

Effectiveness of an Educational Program on Nurses- midwives' Knowledge about Pain Management during Labor in Baghdad Maternity Hospitals

فاعلية البرنامج التعليمي في معارف الممرضات - القابلات حول تدابير الألم أثناء المخاض في مستشفيات بغداد للولادة

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المستخلص

الاهداف: هدفت الدراسة إلى تقييم معارف الممرضات-القابلات حول تدابير الألم أثناء المخاض قبل وبعد تنفيذ البرنامج التعليمي وتحديد فعالية البرنامج التعليمي على معارف الممرضات-القابلات حول تدابير الألم أثناء المخاض في مستشفيات بغداد للولادة.

المنهجية: تم استخدام تصميم دراسة شبه تجريبي خلال الفترة من (27 شباط 2019 إلى 2 حزيران 2019) على عينة غير احتمالية (غرضية) تتكون من (44 ممرضة / قابلة) ممن يعملون في غرفة الولادة ، وقد تعرضت العينة للاختبار القبلي ، برنامج التعليمي ، اختبار البعدي. أجريت الدراسة في ثلاثة دوائر، (مستشفى بغداد التعليمي) في دائرة مدينة الطب ، (مستشفى العلوية التعليمي للولادة ، مستشفى ابن البلدي للولادة والأطفال ، مستشفى فاطمة الزهراء لولادة والأطفال) في دائرة الصحة/الرعاية، (مستشفى الكرخ للولادة ومستشفى اليرموك التعليمي - قسم الولادة) في دائرة الصحة/ دائرة الكرخ. تم استخدام الاستبيان كأداة لجمع البيانات. تم تحليل البيانات من خلال استخدام أسلوب تحليل البيانات الإحصائية الوصفية والاستنتاجية باستخدام الحقيبة الإحصائية الإصدار 22 ونظام الاكسل.

النتائج: اشارت نتائج الدراسة أن أعلى نسبة (25٪) من الممرضات-القابلات تتراوح أعمارهن بين (20-24) سنة ، (77.3٪) من العينة من القابلات الماهرات ، وهناك علاقة مهمة بين فترات الاختبار القبلي والبعدي بعد تنفيذ البرنامج التعليمي فيما يتعلق بمعارف الممرضات بالمخاض وتدابير غير الدوائية في الحد من آلام المخاض لدى النساء الحوامل.

التوصيات: أوصت الدراسة بالتعليم أثناء الخدمة للممرضات والقابلات فيما يتعلق بمعرفة الأدلة الحالية ، وتوفير الخبرة في المهارات اللازمة للوفاء بمسؤولياتهم لدعم تدابير الألم أثناء المخاض وتدريب ممرضات الرعاية الصحية الأولية على تحسين تدابير الألم هو جزء مهم نهج متعدد الوجوه نحو تحسين ومساعدة المرأة على تخفيف الألم أثناء المخاض.

الكلمات المفتاحية: البرنامج التعليمي، معارف الممرضات - القابلات، تدابير الألم ، المخاض

Abstract:

Objectives: To assess nurses-midwives' knowledge about pain management during labor before and after implementation of educational program and to determine the effectiveness of educational program on nurses-midwives' knowledge about pain management during labor in Baghdad Maternity Hospitals.

Methodology: A quasi-experimental design has been conducted during the period of (February 27th 2019 through 2nd June 2019) on non-probability sample (purposive) consists of (44 Nurses/midwives') who are work in delivery room, the sample was exposed to pretest, educational program, posttest. The study was conducted in three Directories, (Baghdad Teaching Hospital) at medical city health directorate, (Al-Elwia Maternity Teaching Hospital, Ibn Al -Balidy for Maternity and Pediatric Hospital, Fatima Al-Zahra for Maternity and Pediatric Hospital) at AL-Russafa/Health directorate, and (Al -Karckh Maternity Hospital and AL - Yarmouk Teaching Hospital - Maternity Department) at Akarkh/Health Directorate. Questionnaire has been used as a tool of data collection. Data were analyzed through the application of descriptive and inferential statistical data analysis approach through the use of (SSPS) version 22.0 and Excel system.

Results: The results of the study revealed that highest percentage (25%) of the nurses-midwives' are (20-24) years old, (77.3%) of the sample were skilled midwives and there is a significant correlation between pretest and posttest periods after the implementation of education program for nurse- midwives regarding knowledge about labor pain and non-pharmacological management in reducing labor pain in pregnant women.

Recommendations: The study recommended in-services education for the nurses- midwives' regarding knowledge of the current evidence, and provides experience in the skills necessary to fulfill their responsibility to support pain management during labor and training primary health care nurses in improved pain management is important part of multi-faced approach towards improving and helping women's to reduce pain during labor.

Keywords: Educational Program, Nurses- midwives' Knowledge, Pain Management, Labor.

Introduction:

One of the most substantial and beautiful periods of a woman's life is pregnancy. It ends with labor process which is the delivery of a fetus. Labor is a dynamic process and a natural unique experience occurred in most women's life. It is associated with meaningful life event, presents both psychological and physiological deviances serious for most pregnant women ⁽¹⁾. Pain is a universal phenomenon experienced by all persons and pain management is one of the most vital aspects of patient care. Pain as a phenomenon has been defined as an 'unpleasant sensor and emotional experience associated with actual or potential tissue damage or described in terms of such damage' ⁽²⁾.

Methodology:

A quasi-experimental design has been conducted during the period of (27th February 2019 through 2nd June 2019) on non-probability sample (purposive) consists of (44 Nurses/midwives') who are work in delivery room, the sample was exposed to pretest, educational program, posttest. The study was conducted in three Directories, (Baghdad Teaching Hospital) at medical city health directorate, (Al-Elwia Maternity Teaching Hospital, Ibn Al-Balidy for Maternity and Pediatric Hospital, Fatima Al-Zahra for Maternity and Pediatric Hospital) at AL-Russafa/Health directorate, and (Al - Karkh Maternity Hospital and AL - Yarmouk Teaching Hospital - Maternity Department) at Akarkh/Health Directorate.

Results

Table (1): Distribution of Socio -demographic Characteristics for Nurses-Midwives':

Socio-demographic Characteristics	Frequency	percent
Age (years)		
20-24	11	25.0
25-29	6	13.6
30-34	7	15.9
35-39	7	15.9
40-44	3	6.8
45-49	8	18.2
50-54	2	4.5
$\bar{x} \pm SD$	33.84 \pm 9.4	
Total	44	100.0

Questionnaire has been used as a tool of data collection to fulfill with objective of the study to assess nurses-midwives' knowledge about pain management during labor before and after implementation of educational program and to determine the effectiveness of educational program on nurses-midwives' knowledge about pain management during labor in Baghdad Maternity Hospitals. Data were analyzed through the application of descriptive and inferential statistical data analysis approach through the use of (SSPS) version 22.0 and Excel system.

Ethical considerations

The Institutional Review Board (IRB) in college of nursing /university of Baghdad reviewed contents of program and questionnaire before conducting a study. Informed consent was taken orally before participating in the study. After that information regarding study title and objectives had been given. Two official requests were submitted through the College of Nursing / University of Baghdad to medical city directorate/ Ministry of Health (MOH) to take approval for data collection from Iraqi center for cardiac disease and Al-Karkh health directorate/ Ministry of Health (MOH) to take approval for data collection from Ibn-Albetar specialist center for cardiac surgery in Baghdad city.

Social Status		
Single	12	27.3
Married	30	68.2
Widowed	2	4.5
Total	44	100.0
Educational Level		
Preparatory Nursing	3	6.8
Preparatory Midwifery	31	70.5
Midwifery Institute	10	22.7
Total	44	100.0

\bar{x} :mean, SD: Standard Deviation

Results out of this table reveal that the highest percentage (25%) of the nurses-midwives' are (20-24) years old; (68.2%) were married; (70.5%) preparatory midwifery graduates.

Table (2): Distribution of Nurses-Midwives' according to Job Characteristics:

Job Characteristics	Frequency	Percent
Job Descriptions		
Skilled Nurse	2	4.5
Skilled Midwife	34	77.3
Technical Midwife	8	18.2
Total	44	100.0
Experience Years in Nursing		
Less than 5	38	86.4
6-11	5	11.4
24-29	1	2.3
Total	44	100.0
Experience Years in Midwifery		
Less than 5	33	75.0
6-11	10	22.7
12-17	1	2.3
Total	44	100.0
Experience Years in Delivery Room		
Less than 5	37	84.1
6-11	7	15.9
Total	44	100.0
Practicing in		
Government Hospital Only	43	97.7
Hospital and House	1	2.3
Total	44	100.0
Training courses in Midwifery		
None	33	75.0
1-3	5	11.4
4-6	2	4.5
7-9	2	4.5
10-12	2	4.5
Total	44	100.0
Working Shifts		
Morning Only	34	77.3
Evening Only	7	15.9
Morning and Evening	3	6.8
Total	44	100.0
Desire to Work in Midwifery		
Yes	44	100.0
No	0	00.0
Total	44	100.0

Results out of this table depicted that the highest percentage (77.3%) of the sample were skilled midwives; (86.4%) having less than (5) years of experience in nursing; (75%) having less than (5) years of experience in midwifery; (97.7%) practicing midwifery in governmental hospitals only; (75%) have no training courses in Midwifery, (77.3%) working at morning shifts only; and (100 %); and having desire to work in midwifery.

Table (3): Distribution of Nurses-Midwives' according to Source of information:

Source of information	Frequency	percent
Sessions about non-pharmacological pain management during labor		
No	34	77.3
Yes	10	22.7
Total	44	100.0
Source of Knowledge		
None	34	77.3
Doctor	1	2.3
Study	2	4.5
Training session	2	4.5
More than one answer	5	11.4
Total	44	100.0
Types of Non-Pharmacological methods		
none	19	43.2
psychological support	19	43.2
massage	2	4.5
change position	2	4.5
deep breathing	2	4.5
Total	44	100.0

Results out of this table reveal that the highest percentage (77.3%) of the nurses-midwives not having any session about non-pharmacological pain management during labor; (77.3%) of them not having any source of information regarding pain management methods during labor; (43.2%) of them do not know the types of non-pharmacological pain management methods; the same percent for the answering of psychological support method.

Table (4-a): Nurses-Midwives Knowledge about Labor Pain in pre- Post Periods

Items of knowledge		Pre-test Period (n=44)						Post-test Period (n=44)						t-test	df	P-value Sig.
		False	True	MS.	SD	RII	Ass.	False	True	MS	SD	RII	Ass.			
		F (%)	F (%)					F (%)	F (%)							
1	Uterine contractions	0(0.0)	44(100)	2.00	.000	1.00	H	0(0.0)	44(100)	2.00	.000	1.00	H	1.000	43	.323 (NS)
2	Labor pain is a feeling accompanied by uterine contractions	1(2.3)	43(97.7)	1.98	.151	0.99	H	0(0.0)	44(100)	2.00	.000	1.00	H	1.000	43	.323 (NS)
3	Causes of labor pain are except.....	30(68.2)	14(31.8)	1.32	.471	0.66	L	7(15.9)	37(84.1)	1.84	.370	0.92	H	5.875	43	.000 (HS)
4	The perception of pain varies from woman to woman	5(11.4)	39(88.6)	1.89	.321	0.95	H	3(6.8)	41(93.2)	1.93	.255	0.97	H	.703	43	.486 (NS)
5	Some women think that screaming and crying relieves pain	17(38.6)	27(61.4)	1.61	.493	0.81	H	5(11.4)	39(88.6)	1.89	.321	0.95	H	2.901	43	.006 (HS)
6	Factors affecting the intensity of pain are except.....	20(45.5)	24(54.5)	1.55	.504	0.78	H	7(15.9)	37(84.1)	1.84	.370	0.92	H	2.936	43	.005 (S)
7	The psychological factors in pain are.....	10(22.7)	34(77.3)	1.77	.424	0.89	H	3(6.8)	41(93.2)	1.93	.255	0.97	H	2.007	43	.051 (NS)
8	Physical factors in pain are except.....	7(15.9)	37(84.1)	1.84	.370	0.92	H	1(2.3)	43(97.7)	1.98	.151	0.99	H	2.213	43	.032 (S)
9	Personal factors in pain are except.....	30(68.2)	14(31.8)	1.32	.471	0.66	L	17(38.6)	27(61.4)	1.61	.493	0.81	H	2.936	43	.005 (HS)
10	Environmental factors in pain are except	29(65.9)	15(34.1)	1.34	.479	0.67	L	16(36.4)	28(63.6)	1.64	.487	0.82	H	3.301	43	.002 (HS)
11	Factors affecting the severity of the pain of health care providers	11(25.0)	33(75.0)	1.75	.438	0.88	H	14(31.8)	30(68.2)	1.68	.471	0.84	H	.684	43	.498 (NS)

F: Frequency, %: Percentage, MS.: Mean of Scores(weighted mean); Sd: Standard Deviation, RII.: Relative Importance Index , Ass.: Assessment, L: Low: (0.0-0.75), H: High (0.76 – 1.00), sig.: Significant, p-value, t-test, df: Degree of freedom, S: Significance ,NS: No Significance.

This table indicates that there is high mean scores and relative sufficiency in pretest period in all items except in item (3, 9 and 10) which show low mean scores and relative sufficiency. While there is high mean scores and relative sufficiency in posttest period with highly significant relationship between the pretest and posttest episodes relative to items (3, 5, 6, 8, 9, 10), while the remaining items show no significant relations.

Table (4-b): Correlation between Pre and Post Variables for the overall Knowledge of Nurses-midwives about Labor Pain, by using Paired Samples Test.

Paired Sample Test								
Pre- Post Test	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
	1.97727	2.51034	.37845	1.21406	2.74049	5.225	43	.000

Std: Standard Deviation, t-test, df: Degree of freedom, sig.: Significant.

There are significant correlations between pretest and posttest periods after the implementation of education program for nurse- midwives regarding labor pain.

Table (5-a): Knowledge of Nurse-Midwives on Non-Pharmacological Pain Management in Reducing Labor Pain.

Knowledge on Non-Pharmacological Pain Management Items		Pre-test Period (n=44)						Post -test Period (n=44)						t-test	df	P-value Sig.
		False	True	MS.	SD	RII	Ass.	False	True	MS	SD	RII	Ass.			
		F (%)	F (%)					F (%)	F (%)							
1	Non-pharmacological management are except.....	7(15.9)	37(84.1)	1.84	.370	.92	H	1(2.3)	43(97.7)	1.98	.151	.99	H	2.213	43	.032 (S)
2	Change posture and body movement one of non....	8(18.2)	36(81.8)	1.82	.390	.91	H	0(0.0)	44(100)	2.00	.000	1.00	H	3.091	43	.003 (HS)
3	Positioning that can be taken during labor are	15(34.1)	29(65.9)	1.66	.479	.83	H	0(0.0)	44(100)	2.00	.000	1.00	H	3.170	43	.003 (HS)
4	Benefits of standing position are except.....	16(36.4)	28(63.6)	1.64	.487	.82	H	10(22.7)	34(77.3)	1.77	.424	.89	H	1.289	43	.204 (NS)
5	Benefits of walking position are except.....	18(40.9)	26(59.1)	1.59	.497	.80	H	11(25.0)	33(75.0)	1.75	.438	.88	H	1.736	43	.090 (NS)
6	The usefulness of standing position and forward	17(38.6)	27(61.4)	1.61	.493	.81	H	2(4.5)	42(95.5)	1.95	.211	.98	H	4.301	43	.000 (HS)
7	Benefits of Rush position is except.....	25(56.8)	19(43.2)	1.43	.501	.72	L	19(43.2)	25(56.8)	1.57	.501	.79	H	1.431	43	.160 (NS)
8	The benefit of sitting position with tilt forward is:	24(54.5)	20(45.5)	1.45	.504	.73	L	8(18.2)	36(81.8)	1.82	.390	.91	H	3.932	43	.000 (HS)
9	The benefits of the position of Alarba are except.....	27(61.4)	17(38.6)	1.39	.493	.70	L	12(27.3)	32(72.7)	1.73	.451	.87	H	3.034	43	.004 (HS)
10	Benefits of lying on the side are except.....	25(56.8)	19(43.2)	1.43	.501	.72	L	9(20.5)	35(79.5)	1.80	.408	.90	H	3.521	43	.001(HS)
11	Benefits of squatting are except.....	17(38.6)	27(61.4)	1.61	.493	.81	H	8(18.2)	36(81.8)	1.82	.390	.91	H	2.033	43	.048 (S)
12	Therapeutic touch of non-pharmacological	7(15.9)	37(84.1)	1.84	.370	.92	H	0(0.0)	44(100)	2.00	.000	1.00	H	2.852	43	.007 (HS)
13	Breathing during childbirth helps to reduce.....	6(13.6)	38(86.4)	1.86	.347	.93	H	0(0.0)	44(100)	2.00	.000	1.00	H	2.606	43	.013 (S)
14	Methods of breathing are except.....	34(77.3)	10(22.7)	1.23	.424	.62	L	11(25.0)	33(75.0)	1.75	.438	.88	H	5.875	43	.000 (HS)
15	Focus on breathing and use of images prevents	11(25.0)	33(75.0)	1.75	.438	.88	H	0(0.0)	44(100)	2.00	.000	1.00	H	3.786	43	.000 (HS)
16	Essential oils help the mother to relax.....	18(40.9)	26(59.1)	1.59	.497	.80	H	0(0.0)	44(100)	2.00	.000	1.00	H	5.456	43	.000 (HS)
17	Essential oils are	31(70.5)	13(29.5)	1.30	.462	.65	L	16(36.4)	28(63.6)	1.64	.487	.82	H	3.034	43	.004 (HS)
18	Methods of use of essential oils are	26(59.1)	18(40.9)	1.41	.497	.71	L	13(29.5)	31(70.5)	1.70	.462	.85	H	2.794	43	.008 (HS)
19	Contraindications for the use of essential oils are	21(47.7)	23(52.3)	1.52	.505	.76	H	9(20.5)	35(79.5)	1.80	.408	.90	H	2.606	43	.013 (S)
20	Essential oils are not given to women who suffer....	28(63.6)	16(36.4)	1.36	.487	.68	L	9(20.5)	35(79.5)	1.80	.408	.90	H	4.332	43	.000 (HS)
21	The benefits of lavender oil are except.....	26(59.1)	18(40.9)	1.41	.497	.71	L	14(31.8)	30(68.2)	1.68	.471	.84	H	2.488	43	.017 (S)
22	Contraindications of lavender oil are	22(50.0)	22(50.0)	1.50	.506	.75	L	12(27.3)	32(72.7)	1.73	.451	.87	H	2.029	43	.049 (S)
23	Benefits of frankincense oil are except.....	21(47.7)	23(52.3)	1.52	.505	.76	H	11(25.0)	33(75.0)	1.75	.438	.88	H	2.226	43	.031 (S)
24	Contraindications for the use of frankincense oil are	24(54.5)	20(45.5)	1.45	.504	.73	L	7(15.9)	37(84.1)	1.84	.370	.92	H	3.548	43	.001 (HS)
25	The benefits of olive oil are....	21(47.7)	23(52.3)	1.52	.505	.76	H	3(6.8)	41(93.2)	1.93	.255	.97	H	4.651	43	.000 (HS)
26	Properties of olive oil are except.....	34(77.3)	10(22.7)	1.23	.424	.62	L	12(27.3)	32(72.7)	1.73	.451	.87	H	6.032	43	.000 (HS)
27	Benefits of jasmine oil are....	30(68.2)	14(31.8)	1.32	.471	.66	L	3(6.8)	41(93.2)	1.93	.255	.97	H	7.026	43	.000 (HS)
28	Contraindications for the use of jasmine oil t.....	28(63.6)	16(36.4)	1.36	.487	.68	L	4(9.1)	40(90.9)	1.91	.291	.96	H	6.603	43	.000 (HS)
29	Warm and cold compresses help relieve labor pains	14(31.8)	30(68.2)	1.68	.471	.84	H	3(6.8)	41(93.2)	1.93	.255	.97	H	3.107	43	.003 (HS)
30	The benefits of Warm compresses are.....	20(45.5)	24(54.5)	1.55	.504	.78	H	3(6.8)	41(93.2)	1.93	.255	.97	H	4.146	43	.000 (HS)
31	Warm compresses are placed on.....	19(43.2)	25(56.8)	1.57	.501	.79	H	1(2.3)	43(97.7)	1.98	.151	.99	H	5.006	43	.000 (HS)
32	The benefits of cold compresses are.....	34(77.3)	10(22.7)	1.23	.424	.62	L	5(11.4)	39(88.6)	1.89	.321	.95	H	8.315	43	.000 (HS)
33	The religious and spiritual aspect affects.....	14(31.8)	30(68.2)	1.68	.471	.84	H	1(2.3)	43(97.7)	1.98	.151	.99	H	3.847	43	.000 (HS)

F: Frequency, %: Percentage, MS.: Mean of Scores(weighted mean); Sd: Standard Deviation, RII.: Relative Importance Index , Ass.: Assessment, L: Low: (0.0-0.75), H: High (0.76 – 1.00), sig., Significant, p-value, t-test, df: Degree of freedom, S: Significance ,NS: No Significance.

This table indicates that there are high mean scores and relative sufficiency in pretest period in items (1, 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 24, 26, 30, 31, 32, 34), and low in items (2, 8, 9, 10, 11, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 33). While there are high mean scores and relative sufficiency in posttest period with highly significant relationship between the pretest and posttest in all items except in (5, 6, 8) show no significant relations.

Table (5-b): Correlation between Pre and Post Variables for the overall Knowledge of Nurses - midwives on non-Pharmacological Management in Reducing Labor Pain in Pregnant Women.

Paired Sample Test								
Pre- Post Test	Paired Differences					t	df	Sig. (2-tailed)
			Std. Error	95% Confidence Interval of the Difference				
				Lower	Upper			
	Mean	Std. Deviation	Mean	Lower	Upper			
	11.27273	9.65296	1.45524	8.33796	14.20750			

Std: Standard Deviation, t-test, df: Degree of freedom, sig.: Significant.

There are significant correlations between pretest and posttest periods after the implementation of education program for nurse- midwives regarding non-pharmacological management in reducing labor pain in pregnant women.

Discussion:**Regarding to Socio-demographic Characteristics**

The present study reveals that the highest percentages (25%) for study sample at age group (20-24) years with mean and standard deviation (SD) (33.84 ± 9.4) as shown in table (1).

These findings are consistent with a descriptive survey design was used to gather information to answer the research questions from the nurses at BroMenn Regional Medical Center. The most common age represented was (20-29) group or 34% of the sample ⁽³⁾.

Conversely, another study found that the highest percentage (48.1 %) of health care providers were in the age group of (25-34) years ⁽⁴⁾.

Nurses-midwives play a crucial role in the management of labor pain for the parturient women. The perceptions of nurses-midwives' for labor pain are effect by their age the younger age more severe than older.

The present study reveals that the highest percentages (68.2%) were married as shown in table (1).

Married nurses- midwives have more perception of the labor pain than an unmarried woman, because the first woman may have experienced pregnancy and labor and felt what pain a woman feels during labor.

The present study reveals that the highest percentages (70.5%) were preparatory graduates as shown in table (1).

Conversely, the study conducted in two medical institutions providing health care services in Moi Teaching and Referral Hospital (MTRH) and Jaramogi Oginga Odinga Teaching and Referral Hospital, Kenya. revealed that the highest percentage were 67.9% of the participants were student nurse/midwife, 25.6% of the participants were nurse/midwife, 3.4% of the participants were medical officers,

2.3% of the participants were the house/clinical officer, 0.4% of the participants were residential doctor and 0.4% of the participant was consultant ⁽⁴⁾.

Nurses-midwives with low educational level will have minimum level of performance to management women's pain during childbirth process. While nurses-midwives with high level of education such as college have more perception to childbirth pain management methods.

Job Characteristics

The present study reveals that the highest percentage (77.3%) of the sample were skilled midwives; (86.4%) having less than (5) years of experience in nursing; (75%) having less than (5) years of experience in midwifery; (97.7%) practicing midwifery in governmental hospitals only; (75%) have no training courses in Midwifery, (77.3%) working at morning shifts only; and (100 %); and having desire to work in midwifery as shown in table (2).

Conversely, another study found the highest percentages (76.7%) of the respondents have 0 to 5 years' experience, (13.5%) of the respondents have 6 to 10 years of experience, (3.8%) of the respondents have 11 to 15 years of experience, (2.6%) of the respondents have above 16 years of experience and (3.4%) of the respondents did not respond ⁽⁴⁾.

Nurses-midwives must have skills in childbirth process and had training courses in midwifery which is essential for proper use in management of pain. Experience year in delivery room is very important for nurses-midwives to give them experience to deal with women pain in labor.

Source of Information:

The present study reveals that the highest percentages (77.3%) of the nurses-midwives not having any session about non-pharmacological pain management during labor; (77.3%) of them not having any source of information regarding pain management methods during labor;

(43.2%) of them do not know the types of non-pharmacological pain management methods; the same percent for the answering of psychological support method as shown in table (3).

These findings are consistent with the study conducted in Kenya revealed that the highest percentages (83.8%) of the participants responded that they did not have any additional training in non-pharmacological pain management during labor. (15.4%) of anticipant's responded that they had gone for the training while (0.8%) of the respondents did not show ⁽⁴⁾.

also stated in their study that, Among (266) participants two nurse midwives had had a special training on first aid including pain management in labor and importance of using non-pharmacological pain management, one clinical officer had a seminar on Massage, and one nurse had attended a seminar on distraction ⁽⁴⁾.

Nurses-midwives' if had session about pain management in labor can help them to assist and instruct laboring women to choice others non-pharmacological therapies, furthermore the psychological support that midwives provide during labor.

Indeed, the study reported that nurses and midwives learn about non-pharmacological therapies of labor pain management from different sources, including nursing and midwifery training colleges, wards and workshops. Emphasis on these therapies during pre and post-registration nursing and midwifery education would, therefore, build their knowledge-base while enhancing the utilization of diverse forms of non-pharmacologic therapies ⁽⁵⁾.

Knowledge of Nurses-Midwives about the Labor Pain in Pre- Post Periods.

The present study reveals that there is high mean scores and relative sufficiency in pretest period in all items except in item (3, 9 and 10) which show low mean scores and relative sufficiency. While there is high mean scores and

relative sufficiency in posttest period with highly significant relationship between the pretest and posttest episodes relative to items (3, 5, 6, 8, 9, 10), while the remaining items show no significant relations as shown in table (4-a).

Also the study shows that there are significant correlations between pretest and posttest periods after the implementation of education program for nurse- midwives regarding labor pain as shown in table (4-b). The study conducted in Kenya revealed that overall Knowledge of non-pharmacological pain management during labor was (42.40%). Among 266 of the participants, knowledge of general information regarding labor is (53.52%) ⁽⁴⁾. These findings are consistent with the study conducted in North Ethiopia revealed that all respondents' 233(100%) responds as they knew about managing labor pain in general, of them 113 (48.5%) knows only non-pharmacologic labor pain management methods whereas 120(51.5%) knows both pharmacologic and non-pharmacologic labor pain management methods ⁽⁶⁾. Nurses-midwives' have knowledge about labor pain in pretest period but not known the causes of labor pain, physical and personal factors in pain because they do not have training courses on labor pain, and for this purposes the researcher provides an educational program on labor pain and factors affecting women in labor pain.

Knowledge of Nurses - midwives on non-Pharmacological Management in Reducing Labor Pain in Pregnant Women.

The present study reveals that there are high mean scores and relative sufficiency in pretest period in items (1, 3, 4, 5, 6, 7, 12, 13, 14, 16, 17, 24, 26, 30, 31, 32, 34), and low in items (2, 8, 9, 10, 11, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 33). While there are high mean scores and relative sufficiency in posttest period with highly significant relationship between the pretest and posttest in all items

except in (5, 6, 8) show no significant relations as shown in table (5-a).

The present study also reveals that there are significant correlations between pretest and posttest periods after the implementation of education program for nurses- midwives regarding non-pharmacological management in reducing labor pain in pregnant women as shown in table (5-b).

The study conducted in revealed that among (266) of the participants, health care providers have inadequate knowledge regarding non-pharmacological pain management during labor. knowledge of non-pharmacological methods is 65.04%, knowledge of aromatherapy is 20.93%, knowledge of massage is 40.23%, knowledge of breathing exercises is 15.04%, knowledge of intra-dermal water blocks is 37.97%, knowledge of hydrotherapy is 40.85%, knowledge of continuous labor support is 58.40%, knowledge of movement and positioning is 50.75%, knowledge of acupressure is 26.32%, knowledge of heat and cold is 27.44% and knowledge of music and audio analgesia is 54.89%. Most of the health care providers practice massaging, breathing exercise and encourage different laboring positions during labor⁽⁴⁾.

Nurses-midwives' do not have knowledge of non-pharmacological pain management in pretest period and do not know the different types of change position and body movement because they do not have training courses on non-pharmacological pain management, and for this purposes the researcher provides an educational program related to pain management methods for the remainder, and the results show a high significant relationship in posttest period.

Recommendations:

The study recommended in-services education for the nurses- midwives' regarding knowledge of the current evidence, and provides experience in the skills necessary to fulfill their responsibility to support pain management during labor and training primary health care nurses in improved pain management is important part of multi-faced approach towards improving and helping women's to reduce pain during labor.

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