ISSN: 2582-7162

Review Article

Utilization of Partograph for Labor Management among Healthcare Providers

Noorjahan Ismail Patel[1], Abdul Latif [2]

[1] Research Scholar Nursing J.J.T.U. Rajasthan India

[2] Research Guide Nursing J.J.T.U. Rajasthan India

Corresponding author: Noorjahan Ismail Patel,Research Scholar Nursing J.J.T.U. Rajasthan India

Email: gulbadn1@gmail.com

How to cite this article: Patel N I1, Latif A[2]. Utilization of partograph for labor management among healthcare providers. GFNPSS-IJMR 2023; 4:9: 2380-2383

Submitted: 06-September-2023; Accepted:05-October-2023;Published:08-October-2023

Abstract:

Background: Generally partograph referred to as the partogram, it is a graphical record that has been widely acknowledged and recognized as the foremost labor monitoring instrument across the world. The World Health Organization has recommended partograph usage during the time of active phase of labor as it aids in the timely detection of abnormal labor progress and facilitates immediate interventions, if necessary. Reviews of articles were collected from online databases to review the utilization of a partograph for labor management.

The World Health Organization recommends the utilization of partograph for all laboring mothers. Partograph is a cost-effective, single sheet of paper that is used to follow maternal and fetal condition and progress of labour. Obstructed and prolonged labours are major causes of maternal deaths. These causes can be minimized by routine utilization of partograph.[1]

Keyword: Consumption; partograph; healthcare providers; executive

Introduction

In earlier history pantographic recording means identify the progress of labour and significant condition of both mother and fetus. It's used in 1970 to identify or detect abnormal labour progress.2

The partograph is a cost-effective tool used to monitor maternal and fetal conditions during labor.

It play an important role for promoting or proper intervention at the time of abnormal labour. Health care professional play an important role to timely detection of abnormal labor and also use proactive measures to prevent prolonged labor. Including this risk associated with postnatal, obstructed labor, hemorrhage, sepsis ,uterine rupture, and its other complications.

The partograph provides a framework for assessing both maternal and fetal condition during labor. Maternal condition can be monitored using different parameters such as; blood pressure which helps in detecting any hypertensive disorder in pregnancy that may lead to complications such as convulsions followed by coma, Pulse rate helps to detect the hydration status of the mother and whether the mother has an infection during labor, Temperature increase may indicate an infection while urine output is checked to exclude abnormal quantities of protein in urine which may indicate damage to the kidneys and dehydration while Obstruction of the bladder can obstruct the fetal head into the birth canal (Magon, 2013).3

What is labour? : Partograph is a single sheet of paper where maternal care providers utilize to monitor labour progress, fetal and maternal condition while a mother is in the active first stage of labour.

Types of partograph: The world Health Organization (WHO) partograms are the best known in most countries with three types published between 1990 to date.

Nurses related factors influencing partograph utilization

- **Knowledge of nurses:** A number of research studies reveal challenge of correct and consistent utilization of the partograph (Magon, 2013; Mathibe-Neke, 2014). The existence of poor utilization of the partograph is associated with lack of midwives' competence and knowledge on partograph use. Competency requires that the health care provider attends to a normal labor and birth, able to perform abdominal examination in order to determine descent of the fetus and able to do a vaginal examination to determine the dilation of the cervix (Ogwang et al., 2011).[4]
- Training of nurses: Comprehensive training on partograph among nurses promote its use which reduce prolonged labor, augmentation of labor, emergency cesarean sections and still births. The attendant should be well trained so that they can have competence for better utilization of the partograph (WHO, 2013). The impact of training among nurses on partograph use demonstrates improved utilization of the tool. Despite good knowledge among midwives on partograph use, poor utilization of the partograph in most health facilities can be attributed to lack of training on partograph use (Opiah et al., 2012) [5]
- Attitude of nurses on partographuse: Most parameters on the partograph are never monitored by the health care provider and the findings are not documented on the partograph after attending to the woman in labor. As a result, progress of labor is never closely monitored which may not translate into appropriate action. Sometimes the health care provider feels that effective completion of the partograph is time consuming task while others do not always understand how the partograph can save a woman's life. The attitude of the health care provider has a potential influence on partograph utilization, without positive attitude the partograph cannot guide health care provider to take appropriate decisions during labor (WHO, 2013).[6]
- Experience of nurses: Experience of midwives is important in regards to utilization of the partograph. Despite the good knowledge on partograph, poor utilization of the partograph in labor can be attributed to lack of experience from the midwives interviewed. Knowledge among junior nurses on partograph use is poor due to lack experience needed for effective utilization of the partograph (Fatusi, 2012). Young midwives in terms of experience may not utilize the partograph because they fear making errors (Abebe et al., 2013).[7]

Efficacy of the Partograph

- As stated earlier, the Cochrane review of the partograph seems to conclude that evidence reveals that partograph use in labors affects the improvement in clinical outcomes partially. Contrary to this, other studies conclude that partograph use results in shorter labors and better maternal and fetal outcomes[8].
- Health-care providers in labor wards experienced the modified partograph to be much more user-friendly, as compared to the composite partograph in which they found the latent phase difficult to complete. The modified partograph was found to significantly improve various intrapartum outcomes like a reduced cesarean section rate, augmentation of labor and admissions to neonatal unit as compared to the composite partograph in especially low-resource settings[9].
- Overall completion of the partograph to the expected standards is poor which affects its use in clinical practice. Analysis of completed partographs shows that the cervical dilatation and fetal heart rate are usually duly filled as compared to maternal well-being findings.[10]

Partograph in Labor: Challenges and Solutions

The greatest challenge in partograph use is to enhance its effective implantation in the management of all labors universally. Unfortunately, the partograph is still not considered as mandatory or central in routine care of all laboring women11. This may be because of lack of commitment and inconsistent acceptability for the usage of the partograph in labor rooms. At present though a majority of health-care workers do possess positive attitudes toward the partograph, a few challenges need to be tackled to ensure a favorable environment. These challenges are support by the health system, availability of resources, competence in use and monitoring and evaluation of the partograph in practice.

Positive validation, facility level guidance, evaluation and audit of partographs from experienced seniors and supervisors will enhance the value of the partograph in clinical practice. Adequate availability of resources, (i.e., the partograph and accessory equipment) will result in completion, which is essential to ensure consistent use, but sadly this is still lacking. Individualized training improves knowledge about the partograph12, but the use of multidisciplinary training strategies results in understanding of roles and promotes coordinated team work.13

All staff members providing care for women in labor should be trained and regularly updated in partograph use. Training should consist of completion and decision-making, like when to start the partograph, when to take action and appropriate referral. A limitation with the partograph use in current practice is the failure to evaluate the tool at facility level in terms of outcomes. This is paramount in evaluating the level of impact partograph use has on care provision and referrals as well as on specific labor outcomes. Hence, if positive outcomes from partograph use are observed and informed to all involved in the birthing process, then certainly it will be embedded into routine labor ward practice.

The Paperless Partograph: A Simplified Tool to Prevent Prolonged Labor.

E Partograph: Jhpiego and the Johns Hopkins Center for Bioengineering Innovation and Design (JHU-CBID) have developed the ePartograph, a handheld device and software platform based on the current partograph recommended by the World Health Organization.14

Mobile partograph: Founded in 2002 out of MIT's Media Lab, Dimagi is a software social enterprise that develops technologies to improve service delivery in underserved communities.

Conclusions

The findings from this study indicate that healthcare workers in most of the reviewed studies displayed inadequate knowledge, limited adherence to practice, and only moderately positive attitudes toward the utilization of partographs. Enhancing the knowledge, competency, and attitude of health workers towards the utilization of the partograph can significantly contribute to the improvement of accuracy in its completion. The outcome of this study demonstrated a pressing requirement for comprehensive reforms in the healthcare sector, particularly in terms of in-service training and continuous monitoring of service delivery across all tiers of healthcare facilities. These measures are crucial for enhancing compliance and accuracy in the utilization of partograph plotting, which, in turn, positively impacts maternal and perinatal health outcomes.

Recommendations

A) Strengthening healthcare facilities through the consistent provision of partographs stands as the initial measure to facilitate healthcare providers' efficacious implementation of partograph protocols. B) Continuous training and on-going professional development using effective instructional methodologies should be provided to every healthcare provider for better utilization of the partograph. C) Establishment of effective supportive supervision programs for healthcare providers, coupled with the enhancement of clinical proficiency in utilizing partographs, emerges as imperative elements for ensuring the long-term success of implementation efforts. D) Implementation of monitoring and auditing protocols for the partograph in clinical practice, encompassing aspects such as its completion, decision-making process, referral practices, and subsequent outcomes.

Funding: The authors received no external funding.

Conflict of interest: The authors declare that this study has no conflict of interest related to the material presented in the study.

Ethical consideration: There are no human participants in this research. Thus, there was no need for ethical approval.

References

01. N J, Thayumanavan M (August 28, 2023) Utilization of Partograph for Labor Management Among Healthcare Providers in Healthcare Facilities in India: A Systematic Review. Cureus 15(8): e44242.

02. WHO_FHE_MSM_93.8.pdf

03. Magon, N. (2013). 'Partograph Revisited', International Journal of Clinical Cases Investigations, 3:1–6.

04. Ogwang S, Karyabakabo Z, Rutebemberwa E. Assessment of partogram use during labour in Rujumbura Health Sub District, Rukungiri District, Uganda. Afr Health Sci. 2009 Aug 1;9 Suppl 1(Suppl 1):S27-34.

05. Opiah, M. M., Ofti, A. B., Essien, E. J., & Monjok, E. (2012). Knowledge and utilization of the partograph among midwives in the Niger Delta Region of Nigeria: African journal of Reproductive Health, 16(1): 125-132.

06. World Health Organization. (2013). Trends in maternal mortality: 1990-2013, Estimates by WHO, UNICEF, UNFPA, the World Bank and the United Nations population. Geneva: Switzerland

07. Abebe, F., Birhanu, D., Awoke, W., & Eligu, T. (2013). Assessment of knowledge and utilization of the partograph among Health professionals in Amhara region, Ethiopia. Science journal of clinical medicine; 2(2): 1-17.

08. Tayade S, Jadhao P. The impact of use of modified who partograph on maternal and perinatal outcome. Int J Biomed Adv Res. 2002;3(4):256–262. [Google Scholar]

09. Lavender T, Omoni G, Lee K, et al. Student nurses experiences of using the partograph in labor wards in Kenya: a qualitative study. Afr J Midwifery Womens Health. 2011;5(3):117–122. doi: 10.12968/ajmw.2011.5.3.117. [CrossRef] [Google Scholar]

10. Yisma E, Dessalegn B, Astatkie A, et al. Completion of the modified World Health Organization (WHO) partograph during labor in public health institutions of Addis Ababa, Ethiopia. Reprod Health J. 2013;10(23):1–7. [PMC free article] [PubMed] [Google Scholar]

11. Groeschel N, Glover P. The partograph. Used daily but rarely questioned. Aust J Midwifery. 2001;14(3):22–27.doi: 10.1016/S1445-4386(01)80021-5. [PubMed] [CrossRef] [Google Scholar]

12. Prem A, Smitha MV. Effectiveness of individual teaching on knowledge regarding partograph among staff nurses working in maternity wards of selected hospitals at Mangalore. Int J Recent Sci Res. 2013;4(7):1163–1166. [Google Scholar]

13. Robertson B, Schumacher L, Gosman G, et al. Crisis-based team training for multidisciplinary obstetric providers. Empir Investig. 2009;4(2):77–83. [Google Scholar]

14. Jhpiego. The E-Partogram. Retrieved on May 10, 2012 from http://savinglivesatbirth.net/ summaries/35.

Universe International Journal of Interdisciplinary Research
(International Peer Reviewed Refereed Journal)
DOI No. – 08.2020-25662434

© UIJIR | ISSN (O) – 2582-6417
OCT 2023 | Vol. 4 Issue 5
www.uijir.com

KNOWLEDGE AND PRACTICES REGARDING PARTOGRAPH AMONG STAFF NURSES WORKING IN LABOR ROOM

Author's Name: Noorjahan Ismail Patel1, DR. Abdul Latif[2]

Affiliation:

1. Research Scholar Nursing J.J.T.U. Rajasthan India.
2. Research Guide JJT University, Jhunjhunu, Rajasthan India.

Corresponding Author Name: Noorjahan Ismail Patel[1], gulbadn1@gmail.com

ABSTRACT

Inadequate care during labor results in threats to the life of the mother and fetus. In order to prevent complications during labor and for a better outcome, it is essential to follow the simple and effective tool such as a Partograph, by the health care providers with an adequate knowledge and skill. Partograph represent graphical record of cervical dilation during labor. ***Design:*** *Pre experimental one group pre test post test design was used to assess the Effectiveness of Self Instructional Module (SIM) on Knowledge and Practice regarding Partograph. Convenient sampling techniques were used to select sample. Informed written consent was taken from each Staff Nurses. A structured questionnaire and checklist were used to assess the knowledge and practice.* ***Result:*** *The findings of the study revealed that pre test knowledge 70% had inadequate, 30% had moderate knowledge and pre test practice 65% had poor 35% had average practice regarding Partograph among staff nurse. Post test knowledge 67% had adequate knowledge, 33% had moderate knowledge and post test practice 78% good practice, 22% had average practice regarding Partograph among staff nurse. Knowledge was significantly associated with educational qualification 0.016 at significance of $p<0.05$ level. There is no association was found between knowledge and other demographic variables like age, total working experience, experience in maternity unit, work place and attended any in-service education on monitoring labor process. In practice, experience in maternity unit was significant 0.045 at $p<0.05$ level and attended any in-services education on monitoring labor was 0.021at $p< 0.05$ level. No association found between practice and other demographic variables like age, education qualification, total working experience, work place etc.* ***Conclusion:*** *Self instructional module will be effective in improving knowledge and practice regarding Partograph among staff nurses in recognized at Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli.*

Keywords: Labor, Physiologic Process, Complications, Partograph, Cervical Dilation

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

INTRODUCTION

A Partograph is one of the valuable appropriate technologies in use for improved monitoring of labor progress, maternal and fetal wellbeing. It is an important tool for managing labor. This is through enabling clinicians (midwives and doctors) to plot examination findings from their assessments on the Partograph. The belief that its use was applicable in developed and developing settings led to its introduction worldwide .A number of common Partograph designs incorporates an alert and action line. The development of the Partograph provided health professionals with a pictorial overview of labor progress, maternal and fetal condition to allow early identification and diagnosis of pathological labor. Its use is critical in preventing maternal and perinatal morbidity and mortality.

Globally, there were an estimated number of 287,000 maternal deaths or a maternal mortality ratio (MMR) of 210 maternal deaths per 100,000 live births in the year 2014. The estimated total number of 287,000 maternal deaths.

Worldwide, 85% (245,000) .The majority of maternal deaths and complications attributable to obstructed and prolonged labor could be prevented by cost-effective and affordable health interventions like the use of partograph.

Therefore the Partograph should be used for all women admitted in established labor. The Partograph serves as an “early warning system” and assists in early decision on transfer, augmentation and termination of labor. It also increases the quality and regularity of all observations on the fetus and the mother in labor and aids early recognition of problems with either. Prolonged labor in the developing world is commonly due to cephalo-pelvic disproportion which may result in obstructed labor, maternal dehydration, exhaustion, uterine rupture and vesico-vaginal fistula.

METHODOLOGY

Research design:

One group pre test post test experimental group design was adopted to accomplish the main objective of the study i.e, to assess the effectiveness of the SIM on knowledge and practice regarding Partograph.

Selection of field for study:

The study was conducted on staff nurses working in maternity unit in recognized hospital. The

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

investigator had selected 60 staff nurses from Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli.who all are working in maternity units. The rational for selecting the samples from these recognized hospitals was the researcher familiarity with setting area, availability of the subjects and feasibility of conducting the study.

Hypotheses

H1: There will be significant difference in pre test and post test knowledge regarding Partograph among staff nurses in recognized hospitals at Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli.

H2: There will be significant difference in pre test and post test practice regarding Partograph among staff nurses in recognized hospitals at Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli.

H3: There will be significant association between the post test knowledge, and practice regarding Partograph among staff nurses with their selected demographic variables.

Sample and sampling technique:

The sample size for the final study consists of 60 Staff Nurses working in maternity unit in recognized hospitals. Convenient sampling technique was used to select the sample. The rational was the number of staff nurses working in maternity units was limited.

Tools for data collection:

Section a: Selected demographic variables

Section b: Prepared SIM on Partograph

Section c: Structured questionnaire to assess knowledge regarding Partograph.

Section d: Checklist to assess expressed practice regarding Partograph.

Description of tool:

The tool has been developed to assess the effectiveness of self instructional module.

Section a: This is prepared to collect the data regarding Age (in years), Educational qualification, Total working experience, Experience in maternity unit, Workplace, Attended any in-service education on monitoring labor process.

Section b: self instructional module it is a study material on WHO modified Partograph.

Section c: This section deals with structured knowledge questionnaire. It consist 27 questions

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

which was used to assess the level of knowledge regarding Partograph among staff nurses in recognized hospitals Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli.

Each correct response carries one (1) mark, incorrect responses carries zero (0) marks.

Section d: This section deals with a checklist for assessing the expressed practice regarding Partograph among staff nurses in recognized hospitals Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli. Each 'YES' response carries one (1) marks and 'NO' carries zero (0) mark.

RESULTS

Major findings:

The analysis of data revealed the following headings:

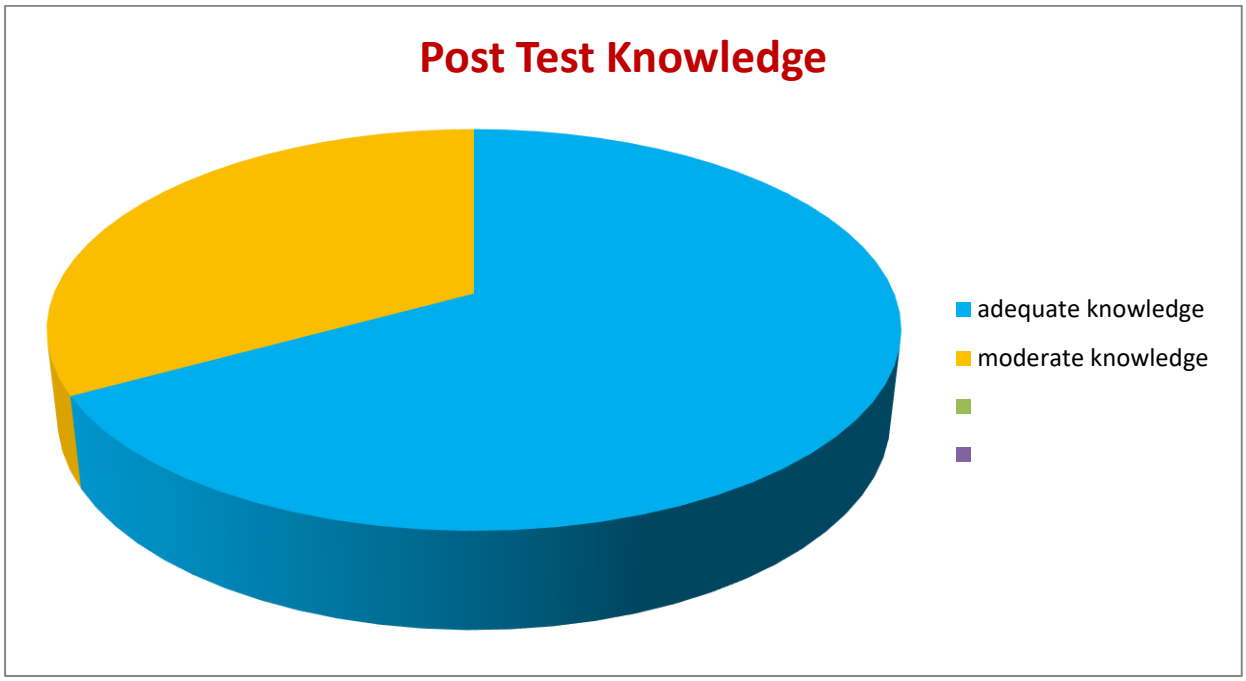
Age (in years), majority of percentage (53.33%) of staff nurses were in the age group of 20-29 years. Educational qualification, majority of percentage (53.33%) of staff nurses were in the age group general nursing midwifery (GNM). Total working experience, majority of percentage (61.66%) of staff nurses were having a experience less than 5years. Experience in maternity unit, majority of percentage (48.33%) of staff nurse had a experience in between 1-5 year. Attended any in-service education on monitoring labor process, majority of percentage (85%) of staff nurses those who are not attended any in service education program.

TABLE 1: Mean pre test knowledge score of staff nurses regarding Partograph N=60

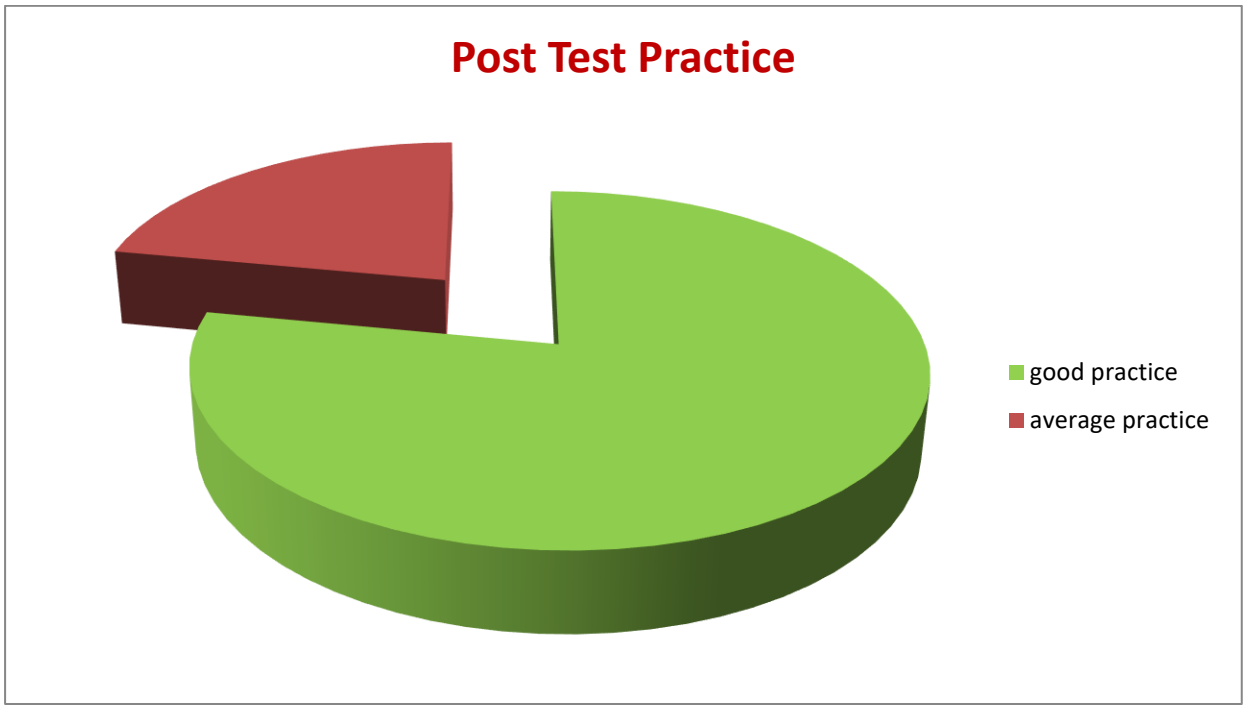
	Mean	SD	Range
Knowledge of staff nurses regarding Partograph.	8.75	± 3.14	4-18

Pre test knowledge among staff nurse 70% had inadequate knowledge and 30% had moderate knowledge regarding Partograph among staff nurse. Pre test practice among staff nurse 65% had poor practice and remaining 35% had average practice regarding Partograph among staff nurse. Post test knowledge 67% staff nurses had adequate knowledge and remaining 33% had moderate knowledge regarding Partograph among staff nurse.

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR



Post test practice 78% staff nurses had good practice and 22% had average practice regarding Partograph among staff nurse.



Association of post test knowledge regarding Partograph among staff nurses with selected demographic variables. Educational qualification was found statistically significant at of 0.006 $p<0.05$.

Association of post test practice regarding Partograph among staff nurses with selected demographic variables such as age (in years). Maternity experience was 0.045, attended any in-service education was 0.021 on monitoring labor process was found statistically significant at

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

p<0.05.

Association of post test knowledge regarding Partograph among staff nurses with selected demographic variables such as age (in years), total working experience, and workplace, maternity experience, attended any in-service education on monitoring labor process was not found statistically significant at the level of significance of p<0.05.

Association of post test practice regarding Partograph among staff nurses with selected demographic variables such as age (in years), total working experience, and workplace, Educational qualification was not found statistically significant at the level of significance of p<0.05.

SUMMARY

The study was conducted to assess the effectiveness of self instructional module (SIM) on knowledge and practice regarding Partograph among staff nurses in recognized hospitals at Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli ". Convenient sampling technique was used for selection of samples. Therefore conceptual framework was developed based on Daniel stufflebeam's evaluation model (CIPP model). The pilot study was conducted during the month of October 2022 and November 2022 on 06 Staff Nurses was selected in Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli. This procedure was done to ensure the reliability of tools and feasibility of study. Socio demographic variables like age, Educational qualification, Total working experience, Experience in maternity unit, Workplace, Attended any in service education on monitoring labor process, Structured questionnaire for knowledge and checklist for practice were used to assess the knowledge and practice regarding Partograph. The actual data collection procedure was carried out from December 2022 to January 2023. Total sample of 60 Staff Nurses were selected by using convenient sampling technique from recognized hospitals are Padma Bhushan Vasant Dada Patil Govt. Hospital, Sangli. Before collection of final data were taken informed consent were taken from Staff Nurses.

CONCLUSION

The Study concluded that there was a significant difference in knowledge and practice score of staff Nurses before and after administering the self instructional module (SIM) regarding Partograph. The association of post test knowledge and practice score regarding Partograph among staff nurses with selected demographic variables educational qualification was 0.006, experience in maternity was 0.045, attended any in-service education program was 0.021 found

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

significant at $p<0.05$ level of significance. It was proven that the effectiveness of self instructional modules was effective for staff nurses regarding partograph.

REFERENCES

1. Fischer M. Labor and delivery. MD India network for health. 2011. www.medline.net.
2. Kilpatrick SJ, Laros R K J. Character tics of normal labour. Obstetrical gynecology. 2002 July; 74(1): 85 – 87.
3. Mathai M. The Partograph for the prevention of obstructed labour .Clinical obstetrics and Gynecology. 2009; 52(2):256-269.
4. Javed I, Bhutta S, Shoaib T. Role of partogram in preventing prolonged labour, Journal of the Pakistan Medical Association.2007; 57(8):408-11
5. Pillitteri A. Introduction to Maternity: maternal and child health nursing. 5th ed. Philadelphia: Lippincott Williams and wilkins Publication; 2008. 102p.
6. Cartmill RS, Thornton JG. Effect of presentation of pratogram information an obstetric decision making. The lancet, 1992 June; 339 (8808): 1520 - 22.
7. WHO. World Health Organization Partograph in management of labour. Lancet. 1994; 343:1399–1404.
8. Opoku BK, Nguah SB. Utilization of the modified WHO Partograph in assessing the progress of labour in a metropolitan area in Ghana. Research journals of women's health.2015; 2(2):1-7.
9. Farideh AR , Maryam AG. A study to assess the effectiveness of planned teaching program on knowledge regarding partograph among 4th year B.sc nursing students of Karnataka College of nursing at Bangalore. Journals of environment, pharmacology and life science.2014;3(5): 25-26.

DOI Link :: https://doi-ds.org/doilink/10.2023-68887354/UIJIR

UNIVERSE INTERNATIONAL JOURNAL OF INTERDISCIPLINARY RESEARCH

(An International Peer Reviewed Refereed Journal)

Certificate of Publication

The Editorial Board of Universe International Journal of Interdisciplinary Research (ISSN: 2582-6417) Impact Factor: 3.7 (SJIF) is hereby awarding this Certificate to

Noorjahan Ismail Patel 2. DR. Abdul Latif

is recognition of the publication of the paper entitled

KNOWLEDGE AND PRACTICES REGARDING PARTOGRAPH AMONG STAFF NURSES WORKING IN LABOR ROOM

Published in Volume 04, Issue 05, Oct 25, 2023 (www.uijir.com)

ISSN: 2582-6417 Impact Factor: 3.7

Editor-in-Chief
UIJIR

Published Paper Code: DOI NO.: 08.2020-25662434
DOI Link: https://doi.ds.org

ISSN No. 2582-693X
Crossref DOI: 10.46376

www.gfnpssijmr.com

GFNPSS - International Journal of Multidisciplinary Research

Certificate of Publication

This is to certify that the Paper ID: **GFNPSSIJMR289** entitled **Utilization of Partograph for Labor Management among Healthcare Providers** submitted by **Noorjahan Ismail Patel** has been published in **Volume 4 Issue 9 September 2023**

ICV 2020:60.3
ICV 2021:88.07

CERTIFIED

Managing Editor

GFNPSS International Journal of Multidisciplinary Research provides digital signed publication certificate after publication of paper

Print this page