

# Effectiveness of Education Training Program on Nurse-Midwives' Knowledge about Immediate Mother and Newborn Skin to Skin Contact at Birth in Baghdad Maternity Hospitals

Muntaha K. Mejbil<sup>1</sup>, MScN, Rabea M. Ali<sup>2</sup>, PhD, Afifa R. Aziz<sup>3</sup>, PhD

<sup>1</sup> Clinical Nurse Specialist, Ministry of Health, Iraq

<sup>2</sup> Professor, Maternal and Newborn Health Nursing Department, College of Nursing, University of Baghdad

<sup>3</sup> Assistant Professor, Pediatrics Nursing Department, College of Nursing, University of Baghdad

**Abstract:** *The present study aims at determining the effectiveness of an educational training program nurse-midwives' knowledge about immediate mother and newborn skin to skin contact at birth in Baghdad Maternity Hospitals. A quasi-experimental "test-retest" design was carried throughout the present study with the application of a pre-test and post-test for nurses-midwives' knowledge regarding stages of labor and pre-test and post-test for their practices during stages of labor, as well as the use of observational checklist. Non-probability (purposive) consists of (70) nurse-midwife, is selected. The sample is exposed to pretest, educational training program and posttest. The sample recruitment takes place from April 10<sup>th</sup> 2017 to December 26<sup>th</sup> 2017. An educational training program is constructed based on initial assessment data and instrument is constructed, relative to the educational training program, to determine the effectiveness of the program on nurses-midwives' knowledge about skin-to-skin contact. The program and the instrument's content validity is determined through panel of (20) expert. The reliability of the instrument is obtained through the application of inter-rater reliability for the determination of the knowledge instrument's equivalence with adequate correlation coefficient of ( $r = 0.70$ ). Data are collected through the utilization of the instrument as self-report questionnaire for the nurses-midwives' knowledge as mean of data collection. Data are analyzed through the application of descriptive statistical data analysis approach of frequency, percentage, mean, grand mean, standard deviation, mean of scores and relative sufficiency and inferential statistical data analysis approach of t-test. The results indicate that nurses-midwives' knowledge about skin-to-skin contact have been greatly improved after their being exposed to the educational training program. The study concludes that the educational training program is confirmed to be an effective measure that can improve nurses-midwives' knowledge.*

**Keywords:** Educational training program, nurse-midwives, knowledge, skin to skin contact

## 1. Introduction

Skin and skin contact is significant, which midwives sought to achieve as a natural after-delivery care. However, in daily practice, midwives countenance many difficulties to such care, such as lack of knowledge between parents and other professionals about the profits of skin contact to the skin, postpartum caesarean section, and other organizational difficulties (e.g., collaboration with other professionals, shortage of time). More skin to skin care was a trial for midwives who sometimes felt forbidden and frustrated when they tried to inform the profits of this type of care [1].

Skin to skin contact supports mothers at an early stage of breastfeeding and teaches mothers about proper attachment and best motherhood status for breastfeeding. Mothers are taught how to kneading their breasts as well as keeping the breast healthy way, identifying feeding signals, and ways to start breastfeeding through active breastfeeding [2].

High oxytocin causes a mother to develop familiar with the unique odor of her newborn infant, and once attracted to it, to prefer her own baby's odor above all others'. Baby is likewise engraved on mother, deriving feelings of calmness and pain decrease along with mom. When the newborn is born, he is already engraved on the odor of his amniotic

fluid. This odor imprint helps him find mother's nipple, which has alike but slightly different odor. In the days following birth, the newborn can be consoled by the odor of this fluid. Skin to skin contact also profits the mother, who reliefs high levels of oxytocin, the hormone of love, when skin to skin with her newborn. This helps her uterus to contact and prevents bleeding after birth postpartum hemorrhage (PPH). Some studies have revealed that mothers who had adored skin to skin contact after birth are more loving with their babies, even several years later [3].

The Cochrane's systematic reviews propose that immediate contact between mother and newborn can advance breastfeeding outcomes, maternal love behavior, attachment, shortening crying time. There are no opposing effects of skin to skin contact. It is simple and needs minimal financial resources. It indorses comfort, reduces stress, reduces stress hormones, promotes early bonding between mother and baby, protects infants from harmful germs; facilitate their transmission [4].

Skin and skin contact is significant, which midwives sought to achieve as a natural after-delivery care. However, in daily practice, midwives countenance many difficulties to such care, such as lack of knowledge between parents and other professionals about the profits of skin contact to the skin, postpartum caesarean section, and other organizational

difficulties (e.g., collaboration with other professionals, shortage of time). More skin to skin care was a trial for midwives who sometimes felt forbidden and frustrated when they tried to inform the profits of this type of care [5].

Midwifery is a significant career for work and social health, and offers obstetric counseling services. They are the first person to contact newborn after birth. However, through the experiences, that have been realized, many midwives do not execute the skin to the skincontact after delivery. Therefore, it is necessary to identify factors that constrain midwives to achieve skin-to-skin contact. To clarify such factors it was obvious to use a theoretical framework that might help to verbalize the issue. As such the Precede-Proceed model was designated. Green and Kreuter developed this model in 1970 and states that in order to change a behavior, the individual alone should not be beleaguered; rather, the entire neighboring environment and the factors affecting his/her behavior should be deliberated. The model consists of several parts comprising a construct namely educational and ecological assessment. The educational and ecological assessment by itself consists of three factors: predisposing factors, enabling factors and strengthening factors. To the best of the knowledge, no study or instrument was established to deal with the factors associated with mother-newborn skin-to-skin contact proximately after birth for midwives <sup>6</sup>

Regarding preceding literature and field work, nurses-midwives' may experience lack of knowledge about skin to skin contact. As a result, the present study aims at presenting nurses-midwives with educational means to advance their knowledge about the immediate mother and newborn skin to skin contact at birth.

## 2. Methodology of the Study

A quasi-experimental "test-retest" design was carried throughout the present study with the application of a pre-test and post-test for nurses-midwives' knowledge regarding stages of labor and pre-test and post-test for their practices during stages of labor, as well as the use of observational checklist. Non-probability (purposive) consists of (70) nurse- midwife, is selected. The sample is exposed to pretest, educational training program and posttest. The sample recruitment takes place from April 10<sup>th</sup> 2017 to December 26<sup>th</sup> 2017. An educational training program is constructed based on initial assessment data and instruments are constructed, relative to the Educational training program, to determine the effectiveness of the program on nurses-midwives' knowledge and practices of skin-to-skin contact. The program and the instruments' content validity is determined through panel of (20) expert. The reliability of the instruments is obtained through the application of inter-rater reliability for the determination of the knowledge instrument's equivalence with adequate correlation coefficient of (r = 0.70). Data are collected through the utilization of the instruments as self-report questionnaire for the nurses-midwives' knowledge and the observational tool for the nurses-midwives' practices as means of data collection. Data are analyzed through the application of descriptive statistical data analysis approach of frequency, percentage, mean, grand mean, standard deviation, mean of scores and relative sufficiency and inferential statistical data analysis approach of t-test, analysis of variance and Chi-squared test.

## 3. Results

**Table 1:** Overall evaluation among the Pretest and Posttest Periods (Nurses-Midwives' Knowledge for Mothers and Their Newborns) of the Study Sample

Variable	Overall Evaluation	Frequency		Percent	
		Pretest-period	Posttest-period	Pretest-period	Posttest-period
Nurses-Midwives' Knowledge	Low (0 - 49)	14	0	12.3	0
	Moderate (50 – 75)	53	0	46.5	0
	High (76 – 100)	3	70	2.6	61.4
	Total	70	70	61.4	61.4
	$\bar{x} \pm SD.$	<b>1.8429± .47045</b>		<b>2.9429± .23379</b>	

$\bar{x} \pm SD.$  = Arithmetic Mean ( $\bar{x}$ ) and Standard Deviation, Such overall evaluation presents moderate levels at the pretest period of nurses-midwives' knowledge for

mothers and their newborns but high level of evaluation at the posttest period of the Study sample.

**Table 2:** The Effect of Skin- to-Skin Contact on Mothers' Physical Health

The effect of the skin-to-skin contact on mother's physical health	Pretest Period (n=70)									Posttest Period (n=70)						T. test	p. value			
	I do not know		Not sure		I know		MS.	SD.	Eva.	I do not know		Not sure		I know				MS.	SD.	Eva.
	F	%	F	%	F	%				F	%	F	%	F	%					
1. Accelerates the time of placental separation.	35	50	17	24.3	18	25.7	1.76	0.8416	low	0	0	3	4.3	67	95.7	2.96	0.204	High	11.66	0
2. Accelerates the return and contraction of the uterus.	35	50	17	24.3	18	25.7	1.76	0.8416	low	0	0	2	2.9	68	97.1	2.97	0.1678	High	11.96	0
3. Helps in secretion hormone oxytocin from the mother.	23	32.9	35	50	12	17.1	1.84	0.6944	low	0	0	5	7.1	65	92.9	2.93	0.2594	High	11.19	0
4. Reduces maternal exposure to	20	28.6	25	35.7	25	35.7	2.07	0.8044	Mod.	0	0	3	4.3	67	95.7	2.96	0.204	High	9.6	0

hemorrhage after childbirth.																				
5. Maintains body temperature regulation and prevent chills.	46	65.7	12	17.1	12	17.1	1.51	0.7754	low	1	1.4	7	10	62	88.6	2.87	0.3777	High	13.33	0

F: Frequency, %: Percentage, MS.: Mean of Scores; SD: Standard Deviation, RS.: Relative Sufficiency, Eva.: Evaluation, Low: (less than 66.66), Moderate: (66.67-83.33), High (83.34-100), P. value: Probability Value, Mod.: Moderate.

This table depicts that there is low and moderate mean scores and relative sufficiency in pretest period, while there is high mean scores and relative sufficiency in posttest period with highly significant difference between the pretest and posttest episodes relative to all items of the effect of the skin-to-skin contact on the mother's physical health.

**Table 3: Comparison among the Study Group Relative to Main Domains of Knowledge in Pretest-Posttest Periods**

Main Domains	Period	F.	M <sub>G</sub>	SD.	RS.	Eva.	Imp. %
Benefits of skin-to-skin contact position concerning mother's passion and security.	Pre	70	2.0081	0.7592	66.93	Upper	25.61
	Post	70	2.5204	0.2828	84.01	Upper	
Effect of the skin-skin-to-skin position on the mother's physical health.	Pre	70	1.7885	0.7914	59.61	Under	57.48
	Post	70	2.9371	0.2425	97.90	Upper	
Benefits of skin-to-skin condition for newborns.	Pre	70	1.6306	0.7315	54.35	Under	64.28
	Post	70	2.9163	0.2878	97.21	Upper	
Conditions for not applying skin-to skin contact.	Pre	70	1.6114	0.7758	53.71	Under	65.85
	Post	70	2.9285	0.2612	97.61	Upper	

**M<sub>G</sub>: Grand Mean, F.: Frequency, SD.: Standard Deviation, RS.: Relative Sufficiency, Eva.: Evaluation,** Under: (less than 66.66), Upper: (66.67-100), Imp.: Improvement =  $((M_{post} - M_{pre}) / (2)) * 100\%$  Results out of such comparison have indicated that the study group has under evaluation of their knowledge at pretest period on the main domains on Effect of the skin-skin-to-skin position on the mother's physical health, and that of knowledge of

Benefits of skin-to-skin condition for newborns, and Conditions for not applying skin-to skin contact, and upper evaluation at pretest-posttest periods on the remaining main domains, but they have moderate improvement on three domains and low improvement on the domain of benefits of skin-to-skin contact position concerning mother's passion and security.

**Table 4: Association between Nurses-Midwives' Knowledge Regarding Benefits of Skin-to-Skin Contact for Mother and Their Newborns and Their Socio-demographic Characteristics**

Socio-demographic Characteristics	Pretest-period				Posttest-period			
	Chi-square	df	P-value	Sig.	Chi-square	df	P-value	Sig.
Age	4.698	3	.195	NS	.748	3	.862	NS
Marital status	4.846	3	.183	NS	2.424	3	.489	NS
Education	5.843	4	.211	NS	1.451	4	.835	NS
Job title	.905	2	.636	NS	.308	2	.857	NS
Years of experience in Nursing	3.864	5	.569	NS	5.090	5	.405	NS
Years of experience Midwifery	3.272	5	.658	NS	6.130	5	.294	NS
Training courses	5.870	2	.053	NS	.695	2	.706	NS
Place of practicing midwifery	1.601	2	.449	NS	.870	2	.647	NS
Working shifts	1.704	2	.427	NS	.243	2	.886	NS
Desire in midwifery	.143	1	.706	NS	.845	1	.358	NS

df: Degree of freedom, P-value: Probability value, Sig.: Level of significance.

Analysis of such association indicates that there is no significant association between nurses- midwives' knowledge regarding benefits of skin-to-skin contact for mothers and their newborns at pretest and posttest periods and their socio-demographic characteristics.

**Table 5: Comparison among the Two Pre-Posttest Periods (Nurses-Midwives' Knowledge) on Overall Domains**

Period	Sample Size	Mean	Standard Deviation		
1.00	70	58.6571	10.21775		
2.00	70	97.8000	4.69536		
<b>Total</b>	<b>140</b>	<b>78.2286</b>	<b>21.17938</b>		
Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	53625.714	1	53625.714	848.180	0.000
Within Groups	8724.971	138	63.224		
<b>Total</b>	<b>62350.686</b>	<b>139</b>			

**Df: Degree of freedom, F: F-statistics, Sig.: Level of significance**

This table depicts that there is significant different means between pre-post nurse-midwives' knowledge. Hence, the null hypothesis is rejected because the p-value is equal to 0.000; there is significant statistical difference between the two periods ( $\bar{X}_1 = 58.6571, \bar{X}_2 = 97.8000$ ).

#### 4. Conclusion

Based on the interpretation and discussion of the study findings, the study can conclude that

- 1) The education training program is confirmed to be an effective measure that can improve nurses-midwives' knowledge.

- 2) Nurses-midwives' knowledge has affectedly changed after being exposed to the education training program.

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