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

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Abstract

Objectives: To assess nurses-midwives' practices about pain management during labor before and after implementation of educational program.

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 the Baghdad Maternity Hospitals. 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: All observations (three observations) in posttest period in the items (changing position, deep breathing, and religious and spiritual idea) appear high and moderate mean scores and relative sufficiency in the three observations after the implementation of education program for nurses- midwives' regarding to the management taken by the midwife to reducing labor pain of pregnant women in delivery room. While other management not implemented by the nurses- midwives' due to the lack in the resources or supplementation in delivery rooms, or due to the routine of the hospitals.

Conclusions: The study concluded that the educational program can be considered as an effective mean for improvement of the nurses-midwives' practices about the importance pain management.

Recommendations: The study recommended to 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' Practices, Pain Management, Labor.*

Introduction

Labor pain is one of the most intense pains of women. This type of pain is very common and is an inevitable part of the childbirth process. For some reasons, labor pain and its experience is quite different from other types of pains. This pain is not a symptom of tissue injury, and can spontaneously be limited and controlled. This pain gradually gets intense and eventually leads to a desirable event which is the childbirth (1)

Pain experienced during childbirth is a complex, multidimensional and subjective phenomenon that is of great concern to both the expectant mother and the maternity healthcare professional. Although the experience of pain is inherent in the childbearing process, unrelieved labor pain can result in negative consequences for the expectant mother, her family, healthcare providers and healthcare systems at large. Apart from maternal consequences such as heightened stress, fear, depression, confusion, hypertension, hyperglycemia, and constipation, unresolved labor

pain can also compromise placental perfusion leading to asphyxia, late decelerations and its resultant fetal distress. These create feelings of guilt and helplessness for the woman's family as well as a lack of confidence in the abilities of healthcare providers and systems in general[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 -Karckh Maternity Hospital and AL - Yarmouk Teaching Hospital - Maternity Department) at Akarkh/Health Directorate. Questionnaire has been used as a tool of data collection to fulfill with objective of the study to assess nurses-midwives' practices about pain management during labor before and after implementation of educational program and to determine the effectiveness of educational program on nurses-midwives' practices 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.

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
$\bar{x}$ ± SD	33.84 ± 9.4	
Total	44	100.0
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

Table (1) shows that the highest percentage (25%) of the nurses-midwives' are (20-24) years with mean and standard deviation (SD) (33.84 ± 9.4); (68.2%) were married; (70.5%) preparatory midwifery graduates.

Table (2): Management Taken by Nurses –midwives' to Reduce Pain during Labor in Delivery Room in Pre and Post Observations.

		Pre Observation							Post Observation							P-value (0.05)
No.	Practical Items	Frequency			MS	SD	RII	Ass.	Frequency			MS	SD	RII	Ass.	
		Always	Some times	Never					Always	Some times	Never					
1	Massage	0	0	44	1.00	.000	0.33	L	2	0	42	1.09	.421	.36	L	N
2	Changing position	0	1	43	1.02	.151	0.34	L	41	0	3	2.86	.510	.94	H	S
3	Therapeutic Touch	0	1	43	1.02	.151	0.34	L	0	0	44	1.00	.000	.33	L	N
4	Deep breathing	0	14	30	1.32	.471	0.44	L	43	0	1	2.95	.302	.97	H	S
5	Concentration and reflection	0	0	44	1.00	.000	0.33	L	0	0	44	1.00	.000	.33	L	N
6	Essential oils	0	0	44	1.00	.000	0.33	L	0	0	44	1.00	.000	.33	L	N
7	Warm and cold compresses	0	0	44	1.00	.000	0.33	L	0	0	44	1.00	.000	.33	L	N
8	Religious and spiritual	0	4	40	1.09	.291	0.36	L	42	0	2	2.91	.421	.96	H	S

F: Frequency, %: Percentage, MS.: Mean of Scores(weighted mean); Sd: Standard Deviation, RII.: Relative Importance Index , Ass.: Assessment, L: Low: (0.33-0.55), M: Moderate:(0.56-0.78), H: High: (0.79 – 1.00).

Table (2) results show that there are low mean scores and relative sufficiency in pretest period in all items. While there are high mean scores and relative sufficiency in posttest period and significant correlations in (changing position, deep breathing, and religious and spiritual idea), after the implementation of education program for nurse-midwives regarding to the management taken by the nurse to reducing labor pain.

Table (3): Nurse-midwife practices to reduce labor pains in the delivery room (clinical practice).

First Observation	Second Observation	Third Observation																							
Nurse-midwife practices to reduce labor pains		Frequency			MS	SD	RII	Ass.	Frequency			MS	SD	RII	Ass.	Frequency			MS	SD	RS	Ass.
		Always	Sometimes	Never					Always	Sometimes	Never					Always	Sometimes	Never				
1.	The nurse-midwife massage for woman…..	2	0	42	1.09	.421	.36	L	1	0	43	1.05	.302	.35	L	1	0	43	1.05	.302	.35	L
A.	Hand massage is done with the back of hand.	2	0	42	1.09	.421	.36	L	7	0	37	1.32	.740	.44	L	4	0	40	1.18	.582	.39	L
B.	Massage the foot from the ankle to the toes…	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
C.	The back massage starts from the shoulder …	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
D.	Massage the shoulder from the bottom of …	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
2.	The nurse-midwife changes the position and ..	0	0	44	1.00	.000	.33	H	37	0	7	2.68	.740	.89	H	35	0	9	2.59	.816	.85	H
A.	Stand position	41	0	3	2.86	.510	.94	H	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
B.	Walking position	26	0	18	2.18	.995	.72	M	21	0	23	1.95	1.011	.64	L	20	0	24	1.91	1.007	.63	L
C.	Stand position and tilt to front	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
D.	Slow Dance position	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
E.	Rush position	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
F.	Semi sitting position	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
G.	The position of shaking the pelvis	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
H.	Sitting position with forward tilt	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
I.	Alarbaat position	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
J.	Kneeling	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
K.	Lie on the side	41	0	3	2.86	.510	.94	H	37	0	7	2.68	.740	.89	H	35	0	9	2.59	.816	.85	H
L.	Squatting position	14	0	30	1.64	.942	.54	L	14	0	30	1.64	.942	.54	L	14	0	30	1.64	.942	.54	L
3.	The nurse-midwife can touch the woman with …	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
4.	Educates pregnant technique of breathing during..	43	0	1	2.95	.302	.97	H	43	0	1	2.95	.302	.97	H	43	0	1	2.95	.302	.97	H
A.	Slow breathing	2	0	42	1.09	.421	.36	L	7	0	37	1.32	.740	.44	L	6	0	38	1.27	.694	.42	L
B.	Breathing Fast and Light Breathing quickly …	14	0	30	1.64	.942	.54	L	14	0	30	1.64	.942	.54	L	14	0	30	1.64	.942	.54	L
C.	Breathing variable at the beginning of the ….	27	0	17	2.23	.985	.74	M	22	0	22	2.00	1.012	.66	L	23	0	21	2.05	1.011	.68	M
5.	Educates women focus on breathing & images	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
6.	The nurse-midwife uses essential oils	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
A.	Lavender Oil	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
B.	Frankincense oil	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
C.	Olive Oil	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
D.	Jasmine oil	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
7.A	The nurse-midwife uses Warm compresses	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
7.B	The nurse-midwife uses Cold compresses	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L	0	0	44	1.00	.000	.33	L
8.	Encourages woman to recite the supplications	42	0	2	2.91	.421	.96	H	38	0	6	2.73	.694	.91	H	38	0	6	2.73	.694	.91	H

F: Frequency, %: Percentage, MS.: Mean of Scores(weighted mean); Sd: Standard Deviation, RII.: Relative Importance Index , Ass.: Assessment, L:Low: (0.33-0.55), M:Moderate:(0.56-0.78), H: High:(0.79 – 1.00).

Table (3) results show that there are high and moderate mean scores and relative sufficiency in the first observations in posttest period practices (2, A, B, & K); (4,C); and (8) after the implementation of education program for nurse- midwives practices taken to reducing labor pain of pregnant women in delivery room. In the second observation there are high mean scores and relative sufficiency in practices (2, & K); (4); and (8). In the third observation there are high and moderate mean scores and relative sufficiency in practices (2, & K); (4, C); and (8).

Discussion

Socio-demographic Characteristics of the Study Sample

Table (1) shows that the highest percentages (25%) for study sample at age group (20-24) years with mean and (SD) (33.84 ± 9.4).

These findings are agreement with cross sectional study design that assess practice of Labor pain management methods and associated factors among skilled attendants in all Tigray region general hospitals. And found that out of the total of (233) skilled attendants were included in the study, making a response rate of 100%. The mean age of the respondents was (30.2 ± 6.6), of them 152(65.3%) were in the age group of (20-29), 56(24%) were in age group (30-39) and 25(10.7%) were in age group (≥ 40) [3]. 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. The study found that the highest percentage (48.1 %) of health care providers were in the age group of (25-34) years [4]. Table (1) shows that that the highest percentages (68.2%) were married. 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. Table (1) shows that the highest percentages (70.5%) were preparatory graduates. These findings are disagreement with a quantitative design was used to examine differences in knowledge of pain assessment and pharmacologic pain management strategies among registered nurses from a large academic medical center. Subjects were selected using type of nursing unit in which they work and a convenience sampling the study found the majority of participants had bachelor's degrees (*n* = 66, 67.3%), 22 (22.4%) had associate's degrees, and 10 (10.2%) had master's degrees [5].

Nurses-midwives' Clinical Practices to Reduce Labor Pains

Table (2) results was consistent with the study for nurses-midwives use in the delivery room the some non-pharmacological methods more than others for different reasons such as decrease nurses-midwives stuff in delivery room, lack of time; no have knowledge and practices about non-pharmacological methods. Inadequate staff served as an obstacle to the utilization the non-pharmacological therapies in managing labor pain. Participants perceived some of the non-pharmacologic approaches to be time consumption for the few attending maternity care providers to administer considering their heavy workload and increased client turnover. Increased workload and client turnover invariably place a lot of stress on the few practicing nurses and midwives, leading to staff exhaustion and impaired work efficiency [2].

Nurses-midwives' practices to reduce labor pains

Table (3) results show that there are high and moderate mean scores and relative sufficiency in the first, second and third observations in posttest period practices (2, & K); (4); and (8). While other practices not implemented by the nurse- midwives due to the lack in the resources or supplementation in delivery rooms, or due to the routine of the hospitals, or neglect of the nurses –midwives' to the practice. The results consistent with Boateng et. al, these stated in their study that nurses and midwives were more use some non-pharmacologic approaches such as sacral massage, deep breathing, and frequently use them in their practice to manage labor pain. The frequent usage of these methods has been reported in previous studies and can be attributed to the familiarity of the midwives with these approaches. While insufficient knowledge may account for the decrease frequent use of these methods, other factors such as inadequate human and material resources may have contributed to this observation; similar to what has been reported in other studies [2].

Conclusions

The study concluded that the educational program can be considered as an effective mean for improvement of the nurses-midwives' practices about the importance pain management.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Clearance: Obtained from the

o Ministry of Health (MOH) - Department of Planning and Health Research Section)

o Ministry of Planning - Central Statistical Organization and Information Technology (CSOIT)

o Baghdad Teaching Hospital

o Al-Elwia Maternity Teaching Hospital

o Ibn Al -Balidy for Maternity and Pediatric Hospital

o Fatima Al-Zahra for Maternity and Pediatric Hospital

o Al -Karckh Maternity Hospital

o AL - Yarmouk Teaching Hospital - Maternity Department

o Ethical Permission Obtained from nurses-midwives'

Recommendations: The study recommended to 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.

References

1. Dolatian M, Hasanpour A, Heshmat R, Alavimajd H. The effect of reflexology on labor pain intensity. J Zanjan Univ Med Sci Health Ser. 2010; (18):5261.
2. Boateng EA, Kumi LO, and Diji AK, Nurses and midwives' experiences of using non-pharmacological interventions for labour pain management: a qualitative study in Ghana, BMC Pregnancy and Childbirth, 2019; 19 (168): Available from https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-019-2311-x
3. Sahile E, Yemaneh Y, Alehegn A, Nigussie W, Salahuddin M, et al., practice of Labour Pain Management Methods and Associated Factors among Skilled attendeds Working at General Hospitals in Tigray Region, North Ethiopia: Hospital Based cross-sectional Study Design. Health Sci J. 2017; 11(4): 516. Available from www.hsj.gr/archive.php
4. Ramasamy P, Kwena A, Emarah A & Kangethe S. Knowledge, Attitude, Practice and Barriers to Educational Implementation of Non-Pharmacological Pain Management During Labor in Selected Hospitals, Kenya. Central African Journal of Public Health. 2018; 4(1): 20-26. doi: 10.11648/j.cajph.20180401.14
5. Craig Joycelyn A, "Nursing Knowledge and Atitudes toward Pain Management". Nursing Teses and Capstone Projects, 2014; 8: Available from https://digitalcommons.gardner-webb.edu/nursing_etd/8