

## **Exploring Perspectives and Beliefs on Postpartum Intrauterine Device Use Among Recent Users in Assiut General Hospitals**

***Running Title:*** *Perspectives on Postpartum Intrauterine Device*

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### **Abstract**

#### **Background:**

Postpartum family planning helps to prevent unintended pregnancies. Yet, utilization remains low in Upper Egypt. Women's opinions reveal preferences for traditional methods and cultural beliefs, contributing to lower acceptance of other methods. This study aims to understand women's perspectives on postpartum IUD use after delivery.

#### **Methods:**

The study was a cross-sectional conducted in Al Shamla and Al Eman Hospitals in Assiut Governorate, Egypt, involving postpartum women using postpartum IUD after delivery for at least 2 months. The sample size was 145, with data collected using a systematic random sampling technique. A semi-structured questionnaire assessed sociodemographic and reproductive data, counseling, satisfaction, and opinions.

#### **Results:**

The study involved 145 postpartum women using IUDs for at least 2 months, with a mean age of 34.8 years. Most participants (73.1%) were urban residents. 82.1% received counseling about the postpartum IUD, while 53.8% expressed satisfaction and would recommend it to others, and 15.9% didn't. Most (51%) viewed IUDs as effective. The significant predictors for satisfaction with the postpartum IUD were having counseling about it AOR=5.39, especially during antenatal care AOR=3.42, and having shorter intervals between deliveries AOR=9.54.

#### **Conclusions:**

Counseling of postpartum women, especially during antenatal care, and having a shorter duration between deliveries were significant predictors of satisfaction with the postpartum IUD. While satisfaction levels were high, misconceptions persisted, highlighting the need for improved education and counseling.

**Keywords:** Long-acting reversible contraception, Opinions, perspectives, Intrauterine device, Counseling, Family planning.

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### **Introduction:**

Postpartum family planning (PPFP) is a critical public health strategy to prevent unintended pregnancies and improve maternal and child health outcomes [1,2].

In Upper Egypt, the situation is concerning as national surveys indicate higher fertility rates, lower use of FP, and significant unmet needs for contraception in this region [3]. Moreover, 61% of postpartum women in low- and middle-income countries (LMICs) report an unmet need for contraception [4].

PPFP utilization remains low in Upper Egypt, with only a small percentage of women receiving counseling about FP during ANC or the postpartum period [6]. The discontinuation of LARC in Egypt contributes to high levels of unmet need for contraception. A study conducted in Suez found that 59.1% of postpartum women who initiated LARC discontinued use within the first 9 months. Because of side effects, desire to become pregnant, and health concerns [7]. Inadequate counseling on potential side effects before LARC insertion was a key factor associated with early discontinuation [8].

Women's opinions regarding LARC in Egypt and other LMICs reveal a complex interplay of preferences and cultural beliefs [9]. In Egypt, many women prefer traditional FP methods due to their perceived ease of use [7]. A recent study indicated that women often favor methods that do not require clinical intervention, leading to a lower acceptance of LARCs [7].

Similar trends are observed in other LMICs, where women's satisfaction and acceptance of LARC vary significantly. Studies from countries like Ethiopia and Kenya show that while there is a growing awareness of the benefits of LARC, misconceptions still hinder its utilization [4]. In Ethiopia, many women delayed or discontinued their use due to fears of side effects and a lack of understanding about the methods [5]. Addressing the cultural norms and misconceptions can significantly enhance the acceptance of PPFP in the region [6,10].

This study aims to understand the perspectives and beliefs of women regarding postpartum IUD as a LARC method and assess their satisfaction with the method because it is crucial for developing effective policies that decrease discontinuation rates.

## **Methods**

### **1- Study Design and Setting**

The study is a cross-sectional analysis conducted in Al Shamla and Al Eman Hospitals in Assiut Governorate in Egypt.

### **2- Study Population**

The study population consisted of postpartum women using Postpartum LARC after delivery, namely the IUD, for at least 2 months at the time of the study.

### **3- Sampling Size and Technique**

The estimated required sample size was 145 patients. The sample size was calculated using Epi-info version 7 software based on the following assumptions:

Based on a previous study [11], the satisfaction level with postpartum IUD after delivery among women was 93.9%, the percentage of confidence limits was 3%, and the confidence level=90%. The sample was collected using a systemic random sampling technique.

### **4- Data Collection**

The questionnaire utilized in this study was semi-structured, and phone interviews were used to gather comprehensive data regarding postpartum IUD opinions among women. It included sociodemographic data such as the women's age, religion, employment, and residence, as well as reproductive health factors like the gender of the child, duration between deliveries, type of previous delivery (vaginal or cesarean), and breastfeeding status. Additionally, the questionnaire assessed whether participants received counseling about postpartum contraception, the timing of that counseling, their satisfaction with the IUD method if they would recommend it to others, and their opinions about postpartum IUD [11].

### **5- Data Management and Statistical Analysis:**

Data entry, cleaning, revising, recording of variables, and statistical analysis were performed using IBM SPSS software, version 26 for Windows. Qualitative data were expressed as frequencies and percentages. Using Shapiro-Wilk tests, numerical data was tested for normality and expressed by mean  $\pm$  SD. Chi-square ( $\chi^2$ ) and Fisher's Exact tests were used to compare qualitative variables. Independent

Sample T-tests were used to compare the mean difference between the two groups. Univariate and multivariate Logistic regression were used to identify the predictors associated with satisfaction with the IUD. The level of significance was considered at a P-value < 0.05.

**6- Ethical Considerations:**

The study protocol was reviewed and approved by the IRB of the Assiut Faculty of Medicine before data was collected, with the approval number 17101733. Also, the aim of

the study was explained to each participant, and consent was obtained

**Results**

The study included 145 postpartum women who were using postpartum IUDs for at least 2 months. **Table 1** shows that the mean age for those women was  $34.83 \pm 5.64$ ; most women (73.1%) lived in urban areas, and the majority were Muslims (92.4%). 45.5% of the women were housewives, 48.3% had clerical jobs, and 12.4% had professional work.

**Table 1:** Sociodemographic characteristics among the study population in 2023

Variable	N=145 (%)
<b>Women age</b>	
▪ Mean ± SD (range)	34.83 ± 5.64 (23- 49)
<b>Residence</b>	
▪ Urban	106 (73.1%)
▪ Rural	39 (26.9 %)
<b>Religion</b>	
▪ Muslim	134 (92.4%)
▪ Christians	11 (7.6%)
<b>Women Jobs</b>	
▪ Housewife	66 (45.5%)
▪ Unskilled work	14(9.7%)
▪ skilled work	6 (4.1%)
▪ Professional work	18(12.4%)
▪ Clerical work	41(48.3%)

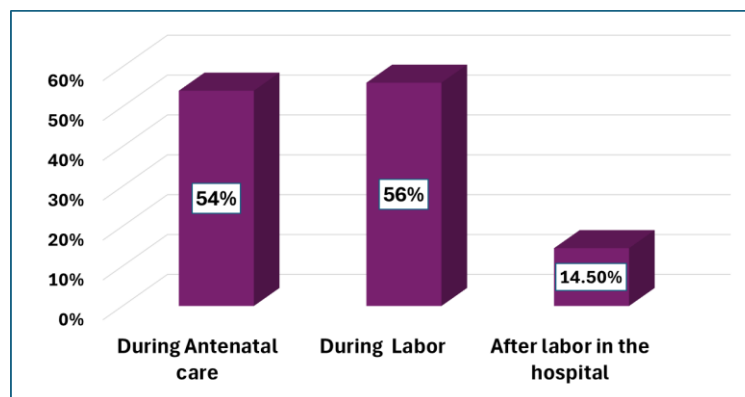
- a. Unskilled includes occupations that don't require skills (e.g., cleaners and sweepers)
- b. Skilled manual includes occupations that require technical skills or training.
- c. Clerical work includes office clerks, secretaries
- d. Professionals include doctors, engineers, and teachers.

**Table 2 and Figure 1,2** show that regarding the mean duration between this current and the past delivery, it was  $17.04 \pm 4.84$ , and regarding the type of this past delivery, 75.2% had a cesarean section. Among the studied women, 89.7% were breastfeeding. Of the baby's gender, 64.8% were females. Regarding counseling on

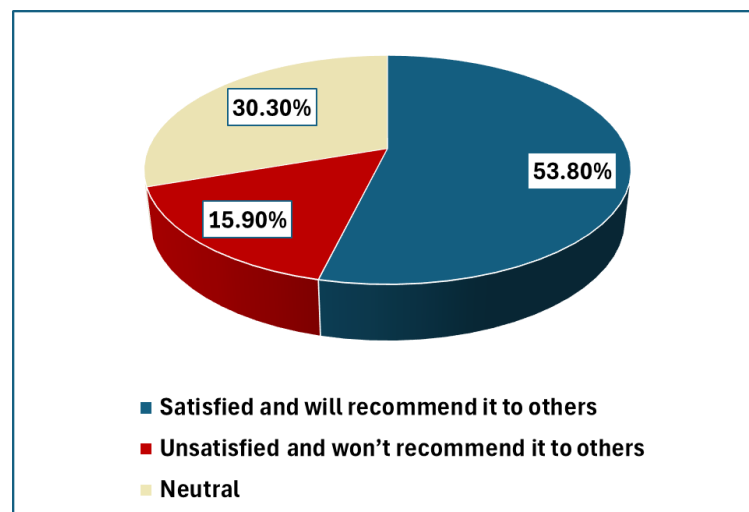
postpartum IUD, 82.1% had received counseling. 54% during ANC, 56% during labor, and 14.5% after labor. When asked if they were satisfied and would recommend others to use the method, 53.8% answered that they were satisfied and would recommend the postpartum IUD, and 15.9% answered that they were unsatisfied and wouldn't recommend it.

**Table 2:** Reproductive characteristics among the study population in 2023

Variable	N=145 (%)
<b>Duration between current and past delivery in months</b>	
▪ Mean ± SD (range)	15.04 ± 5.84 (10-26)
<b>Type of previous delivery</b>	
▪ Vaginal	31 (21.4%)
▪ Cesarean	109 (75.2%)
▪ First delivery	5 (3.4%)
<b>Breastfeeding</b>	
▪ Yes	130 (89.7%)
▪ No	15 (10.3%)
<b>Baby gender</b>	
▪ Male	51 (35.2%)
▪ Female	94 (64.8%)
<b>Had counseling regarding postpartum IUD</b>	
▪ Yes	119 (82.1%)
▪ No	26 (17.9%)



**Figure (1):** Timing of postpartum IUD counseling



**Figure (2):** Satisfaction with postpartum IUD and recommending it to others

**Table 3** presents the advantages and disadvantages of the postpartum IUD as reported by users in Assiut Governorate, Egypt. Most women (58.6%) consider the IUD the best FP method, with 40.7% recognizing its long-acting nature. Additionally, many women appreciate that the

IUD does not cause weight gain (39.9%) and is perceived as a safe method (36.6%).

However, there are notable concerns regarding IUD use. Approximately 14.5% of women reported experiencing abdominal pain, colic, or infections, while 9% noted an increase in menstrual bleeding.

**Table 3:** Women's opinions regarding postpartum IUD from users' perspective in Assiut Governorate, Egypt

Women's opinions	N=145 (%)
<b>Advantages</b>	
▪ IUD is the best method	85 (58.6%)
▪ IUD is long-acting and prevents pregnancy for many years	59 (40.7%)
▪ IUD doesn't cause side effects such as weight gain	58 (39.9%)
▪ IUD is a safe method	53 (36.6%)
▪ IUD as it doesn't fail and cause pregnancy like other methods	48 (33.2%)
▪ She didn't feel the pain of installing an IUD because it was intraoperative	43 (29.6%)
▪ IUD doesn't require using your memory like other methods	37 (25.5%)
▪ IUD can be easily removed whenever she wants, and she can remove it by herself	33 (22.8%)
▪ Instant return of fertility	19 (13.1%)
<b>Disadvantages</b>	
▪ IUD causes abdominal pain, colic, and infections	21 (14.5%)
▪ IUD can cause an increase in period flow or bleeding during menstruation	13 (9.0%)
▪ IUD causes discomfort during intercourse	10 (6.9%)
▪ IUD requires a doctor to install it	7 (4.8%)

**Table 4** shows that when the association between women's characteristics and their satisfaction with the postpartum IUD, there was a statistically significant higher mean of age among women who were satisfied with the postpartum IUD compared to the unsatisfied group ( $34.86 \pm 5.19$  VS  $29.51 \pm 4.14$ ) P value 0.042 and also lower mean duration between this current and past delivery ( $12.45 \pm 4.39$  vs  $17.41 \pm 4.82$ ) P value  $\leq 0.001$ . A higher percentage of

women breastfed among the satisfied group; however, it wasn't significant. A statistically significant higher percentage of women who had counseling in the satisfied group (58.0% Vs. 42.0%) P value 0.031. Also, it was higher whether they had counseling during ANC, labor, or after labor, P values (0.023, 0.037, 0.026, respectively) among the satisfied women compared to the unsatisfied group.

**Table 4:** Association between women's characteristics and their opinion regarding the postpartum IUD in 2023

Variable	Satisfied and would recommend the IUD (n=78)	Neutral / Unsatisfied and wouldn't recommend the IUD (n=67)	P-Value*
<b>Residence</b>			
▪ Urban	61 (57.5%)	45 (42.5 %)	0.135
▪ Rural	17 (43.6%)	22 (56.4%)	
<b>Age</b>	34.86 ± 5.19	29.51 ± 4.14	0.042
<b>Breastfeeding</b>			
▪ Yes	72 (55.4%)	58 (44.6%)	0.258
▪ No	6 (40.0%)	9(60.0%)	
<b>Duration between current and last delivery</b>	12.45 ± 4.39	17.41± 4.82	≤0.001
<b>Had counseling regarding postpartum IUD</b>			
▪ Yes	69 (58.0%)	50 (42.0%)	0.031
▪ No	9 (34.6%)	17 (65.4%)	
<b>Time of this counseling #</b>			
▪ ANC	57 (70.2%)	23 (28.8%)	0.023
▪ Labor	48(59.7%)	33 (40.3%)	0.037
▪ After labor	16 (76.2%)	5 (23.8%)	0.026

\*Chi-square test and Independent T-test. Statistical significance (p < 0.05). # multiple answers allowed.

**Table 5** shows that the significant variables in the bivariate analysis were entered in univariate and then multivariate logistic regression. The significant predictors for satisfaction with the postpartum IUD

were counseling about postpartum IUD, the timing of this counseling during ANC, and the shorter duration between this current and past delivery.

**Table 5:** Predictors of satisfaction with the postpartum IUD among the studied population in 2023

Variable	Univariate Log reg		Multivariate log reg	
	OR (95%, CI)	P-Value	AOR (95%, CI)	P-Value
<b>Increased Women's Age</b>	1.02 (1.01-1.92)	0.004		
<b>Shorter duration between current and past delivery</b>	1.145 (1.05 -1.56)	<0.001	9.54 (1.23-1.95)	<0.001
<b>Had counseling about postpartum IUD</b>	3.48 (1.58 -2.39)	<0.001	5.39 (2.09-4.69)	<0.001
<b>Time of this counseling</b>				
▪ During ANC	5.92 (5.17-7.36)	<0.001	3.42 (4.58-7.65)	<0.001
▪ During labor	2.61 (3.81 - 5.62)	0.003		
▪ After labor	1.16 (6.08-7.84)	0.032		

OR (odds ratios), AOR: adjusted odds ratio. 95% CI: 95% confidence intervals.

Backward LR model. Dependent variable: satisfaction with the IUD

### Discussion

Studying the perspectives on LARC helps tailor educational interventions and

improve access, ultimately enhancing reproductive health outcomes. The study

found that most participants who were postpartum LARC users were urban

residents with a mean age of 34.83 years. This aligns with findings from a study in Ethiopia, which also noted that urban residency and older age significantly influenced women's knowledge and attitudes toward postpartum IUDs [12]. A significant 75.2% of women had cesarean sections, which may affect perceptions of postpartum contraception. This was similar to a study where women who underwent cesarean deliveries were less likely to utilize postpartum IUDs as women who got CS had a skilled birth attendant who could offer an FP method [13]. The study found that while many women viewed IUDs positively, misconceptions about side effects persisted. A similar study reported that knowledge about postpartum IUDs was low, with only 36% of women demonstrating adequate knowledge, indicating a critical need for education [14]. Approximately 53.8% of women expressed satisfaction with the IUD and would recommend it to others. This was similar to the findings from a study that noted high satisfaction rates among women who received proper counseling about postpartum contraception [15].

The study found a statistically significant higher mean age among women who were satisfied with the postpartum IUD compared to those with negative opinions. This aligns with findings from a study in Ethiopia, which reported that older women were more likely to be satisfied with postpartum contraception [11]. Women with a lower mean duration between the current and past delivery were more likely to be satisfied with the postpartum IUD, as it was a significant predictor. A similar study in Ethiopia found that women with shorter birth intervals were more likely to utilize and accept postpartum IUD [14]. While not statistically significant, the study noted that many breastfeeding women were satisfied with the IUD. Research has shown that breastfeeding status is associated with positive attitudes toward postpartum contraception, as it doesn't affect breastfeeding [13].

The study revealed that 82.1% received counseling about postpartum IUDs, which

was a significant predictor of satisfaction with the method. This is supported by findings from another study, which indicated that counseling significantly increased the likelihood of postpartum IUD utilization (AOR = 3.05) [13]. There was a statistically significant higher percentage of women who received counseling during ANC, labor, or after labor in the group that was satisfied with the postpartum IUD. A study in Ethiopia found that discussing postpartum IUD with a healthcare provider during counseling in ANC and after labor improved women's attitudes toward the method [16]. The study had limitations as it didn't involve other FP methods or spouses' perspectives, the study design was cross-sectional, and satisfaction was measured using proxy questions.

### **Conclusions**

Getting counseled about postpartum IUD, especially during ANC, and having a shorter duration between deliveries were significant predictors of satisfaction with the IUD. A significant percentage reported receiving counseling about the postpartum IUD, primarily during ANC, labor, and after labor, which correlated with more favorable perceptions of the method. While over half expressed satisfaction and a willingness to recommend the IUD, misconceptions about side effects were common. Additionally, older women and those with shorter intervals between deliveries were more likely to be satisfied with the IUD. Addressing these cultural and informational gaps, empowering women through counseling and education about LARC options, and ensuring access to trained healthcare providers can help shift perceptions and increase the acceptance of these effective FP methods. The findings suggest a need for further research to explore barriers to IUD acceptance and the effectiveness of different interventions.

### **Abbreviations**

ANC	Antenatal Care
FP	Family Planning
IUDs	Intrauterine Devices
LMICs	Low- and Middle-Income Countries
PPFP	Postpartum Family Planning



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