Original Article

Effect of Pre-discharge Postpartum Counseling on Knowledge, Attitude and Use of Family Planning in a Tertiary Hospital in Upper Egypt

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ABSTRACT

Introduction: Family planning is a crucial healthcare service, so our study aimed to assess the effect of pre-discharge postpartum counselling on knowledge, attitude, and use of family planning methods within 6 weeks postpartum.

Methods and Materials: A prospective randomized controlled trial (RCT) (Clinical trial ID: NCT05079100) was conducted at the post-partum unit in Women's Health Hospital, University hospital, from the 1st of February 2022 to the 1st of March 2022. Eligible women were randomly assigned into two groups the intervention group including 60 participants who received a face-to-face counselling and brochure about postpartum contraception methods and the control group including 60 participants received the standard care. Outcome groups were compared regarding change in knowledge, attitude, and use of family planning in the 6 weeks following childbirth.

Results: The groups were comparable regarding demographic, obstetric and contraceptive histories and there was insignificant difference between the two groups. The results show that post-partum counseling had a significant effect on the use of post-partum family planning methods within six weeks postpartum, as there were 65.2% of women used F.P. method within 6 weeks postpartum in the intervention group and 34.7% only women used F.P. methods in the control group. Also, had a significant effect on increasing knowledge and changing attitudes toward postpartum family planning with *p-value* < 0.001.

Conclusion: Postpartum counseling has a significant effect on knowledge, attitude toward F.P., and use of postpartum family planning methods.

Key Words: Contraception, family planning, methods, postpartum.

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INTRODUCTION

Contraceptive use reduced maternal death by 40% in the last 25 years worldwide and a further 30% of maternal death would fall if all women who want to avoid pregnancy use an effective contraceptive method in developing countries and Contraceptive use improves birth interval length and this in turn improves under-five survival[1]. Thus, family planning (FP) services must be made universally accessible to stabilize the population. However, obstacles that prevent the usage of FP make it difficult to use[2].

The primary obstacles to family planning (FP) use are the little or incorrect knowledge negative attitude toward family planning (FP)[3]. In addition, a lot of women in Egypt do not receive adequate antepartum counselling on contraception, according to Egyptian Family Health Survey (EFHS) 2021[4], Merely 7% of women who attended health facilities talked about family planning at the time of the visit. Also, women do not receive adequate postpartum counselling or receive delay postpartum counselling, this increases the chance to unplanned pregnancy as fertility returning as early as 25 days after delivery[5].

It is important to ensure adequate pre-discharge postpartum counselling for every woman as most women in Egypt reported delivering in a health facility where 95% of all live births in the five-year period before the EFHS 2021 took place in a health facility[4], there are many approaches reported in previous research for Postpartum counselling e.g. brochures or charts[6], video[7,8], phone calls or SMS[6,9], and certain applications[10]. In addition to conventional conversation.

Previous research regarding postpartum counseling effectiveness of different approaches may be different according to the population studied, study setting and counsellor experience, So, this study aimed to assess effect of pre-discharge face to face postpartum counselling and educational brochure on increase knowledge and change attitude and encourage use of family planning methods.

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METHODS AND MATERIALS

This study was a prospective randomized controlled trial (RCT) conducted at the post-partum unit in Women's Health Hospital, University hospital , from the 1st of February 2022 to the 1st of March 2022. The participants were selected from the women in the postpartum period. Inclusion criteria were: currently married women who delivered within the previous 24 hours at Women's Health hospital and accepting to share in our study. Exclusion criteria were: women diagnosed with mental problems, postpartum psychosis, unstable hemodynamic status, women after peripartum hysterectomy or tubal ligation, and women whose husband is abroad.

The participants were randomly recruited from the postpartum unit by the nurse assistants after fulfillment of inclusion and exclusion criteria. Cases were assigned into groups by sealed envelope. The women were divided into two groups: group A [intervention group (IG)] including 60 participants received face-to-face counseling and a brochure about postpartum contraception methods. group B [control group (CG)] including 60 participants received the standard care and counseling about family planning is left to the discretion of discharging residents.

To minimize contamination risks in the control group, each participant from both the intervention and control groups was individually escorted to a separate room by an assistant. This measure ensured that women in the postpartum ward remained unaware of the participants' allocation or the reasons for their departure.

The baseline assessment for both groups was done through a semi-structured questionnaire (pre-discharge questionnaire) (ANNEX 1) that covered the following items: 1st section; Demographic data and socioeconomic score. The score was collected using El-Gilany, *et al*. 2012 (revalidated Fahmy and El-Sherbini score)[11], 2nd section; menstrual history, obstetric history, and contraception history, 3rd section; knowledge about the contraception methods using Arabic validated knowledge score (Mohamed H.S, 2020)[12], and 4th section; attitude toward use of contraception methods using Arabic validated F.P. attitude scale[12].

After the baseline assessment was done the intervention group participants received the counseling session which included the benefits of family planning in all aspects, addressing myths and misconceptions, personalizing counseling, and family planning methods. (ANNEX 2) Also, a brochure including key messages about postpartum contraception was given to them. (ANNEX 3)

The control group received the standard care which include post-delivery assessment, prescription of medications, counseling about wound care and red flags, breastfeeding and some providers may give advice to use family planning method.

Follow-up was done using a phone interview from 15th March to 15th April 2022. The data of post-discharge questionnaire (ANNEX 4) was completed, the questionnaire covered the following items in 1st section; the contraception use, type of method used, the cause of non-using any methods, 2nd section; knowledge about the contraception methods, and 3rd section; the attitude about use of contraception methods. Only 10 participants could not be reached despite the multiple trials being done till 30th May 2022 and three different phone numbers were taken from every patient to decrease the drop out.

The Data were analyzed by using SPSS (Statistical Package for the Social Science, version 22, IBM, and Armonk, New York). Descriptive analysis was done and univariate and multivariable logistic regression analyses were calculated to investigate the significant predictors of contraceptive use (Odds Ratio -OR-, 95% confidence interval -95% CI and *p-value*-) with significance set at $p<0.05$.

The proposal was reviewed before starting data collection via the Ethical Review Committee of the Faculty of Medicine with number (IRB No: 17101638) Participants were informed about the study's procedures and objectives, with a strong emphasis on confidentiality and privacy and written informed consents were taken. Those who declined participation still received standard care but were excluded from the study (Figure 1).

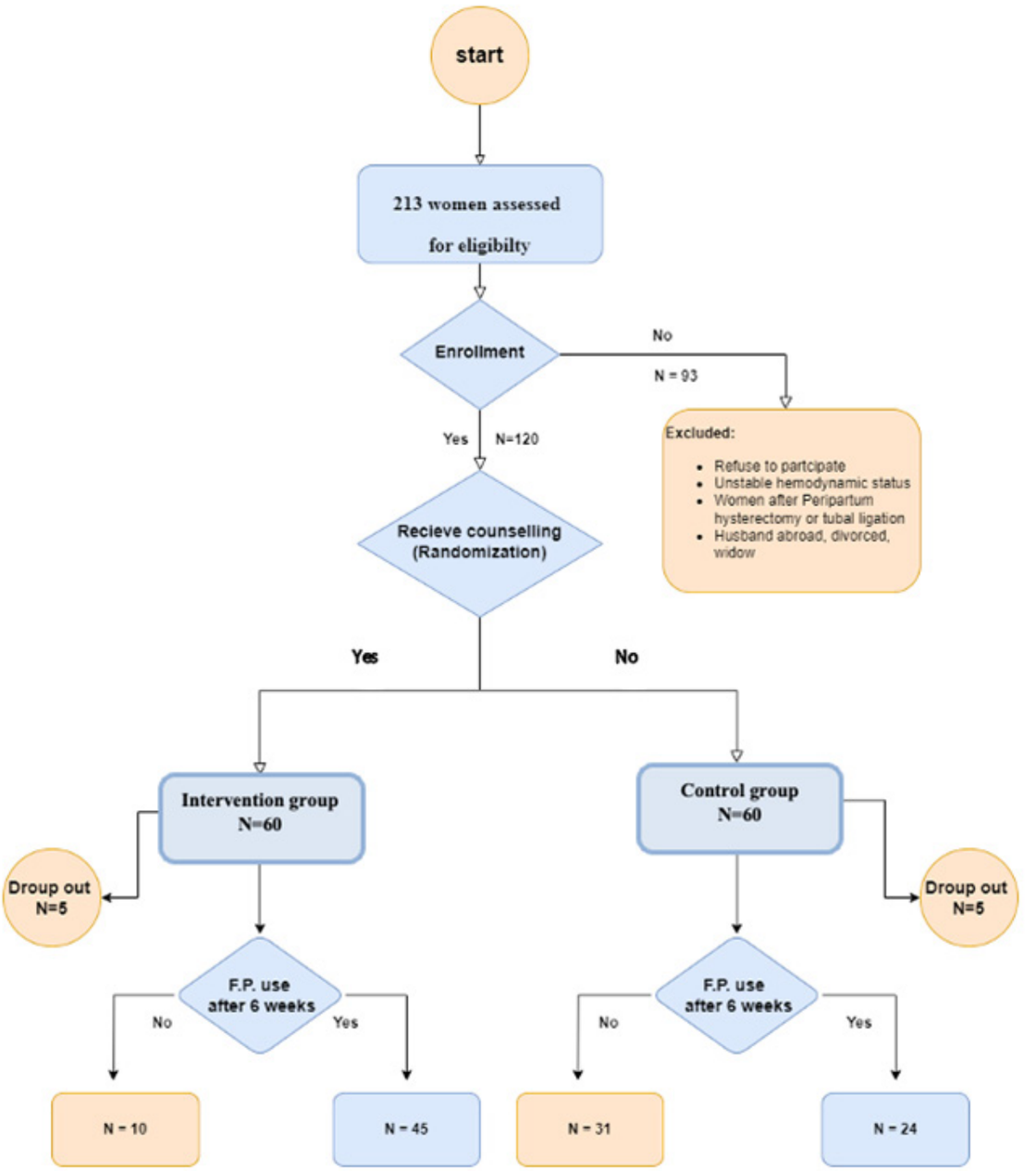

Fig. 1: Flow chart of the study participants at the postpartum unit in women's health hospital, University hospital, 2022

RESULTS

The mean age of the participants was 28.32 ± 5.7 years old, there were 34.5% of women had secondary and same-level education. There were 105 housewives and only 5 women were working. Most of the mothers 88.3% live in rural areas and only 11.74% live in urban areas. For most of the mothers, 65.5% had a low socioeconomic status (SES) category and only 34.5% had a middle SES category in the total sample. The differences between the two groups were statistically insignificant. These results are shown in (Table 1).

Table 1: Baseline sociodemographic characteristics of the studied groups at the postpartum unit, University hospital, women health hospital, 2022.

	Intervention Group (n = 55)	Control Group (n = 55)	Total (n =110)	*P-value*
Age/years (mean ± SD) Range	28.05 ± 5.7 18 - 40	28.58 ± 5.8 16 - 42	28.32 ± 5.7 16 - 42	0.631*
Wife's education				
Illiterate	11 (52.38%)	10 (47.61%)	21 (19.00%)	
Primary &Preparatory	17 (45.91%)	20 (54.12%)	37 (33.61%)	0.497**
Secondary &Same level	22 (57.92%)	16 (42.13%)	38 (34.53%)	
University & Postgraduate	5 (35.74%)	9 (64.31%)	14 (12.71%)	
Wife's occupation				
Housewife	52 (49.51%)	53 (50.49%)	105(95.49%)	0.64?*
Working	3 (60.00%)	2 (40.00%)	5(4.51%)	
Residence				
Rural	46 (47.47%)	51 (52.53%)	97(88.26%)	0.140*
Urban	9 (69.18%)	4 (30.82%)	13(11.74%)	
Socioeconomic score category				
Low	36 (50.00%)	36 (50.00%)	72(65.49%)	1.000**
Moderate	19 (50.00%)	19 (50.00%)	38(34.51%)	
No. of pregnancies (Mean ± SD) Range (1 - 8)	3.25 ± 2.0	3.91 ± 2.0	3.58 ± 2.0	0.755*
No. of abortion (Median (Range))	0 (0 - 4)	1 (0 - 4)	0 (0 - 4)	0.098***

*Independent Sample t-test was used to compare the differences in Mean between groups
**Chi-square test was used to compare the frequency differences between groups
***Mann-Whitney U-test was used to compare the differences in Median between groups
#one case was excluded from the analysis as it had extreme data: (11 pregnancies, 10 deliveries and 11 living children)
All percent in the table is row percent.

There was an insignificant difference between the two groups in the pre-intervention knowledge score however there was a significant difference between the two groups in the mean post-intervention knowledge score as in the intervention group was 15.71 ± 1.5 and in the control group 11.47 ± 3.7and the change in the pre- and post-intervention knowledge score in the intervention group was significant as the mean pre intervention knowledge score was 12.01 ± 3.6 and the mean post-intervention knowledge score 15.71 ± 1.5 and the *p-value* was < 0.001 as in the (Table 2).

Table 2: Effect of educational program on the knowledge score and attitude score among women of the studied groups at the postpartum unit, University hospital, hospitals,2022.

Knowledge score	intervention (n = 55)	control (n = 55)	Total (n=110)	*P-value**
Pre-intervention				
Mean ± SD	12.01 ± 3.6	10.38 ± 3.6	11.41 ± 3.6	= 0.091*
Median (Range)	12 (1 - 17)	11 (2 - 17)	12 (1-17)	
Post-intervention				
Mean ± SD	15.71 ± 1.5	11.47 ± 3.7	13.59 ± 3.5	< 0.001*
Median (Range)	16 (12 - 17)	11 (3 - 21)	15 (3 – 21)	
*P-value***	< 0.001	= 0.004	< 0.001	< 0.001***
Attitude Score				
Pre- intervention				
Mean ± SD	103.13 ± 12.8	101.31 ± 13.1	103.75 ± 13.6	0.091*
Range	105 (70 - 128)	104 (69 - 129)	105 (69 – 129)	
Post-intervention				
Mean ± SD	120.04 ± 7.6	106.20 ± 13.8	111.58 ± 13.5	< 0.001*
Range	120 (100 - 132)	109 (77 - 132)	114 (77 – 132)	
*P-value***	< 0.001	= 0.004	< 0.001	< 0.001***

*Independent sample t-test was used to compare the differences in Mean between groups
**Paired sample t-test was used to compare the differences in Mean between groups
***Two-way RM-ANOVA

As regards the attitude score attitude score, there was an insignificant difference between the 2 groups in the mean pre-intervention attitude score in the intervention was 103.13 ± 12.8 and in the control was 103.13 ± 12.8 and the *p-value* was < 0.001. However there was a significant difference between the two groups and the change in the pre intervention - and post-intervention attitude scores in the intervention group was significant as was 103.13 ± 12.8 and 120.04 ± 7.6 respectively and the *p-value* was < 0.001. The little change in the pre-and post-intervention knowledge and attitude scores in the control group was significant. This may be due to exposure to other forms of awareness, such as social media or friends and family. These results shown in (Table 2).

There was 65.2% of the women in the intervention group used F.P. methods. Compared to 34.7% in the control group with p-value < 0.001 and the most common methods used in both groups were progestin-only pills (pops) showed in (Table 3). The main cause for not using F.P. methods in both groups was "Desire to get more children/ Want big family" (N =15) followed by Husband or Family refusal(N=10) then "Compensate for dead New-born/ infant, Husband is abroad, History of a period of infertility, Other causes".

Table3: post-intervention Family planning methods used by women in both groups within 6 weeks postpartum, 2022.

Method used	intervention (n = 55)	control (n = 55)	Total (n=110)	*P-value*
Progestin-only Pills (POPs)	26 (76.5%)	8 (23.5%)	34 (30.9%)	= 0.001*
Progestin-only Injections	4 (44.4%)	5 (55.6%)	9 (8.1%)	
IUDs	9 (69.2%)	4 (30.7%)	13(11.8%)	
Hormonal IUDs	0 (0%)	4 (100%)	4(3.6%)	
Implant/Norplant	4 (57.1%)	3 (42.9%)	7(6.3%)	
LAM	2 (100%)	0 (0%)	2(1.8%)	
Total	45 (65.2%)	24 (34.7%)	69(62.7%)	

*Monte Carlo exact test was used to compare the frequency differences between groups
** No COCs used among participants because they were breastfeeding women less than 6 months postpartum.

In (Table 4), the univariate analysis showed that the intervention group had 5.8 times possibility of F.P use than control group, there was a 57% increase in F.P. use with 1 pregnancy increase in parity. And those females who had the intention to use the F.P. method had a 24% increase in F.P. use than females who did not intend to use F.P. methods.

Table 4: Univariate/Multivariable Logistic Regression of the predictors of postpartum Contraceptive use among women of both groups within 6 weeks postpartum.

Variable (reference)	Univariate		Multivariable	
	OR (95% CI)	P-value	OR (95% CI)	*P-value*
Intervention (no- intervention)	5.812 (2.440–9.847)	< 0.001	8.075 (3.418–17.572)	< 0.001
Female Age/years (younger age)	1.070 (0.996–1.149)	0.065		
Husband Age/years (younger age)	1.020 (0.969–1.073)	0.457		
Female Education (illiterate)	1.082 (0.716–1.635)	0.709	1.216 (1.007–4.124)	0.045
Husband Education (illiterate)	1.048 (0.665–1.650)	0.840		
SES Score (low SES)	1.009 (0.960–1.060)	0.735	1.174 (1.006–1.370)	0.041
Knowledge Score (low knowledge)	1.078 (0.969–1.200)	0.176	1.124 (1.002–1.118)	0.044
Parity (one pregnancy)	1.579 (1.208–2.063)	0.001		
No. Living Children (one child)	1.736 (0.695–4.333)	0.238	1.643 (1.244–2.171)	0.001
Received Counselling Pre (non-received)	1.600 (0.966–2.649)	0.068		
Intention to Use FB Method (no intention)	12.241 (4.524–9.002)	< 0.001	10.856 (5.124–22.180)	< 0.001

OR: Odds Ratio; CI, Confidence Interval R2:0.81

However after adjusting all the other factors, females in the intervention group had 8 times the probability of F.P. use than females in the control group, And with the increase of 1 level in female education, there was a 21% increase in F.P. use after adjusting for all other factors. Also, when the SES score increased 1 point there was a 17% increase in F.P. use, and in knowledge score, with an increase of 1 point, there was a 12% increase in F.P. use. There was a 64% increase in F.P. use with a 1-child increase in the number of living children after adjusting for all other factors. Also, those females who had the intention to use the F.P. method were 10.8 times more likely to use it than females who did not intend to use the F.P. method.

DISCUSSION

Findings and interpretation

The current study found that the postpartum educational program increased knowledge and attitude toward F.P concept and increase use of F.P methods within 6 weeks postpartum in intervention group than control group.

Results in the Context of What is Known

The study found that knowledge score of the participants and awareness about the types of F.P. methods were significantly increased in the intervention group than the control group. Those results agreed with another study in upper Egypt[13] but it included 200 primipara only and the counseling was within 2 months postpartum, and follow-up were in 6 and 12 months. Another randomized trial in Thailand[14] showed no statistically significant difference between the 2 groups in which the 1st received immediate postpartum counseling and the 2nd received conventional early postpartum counseling, also reported that the attitude towards F.P. of the participants was significantly improved after the provision of health education. This agreed with the study of Upper Egypt[13].

The current study found that the conduction of counseling at the time of delivery has the strongest effect on women's subsequent use of contraception methods in the postpartum period, as more than eighty percent of the women who received postpartum counseling used F.P. method compared to forty-three percent of the women did not receive any counseling used F.P method. This finding agreed with other studies in upper Egypt, India, and U.S.A[13,15,16] But in Upper Egypt, as it was mentioned the participants were only primipara, and early postpartum contraception counseling and follow-up was in 6 and 12 months. Indian study also showed women that who received family planning counselling at the time of delivery were two times more likely to use a modern contraceptive method plus that study found there was an increase in the use of a modern contraceptive method after counselling during child immunization visits within 12 months postpartum. U.S.A. study found that postpartum counseling had significantly increased postpartum use of contraceptive methods especially when women received both prenatal and postpartum contraceptive counselling.

Also, there is an agreement with the U.S.A study[17]. but that study focused on assessment of the use of long-acting reversible contraception (LARC). However, the result of our study disagrees with the other studies of Spain[18], and Congo[19] which showed a slight difference between the two groups in the use of postpartum family planning methods. Also, these studies from the U.S.A.[20,21], and Kenya[9] showed no difference at all between the two groups.

In the current study, for the determinants of immediate postpartum FP use, by multivariate analysis, receiving the counselling kept its positive association with F.P. use after accounting for female education, SES score, knowledge score, and no. of living children and intention to use FB methods. This is the same with intention to use that also kept positive association with F.P. use. The number of living children was found to have a positive association with F.P. use. Similar results in those studies in Turkey[22] and Ughanda[23] found that a high number of living children was associated with a high probability of using F.P. methods. Another study from Pakistan[24] reported that the use of F.P. methods increased with the increase in the number of children till the birth of the fourth child.

These study findings did not agree with the study of sub-Saharan Africa[25] which found that women with higher numbers of under-five children are more likely to have unmet needs for both limiting and spacing of births than women others. These studies of Ghana[26], and Kenya[27] found that high parity is associated with a low rate of F.P. use. This may be due to a different population, lack of resources and lack of knowledge.

Clinical implications

Knowledge should be delivered and needs to be addressed by the different sources, mainly health care providers and the media. Healthcare providers are in need to be trained about counselling of women appropriately about myths and misconceptions about contraception. Provision of contraceptive counselling in the postpartum ward before discharge can increase the use of family planning methods 6 weeks after childbirth. Provision of counselling in the postpartum ward can increase knowledge about family planning methods and can somehow change negative attitude toward family planning methods.

Research implications

Multicenter studies may provide a more accurate result of the effect of post-partum counselling on the knowledge, attitude, and use of F.P. The role of the different forms as videos, phone calls, applications or massages, and pamphlets in addition to the timing of counselling if done preconception and antenatal should be studied and be compared to postpartum face to face counselling. A long follow up may give a more comprehensive picture about the benefits of counseling.

Study Strengths and Limitations

The randomized design of the study minimized selection bias. The questionnaire was designed through a thorough literature search, expert opinion, and panel discussion until it reached the final form. It was then piloted on a sample of study subjects to test the acceptability and understandability of the questionnaire. The counseling intervention can be reproduced easily in settings similar to ours. However, there are some limitations of the study. First, this is a single center study. Time and financial/logistic constraints prohibited extending the study to other centers. However, the Women's Health hospital has the highest flow, and it receives a very diverse clientele from all Upper Egypt. Drop out of 5 women from each group is another limitation. The provided phone numbers were wrong. Attempts to contact relatives, acquaintances and community leaders failed. Despite randomization, the Control group women were higher parity than women in the intervention group. However, counseling programs significantly predicted contraceptive use after considering the parity. Also, there was no blinding in data collection or analysis. However, the outcome was a simple yes/no question. This is unlikely to be affected by the knowledge of the study group to which the woman was assigned.

CONCLUSION

Postpartum counseling has a significant effect on knowledge, attitude toward F.P., and use of postpartum family planning methods. The most common method used at 6 weeks postpartum was the progestin-only pills (pops).

CONFLICT OF INTERESTS

There are no conflicts of interest.

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Appendix 1
Pre-intervention questionnaire

Name: …… **phone numbers:** ……

Section one (Demographic characteristics):

Age: ……			Age of the husband:.....
Number of living children: ……			
Number of living sons: ……			
Number of living daughters: ……			
Socioeconomic status			
Education and cultural domain (for both husband & wife)			
1-Illiterate			5-Secondary / technical (3-5)
2-Just read& write			6-Intermediate (2 years) institutes
3-primary			7-University
4-Preparatory			8-post graduate
Education of wife: …… (write number from above list)			
Education of husband: …… (write number from above list)			
Access to health information:	Printed materials, e.g., books, posters, booklets, etc.;		Audio-visual message on television &/or radio
Occupation domain (for both husband & wife)			
1-Non-working/housewife			4-Trades/business
2-Unskilled manual worker			5-Semi-professional/clerk
3-Skilled manual worker/farmer			6-Professional
Job of wife: …… (write number from above list)			
Job of husband: …… (write number from above list)			
Family domain			
Residence:	Rural		Urban
Number of family members (parents, children & all dependents): ……			
Number of earning family members: ……			
Education of children (aged ≥ 5 years, whether free or private education):			
1st child: …… 3rd child: …… 5th child: ……			
2nd child: …… 4th child: …… 6th child: ……			
Economic domain			
Income from all sources:	1-In debt		2-Just meet routine expenses
	3-Meet routine expenses and emergencies		4-Able to save/invest money
Family receives governmental support:	Yes		No
Family pays tax:	Yes		No
Family possessions domain (put a√ mark on what you own)			
1-Refrigerator	4-Washing machine	7-Agricultural land	10-Another house
2-Radio	5-Telephone / mobile phone	8-Non-agricultural land for housing	11-Animals /Poultry
3-Television	6-car	9-Shop or animal shed	12-Computer/ Internet
Home sanitation domain (put a√ mark on what you own)			
services	1-Pure water supply	4-Sewerage system	6-Electricity
	2-Flush latrine	5-Air conditioning	7-Natural gas
	3-Municipal collection of solid wastes		
Type of house	Owned, ≥ 4 rooms		Owned, < 4 rooms
	rented, ≥ 4 rooms	rented, < 4 rooms	No place to reside
Crowding index:	≤ 1 person per room		More than 4
Health care domain(choose)			
Usual source of health care:	1-Private health facilities		2-Health insurance
	3-Free governmental health service		4-More than one of the above sources
	5-Traditional healer/self-care		

Section two (menstrual history):

Return of menstruation after deliveries:
1st: ……
2nd: ……
3rd: ……
4th: ……
5th: ……

Section three (obstetric history):

Number of pregnancies: ……
Numberofdeliveries:……
Did you have any history of abortion? (yes / no) Number of abortions: ……

Mode of each delivery:

Mode of 1st delivery: ……	Normal labour	Caesarean
Mode of 2nd delivery: ……	Normal labour	Caesarean
Mode of 3rd delivery: ……	Normal labour	Caesarean
Mode of 4th delivery: ……	Normal labour	Caesarean
Mode of 5th delivery: ……	Normal labour	Caesarean
Mode of 6th delivery: ……	Normal labour	Caesarean

Spaces between pregnancies:

Between 1st and 2nd: ……
Between 2nd and 3rd: ……
Between 3rd and 4th: ……
Between 4th and 5th: ……
Between 5th and 6th: ……

Health problems:	(1) acute anaemia	(3) hypotension	(5) diabetes mellitus	(7) others
	(2) hypertension	(4) heart diseases	(6) joint diseases	(8) nothing
Post-partum pregnancy risk:			Risk perceived	Risk not perceived
history of still birth, neonatal, Infant, children's deaths:			Yes	No
Numbers:	Still birth (……)	Neonatal (……)	Infant (……)	Children (……)

Section four (contraception history):

Did you receive prenatal contraceptive counselling?	Yes	No
Contraception History		
Did you use any contraception before?	Yes	No

Which methods did you use and its duration of using? (give them numbers in order)

○ COCs D:	○ Combined Inj. D:	○ IUDs D:	○ Norplant D:
○ POPs D:	○ Progestin only inj. D:	○ Hormonal IUDs D:	○ Male condom D:
○ LAM D:	○ Safe period D:	○ coitus interrupts D:	○ Other method D:

Why she stopped using methods??

1: desire to get pregnant.	2: side effects and health concerns.	3: method failure (get pregnant)
4: husband disapproved.	5: marital dissolution.	6: infrequent sex
7: husband away	8: access &availability	9: cost

Why she stopped 1st method: …… (write number from above list)
Why she stopped 2nd method: …… (write number from above list)
Why she stopped 3rd method: …… (write number from above list)
Why she stopped 4th method: …… (write number from above list)
Why she stopped 5th method: …… (write number from above list)
…… (write number from above list)

Section five (knowledge and contraception history):			
		Know	Do not know
Optimum gap between two child births			
Optimum number of children			
FP is helpful in avoiding unwanted births			
Methods of FP			
Oral contraceptives (OCPs)			
How they are taken in relation to the cycle			
Number of pills in the packet			
What should A woman do if you forgot taking one or two pills			
Side effects of pills (at least 2)			
IUD			
Time for its insertion			
How long it lasts in the uterus			
How to check its position			
Is it necessary for follow up after insertion			
Side effects of IUD (at least 2)			
Advantages of IUD (at least 2)			
Injections			
Awareness of injections			
Women using the birth control shot (Depo Provera) must get an injection every month or three months			
Implants			
Awareness of implants			
Time for its administration			
For how long it remains in the arm			
Side effects			
Condom			
Awareness of condom			
Can protect against sexual transmitted diseases			
Natural methods			
Awareness about lactational amenorrhea			
Awareness about safe period			
Awareness about Coitus interrupts			
What are Your sources of information?			
Media& social media	**Health care providers**	**Family**	**Friends & neighbour**

Section six (post-partum contraception attitude and intention):					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Society attitude					
1. Extra children show man's strength					
2. More children gain social power					
3. Families want to have more children to share the workload					
4. It is okay for a family to have many children since children can take care of each other					
5. Having many children in the family means that the siblings will support each other in the future					
6. A boy is a must for his assets not to be divided					
7. Giving birth is the primary duty of the mother					
8. The family should have two daughters and two boys					
9. Children are God's gift so family planning is refused					
10. Birth control method is not a traditional issue					
11. Mothers or mother-in-law do not allow to use contraception					
12. If there is a boy, it is said that I have a child					
13. Boy strengthen the power of father					
14. boy carry the name of his father					
Methods attitude					
1. Intra uterine devise causes headache					
2. The thread of the IUD reduces sexual intercourse					
3. It is feared that the IUD will escape into the stomach					
4. It is feared that birth control pills will cause cancer, bleeding etc.,					
5. The birth control method is thought to affect the sexual intercourse negative					
6. Couples who use birth control method have less sexual pleasure / desire					
7. It is difficult for women who use a birth control method to have a child again					
8. The man who use condoms does not enjoy sexual intercourse					
9. Injections can affect ability of getting pregnant after stopping					
10. female who use family planning methods become masculine					
11. Family planning methods is useless					
12. Injections can cause obesity					
Pregnancy attitude					
1. It is believed that conceiving at intervals of less than two years is unfavorable for the health of children. I don't believe					
2. I do not believe that getting pregnant at intervals of less than two years is unfavorable for maternal health					
3. Pregnancy makes women attractive					
4. In terms of health, it is better to give birth than to use a birth control method					
5. Families with many children can follow the development of each child closely					
6. Pregnancy stabilize the family and avoid divorce					
7. Pregnancy protect women from diseases					
8. I think there is no need to learn a birth control method					
Intention for use					
Do you have any intention to use one of F.P methods?				Yes	No

Appendix 2
Counseling Session Content

Every counselling session was done with intervention group includes:

a) Benefits of family planning:

- For mother health and neonatal health.
- For breast feeding and next pregnancy.
- For family health and welfare.
- Optimum number of children for a family.

b) Addressing myths and misconceptions:

- Having many children is seen as a sign of fertility and virility or strength and masculinity of father.
- Boys better than girls and the relationship of boys to inheritance.
- The role of female in her society is only reproductive function.

c) Myths about contraception methods:

such as the belief that they cause infertility or that they are only for women who have already had children and its relation to cancers.

d) Personalize counselling:

Include tailoring counselling sessions to each woman's individual needs and preferences, taking into account her socio-cultural background, personal values, health status and her life style.

e) Family planning methods:

- Different contraception options, how to use correctly, suitable time to start each method, duration of each method, efficacy, advantages, possible side effects and effect on future fertility.
- Benefits of immediate postpartum contraception.
- How to manage any potential side effects, as well as the importance of continued use to maintain effectiveness and follow up of each method.

Appendix 3
Brochure

Appendix 4
Post-intervention questionnaire

Name: ……..……. **phone numbers:** ……..……

Section one (use of post-partum contraception)

Do you start to use one of F.P methods?? Yes No

Which method did you start to use? From when??

○ COCs	○ Combined Injections	○ IUDs	○ Norplant
○ POPs	○ progestin only injections	○ Hormonal IUDs	○ Periodic absence
○ LAM	○ Male condom	○ coitus interrupts	○ Other method

What is the cause of non-using F.P. methods? .....

Section two (post-partum contraception attitude):

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Society attitude					
1. Extra children show man's strength					
2. More children gain social power					
3. Families want to have more children to share the workload					
4. It is okay for a family to have many children since children can take care of each other					
5. Having many children in the family means that the siblings will support each other in the future					
6. A boy is a must for his assets not to be divided					
7. Giving birth is the primary duty of the mother					
8. The family should have two daughters and two boys					
9. Children are God's gift so family planning is refused					
10. Birth control method is not a traditional issue					
11. Mothers or mother-in-law do not allow to use contraception					
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1. Intra uterine devise causes headache					
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3. It is feared that the IUD will escape into the stomach					
4. It is feared that birth control pills will cause cancer, bleeding etc.,					
5. The birth control method is thought to affect the sexual intercourse negative					
6. Couples who use birth control method have less sexual pleasure / desire					
7. It is difficult for women who use a birth control method to have a child again					
8. The man who use condoms does not enjoy sexual intercourse					
9. Injections can affect ability of getting pregnant after stopping					
10. female who use family planning methods become masculine					
11. Family planning methods is useless					
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Pregnancy attitude					
1. It is believed that conceiving at intervals of less than two years is unfavorable for the health of children. I don't believe					
2. I do not believe that getting pregnant at intervals of less than two years is unfavorable for maternal health					
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4. In terms of health, it is better to give birth than to use a birth control method					
5. Families with many children can follow the development of each child closely					
6. Pregnancy stabilize the family and avoid divorce					
7. Pregnancy protect women from diseases					
8. I think there is no need to learn a birth control method					