



## Approaches to Address the Discontinuation Rate of Family Planning Methods among the New Users in Suez Governorate, Egypt: An Interventional Study

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### ABSTRACT

**Background:** In the last few decades, Egypt suffered major socioeconomic consequences of the overpopulation problem. **Objective:** This study aims to measure the contraceptive dynamics (discontinuation- switching-failure) rates among postpartum new family planning users and to assess the role of follow-up counselling to decrease the discontinuation rate. **Method:** This was an intervention health facility-based study. It was conducted in two primary health care facilities in Suez governorate among postpartum new family planning users. A purposive sample of 264 women was taken. Studied participants were divided into intervention and non-intervention groups. Structured questionnaire was used, and data collection was done over the period of the first 3 months of the study. Tailored family planning counselling tools were designed and applied for intervention group only with follow up counselling sessions every three months. Only observational follow up was done for non-intervention group. **Results:** The mini pill was the commonly used method for both intervention and non-intervention group (31.8% and 31.1%) respectively at baseline data. After counselling, there was a dramatic shift towards (IUD- Implanon) (26.5%-3.8%) in the interventional group. There was statistical difference between those who switched and non-switched (among the intervention group) according to the type of contraception used (p value: 0.001). Nearly one third (37.5%) of those discontinue contraception in the intervention group became contraception users again by the help of follow up counselling sessions, while no change occurs among the non intervention group. **Conclusion:** Family planning counselling is essential for women to sustain their reuse of contraceptive methods after discontinuation.

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### INTRODUCTION

Primary health care the first level of contact of individuals with the national health system.<sup>1</sup> Family planning is one of the ten greatest public health achievements of the twentieth century. The availability of family planning services helps to improve family health outcomes.<sup>2</sup> EDHS, 2014 found that the most widely used methods among the currently married women the IUD (30%), pills (16%) and injectables (9%).<sup>3</sup>

Despite the great efforts exerted to improve the

family planning services via providing low-cost contraceptive methods in all primary health care units, centers and general hospitals, percentage of users of family planning methods does not exceed (60%).<sup>3</sup>

Premature discontinuation of contraception can lead to unplanned pregnancy, which may result in increased maternal, neonatal, infant health problems.<sup>4</sup>

Improving continuation is a never-ending challenge because it necessitates progress in a variety of areas, including logistics, counseling, and care quality.<sup>5</sup>

The ideal client-provider interaction involves the provider treating all clients with respect, responding

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**Table 1: Socio-demographic characteristics of the two groups.**

Description	Group				P value
	Intervention (132)		Non-intervention (132)		
	N	%	N	%	
<b>Age groups</b>					
20-24	45	34.1	33	25	0.256
25-29	42	31.8	46	34.8	
30-34	35	26.5	46	34.8	
35+	10	7.6	7	5.3	
<b>Number of pregnancies</b>					
One	28	21.2	47	35.6	<b>0.000</b>
2-3	72	54.5	75	56.8	
4+	32	24.2	10	7.6	
<b>Living children</b>					
One	41	31.1	40	30.3	<b>0.023</b>
2-3	71	53.8	85	64.4	
4+	20	15.2	7	5.3	
<b>When last pregnancy</b>					
< =2 months	70	53.0	78	59.1	0.321
> 2 months up to 9 months	62	47.0	54	40.9	
<b>Socioeconomic standard (SES)</b>					
Low (<50%)	8	6.1	1	0.8	<b>0.000</b>
Medium (50 -< 75%)	56	42.4	22	16.7	
High (>=75%)	68	51.5	109	82.6	

#### P-value of chi square test

to their reproductive needs and intentions, assisting in the selection of the most appropriate method.<sup>6</sup> So major health organizations have introduced counseling interventions as an important element in family planning care.<sup>7</sup>

There is an urgent need to do studies in Egypt which provide useful information to health planners and policy makers to formulate appropriate policies to improve the reproductive health of women in the country.<sup>8</sup>

So the aim of this study is to assess discontinuation, switching and failure rates of postpartum contraception and assess the role of follow-up counseling to decrease the discontinuation rate.

#### METHOD

This study was conducted in two primary health care centers in Arbaeen and Ataqah Districts in Suez governorate, Egypt.

The study is an intervention health facility-based research with intervention phase and post intervention phase.

Inclusion Criteria included Married women aged 15-49 years who came to receive contraceptive method for the first time after the end of puerperium (40

days after delivery) during the first 3 months of data collection phase.

Exclusion criteria included pregnant women (being pregnant while using the contraception method "contraception failure")

The selection of Suez governorate was done by convenience sampling. Selection of healthcare districts & primary health care facilities which have the highest discontinuation rate in the governorate was made by revision of the reports. Purposive selection of the study population was done (all married female clients aged 15-49 years seeking contraception after the end of puerperium "40 days after delivery") were included in the study. The studied participants were divided into two groups through simple random sampling; the first group "intervention group" that received follow up counseling sessions every 3 months till the end of the study after 12 months, the second group "non-intervention group" will not receive follow up counseling sessions (only observational follow up) was done for them.

According to our collective clinical and research experience, we anticipated that the proportion of women who improved use or maintained a high level of use would increase by 25% in the

**Table 2: Baseline contraceptive characteristics for both groups.**

Description	Group				P value
	Intervention (132)		Non-intervention (132)		
	N	%	N	%	
<b>Contraception taken</b>					
Combined pills	28	21.2	23	17.4	0.190
IUD	21	15.9	24	18.2	
Mini pills	42	31.8	41	31.1	
3 months injectables	28	21.2	24	18.2	
Monthly injectables	2	1.5	11	8.3	
Condoms & vaginal suppository	11	8.4	9	6.8	
<b>Time of counseling about contraception</b>					
After delivery	81	61.4	81	61.4	1.000
During pregnancy	51	38.6	51	38.6	
<b>Who share in counseling</b>					
Nurse	106	80.3	95	72	0.112
Physician	26	19.7	37	28	

*P-value of chi square test*

**Table 3: The percent distribution of different types of contraception used in 1<sup>st</sup> counseling session and the 3<sup>rd</sup> follow-Up counseling session in the interventional group (N=132)**

Contraception type	1 <sup>st</sup> Counseling session		3 <sup>rd</sup> Counseling Session	
	N	%	N	%
Combined pills	28	<b>22.0</b>	41	<b>31.0</b>
IUD	21	<b>15.9</b>	35	<b>26.5</b>
Mini-pills	42	<b>31.8</b>	19	<b>14.5</b>
Implanon	0	<b>0.0</b>	5	<b>3.8</b>

intervention group and by 10% in the control group over the 12-month period. By using Epi-Info (v6) sample size calculator, 112 women were required in each study group (total 224) with power of 80% and confidence interval 95%. 20% was added to compensate for the dropouts, and, therefore, 264 (132 women in each group) were included.

*Phases of the Study & study tools:*

**A. Pre intervention phase:** Baseline data was collected from the studied participants in both groups (the intervention group and the nonintervention group) through personal interview. Data collection was made over the period of the first 3 months of the study. Two structured questionnaires were used. Filling in the questionnaires took 15 to 20 minutes. Pilot testing was conducted.

The first questionnaire includes the Personal and Socio-demographic status of the interviewees,

contraceptive use status and data related to service provision (information about the method, informed choice, follow up practices and client satisfaction).

The second questionnaire includes the currently used method and the causes of contraception dynamics; discontinuation, switching or failure of contraceptives (If occurred).

The modified scale for social level of families was updated from the original scale of Fahmy and El-Sherbini.<sup>9</sup>

**B. Intervention Phase:** Tailored family planning counseling tools based on the WHO and the ministry of health were designed. Counseling messages include the perfect use of each family planning method, the most common side effects, how to manage it and the advantages to use contraceptives. The researcher received family planning counseling courses before the start of the study for capacity building and to train other workforce helping her in the study. The counseling sessions were conducted through a client-centered interview among the intervention group only. The follow up counseling sessions were held for them every 3 months during the time of contraception; each counseling session took about 15-20 min. A Timetable was designed. The studied participants were contacted over the phone.

Observational follow up on the non-intervention group was done by identifying the contraception situation of the clients every 3 months till the end of the 12 months of the study.

**Table 4: Contraception dynamics (switching-discontinuation-failure) rates among intervention and nonintervention groups.**

Contraception dynamics	INV (n=132)		NINV (n=132)		P Value
	N	%	N	%	
<b>Switching</b>					
Yes	58	43.9	64	48.5	0.47
No	74	56.1	68	51.5	
<b>Discontinuation</b>					
Yes	16	12.1	18	13.6	0.71
No	116	87.9	114	86.4	
<b>Failure</b>					
Yes	5	3.8	8	6.1	0.39
No	127	96.2	124	93.9	

INV=Intervention, NINV= Non Intervention P-value of chi square test

C. Evaluation Phase: knowledge, attitude and practice (KAP) of the studied participants were assessed in both groups toward the use of family planning method and contraceptive dynamics (discontinuation, switching and failure rate).

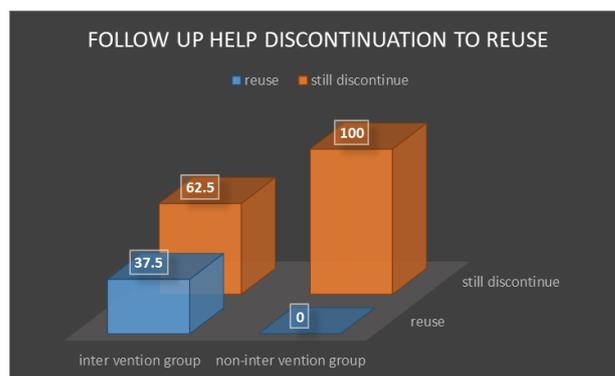
Data management: Precoded data were entered on the Statistical Package of Social Science Software program, version 21 (SPSS) to be statistically analyzed. Data were summarized using numbers and percent for qualitative variable. Statistical differences between groups were tested using Chi Square test for qualitative variables,

**RESULTS**

As shown in Table (1), there was no significant difference between intervention group and non-intervention group concerning age group and time of last pregnancy (0.256 and 0.321) respectively.

There was no statistical significance as regard the contraception used, time of counseling nor who shared in counseling between intervention and non-Intervention (P value: 0.190, 1.000, 0.112) respectively. Baseline contraception showed that the mini pill was the commonly used method for both intervention and nonintervention group (31.8% and 31.1%) respectively. (Table 2)

In the interventional group, combined pills were the commonly used method in the 3<sup>rd</sup> follow up (31%) compared to (22%) in the 1<sup>st</sup> session. Also, there was an increase in the percent of IUD users in 3<sup>rd</sup> counseling sessions (26.5%) compared to 1<sup>st</sup> counseling session (15.9%). (Table 3)



**Figure 1: Role of follow up sessions to help discontinuers to reuse contraception.**

Despite the presence of changes in proportions regarding contraception dynamics, there was no significant difference between intervention and non-Intervention regarding switching, discontinuation, and failure (P-value: 0.459, 0.713, and 0.393 respectively). (Table 4)

As shown in figure (1): (37.5%) of those discontinue contraception in the intervention group became contraception users again by the help of follow up counselling sessions, while no of those who discontinue contraception in the non intervention group reuse contraception again.

There was statistical difference between those who switched and non-switched (among the intervention group) according to the type of contraception used (p value: 0.001). (Table5)

**DISCUSSION**

The study showed that nearly one-third of the study participants in the intervention and nonintervention group (31.8, 34.8% respectively) were in the (25-29 years) age group, which is analogous to a similar study in Jimma Town, Southwest Ethiopia regarding contraception discontinuation<sup>11</sup> where nearly one third (38.5 %) of them were between the ages of (25-29) years .

Only one third of the participants (38.6%) received counseling about contraception during pregnancy and two thirds of the participants (61.4%) after delivery. This also explains the reason for the delayed onset of contraception use. Furthermore, accessing implants and IUDs may cause additional delays because they require a physician appointment prior to insertion

The counseling model used in this study was a client-centered interview, which has been linked to increase in client satisfaction and method

**Table 5: The effect of baseline contraception on Switching among the Intervention Group only (n=132).**

Baseline Contraception	Switching				p-value
	Yes (no 58)		No (no 74)		
	No	%	No	%	
Combined pills	10	17.3	18	24.3	<b>0.001</b>
IUD	2	3.4	19	25.7	
Mini pills	22	37.9	20	27.0	
3-month injectables	13	22.4	15	20.2	
Monthly injectables	1	1.7	1	1.4	
Condoms & vaginal suppository	10	17.3	1	1.4	

*P-value of chi square test*

continuation in a previous study conducted in Egypt.<sup>12</sup>

One-third of the participants were counseled by physicians and the other two-thirds of the participants were counseled by nurses (under the supervision of the study researcher who receives training courses on Decision Making Tool). This is consistent with a similar study addressing family planning counseling sessions in primary healthcare facilities in Sadat City District, Menoufia Governorate; where 100% of nurses versus 38.1% of physicians received counseling training courses and shared in counseling of the clients.<sup>13</sup> It is clear that providing family planning service to the clients mainly depends on the nurses.

In a previous study<sup>14</sup>, it was discovered that antenatal contraceptive counseling (beginning in the 22nd week of pregnancy) delivered by community midwives was highly acceptable to women allowing more than one-third of them to choose a LARC (long-acting reversible contraception) method.

Regarding different types of contraception, in the interventional group, mini pills were the commonly used method in the 1<sup>st</sup> counseling session (31.8% compared to 14.5% in the 3<sup>rd</sup> follow up session) while combined pills were the commonly used method in the 3<sup>rd</sup> follow up (31%) compared to (22%) in the 1<sup>st</sup> session. There was an increase in the percent of IUD users in 3<sup>rd</sup> counseling sessions (26.5%) and compared to (15.9%) in the 1<sup>st</sup> session. (Table 3).

These findings agree with WHO where the use of mini-pills were recommended for breastfeeding females in the 1<sup>st</sup> 6 months after delivery (28.8%) and shifting to combined pills.<sup>15</sup>

There is also an increase in the use (IUD and implants) from (15.9 and 0%) to (26.5% and 3.8%) respectively. This agreed with the study addressing reversible contraception, where IUDs and the

subdermal implant have the highest rates of satisfaction and 12-month continuation.<sup>16</sup>

Apart from implants, IUD discontinuation are less common, owing to the fact that discontinuing use needs a decision to remove it. After three years of use, IUD continuation rates have been reported to be around 70%.<sup>17</sup>

Despite significant changes in the proportions of intervention and non-intervention group regarding the continuation of contraceptive use compares the baseline data (in the family planning office in Suez governorate) with the 12 months study, we found no significant differences between the two groups concerning contraceptives (switching and failure). This is consistent with a study conducted in North Carolina [18] that showed no significant differences between the two groups in 12 months with regard to the failure rate and the maintenance of contraception use.

The success of the intervention is to improve the practices of intervention group as regard the reuse of contraception after discontinuation in this group with no change in the non-intervention group (p value: 0.006)

**CONCLUSION**

The study concluded that proper counseling for women can help them to sustain their reuse of contraceptive methods after discontinuation.

**Ethical Considerations**

The study protocol was discussed by the staff members of the Public Health Department, Faculty of Medicine, Cairo University, and approved by Cairo University board. The selected members of this department constituted the internal review board to guarantee the ethical conformity of the study, and approval from the Research Ethics Committee was obtained.

Verbal consents were obtained from all the participants in the study and data confidentially was preserved according to the revised Helsinki declarations of biomedical ethics [10] (*World Medical Association Declaration of Helsinki, 2008*)

**Recommendations:** Family planning counseling should be provided in health care facilities to help women to sustain their reuse of contraceptive methods after discontinuation

### Limitations

Recruitment of the study participants was difficult at the beginning of the study. There were difficulty in follow-up of the studied participants over the 12 months period of the study.

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