

## Effectiveness of Post-Abortion Family Planning Counseling Program on Nurses and Midwives' Practices in Middle Euphrates Maternity Hospitals

فاعلية برنامج مشورة تنظيم الاسرة ما بعد الاجهاض على ممارسات الممرضات - القابلات في  
مستشفيات النسائية في الفرات الاوسط

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### الخلاصة

**الاهداف:** لتحديد فاعلية برنامج مشورة تنظيم الاسرة ما بعد الاجهاض على ممارسات القابلات و الممرضات بالإضافة إلى التنبؤ أي من المتغيرات تُساهم في التأثير على ممارساتهم.

**المنهجية:** دراسة شبه تجريبية أُجريت من ٢٣ نيسان ٢٠١٧ إلى ١٤ آذار ٢٠١٨ في ثلاث محافظات في الفرات الاوسط من العراق: (كربلاء المقدسة، النجف الاشرف و بابل) على الممرضات والقابلات اللواتي يعملن في مستشفيات النسائية. العينة العشوائية المنتظمة استخدمت لاختيار ١٢٢ ممرضة وقابلة، (٦٠) منهن للمجموعة التجريبية و (٦٢) للمجموعة الضابطة. استعملت قائمة تدقيق أداة تقويم الممارسات والتي تضمنت ٥٠ فقرة. تم تحديد صدق المحتوى من خلال مراجعتها من قبل (١٦) خبير وتم تحديد ثبات الاستبانة من خلال الدراسة الاستطلاعية وتم استخدام الإحصاء الوصفي و الاستدلالي في تحليل البيانات.

**النتائج:** كشفت نتائج الدراسة ان هناك فروق معنوية عالية في ممارسات الممرضات و القابلات بين المجموعتين التجريبية والضابطة في الاختبار البعدي، بينما لا توجد فروق بين كلا المجموعتين في الاختبار القبلي. المتغيرات: (العمر، المستوى التعليمي، موقع العمل الحالي في المستشفى، العمل في تنظيم الاسرة، الحالة الاجتماعية وسنوات الخبرة) لم تؤثر على ممارساتهن.

**التوصيات:** اجراء الدورات التعليمية والتدريبية التي تتعلّق بمشورة تنظيم الاسرة ما بعد الاجهاض لكل الممرضات والقابلات اللواتي يعملن في مستشفيات النسائية في الفرات الاوسط. يجب ان تتضمن مناهج التمريض والقابلة مشورة تنظيم الاسرة ما بعد الاجهاض.

**الكلمات المفتاحية:** فاعلية برنامج، مابعد الاجهاض، تنظيم الاسرة، المشورة، القابلات

### Abstract

**Objectives:** To determine the effectiveness of post-abortion family planning counseling program on nurses and midwives' practices and to predict the variables which may effect on their practices

**Methodology:** A quasi experimental study was conducted from 23<sup>th</sup> April 2017 to 14<sup>th</sup> March 2018 in three governorates in Middle Euphrates of Iraq: (Holy Karbala, Al - Najef Al Ashraf and Babylon) on nurses and midwives who work at maternity hospitals. Systematic random sampling was used to select 122 nurses and midwives, (60) of them for study group and (62) for control group. A checklist is an instrument that evaluate the practices which included 50 items. Validity of content was determined through reviewing it by (16) experts and reliability of tool was determined through a pilot study. descriptive and inferential statistics were used to analyze the data.

**Results:** The results of study revealed that there were high statistical differences in nurses and midwives' practices between study and control groups at posttest, while there were no differences between both groups at pretest. Variables: (age, educational level, social status and years of experiences) were not effect on their practices.

**Recommendations:** Establishing teaching and training courses concerning post abortion family planning counseling for all nurses and midwives who work at maternity hospitals in middle Euphrates.

**Keywords:** Effectiveness of Program, Post-Abortion, Family Planning, Counseling, Nurses-Midwives Practices.

## Introduction

Abortion imposes heavy burdens on mother, family and society, particularly in developing countries<sup>1</sup>. Globally, around 210 million women become pregnant annually, of which 75 million pregnancies end in either induced or spontaneous abortions or still births and 47,000 women die due to unsafe abortion that is accounting for about 13% of all maternal deaths. Majority of these women do not want to become pregnant again in the near future<sup>2</sup>. Post abortion family planning is the initiation and use of family planning methods at the time of management of an abortion or before fertility returns<sup>3</sup>. World Health Organization recommends spacing of at least 6 months between abortion and next pregnancy. Therefore, providing family planning services as a part of post abortion care can improve contraceptive acceptance and help to avoid unwanted pregnancies. Providing family planning counseling and services to women following an abortion has emerged as a key strategy to address this issue<sup>4</sup>. Counseling is a critical component in providing quality post-abortion family planning services and involves communication between a service counselor and a client. It helps the client to understand the essential concepts of family planning, to have options for contraceptive methods and to choose a method based on her needs and preference<sup>5</sup>. Post abortion family planning services need to be provided immediately after an induced or spontaneous abortion or treatment of complications, because fertility returns very quickly. Voluntary post abortion contraception is recommended to reduce unintended pregnancies and repeat abortions and to reduce the risks of adverse maternal and perinatal outcomes for pregnancies following induced or spontaneous

abortion<sup>6</sup>. Verme (1994) stated that health care providers already failed once to help woman avoiding an unwanted pregnancy, when she attended hospital with an induced abortion and they have failed twice, if she leaves the hospital without having any means of preventing another unwanted pregnancy in the future<sup>7</sup>. Therefore, post-abortion family planning counseling should be comprehensive and address the many issues related to health including birth spacing information, family planning methods and available family planning services, sexual transmitted infection evaluation and treatment, and human immunodeficiency counseling and testing, for example, women who have experienced an unintended pregnancy need to know fertility returns quickly within 10 to 11 days after a first trimester abortion and within 4 weeks after a second trimester abortion. Some previous studies that similar to present study predicted that some variables which are including: (Nurses and midwives' age, educational level, social status and years of experience have effect on their practices regarding post abortion family planning counseling<sup>8</sup>.

## Methodology

A quasi experimental design was conducted throughout the present study with the application of pre-test / post-test approach on nurses and midwives for both study and control groups regarding post-abortion family planning counseling practices from 23<sup>th</sup> April 2017 to 14<sup>th</sup> March 2018. A questionnaire and checklist were used for data collecting. The researcher administered to the nurses and midwives a questionnaire sheet about demographic characteristics and knowledge assessment concerning post abortion family planning counseling. All participants who

received the questionnaire returned it the same day. While the practices checklist was observed by the observer for five clients. Systematic random sampling was used to collect the data from nurses and midwives who work at maternity hospitals in three governorates where reside in the Middle Euphrates of Iraq: (Holy Karbala, Al - Najef Al-Ashraf and Babylon), the entire sample consist of (100) nurse and midwife, (50) of them for study group and (50) for control group. The sample was exposed to pretest to assess practices for both study and control groups, then the implementation of program was carried out by the researcher on the study group only, while posttest was applied on both study and control groups. An educational program was carried out by the researcher for the study group, it was done within eight educational sessions during four consecutive weeks at the Gynecology and Maternity Hospital / Continues Nursing Education Classroom in Holy Karbala Governorate after the formal administrative approval was obtained. The subjects of study group were exposed to program in the same class and circumstances. The sessions were held which included: (counseling, communication skills, family planning methods and dual protection which last for (2 hours) from (8.30 am to 10.30 am) for each session, teaching techniques which were used: lectures, group discussion, computer, data show, samples of contraceptives forms, pictures, posters and received them booklet after the end of the session. Instrument is constructed relative to program and consisted of two parts: The first part was related to the demographic data. The second part was checklist observation which involved 50 sub items to evaluate nurses and midwives' practices regarding post – abortion

family planning counseling. Checklist used by the researcher for five observations for each study subject. It consists of three main domains, each one of these included several items: Communication Skills contained (16) items, Counseling Skills contained (14) items and Family Planning Method Choosing contained (20) items. The 50 items were responded through a three point Likert scale ranging from: (3) for implemented, (2) for some times and (1) for don't implement with cut-off point (2). Counseling was conducted in a private room, with sufficient time (30 to 45 minutes) and confidentiality assured. Practice tests were used for pre and post-tests. The program and the instrument's content validity are determined through panel of (16) experts. A pilot study was conducted before starting actual data collection on (10) nurses and midwives who work at Gynecology and Maternity Teaching Hospital in Holy Karbala Governorate. The pilot study was conducted to find out whether the items of instrument were clearly understood, applicable and to determine the reliability as well as to estimate the time required for the interview. The reliability of instrument was determined through the test and re-test approach, with distance period two weeks between these tests. The result of the reliability was ( $r^1 = 0.988$ ) with Pearson correlation coefficient was calculated ( $r = 0.977$ ) for practices items which were statistically acceptable. The data analyzed by using descriptive statistics (frequency, mean, percentage, standard deviation) and inferential statistic (pearson correlation, T-tests and simple linear regression) with a p-value  $\leq 0.05$  were considered as statistically significant.

**Results:****Table (1): Distribution of Socio-Demographic Characteristics**

Variables	Study Group (n=50)		Control Group (n=50)	
	F	%	F	%
<b>Age / years</b>				
20 – 24	17	<b>34.0</b>	30	<b>60.0</b>
25 – 29	11	22.0	11	22.0
30 – 34	6	12.0	2	4.0
35 – 39	7	14.0	2	4.0
40 – 44	4	8.0	2	4.0
≥ 45	5	10.0	3	6.0
$\bar{X} \pm SD$	30.44 ± 8.39		25.74 ± 7.78	
<b>Educational Level</b>				
Nursing secondary school graduate	13	<b>26.0</b>	12	24.0
Midwifery secondary school graduate	10	20.0	12	24.0
Nursing institute graduate	11	22.0	14	<b>28.0</b>
Midwifery institute graduate	10	20.0	8	16.0
College graduate and more	6	12.0	4	8.0
<b>Social Status</b>				
Married	32	<b>64.0</b>	22	44.0
Single	16	32.0	26	<b>52.0</b>
Divorce	2	4.0	0	0.0
Widowed	0	0.0	2	4.0
<b>Years of Experience</b>				
≤ 1 year	4	8.0	5	10.0
1 – 4 years	14	28.0	12	24.0
5 – 9 years	16	<b>32.0</b>	14	<b>28.0</b>
10– 14 years	8	16.0	8	16.0
15 – 19 years	5	10.0	7	14.0
≥ 20 years	3	6.0	4	8.0
$\bar{X} \pm SD$	8.02 ± 6.01		8.68 ± 6.09	

n= Number of Sample, F. =Frequencies, % = Percentages,  $\bar{X}$  = Arithmetic Mean, SD = Standard Deviation

Table (1) indicates that the highest percentages (34%) and (60%) of the nurses and midwives for both study and control groups respectively within age groups (20 - 24 years old) with mean and standard deviation (SD) of age for both groups were (30.44 ± 8.39), (25.74 ± 7.78) respectively. The highest percentage (26%) of the subjects in the study group were graduated from nursing secondary school, while the highest percentage (28%) of the participants in the control group were graduated from nursing institute. The highest percentage (64%) of the nurses and midwives in the study group were married, while the highest percentage (52%) of them in the control group were single. The highest percentages (32%) and (28%) for both study and control groups respectively were had (5 – 9) experience years with the mean and standard deviation (SD) for both groups were (8.02 ± 6.01) and (8.68 ± 6.09) respectively.

**Table (2): Differences in Nurses and Midwives' Practices Regarding Post abortion Family Planning Counseling in Study and Control Groups at pretests. n= 50**

No.	Sub Items	Pretest study group			Pretest control group			t	P-v	C.S
		GMS	R.S %	Ass.	GMS	R.S %	Ass.			
A.	Communication Skills	1.31	43.67	N/A	1.23	41	N/A	1.905	0.06	NS
B.	Counseling Skills	1.14	38	N/A	1.11	37	N/A	0.407	0.689	NS
C.	Family Planning Methods Choosing	1.17	39	N/A	1.16	38.67	N/A	0.183	0.855	NS

GMS = Grand Mean Score, R.S = Relative Sufficiency, Ass. = Assessment, N/A = Not applicable (R.S = less than 66.66%), Adequate (R.S = 88.90% – 100%), t = T-test, P-V, Probability Value, C.S. = Comparison Significant, NS = None Significant at  $P \geq 0.05$ .

Table (2) shows that there are low grand mean scores with low Relative Sufficiency (R.S) and assessed as (Not applicable) in all items of participants' practices regarding communication skills, counseling skills and family planning methods choosing domains at pretests for both study and control groups before implementation the program. There are not statistical differences in all items between both groups.

**Table (3): Differences in Nurses and Midwives' Practices Related to Post abortion Family Planning Counseling Between Pretest and Posttest for Study Group. n=50**

Main Domains	periods	Paired Statistic		Paired Samples Test				
		$\bar{X}$	SD	MD	t	df	Sig. (2-tailed)	C.S
A. Communication Skills	pre	20.84	4.52	-25.260	38.088	49	0.000	HS
	post	46.10	1.25					
B. Counseling Skills	pre	15.84	2.69	-23.980	47.479	49	0.000	HS
	post	39.82	1.76					
C. Family Planning Methods Choosing	pre	21.28	1.77	-35.460	91.443	49	0.000	HS
	post	56.74	2.52					
Overall Domains of Practices	pre	57.02	7.21	-85.640	76.412	49	0.000	HS
	post	142.66	3.13					

$\bar{X}$  = Arithmetic Mean, SD = Standard Deviation, MD = Mean difference, df = degree of freedom, C.S. = Comparison Significant, HS = High Significant at  $P \leq 0.05$ .

Table (3) shows that there are high statistical significance differences between pretest and posttest for study group in nurses and midwives' practices regarding post abortion family planning counseling and the findings reveal that there are high means in all domains related to posttest after implementation the program. While there are low means in all domains at pretest (before implementation the program). An educational program has a positive effect on

nurses and midwives' practices when compare means between pretest and posttest for study group.

**Table (4): Difference in Nurses and Midwives' Practices Regarding Post Abortion Family Planning Counseling Between Both Study and Control Groups at Posttests.**

Main Domains	Group Statistics				Independent Samples Test				
	Groups	n	$\bar{X}$	SD	MD	t	df	Sig. (2-tailed)	C.S
A. Communication Skills	Study	50	46.10	1.25	27.2 60	48.091	98	0.000	HS
	Control	50	18.84	3.81					
B. Counseling Skills	Study	50	39.82	1.76	24.1 80	60.847	98	0.000	HS
	Control	50	15.64	2.19					
C. Family Planning Method Choosing	Study	50	56.74	2.52	35.2 40	80.620	98	0.000	HS
	Control	50	21.50	1.79					
Overall Domains of Practices	Study	50	142.66	3.13	84.9 40	80.477	98	0.000	HS
	Control	50	57.72	6.78					

$\bar{X}$  = Arithmetic Mean, SD = Standard Deviation, MD= Mean difference , df = degree of freedom, t = t-test, C.S. = Comparison Significant, HS = High Significant at  $P \leq 0.05$ .

Table (4) shows that there are high statistical significance differences between post- tests for both study and control groups in nurses and midwives' practices related to post abortion family planning counseling and the findings reveal that there are high means in all domains related to post test for study group after implementation of the program. While there are low means in all domains in posttest for control group. An educational program has a positive effect on nurses and midwives' practices when compare means between both study and control groups at post tests.

**Table (5): The Relationships Between Demographical Characteristics & Nurses and Midwives' Practices in Post Abortion Family Planning Counseling for Both Study and Control Groups.**

Variables		Study Group				Control Group			
Independent	Dependent	R	F	Sig.	C.S	R	F	Sig.	C.S
Age	Nurses & Midwives Practices	0.12	0.70	0.406	NS	0.04	0.06	0.806	NS
Educational level		0.1	0.01	0.941	NS	0.21	2.27	0.139	NS
Social Status		0.15	1.12	0.296	NS	0.08	0.31	0.579	NS
Years of experience		0.19	1.74	0.193	NS	0.19	1.82	0.183	NS

R= Correlation, F= Calculated F value for Simple Linear Regression Test, Sig = Significant at p-value  $\leq 0.05$ , C.S = Comparison Significant, NS= None Significant at  $P \geq 0.05$ .

Table (5): reveals that demographic variables which include: (Age, Educational level, Social Status and Years of experience) were had no relations with nurses and midwives' practices for both study and control groups.

## Discussion

### Part I: Nurses and Midwives' Demographic Characteristics Distribution

#### 1. Age of Nurses and Midwives:

The present results revealed that the highest percentages (34%) and (60%) of both study and control groups were within age groups (20 - 24 years old) with mean and standard deviation (SD) ( $30.44 \pm 8.39$ ), ( $25.74 \pm 7.78$ ) years respectively. This result agree with a study that showed the mean age with a standard deviation of participants was ( $31.5 \pm 9.8$ ) years<sup>9</sup>. The findings of the present study are disagree with similar study which had 100 sample that showed that the average age of the nurses and midwives was 46 years and the range of age groups was (26 – 66 years)<sup>10</sup>.

#### Nurses and Midwives' Level of Education:

According to the results, The highest percentage (26%) of the subjects in the study group were graduated from nursing secondary school, while the highest percentage (28%) of the participants in the control group were graduated from nursing institute. The findings of present study are inconsistent with study that revealed the nurses in the similar study were: (15.9 %) of nurses were Bachelor in nursing, (35.2%) of them were certified by diploma, and (48.9%) of them had a school graduated<sup>11</sup>.

#### 2. Nurses & Midwives' Social Status:

The highest percentage (64%) of the nurses and midwives in the study group were married, while the highest percentage (52%) of them in the control group were single. The findings of present study are inconsistent with study that showed the majority of nurses (72%) were married while (28%) were single<sup>12</sup>.

#### 3. Years of Experience:

Finding of the present study revealed that the highest percentage (32%) and (28%) for both study and control groups were had (5 – 9) experience years with the mean and standard deviation (SD) for both groups were ( $8.02 \pm 6.01$ ) and ( $8.68 \pm 6.09$ ) respectively. This result inconsistent with study that showed the length of experience was: less than 1 year (21.1%), 1–2 years (49.1%), more or equal 3 years (29.8%)<sup>13</sup>.

### Part II: Differences in Nurses and Midwives' Practices & Post abortion Family Planning Counseling in Study and Control Groups at pretests

The findings of present study showed that there were no significance differences between study and control groups at pretests regarding nurses and midwives' practices concerning post abortion family planning counseling. The findings revealed that there were low grand mean scores in all domains for both groups at pretests before implementation of an education program as shown in table (2) by using of an independent samples t-test. So the researcher accepted the null hypothesis and rejected the alternative hypothesis which means that there was no significant difference in nurses and midwives' practices between pretests for both study and control groups. The findings of the present study supportive evidence is available in the study that showed there were no significance differences between study and control groups regarding participants' practices concerning post abortion family planning counseling at pretests<sup>14</sup>.

### Part III: Differences in Nurses and Midwives' Practices Related to Post abortion Family Planning Counseling Between Pretest and Posttest for Study Group

Findings showed that there are high statistical significant differences between pretest and posttest for study group in nurses and midwives' practices regarding post abortion family planning counseling. The findings also revealed that there are high means in all domains related to posttest (after implementation of the program), while there are low means in all domains at pretest (before implementation of the program) as shown in table (3) by using of paired samples t-test. So the researcher accepted the alternative hypothesis and rejected null-hypothesis which means that there was a significant difference in nurses and midwives' practices concerning post abortion family planning counseling between pretest and posttest for the program implementation (Mean pre  $\neq$  Mean post) at p-value  $\leq 0.05$ . The findings of the present study supportive evidence is available in the study that showed the means differences increased between pre and post tests for study group regarding post abortion family planning counseling practices <sup>15</sup>.

#### **Part IV: Difference in Nurses & Midwives' Practices Regarding Post Abortion Family Planning Counseling Between Both Study and Control Groups at Posttests**

The results showed high statistical significance differences between posttests for both study and control groups regarding participants' practices as shown in table (4) by using of independent samples t-test. So the researcher accepted the alternative hypothesis and rejected null-hypothesis which means that there was a significant difference in nurses & midwives' practices concerning counseling between posttests for both study and control groups (Mean for study group at posttest  $\neq$  Mean for control group at posttest). The findings of the present study supportive evidence is available in the study that showed adequate practices in study group who had received post abortion family planning counseling during comparison with the no-program group <sup>16</sup>.

#### **Part V: The Relationships between Demographical Characteristics & Nurses and Midwives' Practices in Post Abortion Family Planning Counseling for Both Study and Control Groups**

Present findings revealed that demographic variables which include: (age, educational level, workplace in hospital currently, working in family planning, social status and years of experiences) were had no relations with nurses and midwives' practices as shown in table (5) by using of simple linear regression. The current findings are inconsistent with findings of study which demonstrated that variables included: provider education and experience were found to have effect on the participants' practices with higher quality of care <sup>17</sup>.

#### **Recommendations:**

1. Establishing training courses concerning post abortion family planning counseling for all nurses and midwives who work at maternity hospitals in middle Euphrates of Iraq.
2. Implementing training programs for nurses and midwives concerning the effective communication use professionally.
3. Nursing and midwifery curricula should involve post abortion family planning counseling and communication skills.
4. Empowering nurses and midwives to take counselor role not an educator in services that provide family planning counseling.
5. Improving family planning services that provide suitable cultural contraceptive education is required.
6. Improving the quality of counseling services at family planning centers in the middle Euphrates to ensure that post abortion clients receive the highest possible level of care.



7. Health care policymakers should focus on developing and supporting effective family planning counseling services in the Middle Euphrates of Iraq.

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