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Barriers Affecting Utilization of Partogram In Labor Unit at Benha University Hospital

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Abstract

Aim: The study was to assess the barriers affecting utilization of partogram in labor unit at Benha University Hospital. **Design:** A descriptive design**. Setting:** The labor unit in the obstetrical and gynecological department at Benha University Hospital. **Sample:** Convenient sample of doctors and nurses who are working at the study setting, sample size was 40 nurses and 30 doctors. **Tools:** The tools of data collection were self-administrated questionnaire sheet& modified likert scale. **Results:** Showed that, the majority of the studied doctors had good knowledge about the use of partogram and nearly three quarters of them had positive attitude regarding partogram. All of the studied doctors reported lack of time and increased number of cases considered as barriers for the utilization of partogram. As regards the studied nurses, more than half of them had poor knowledge about the partogram and the majority of them had negative attitude regarding the partogram. Also, the majority of the studied nurses reported lack of knowledge about partogram and absence of training related to the use of partogram as barriers for its effective utilization. **Conclusion:** There were barriers affecting utilization of partogram at Benha university hospital, the main barriers for doctors were lack of time and increased number of cases. Meanwhile,the main barriers for nurses were lack of knowledge about partogram and absence of training related to its use. **Recommendedations:** Developing training programme for nurses working in labor unit regarding use of partogram to improve their knowledge, practice and attitude.

Key words: partogram, barriers, knowledge, attitude.

Introduction

Partogram is a graphical, decision support tool that allows birth attendants to monitor cervical dilation in relation to time, while plotting those measurements on a graph and to determine if labor was progressing normally or not **(Woldemichael, et al., 2016).**

Previously, partogram was introduced to illustrate cervical dilation graphically during labor and later, it incorporates the action and alert lines. It also involves various parameters to assess progress of labor and maternal and fetal conditions during labor **(Zelellw et al., 2016).** using partogram can be very effective in reducing maternal complications from prolonged and obstructed labor as (sepsis, uterine rupture and postpartum hemorrhage) and fetal complications as (infection, anoxia and death) **(Konlan, et al., 2016).**

There are several major barriers for effective partograph use by obstetric care providers in management of labor as lack of knowledge, lack of training especially when accompanied by limited resources as lack of partograph charts, having negative attitude toward partograph and also lack of supervision and mentoring from hospital administrators **(Bedwell, et al., (2017).**

Thus, Obstetric care nurses must understand the importance of effective and consistent use of partogram and acquire skills required for proper utilization of such an important tool because there is a need of those care providers who have a competent performance, human, safe and assertive to laboring women **(Vasconcelos, et al., 2013).**

Significance of the study

Every day in 2015, about 830 women died due to complications of pregnancy and child birth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented. In Egypt, Maternal mortality is a major cause of death for women. It is estimated to be33/100000livebirth.**(WHO,UNFPA,UNICEF,TheWorldBankandTheUnitedNations, 2015).** Nearly all of these deaths are preventable because the majority of deaths are caused by hemorrhage, prolonged or obstructed labor, sepsis, hypertensive disorders and unsafe abortion. Partogram is a valuable tool in skilled management of labor which can reduce maternal mortality rates through early detection of abnormal progress of labor and accordingly preventing its complications.

Aim of The Study

This study aimed to assess barriers affecting utilization of partogram in labor unit at Benha university hospital.

Research Question

- Are there barriers affecting utilization of partogram in labor unit at Benha university hospital?

Subject and Methods

Research design:

A descriptive design has been adopted to fulfill the aim of the present study.

Research Setting:

The study was conducted in the obstetrical and gynaecological department at Benha university hospital in the labor unit.

Sampling:

Type: convenient sample from nurses and doctors who were working in the mentioned study setting was selected.

Sample size: (40) Nurses and (30) doctors.

Tools of Data collection:

I- Self administrated questionnaire: that included the following parts**:**

- Socio-demographic data such as (age, qualification, years of experience).

- Assessment of doctors' and nurses' knowledge regarding partogram as (definition, components, when to start recording into the partogram, importance of using partogram, complications that can be avoided by using partogram, the graphical lines in the partogram and the functions of these lines).

Scoring system for knowledge:

-Correct answer was scored (3).

-In correct answer was scored (2).

-Don't know was scored (1).

-Total knowledge is considered good if the percent score is > (75%), average if = (60-75) % and poor if < (60%).

3- Assessment of barriers affecting utilization of partogram as lack of time, lack of knowledge and negative attitude toward partogram.

II- Modified likert scale:-

It was adopted from **Salama, etal., (2010)** and modified by the researcher. It contained statements to assess doctors' and nurses' attitude regarding utilization of partogram as (importance of partogram, role of partogram in early detection of any deviation from normal and its role in decreasing maternal and fetal risks during labor).

Scoring system for attitude:

-The responses were scored as the following agree (3), sometimes (2), disagree (1).

-Total attitude was considered positive if the percent score was > (75%), uncertain if the percent score is = (60-75%) and negative if < 60%.

Content validity:

Tools of data collection were reviewed by panel expertise (three specialized university professionals in obstetrics and gynecology and in maternal and newborn nursing) according to their comments, modifications were done.

Ethical Considerations:

- An informed written consent was obtained from the study participants before collecting data.

-No harmful maneuver was performed or used.

-All data were considered confidential and were only used for the purpose of research.

-Nurses and doctors were informed about their right to withdraw from the study at any time without giving reasons.

-Pilot Study:

A pilot study has been conducted to test the clarity and applicability of study tools and the time needed to fill in the questionnaire which was 30 minutes. (10%) of the total sample doctors (3) and nurses (4) were chosen and no modifications were done.

- Field work:

- The study was implemented for six months, from the beginning of February 2016 to the end of July 2016.
- Labor unit was visited by the researcher 3 days weekly from 9 am to 2 pm.
- The researcher introduced herself to the study participants who were available, introduced herself and the aim of the study was explained.
- The researcher distributed the two tools to the study participants which were self-administered questionnaire and modified likert scale and waited until doctors and nurses filled in the tools and then collected them.

Limitations of the study: Some of doctors and nurses were too busy to fill in the tools in the same day and they were collected in another day.

Results:

Table (1): Distribution of the studied sample (doctors) regarding their characteristics (n=30).

Variable	Frequency	%
Age in years		
20 - ≤ 30	15	50.0
30 -≤ 39	15	50.0
Mean ±SD	24.86±8.79	
Educational qualification		
Post-graduate studies	22	73.3
Bachelor of medicine	8	26.7
Years of experience		
(1- ≤ 5) years	15	50.0
(5- <10) years	13	43.3
(10 - ≤15) years	2	6.7
Mean ±SD	11.46±4.76	

Table (1) shows that half of the studied doctors (50%) were in age group of (20 - ≤ 30) years old and the other half were in age group of (30 -≤ 39) years. The mean age of them was 24.86±8.79 years. Nearly three quarters (73.3%) of the studied doctors had post-graduate studies and half of them had years of experience ranged from (1- ≤ 5) years with mean experience years about 11.46±4.76.

Table) 2 :(Distribution of the studied sample (doctors) regarding the mentioned barriers affecting utilization of partogram (n=30) .

Variable	Yes		No	
	No	%	No	%
Absence of accountability from hospital administrators.	10	33.3	20	66.7
Lack of mentoring and supervision	10	33.3	20	66.7
Lack of services and in-adequate partograph charts.	19	63.3	11	36.7
Shortage of staff.	20	66.7	10	33.3
Lack of time and increased number of cases.	30	100.0	0	0.0
Partogram isn't in the hospital policy.	9	30.0	21	70.0

Table (2) shows that all of the studied doctors (100%) reported that lack of time and increased number of cases considered as a barrier to the use of partogram in labor.

Table) 3 :(Distribution of studied sample } (nurses) (n=40) {regarding their characteristics .

Variable	Frequency	%
Age in years		
20-<30	21	52.5
30-<40	15	37.5
40≤	4	10.0
Mean ±SD	26.57±7.43	
Educational qualification		
Bachelor of nursing	1	2.5
Nursing technical institute	14	35.0
Nursing diploma	25	62.5
Years of experience		
(1-<5) years	15	37.5
(5-<10) years	7	17.5
(10-<15) years	9	22.5
15≤ years	9	22.5
Mean ±SD	12.59±5.76	

Table (3) shows that more than half of the studied nurses (52.5%) were in age group of (20-<30) years old and the mean age of them was 26.57±7.43 years. Nearly two thirds (62.5%) of them were diploma nurses and (37.5%) had years of experience from (1-<5) years with mean experience years about 12.59±5.76.

Figure) 1 :(Percentage distribution of the studied sample (nurses) regarding their total knowledge about partogram.

Figure)1 :(This figure demonstrates that more than half of the studied nurses had poor knowledge regarding partogram.

Table) 4 :(Distribution of the studied sample) nurses (regarding the mentioned barriers affecting utilization of partogram (n=40).

Variable	Yes		No	
	No	%	No	%
Absence of accountability from hospital administrators.	4	10.0	36	90.0
Lack of mentoring and supervision.	4	10.0	36	90.0
Lack of services and in adequate partograph charts.	22	55.0	18	45.0
Shortage of staff.	16	40.0	24	60.0
Most of cases come in late stage of labour.	5	12.5	35	87.5
Lack of time and increased number of cases.	21	52.5	19	47.5
Partograph isn't of practical value .	4	10.0	36	90.0
Partogram isn't in the hospital policy.	19	47.5	21	52.5
Lack of knowledge about partogram.	38	95.0	2	5.0
It is written in a foreign language .	8	20.0	32	80.0
Presence of abbreviations and symbols that aren't understood and needs explanation .	4	10.0	36	90.0
Absence of training on partogram.	38	95.0	2	5.0
Partogram isn't of nurse's responsibilities .	14	35.0	26	65.0

Table (4) this table shows that the majority of the studied nurses (95%) reported that both lack of knowledge about partogram and absence of training on its use were the mentioned barriers affecting utilization of the tool by the studied nurses .More than half of them (55%) reported lack of services and in-adequate partograph charts also considered as barriers for the partogram utilization.

Figure) 2 :(Percentage distribution of the studied sample (nurses) regarding their total attitude toward using of partogram.

Figure) 2 :(This figure demonstrates that the majority of the studied nurses had negative attitude toward partogram.

Discussion:

Regarding the age of studied doctors, half of them were in age group of (20-≤30) with mean age of 24.86±8.79. This result agreed with **Zelellw et al., 2016** who studied "Knowledge and Attitude of Obstetric Care Providers on Partograph and Its Associated Factors in East Gojjam Zone, Northwest Ethiopia". This study found that nearly half (46.9%) of the care providers were in age group of (25-29) years old.This result may be due to that the doctors who actually intervene labor cases in Benha university hospital were clinical instructors, assistant lecturers and lecturers and these groups usually range between 24-40 years old.

Regarding the educational qualifications of the studied doctors, nearly three quarters of them had post-graduate studies and the others had bachelor of medicine. The findings of the present study disagreed with **Wakgari, et al., (2015)** who studied "Partograph utilization and associated factors among obstetric care providers in North Shoa Zone, central Ethiopia across sectional study." This study found that (1.7%) of study participants had master degree. This may be due to that Benha university hospital's protocol necessitated that doctors must have post-graduate studies.

Regarding the years of experience, half of the studied doctors had years of experience from (1-≤5) years, less than half (43.3%) of them had years of experience from (6-10) years and (6.7%) were from (10-≤15) years with mean experience years of 11.46±4.76.

Concerning the barriers affecting utilization of partogram for doctors, the findings of the present study showed that all of the studied doctors (100%) reported that lack of time and increased number of cases was the main barrier to the use of partogram. Shortage of staff, lack of services and in-adequate partograph charts were also major barriers.

The results of the present study was supported by ***Khonje, (2012)*** who found the barriers to effective utilization of partograph were shortage of staff with high workload ,lack of time, negligence, inadequate supervision and lack of motivation. *These findings may be due to* being Benha university hospital a referral hospital and many cases and deteriorated cases were referred to it, so lack of time and increased number of cases was the major barrier.

Regarding the age of studied nurses, more than half of the studied nurses were in age group of (20-<30) years with mean age of 26.57±7.43.This result was in the same line with ***Abebe, et al., (2013)*** who found that nearly two thirds (61.6%) of study participants were in age group of (20-29) years,(30.5%) were in age group of (30-39) years and (7.9%) were 40 years or more. *This may be due to* that most of the studied nurses were nursing diploma who were delegated to work at young age.

Concerning the educational qualifications of the studied nurses, nearly two thirds of the studied nurses had nursing diploma, but a minority of them had bachelor of nursing. This result was supported by ***Wakgari, et al., (2015)*** who found that more than half (58.3%) of study participants had nursing diploma. Regarding the years of experience of the studied nurses, more than one third of the studied nurses had years of experience from (1-5) years with mean experience years of 12.59±5.76.This result came in the same line with ***Salama, et al., (2010)*** who found that (61.2%) of the studied nurses had years of experience less than 10 years with mean experience years of 11.1±9.5. *This may be because* studied nurses were within the same age and were within the same years of delegation to work.

In addition, the results of the present study revealed that more than half (52.5%) of the studied nurses had poor level of knowledge about partogram. The findings of the present study was in the same line with a study conducted by ***Engida, et al., (2013)*** who studied *"Knowledge and utilization of partograph among obstetric care givers in public health institutions of Adis Ababa, Ethiopia".* This study found that the majority of nurses had poor level of knowledge regarding partograph. *These results may be due to* that most of the studied nurses were with nursing diploma and most of them didn't study or receive in service training on use of partograph.

Moreover, the results of the present study found that the majority of the studied nurses had negative attitude toward the use of partograph. These findings was in the same line with ***Masika, et al., (2015)*** who found that the majority of professional birth

attendants had negative attitude toward the use of partograph. *This may be due to* that the knowledge of the studied nurses were poor and most of them didn't receive training on using partograph and negative attitude resulted from having poor knowledge.

Furthermore, the findings of the present study revealed that the majority of the studied nurses reported that both lack of knowledge about partogram and absence of training on using the tool were barriers to its effective utilization. this result was supported by ***Medhanyie, et al., (2012)*** who found in a study about *"Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross-sectional study"* that in-adequate use of partogram was associated with lack of trained personnel. *This may be due to* that the study participants didn't study partograph, didn't receive training on using partogram, didn't know how to use the tool and accordingly didn't make proper utilization.

Conclusion

There were barriers for effective utilization of partogram for doctors and nurses working in labor unit at Benha university hospital. The main barriers for doctors were lack of time and increased number of cases, but for nurses were lack of knowledge about partogram and absence of training on using it.

Recommendations:

- Pre –service and in-service training should be designed to improve nurses' knowledge, practice and attitude regarding utilization of partogram.

- Provision of regular workshops and seminars for nurses on partogram use.

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