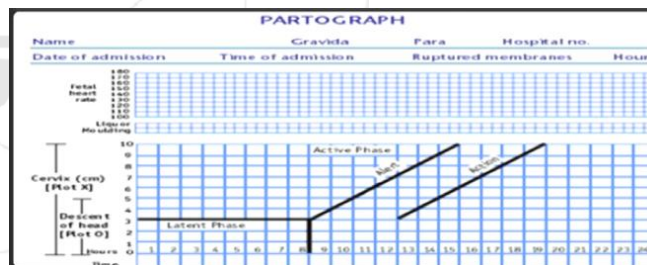
Part II – Progress of Labour (at middle)
- This section of the paragraph has as its central feature a graph of cervical diltation against time
- It is divided into a latent phase and an active phase
- Cervical diltation
- Descent of the fetal head
- Fetal position (find out fetal position during abdominal examination use lateral grip)
- Uterine contractions

Latent Phase
- It starts from onset of labour until the cervix reaches 3 cm diltation
- Once 3 cm diltation is reached , labour enters the active phase
- Lasts 8 hours or less
- Each lasting > 20 sceonds
- At least 2/10 min contraction

Active Phase
- Contractions at least 3 / 10 min
- Each lasting > 40 sceonds
- The cervix should dilate at a rate of 1 cm / hour or faster

Alert Line (Health Facility Line)
The alert line drawn from 3 cm diltation represents the rate of diltation of 1 cm / hour. Moving to the right or the alert line means referral to hospital for extra vigilance

Action Line (Hospital Line)
The action line is drawn 4 hour to the right of the alert line and parallel to it. This is the critical line at which specific management decisions must be made at the hospital

Cervical Diltation
It is the most important information and the surest way to assess progress of labour, even though other findings discovered on vaginal examination are also important .if a woman arrives in the active phase of labour , recording of cervical diltation starts on the alert line. when the active phase of labor begins , all recordings are transferred and start by plotting cervical diltation on the alert line

Descent of the Fetal Head
It should be assessed by abdominal examination immediately before doing a vaginal examination, The rule of fifth means the palpable fifth of the fetal head are felt by abdominal examination to be above the level of symphysis pubic When 2/5 or less of fetal head is felt above the level of symphysis pubis , this means that the head is engage , and by vaginal examination , the lowest part of vertex has passed or is at the level of ischial spines Assessing descent of the fetal head by vaginal examination.0 station is at the level of the ischial spine (Sp)

Uterine Contractions
- Observations of the contractions are made every hour in the latent phase and every half-hour in the active phase
- Frequency how often are they felt?
- Assessed by number of contractions in a 10 minutes period
- Duration how long do they last?

Part III: Maternal Condition (at bottom)
Name/DOB/Gestation, Medical/ Obstetrical issues, Assess maternal condition regularly by monitoring , drugs , IV fluids, and oxytocin , if labour is augmented, Pulse , blood pressure (best position of BP. Mearsure sit & lie down), Temperature, Urine volume , analysis for protein and acetone

Safe Motherhood Conference organized jointly by The World Bank, WHO and the United Nations Population Fund at Nairobi in 1987 concluded with a "Call to Action." This call demands that health workers involved in the care of mothers and children take positive action now to reduce maternal mortality and morbidity. Among the actions called for are to ensure that all pregnant women are screened by supervised and appropriately trained non-physician health workers where appropriate, with relevant technology including partographs as needed, to identify those at risk and to provide prenatal care and care during labour, as expeditiously as possible.

As part of the Safe Motherhood, World Health Organization promoted a partograph with a view to improving labour management and reducing maternal and fetal morbidity and mortality. Introduction of the partograph with an agreed labour management protocol reduced both prolonged labour (from 6·4% to 3·4% of labours) and the proportion of labours requiring augmentation (from 20·7% to 9·1%). Emergency caesarean sections fell from 9·9% to 8·3% and intrapartum stillbirths from 0·5 to 0·3%.

When the partograph is used effectively it will prevent prolonged or obstructed labour, which accounts for about 8% of maternal deaths.[6] The majority of the deaths and complications could be prevented by cost-effective and affordable health interventions like the partograph and indeed the same measures that would prevent maternal deaths would also prevent morbidity and improve neonatal outcome.

The partograph can be used by midwives personnel to assess the progress of labor to identify when intervention is necessary. Studies have shown that using the partograph can be highly effective in reducing complications from prolonged labor for the mother such as postpartum hemorrhage, sepsis, uterine rupture and its sequelae and for the newborn like death, anoxia, infections, etc. It is very useful to assist in make the correct decision about transfer, Caesarean section, or other life-saving interventions. Partograph is one of the very important tools for monitoring the labour. This helps in identifying the prolonged labour, decision for augmented labour and for the operative deliveries. This make to reduce the maternal mortality rate during the intra natal period.

2. Literature Survey

A descriptive study was conducted to evaluate the health workers in the use of partograph among fifty-six health workers offering delivery services in primary health care facilities after 7 months of training. A total 242 partograms of women in labour were plotted over a year period in which 76.9% of them plotted correctly193 (79.8%) Community health workers plotted and 49 (20.2%) nurse midwife plotted correctly. Inappropriate action based on the partograph occurred in 6.6%. The findings reveals that lower cadres of primary health care workers can be effetely trained to use the partogram with satisfactory results and thus improved the maternity outcome.

A prospective study was conducted to assess the effectiveness of the maternal care by using manual of the perinatal education programme to interpret antenatal cards and partogram among 193 midwives. They were compared by the study group for questions from the antenatal card and the partogram improved by 33.0% (p < 0.001) and 17.5% (p = 0.001), respectively. No changes were observed in the control group. This study concluded that midwives that

studied the Maternal Care Manual significantly improved their ability to interpret clinical information and apply knowledge. If this ability is applied in clinical practice, a reduction in maternal and perinatal deaths is possible.

An interventional study was conducted to determine the effect of partogram on the frequency of prolonged labour; augmented labour, operative deliveries will reduce maternal and perinatal complications. The study involved 1000 women in labour in which 88% had normal vaginal delivery, 5.6% had operative vaginal delivery and 6.4% had caesarean section. This study reveals that by using partograph frequency of prolonged and augmented labour, postpartum hemorrhage, ruptured uterus, puerperal sepsis and perinatal morbidity and mortality was reduced.

A retrospective study was conducted to assess the frequency and mode of delivery of women admitted in the latent and active labour using the World Health Organization partograph. That women admitted in the latent phase had more operative deliveries as labour progressed to the right of the alert line in active phase compared to women admitted in the active phase of labour. The study concluded that one-third of the women were admitted in the second stage of labour need criterion-based audits would definitely improve management of labour.

A descriptive study was conducted to the quality of partograms used to monitor labour. This study involve 20 midwives and of all partograms reviewed in this 50% had no records of duration of labor, 97% cervical dilation and 94% fetal heart rates were recorded , 94% had not recorded blood pressure, temperature, and pulse rates and 91% of these were judged to be substandard. These finding reveal that poor management of labor and urgent in-service training about the importance of documentation and regular partogram audit in order to reduce maternal and perinatal deaths.

3. Statement the of the problem

A study to assess the effectiveness of IEC intervantion on knowledge regarding utilization of partograph among selected gnm. 3rd year student of mni. Muzaffarnagar.

Objectives of the Study
1) To assess the level of knowledge on partograph among GNM. 3rd year students.
2) To assess the effectiveness of IEC intervention on knowledge regarding utilization of partograph among selected GNM. 3rd year students.
3) To compare the pretest and posttest level of knowledge on partograph among GNM. 3rd year students.

Hypothesis
H1- The mean post-test knowledge score of GNM. 3rd year student will be significantly higher than their mean pre-test knowledge scores as measured by the structured interview schedule at 0.05 level of significance.

Assumptions

1) GNM, 3rd year students have some knowledge regarding partograph.
2) This information booklet will help the GNM. 3rd year students to improve their knowledge regarding partograph
3) GNM, 3rd year students will be free and frank responses regarding knowledge towards partograph.
4) Knowledge of GNM. 3rd year students are measure by structured knowledge questionnaire.

Conceptual framework
Theoretical framework selected for this study was based on general systems theory as postulated by Von Bertalanffy (1998) and afterwards modified by J.W.Kenny (1990). This is regarded as a universal grand theory because of its unique relevancy and applicability (Johnson and Webber, 2005). It is one type of exchange theory. In general systems theory, systems are composed of both structural and functional 5 components that interact within the boundary that filters the type and rate of exchange with the environment. Here all the living systems are open systems because there is an ongoing exchange of matter, energy and information.

4. Operational Definitions

Effectiveness: It refers to the extent to which IEC intervantion will increase the knowledge of students regarding utilization of partograph in labour.

IEC:- It is self development information booklet will be used as intervention to provide the information on utilization of partograph in labour.

Information Booklet: A well planned and arranged information book designed for GNM. 3rd year students to provide information on partograph.

Knowledge: In this study knowledge refers to the correct response from the GNM. 3rd year student regarding the partograph. It will be measured by structure questionnaire through interview schedule.

Partograph refers to the graphical record of single sheet paper use for observation made of a women in labour to check the progress of labour & other complication.

GNM: In this study refer to GNM 3rd year students. who have studying in MNI. Muzaffarnagar.

5. Methodology

The research approach adopted for the study was evaluative with one group pre-test post-test design was used to assess the effectiveness of ICE on knowledge regarding partograph .The sample consisted of 50 GNM. students , who were available at the time of study. Non probability purposive sampling method was used for the selection of samples. The

instrument for the data collection was structured knowledge questionnaire.

6. Result & Discussion

Table 1: Frequency and Percenatge Distribution of GNM. 3rd Year Students and their Selected Demographic Characteristics

S.No.	Varibles	Frequency	Percentage
1.	**Age (Years)**		
	19-22 years	35	70%
	23-25years	09	18%
	26-28years	01	02%
	29-30years	05	10%
2.	**Gender**		
	Male	08	16%
	Female	42	84%
3.	**Religion**		
	Hindu	43	86%
	Muslim	07	14%
	Sikh		0%
	Christian		0%
4.	**Any Previouus Class Attended Regarding Partogram/ Partograph**		
	Yes.	37	74%
	No.	13	26%
5.	**From which board you have passed your senior secondary class**		
	UP. Board.	49	98%
	CBSE.	01	02%
	ICSE.	00	0%
	OTHER	00	0%

1) Distribution of Age
The Socio-demographic variable related to age indicates that maximum (SN= 70%) of the nurse students were of aged years, 19-22, 18 % of them who were 23-25-years, 0.2 % of them who were 26-28 years and 10.0 % of them were above 29-30 years.

2) Distribution of Gender
The Socio-demographic variable related to gender indicates that majority of the student nurses male (sn=16%) , 84 % female.

3) Distribution of Religion
The Socio-demographic variable related to religion indicates that majority of the student nurses hindu (sn=86%) were, Muslim 14% were Sikh, 0.0% were Christian 0.0%

4) Distribution of any Previous Class Attended regarding Partograph
Most of the (n= 74.0%) of student nurses had no any previous class attented regarding partograph, 37% had yes taken previous class attended regarding partograph.

5) Distribution of Year of from which board you have passed your Senior Secondary Class
Most of the (sn= 98%) of student nurses had passed UP. board ,0.2% passed CBSE, 0.0% passed ICSE, 0.0% had passed other.

Table: Mean, Median, Standard Deviation of Pre-Test and Post-Test Knowledge Score of the Effectiveness of ICE. on Partograph, sn=50

Knowledge test	Mean	Median	Standard deviation
Pre-test	13.3	14	2.215
Post-test	15.5	16	1.81

The data presented in table-The mean post-test knowledge score (15.5) of the married women was higher than their mean pre-test knowledge score (13.3). There was reduction in the standard deviation from pre-test (2.215) to post-test (1.81).

Table: Mean, mean difference and standard deviation of difference, standard error of mean difference and t- value of pre-test and post-test knowledge scores of the effectiveness of information booklet on partograph, S-50

Group	Mean knowledge scores		Mean D	SDD	SED	"t-" value
GNM 3RD	Pre-test 13.3	Post-test 27.3	8.3	4.97	.703	1.73

Data presented in table 3 show that the mean post- test knowledge score (27.3%) of student nurses on partograph was higher than the mean pre-test knowledge score (13.3%) with the mean difference of 8.3% The obtained mean difference was found to be statistically significant evident from the obtained t value (1.73%) .

7. Conclusion

The result of the study reveals that knowledge regarding Partograph among GNM. 3rd year student. The ICE.was found to be effective in increasing the knowledge.

8. Nursing Implication

Nursing education
to improve the knowledge of students regarding partograph the nurse educator provide training related to partograph to all staff nurses so, that they all will have adequate knowledge regarding partograph which will help them in their working area.

Nursing practice
For update improving the knowledge of student nurse, there is a need for regular teaching programme. Which will improve their knowledge level of staff nurses which leads to timely intervention. To reduce the complication during labour also reduce the motility rate. to improve the knowledge of staff nurses in service education & workshop & regular teaching should be organized at regular period so that their knowledge will be updated and refined.

Nursing administration
As an administrative role of nurse will enhance the working capabilities of staff nurses in the hospital areas. The nurse administrator assess the quality of care provided by the staff nurses   regarding partograph. it will improve the quality assurance of   staff nurses in rendering care to during labour at the hospital.

Nursing research

The findings of the present study are helpful for the nursing professionals and nursing students to conduct further studies to find out the effectiveness of various methods of providing education on improving the knowledge regarding partograph among GNM. students. it will in turn strengthen nursing research pertaining to the obstetrics & gynecology nursing.

9. Recommendations

The study can be replicated in various settings

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