

## Re-Learning Partograph by Staff Nurses as a Strategy to Improve Knowledge and Practice of Staff Nurses Working in Selected Hospital of District Ambala, Haryana

Sarita Thakur\*, Rathish Nair\*, Ajesh Kumar\*

Assistant Professor, College of Nursing, All India Institute of Medical Sciences, Patna, Bihar – 801507.

### Abstract

The Partograph, a graphic recording of progress of labour and salient conditions of the mother and fetus. The partograph serves as an “early warning system” and assists in early decision on transfer, augmentation and termination of labour. Quasi experimental study was conducted to evaluate the effectiveness of planned teaching programme on partograph to assess and compare the knowledge and practice of staff nurses in experimental and control group, to determine the relationship between the knowledge and practice of staff nurses regarding partograph before and after the administration of planned teaching programme & to determine the association of level of knowledge and practice of staff nurses regarding partograph with selected variables. The design was pre-test post-test control group. Sixty staff nurses, 30 in experimental group and 30 in control group were selected by convenient sampling technique. Staff nurses from MMIMS&R Hospital Mullana, Ambala & Civil Hospital Ambala City were selected. Structured knowledge questionnaire and structured simulation situations were used to generate the required data. The mean post test knowledge score ( $23.73 \pm 2.95$ ) and mean post test practice score ( $54.53 \pm 3.89$ ) in experimental group were higher. than control group and were found statistically significant at 0.05 level of significance. A moderate positive correlation (0.231) was found between knowledge and practice score of staff nurses. There was significant association between gain in knowledge score of staff nurses and their previous education. Study concluded that planned teaching programme was effective in enhancing knowledge and improving the practice of staff nurses regarding partograph.

Keywords: Pregnancy; Augmentation; Partograph.

Pregnancy and labour are a normal physiological process, which are associated with certain risks. These risks can be prevented and managed if adequate ante partum and intra partum care is given to the pregnant and labouring women by skilled birth attendant. In developed countries, these risks have been largely overcome as every pregnant woman has access to special care during pregnancy and child birth. Half a million women lose their lives every year because of pregnancy related complications. Obstructed labour and ruptured uterus contributes up to 70% of maternal mortality. Early detection of abnormal progress and prevention of prolonged

labour can significantly reduce it. Tools and techniques to monitor labour thus play an important role in saving women’s lives. The Partograph, a graphic recording of progress of labour and salient conditions of the mother and fetus. The partograph serves as an “early warning system” and assists in early decision on transfer, augmentation and termination of labour.

Current Maternal Mortality Rate (MMR) of India is 254 in 100,000 live births. According to the World Health Organization (WHO), one woman dies every eight minutes due to complications arising from pregnancy such as sepsis, hemorrhage or obstructed labour. These deaths could be avoided if there is timely medical intervention. A partograph is a graphical representation of a woman’s progress in labour, plotting the duration of labour in hours

**Reprint Request:** Rathish Nair, Assistant Professor - College of Nursing, All India Institute of Medical Sciences, Patna, Bihar – 801507.

E-mail: [rathish401@gmail.com](mailto:rathish401@gmail.com)

against cervical dilatation in centimetres. Use of the partograph is based on the assumption that it facilitates earlier recognition of dystocia, thereby optimizing the timing of appropriate intervention, such as amniotomy, oxytocin augmentation, or, most importantly, Caesarean section. In developing countries the focus of managing labour is on preventing maternal and foetal death related to prolonged labour, whereas in developed countries the focus is on earlier identification and management of dystocia in order to offer interventions and avoid CS. Reduction of the rate of primary CS for dystocia would then reduce the rate of repeat CS.

#### *Objectives*

1. To assess and compare the knowledge of staff nurses regarding partograph in experimental and control group before and after the administration of planned teaching programme (PTP).
  2. To assess and compare the practice of staff nurses regarding partograph in experimental and control group before and after the administration of PTP.
  3. To determine the relationship between the knowledge and practice of staff nurses regarding partograph before and after the administration of the PTP.
  4. To determine the association of level of knowledge & practice regarding partograph with selected variables.
1.  $H_1$ : The mean post-test knowledge score will be significantly higher than the mean pretest knowledge score of staff nurses regarding partograph.
  2.  $H_2$ : There will be significant difference between the pre test knowledge score of staff nurses of experimental group and control group regarding partograph.
  3.  $H_3$ : The mean post-test knowledge score of staff nurses in experimental group will be significantly higher than the mean post test knowledge score of staff nurses in control group regarding partograph.
  4.  $H_4$ : The mean post-test practice score of staff nurses in experimental group will be significantly higher than the mean post test practice score of staff nurses in control group regarding partograph.
  5.  $H_5$ : There will be a significant relationship between knowledge score and practice of staff nurses regarding partograph at 0.05 level of significance.

## **Methodology**

Research design: A quasi experimental approach with one group pre-test post-test control group design were used. Sixty samples collected from staff nurses working in selected Hospital Maharishi Markandeshwar Institute of Medical Sciences & Research Mullana Ambala & Civil Hospital Ambala City, Haryana using convenient sampling method.

#### *Variables*

Independent variable is Planned Teaching Programme (PTP) on partograph. Dependent variables are knowledge and practice of staff nurses towards partograph.

Tools and techniques: Tools for the present study was constructed by the researcher.

#### *Socio Demographic Data Sheet*

The socio demographic information had 8 items which includes age, sex, marital status, accademic education, professional education, total year of experience, year of experience working in labour room, Have you attended inservice education programme etc.

#### *Knowledge Questionnaire*

There were 30 multiple knowledge questions in questionnaire with one correct answer. The items in the questionnaire were divided under 3 dimension (concept, knowledge, & charting).

#### *Simulation Situation*

simulation situation were prepared. There was five situation consist 60 items. These items were prepared by giving different-different situation of labour each item for one mark every situation consist of 12 questions.

#### *Validity and Reliability*

The content validation was established by the nine experts from various hospital specialized in obstetrics & gynecology split half method was used. The pilot study was conducted for checking the feasibility of the study.

#### *Findings of the Study*

Table1 reveals that knowledge score of subjects

were significantly increases after the PTP where as in control group with out PTP score was almost same as pre test. Table 2 shows that practice score of subjects were significantly increased after the PTP.

**Table 1:** Mean, Mean Difference, Standard Deviation of difference and Standard Error of Mean Difference and 't' value from pre test to post test knowledge score in Experimental and Control group regarding partograph.

Knowledge Score	Mean	M <sub>D</sub>	S.D <sub>D</sub>	SE <sub>MD</sub>	't' value
<b>Experimental(n=30)</b>					
Pre-test	16.30	7.43	1.02	1.01	9.87*
Post-test	23.73				
<b>Control group(n=30)</b>					
Pre-test	16.57	0.13	0.04	1.41	0.52
Post-test	16.70				

t(29)=2.05 significant at .05 level

**Table 2:** Mean, Mean Difference, Standard Deviation of difference, Standard Error of Mean Difference and 't' value of pre test and post test Expressed Practice Scores of Staff nurses in Experimental and Control group regarding Partograph.

Knowledge Score	Mean	M <sub>D</sub>	S.D <sub>D</sub>	SE <sub>MD</sub>	't' value
<b>Experimental(n=30)</b>					
Pre-test	36.40	18.13	4.32	2.00	12.2*
Post-test	54.53				
<b>Control group(n=30)</b>					
Pre-test	35.67	0.50	1.06	3.37	0.91 <sup>NS</sup>
Post-test	36.17				

t(29)=2.05 significant at .05 level

**Table 3:** Correlation between pre test & post-test practice score and knowledge score Obtained by staff nurses. n-30

n=30	Knowledge Score		practice score		r value
	Mean	S.D	Mean	S.D	
Pre-test	16.30	3.984	36.40	8.219	0.197 <sup>NS</sup>
Post test	23.73	2.959	54.53	3.893	0.231 <sup>NS</sup>

r(28) = 0.37 Non significant at 0.05 level of significance

The finding in the Table 1 shows that there is enhancement of knowledge of staff nurses after PTP coefficient of correlation between pre test knowledge score and practice score was 0.197, suggesting a very low positive correlation between the knowledge score and practice score of staff nurses regarding partograph. The computed 'r' value (0.197) between the knowledge score and practice score was not significant at 0.05 level of significance. Data further shows that coefficient of correlation between post test knowledge score and practice score was (0.231), suggesting moderately positive correlation between knowledge score and practice score of staff nurses regarding Partograph.

Therefore null hypothesis H<sub>07</sub> was accepted and research hypothesis H<sub>7</sub> was rejected.

Data Further indicates that the computed chi square values of personal variables (age, gender, educational status, marital status religion, years of experience, year of working in labour room experience, continuing Nursing education programme. In-service training on partograph in the past three years with knowledge of Partograph were not found to be significantly associated with the levels of knowledge showing the influence of these variables on the knowledge of staff nurses.

### Summary of Findings

Majority of the subjects (83.3) was in age group of 22-24 years. Majority of them i.e. (96.7%) had general nursing and midwifery training and only (3.3%) had done BSc.Nursing.

Majority of subjects (93.3) had less than two years of experience and (33.3) had 8 to 10 year experience.

Majority of staff nurses (93.3) had less than two year experience in working labour room.

Majority of Staff nurses (86.7) had not attended any services programme related to partograph.

The mean post-test knowledge score (23.73) was significant higher than the mean pre test knowledge score(16.30) with t valueof 9.87\* significant at 0.05 level, suggesting the effectiveness of PTP in increasing the knowledge of nursing personnel regarding Partograph.

The maximum gain was in the area of concept of knowledge of partograph (46.12)

The mean post test practice score (54.53) was found to be significantly higher than the mean pre test score (36.40) with a t value of 't' 12.22\* significant at .05 level, suggesting the effectiveness of PTP in enhancing the practice of staff nurses regarding partograph.

Coefficient of correlation between the post test knowledge score and practice score 0.231 is moderately significant at .05 level.

### Discussion

The purpose of this study was to assess and evaluate the effectiveness of Planned teaching Programme regarding Partograph in terms of knowledge and practice of Staff nurses. The present study findings shows that majority of staff nurses in both the experimental and control group having average level of knowledge regarding partograph in pre test. The findings are consisting with the existing literature by MN Norelle Groeschel, Pauline at the peripheral maternity centers. In this study 396

maternity care-providers out of the 216 personnel (54.5%) who were aware of the partograph, 36 (16.7%), 119 (55.5%) and 61 (28.2%) demonstrated poor, fair and good levels of knowledge respectively.

Petterson KO, Suensson ML, Christensson K. found similar results: 216 (54.5%) nursing personnel were aware of partograph, out of which 36 (16.7%), 61 (28.2%) and 119 (55.5%) demonstrated poor, fair and good levels of knowledge respectively.

The present study findings indicate that the mean post test knowledge score of staff nurses regarding Partograph was significantly higher than the mean pre test knowledge score in experimental group which shows that there was significant increase in knowledge among staff nurses after administration of PTP.

This findings are consistent with the finding of the study conducted by Sidrah Nausheen, Sadiya Jalil, Tauqir Anwer, Asif Zia Akhter on assessment of improvement in knowledge and skills amongst trainees of workshop on labour and partograph. This study provides evidence that an interactive intervention in form of workshop on partograph has resulted in improvement of knowledge and skills amongst trainees for the assessment in the improvement in knowledge is pretest and post test [13].

The present study findings is also similar to a recent study conducted by Arez Saviola, Raddi Sudha A, Metgud MC regarding effectiveness of PTP on partograph. The results shows that the overall pre-test mean knowledge scores was 13.9, whereas post-test mean knowledge scores was 21.83. The overall pre-test mean skill scores was 5.57, whereas post-test mean skill scores was 12.63. Thus it was inferred that the planned teaching program was effective and while the gain in knowledge and skill score is commendable, there is still room for improvement.

#### *Recommendations*

A similar study can be conducted in a large population.

A comparative study can be done between the effects of planned teaching programme versus self-instructional modules.

A study may be done to explore the attitude and practice of the nurse regarding partograph.

A comparative study can be done to find out the knowledge and practice of medical students and nursing students regarding partograph.

A study can be conducted to assess the knowledge

and practice of ANM student regarding partograph.

#### **Conclusion**

The following conclusions are drawn from the findings of the study: Deficit in knowledge of staff nurses regarding partograph was found in all area of concept, observation and Charting. Staff nurses had significant gain in knowledge and improvement in the practice regarding partograph after administration of planned teaching programme. PTP was effective in enhancing the knowledge of staff nurses regarding partograph. Deficit in the practice of staff nurses regarding partograph was found in all the areas of palpation and minimum deficit was found in the area of charting. Moderately positive correlation was found between the knowledge score and practice score of staff nurses regarding partograph. Thus the planned teaching programme regarding partograph was effective in enhancing the knowledge and improving the practice of staff nurses.

#### **Acknowledgments**

At the very outset. I would like to thank almighty for his presence. My sincere thanks go to all participants in my study. Lastly and most importantly I am grateful to everybody who was important to success realizations of thesis.

*Funding:* self funding

*Competing Interests:* None stated

*Ethical Consideration:* Ethical approval taken from the M.M. University research committee.

#### **Conclusion**

The following conclusions are drawn from the findings of the study: Deficit in knowledge of staff nurses regarding partograph was found in all area of concept, observation and Charting. Staff nurses had significant gain in knowledge and improvement in the practice regarding partograph after administration of planned teaching programme. PTP was effective in enhancing the knowledge of staff nurses regarding partograph. Deficit in the practice of staff nurses regarding partograph was found in all the areas of palpation and minimum deficit was found in the area of charting. Moderately positive correlation was found between the

knowledge score and practice score of staff nurses regarding partograph. Thus the planned teaching programme regarding partograph was effective in enhancing the knowledge and improving the practice of staff nurses.

### References

1. The global Maternal Mortality Rate (MMR) [Internet] 2010 was 210 maternal deaths per 100,000 live births, down from 400 maternal deaths per 1.00.000.Feb 2010[updated 2010 Jan; cited 2010]. Available from:<http://www.medicinenet.com/script/main/art.asp.articlekey=20340>
2. NavneetMagon. Clinical Cases and Investigations. International Journal. 2011 August; (1): 45-56.
3. Azandeybe N, Testa J, Makoutode M. Assessment of partogram utilization in Benin. Gynecology J. 2004; (2): 295-302.
4. Fantu Abebe1, Dereje Birhanu2, Worku Awoke2, TadesseEjigu.. Assessment of knowledge and utilization of the partograph among health professionals in Amhara region Ethiopia. Journal of Science andmedicine. 2013; 2(2): 26-42.
5. Kunaal K Shinde, Vidyadhar B. Bangal, Rashmi K Singh.Study of course of labour by modified who partograph. Journal of biomedical and advance research. 2012 Mar; 3(05): 391-397.
6. Fahdhy M. Evaluation of WHO partograph implemented by midwives for maternity home birth in Medan Indonesia [Internet].2011[updated 2011 Oct 11;cited 2011 Nov 11]. Available from: <http://www.sciencedirect.com/science?ob=articleURL&Udi=B6WN9-4GSC2N61>
7. Kenchaveeriah. Comparison of two WHO partographs. Gynecological Journal Turkish-German. 2011 Mar 19; 8(12): 31-42.
8. Dohbit J.S, Nana N.P, Foumane P. Mboudou E.T, Mbu R, A survey of the knowledge, attitude and practice of the labour partograph among health personnel. Journal of Yaoundé, Cameroon. 2010 Apr 16; 328(532): 1215-1219.