Effectof the Teaching Program Regarding Partograph on Midwives Knowledge at Delivery Room in KarbalaCityHspitals

اثر البرنامج التعليمي لمخطط الولادة(البارتوغراف) على معرفة القابلات في صالات الولادة في مستشفيات مدينة كربلاء

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الخلاصة:

خلفيةالبحث:مخطط المخاض هو المخطط الاول لتقيم عملية الولادة صمم من قبل العالم فريدمان.مخطط الولادةأداةغير مكلفة صمم لتزويدنا بنظرة عامة عن الولادةعلى شكل رسومات بيانية لتحسين نتاج الولادة عندما يستخدم لادارة ومراقبة عملية المخاض .ان الغرض من مخطط البارتوغراف او البارتوغرام مساعدة القابلات في تسجيل وتفسير وتحليل واستخدام البيانات لاتخاذ قرارات وتدابير سريرية بينما يكون المخاض في حالة التقدم. ان هذا المخطط يعتبر (نظام تحذير مبكر) يزودنا بموجز عام عن تقدم الولادة وتسجيل المعلومات حول حالة الام والطفل خلال عملية المخاض.

الهدف:تقييممعرفة القابلات بخصوص استعمال البارتوغراف في الطور الاول من المخاض في صالة الولادة.

المنهجية : اختبار شبه تجريبي لمجموعتي الدراسة (مجموعة الدراسة والمجموعة الضابطة) للتأثير على الدراسة الحالية. عينة الدراسة تتكون من جميع القابلات اللواتييعملن في صالات الولادة في مستشفى النسائية والتوليد ومستشفى الهندية العام في مدينة كربلاء. الية اختيار العينة في هذه الدراسة هي عينة غير احتمالية ملائمة ،تتكون من 50 قابلة يعملن في صالة الولادة في مستشفيات مدينةكربلاء.تم جمع العينة خلال الفترة من 1شباط الى 28 شباط 2015 يتكون الاختبار من 25 فقرة تتعلق بمعرفة القابلات بمخطط البارتوغراف .تم وصف وتحليل البيانات باستخدام اساليب الاحصاء الوصفي والاستنباطي

النتائج: اظهرت نتائج الدراسة ان 88% من القابلات لا تمتلك معرفة بخصوص استعمال مخطط البارتوغراف في مجموعة الدراسة و 92% في المجموعة الضابطة %80،من القابلات تمتلك معرفة جيدة في مجموعة الدراسة بعد تنفيذ البرنامج التعليمي بخصوص المخطط الولادي .

الأستنتاج: ان معرفة القابلات بخصوص المخطط الولادي تزداد بعد التداخل (البرنامج التعليمي) وهذه النتائج اوضحت ان التعليم الجماعي فعال جدا في تحسين وتطوير معرفة القابلات

التوصيات: تحسين معرفة القابلات بالمخطط الولادي (البارتوغراف) بواسطة الاستعمال المستمر للبرامج التعليمية والتدريب وورشات العمل لجميع القابلات وخصوصا في صالات الولادة .

مفردات البحث:المخطط الولادي، القابلات، صالة الولادة.

Abstract:

Background: Partograph was a first graphic assessment of progress of labour was designed by Friedman It is a cheap instrument designed to provide a constant graphic overview of labour and has been shown to enhance outcomes when used to manage and monitor labour. The purpose of the partograph, also called the partogram, is to help midwives record, interpret, analyze, and use data to make clinical management decisions while labor is in progress. The form (which is an early warning system) provides a graphic overview of the progress of labour and records information about maternal and fetal condition during labour.

Objective: to assess midwives knowledge regarding use of partograph in first stage of labor in delivery room.

Methodology: Quasi experimental design for two groups(study and control) was found to be effective for the present study. In this study the target population was consisted of all midwives working in delivery room in hospitals of a Holy Karbala city. The sampling technique use in this study was non probability convenience method of sampling ; sample were consist of 50 midwives working in delivery room in Karbala hospitals. There were 25 items regarding knowledge of partograph. The data collection were carried out during the period fromFebruary 1st to February28th, 2015.The data analyzed through the use of the descriptive and inferential statistical analysis procedures.

Results: the results of the study reveal that (88%) of midwives have poor knowledge for using partograph in study group and (92%) in control group, 80% of midwives have good knowledge in study group after implementation of teaching program regarding partograph the result revealed that the knowledge of midwives regarding partograph is increased after the intervention these finding shows the group teaching was very effective in improving the knowledge of midwives.

Conclusion: The finding concluded that the teaching program was very effective in increasing their knowledge regarding using of partograph.

Recommendation: Enhance the midwives knowledge regarding partograph by frequency application of teaching program, training course and workshop for all midwives specially in delivery room.

Key words: Partograph,Midwives, Delivery Room.

INTRODUCTION:

According to world health organization(WHO) in 2004 each year out of the 210 million women becoming pregnant, 20 million will experience pregnancy-related illnesses and 5,00,000 died due to complications of pregnancy and childbirth.Most maternal and newborn deaths occur around the time of delivery [1]. Globally, there were an estimated of 287,000 maternal deaths in 2010. This means, every day, approximately 800 women die from preventable causes related to pregnancy and childbirth. About 99% of maternal deaths occur in developing countries, while more than half of these deaths were preventable [2]. 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 [3].

The main causes of maternal deaths are hemorrhage, infection, pre-eclampsia, eclampsia, unsafe abortion, obstructed labour, anemia, hepatitis etc. Obstructed labour rate about 8%, Prolonged labour was commonly occur due to cephalopelvic disproportion which may result as complications such as obstructed labour; maternal dehydration, exhaustion, uterine rupture and vescicovaginal fistula [4]. The first graphic assessment of progress of labour was designed by Friedman in 1954 and further improved by Philpott and Castle in1972 [5].

Abundanteffort has been done to enhance the partograph as ainstrument which graphically represents key events during labour and acclimatizes it for use worldwide. The partograph is an cheapinstrument designed to supply a continuous pictorial overview of labour and has been shown to enhance outcomes when used to observer and manage labour. It is a single sheet of paper which contains information about the fetus' heart rate, uterine contraction, any drugs used and other important elements that could assistanceevade extensive descriptive notes. With its use, there is no need to record labour events repeatedly. It helps predict deviation from normal progress of labour, and supports timely and proven intervention. It also helps to facilitate responsibility to the person conducting labour [6]. techniques to monitor labor thus play an important role in saving women's lives[7].

Objetives:

1- Assess the knowledge of midwives regarding partograph (pre-test) for both group (study and control group).
2- Assess the knowledge of midwives regarding partograph (post-test)for study group.
3- Find the association between knowledge of both groupsafter the program.

METHODOLOGY:

Study design: Quasi experimental design for two groups(study and control) was found to be effective for the present study.
Sample: Sample were consist of 50 midwives working in delivery room in Karbala hospitals.The sampling technique use in this study was non probability convenience method of sampling ;
Setting:In this study the target population was consisted of all midwives working in delivery room in Maternity Teaching Hospital and Al- Hindyia General Hospital of a Holy Karbala city.This Study is carried out in Holy karbala city from December, 3th, 2014 to May, 26th, 2015.**Instrument**:Thequestionnairewas consisted of (25) items of multiple choice questions under 3 categories such as meaning and definition, purpose and principles, monitoring labor and charting of partograph. Each question has 4 answer (1 correct answer and 3 false answer), the score "1" was given for correct answer while the score "0"was given for wrong answer.The result of scores were ranged as follows:
1- Poor knowledge ≥ 12% .

2- Fair knowledge 13-19% .

3- Good knowledge <20% .

Validity:The content validity of the tool was established inconsultation with guide of experts from the field of obstetrics and gynecology department of nursing & medicine and other field specialties. Suggestion of the experts were considered for modification and changes which were made accordingly.

Data collection: The data collection were carried out during the period fromFebruary 1st to February28[th] ,2015.

Data analysis: The collected data was analysis by using descriptive statistics (mean, mean percentage, standard deviation) and T-test to find out the association between the demographic variables and the scores of knowledge.

RESULT:

Table (1) Demographic characteristics for study sample (study and control group).N=50

Variables		Study group		Control group	
		Frequency	%	Frequency	%
Age (years)	20---24	9	36.0	12	48.0
	25---29	6	24.0	3	12.0
	=>30years	10	40.0	10	40.0
Marital status	Married	10	40.0	14	56.0
	Single	12	48.0	9	36.0
	Widow	1	4.0	2	8.0
	Divorced	2	8.0	-	-
Level ofeducation	School of Nursing	-	-	2	8.0
	Secondary Midwifery School	20	80.0	20	80.0
	Secondary School of Nursing	4	16.0	-	-
	Technical Medical Institute	1	4.0	3	12.0
	College Nursing	-	-	-	-
Period of general experience (years)	<5	19	76.0	12	48.0
	5---9	1	4.0	5	20.0
	10---14	-	-	3	12.0
	=>15	5	20.0	5	20.0
Period of experience in labor ward (years)	<5	20	80.0	16	64.0
	5---9	1	4.0	4	16.0
	=>10	4	16.0	5	20.0
Total		25	100%	25	100%

Table 1 demonstrates demographic characteristic of the study sample. In study group the higher percentage (40%) of midwives their age ≥ 30 years old, while the lowest percentage (24%) for the age group(25-29) years.the majority (80%)of study group were graduated from secondary midwifery school. In sequence (16%) were graduated from secondary nursing school and the (4%) graduated from technical-medical institute.The higher percentage (76%) of midwives how have general experiences for(less)<5 years. While the lowest percentage (4%) for (5-9) years.The majority of midwives percentage were having experiences in delivery room of (80%) for(less) <5 years and the lowest percentage (4%) for (5-9)years.In control group the

higher percentage (48%) of them were for age 20-24 years old. While the lowest percentage(12%) of them (25-29) years old. Most of these midwives were married (56%) while only (8%)were widowed. The majority (80%)of them were graduated from secondary midwifery school. The lowest percentage (8%) were graduated from school of nursing, the higher percentage (48%) of midwives general experiences for (less)< 5 years. While the lowest percentage (12%) for (10-14) years. Majority of midwives percentage were having experiences in the delivery room of (64%) for(less) <5 years and the lowest percentage (16%) for (5-9)years

Table (2)Distribution of significant midwives knowledge (pre-test & post-test) for both group regarding the use partograph in the delivery room .

Items	Pre-test study group		Post-test study group		p-value	Pre-test post-test control group		Pre-test for both group
	F	**%**	*F*	*%*	**p-value**	**F**	**%**	**p-value**
What is partograph	10	40.0	25	100	0.0001*	13	52	0.395
What is the purpose of partograph	20	80.0	25	100	0.018*	21	84	0.713
When dose the active phase commence	9	36.0	22	88	0.0001*	10	40	0.771
Latent phase of the labour should not last longer than	8	32.0	23	90	0.0001*	6	24	0.529
How often can we perform the vaginal examination during latent phase	5	20.0	15	60	0.004*	-	-	0.018*
What are the maternal parameter recoded on partograph	7	28.0	20	80	0.0001*	3	12	0.157
What are the component of partograph	19	76.0	23	92	0.123	13	52	0.077
What are the fetal parameters recorded on partograph	5	20.0	23	92	0.0001*	5	20	-
Where does the cervical dilatation line lie in the active phase of labor	5	20.0	16	64	0.002*	5	20	-
How many phases are there in the first stage labour	3	12.0	21	84	0.0001*	6	24	0.269
Which phase the cervical dilatation will be slow	4	16.0	17	68	0.0001*	3	12	0.684
When admission to hospital takes place in the active phase, the dilatation is immediately plotted on	9	36.0	19	76	0.004*	7	28	0.544
How to identify the descent of fetal head	1	4.0	22	88	0.0001*	3	12	0.297
How to identify the weak contraction	12	48.0	22	88	0.002*	7	28	0.145
How much is the normal FHR	19	76.0	25	100	0.009*	21	84	0.480
Which is the best time to listen to the fetal heart rate	2	8.0	14	56	0.0001*	8	32	0.034*
What it indicates if the FHR is below 100	23	92.0	25	100	0.149	21	84	0.384
Which colour indicate that the liquor amnion is normal	16	64.0	25	100	0.001*	14	56	0.564
Which letter is use to record on partograph when the membranes are intact	7	28.0	23	92	0.0001*	3	12	0.157
Which letter is use to record on partograph when the amniotic fluid is meconium stained	9	36.0	23	92	0.0001*	18	72	0.011*
If moulding is present its marked as	8	32.0	22	88	0.0001*	5	20	0.333
What dose sever moulding indicate	8	32.0	21	84	0.0001*	14	56	0.087
What progresses in proportion to uterine contractions	23	92.0	22	88	0.637	20	80	0.221
What is essential for good progress of labour	21	84.0	20	80	0.713	20	80	0.713
What should be done if cervicograph moves to the right of the alert line	2	8.0	21	84	0.0001*	2	8	-

*Significant difference in proportions using Pearson Chi-square test at 0.05 level.

This table shows that there was a significant difference between pre &posttest in study group concerning p-value of most items for midwives knowledge regarding use of partograph in the delivery room.

Table (3) Pre-test & Post-test knowledge scores of the study sample.

Categorize knowledge score	Pre-test study group		Post-test study group		Pre & posttest control ogroup	
	No	%	No	%	No	%
Poor (=<12)	22	88.0	-	-	23	92.0
Fair (13---19)	3	12.0	5	20.0	2	8.0
Good (=>20)	-	-	20	80.0	-	-

Table (3) shows that (88%) of midwives have poor knowledge regarding partograph in study group and (92%) in control group, 12%have fair knowledge in study group and 20%in control group, 80% of midwives have good knowledge in study group after implementation of teaching program regarding partograph

DISCUSSION:

The midwives demographic characteristics in study group, indicated that higher percentage (40%) of midwives their age ≥ 30 years old, while the lowest percentage (24%) for the age group(25-29) years. This finding agreed with the study done in Mangalorewhorevealed that the higher percentage (53.33) in the age between (30-39) years old[8]. the majority (80%)of study group were graduated from secondary midwifery school. In sequence (16%) were graduated from secondary nursing school and the (4%) graduated from technical-medical institute. This finding supported with the study done in Iraq in 2005 shows that the higher percentage (33.3) graduated from secondary midwifery school and the lowest percentage (16.0) graduated from technical medical institute[9].The higher percentage (76%) of midwives how have general experiences for(less)<5 years. While the lowest percentage (4%) for (5-9) years. This finding was not in agreement with the study done in Iraq in 2005which shows that the higher percentage (40) of midwives who have general experience 16-20 years and the lowest percentage (6.6%) for (6-10) years.The majority of midwives percentage were having experiences in delivery room of (80%) for(less) <5 years and the lowest percentage (4%) for (5-9)years in study group. This finding agree with the study done in Nigeria 2013 which shows that 59% of midwives have1-5 years of experiences in delivery room[10]. In control group the higher percentage (48%) of them were for age 20-24 years old. While the lowest percentage(12%) of them (25-29) years old. Most of these midwives were married (56%) while only (8%)were widowed. The majority (80%)of them were graduated from secondary midwifery school. The lowest percentage (8%) were graduated from school of nursing, the higher percentage (48%) of midwives general experiences for (less)< 5 years. While the lowest percentage (12%) for (10-14) years. Majority of midwives percentage were having experiences in the delivery room of (64%) for(less) <5 years and the lowest percentage (16%) for (5-9) years.

The design of the partograph program was selected and consisted of 25 items on knowledge , evaluation made from the knowledge of both groups under the assessment of the following different aspects. The single most striking evaluation is to emerge from the data comparison was the differences between study and control group in pre-test are highlighted in

the table (2), which is reveals that the overall response to the questions number (5, 16 and 20) of the partograph have a significant correct answers, this mean the midwives have good knowledge regarding vaginal examination during latent phase, the best time to listen the fetal heart rate and the letter used to record amniotic fluid when meconium stained because this items as a part of curriculum. Component- analysis from post-test knowledge scores, As this table shows, there is a significant difference (p < 0.05-0.0001) between the pre-and post-test for the study group.

Knowledge regarding definitions, purpose and principle of partogram this component consist of 5 questions. The items of questions in pre-test had a percent mean (39.2%). While post-test had a mean percentage of 92.8% the different between two mean was 61%.

Knowledge regarding interpreting partogram chart – This component consists of 8 questions. The items of questions in pre-test had a percent mean of 30.5 while post-test had a mean percentage of 73.5% the different between two mean was 44%.

Knowledge regarding labor observation and monitor of partogram – this component consists of 12 questions. The items of questions in pre-test had a percent mean 45.7 while post-test had a mean percentage of 83%, in present study in all the components, there was good increase in the post test knowledge score of the respondents with significant enhancement of knowledge in each component indicating that the teaching program was effective in enhancing the knowledge level. Thus the result of p-value show the improvement of the mean value of knowledge score of posttest, this finding is agreed with the studied done in Iran, it was found that significant increase in the mean percentage of knowledge score of each component in the post test when compared to the pretest mean percentage knowledge score[11].

Table (3) revealed that (88%) of midwives had poor knowledge score and (12%) of them had fair knowledge score in pretest knowledge on partograph of study group. this finding was agreed with the study done in Amhara region in Ethiopia, 2013 in which nearly (26.6%) of the participants had good knowledge regarding partograph, (73.4%) had poor knowledge [12], and didn't agree with the study done in Addis Ababa, Ethiopia in which nearly forty percent of the participants had good knowledge on it [13], and agreed with the survey study which conducted to assess the knowledge of the labour partograph among the birth attendants at Cameron, the result of this study revealed that highest percentage(65%)of midwives had poor knowledge regarding partograph in pretest [13]. In post-test knowledge on partograph (80%)of midwives had good knowledge scores and (20%)of the them had fair knowledge scores. The present finding were had a significant increase in the mean percentage of knowledge score on each items in posttest. Those received teaching program were able to explain component of partograph better than others. This finding may support the idea that the teaching program improves the status of existing knowledge. Still this finding is consistent with the previous studies done in Iraq, Malawi, Nigeria and Ethiopia [14-17].

An evaluator study was conducted in Belgaum, supports the findings of present study. It attempted to evaluate the effectiveness of an educational intervention in terms of knowledge regarding partograph. It was found that there was significant difference between the pretest and posttest mean knowledge score at p<0.05 level of significance [18].

CONCLUSIONS

The present study concludes that though majority of the midwives had poor knowledge on using of partograph but most of them gained good knowledge after application the teaching program. The finding concluded that the intervention was very effective in increasing their knowledge regarding using of partograph.

RECOMMENDATIONS:

1- Enhance the midwives knowledge regarding partograph by frequent teaching program, training course and workshops for all midwives especially in delivery room.

2- Multimedia advertising for using partograph especially in the delivery room.

3- Suggestion for further studies which will be conducted in large population to explore the gap between knowledge, attitude, and practice of midwives regarding partograph.

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