

Impact of contraceptive counselling training among counsellors participating in the FIGO postpartum intrauterine device initiative in Bangladesh

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Abstract

Objective: To evaluate the impact of structured training given to dedicated family planning counsellors on postpartum intrauterine device (PPIUD) services across six tertiary hospitals in Bangladesh.

Methods: Family planning counsellors underwent structured training on postpartum family planning, PPIUD in particular, over a four-day period. Impact of training was evaluated by comparing PPIUD counselling rates, consent rates, insertion rates, and removal rates five months before and five months after the training, using data from women delivering in the participating facilities.

Results: A total of 27 622 women were included in this analysis: 11 263 (40.8%) before the training intervention and 16 359 (59.2%) after it. There was an increase in the proportion of women who were counselled (from 75.3% to 83.8%, $P<0.001$), and a small decrease in the proportion of women agreeing to have a PPIUD inserted following counselling (13.7% vs 12.9%, $P=0.03$). Overall insertion rate was similar before and after training (9.5% vs 9.8%, $P=0.42$), while removal rate reduced from 2.8% to 1.8% ($P=0.41$).

Conclusion: Structured training had no impact on overall PPIUD insertion rate. However, it did impact numbers of women receiving counselling, perceived quality of the counselling received, and overall removal rates.

KEY WORDS

Bangladesh; Contraceptive counselling; Family planning; FIGO initiative; Postpartum intrauterine device; PPIUD; Training

1 | INTRODUCTION

Birth spacing is an effective way to reduce maternal, perinatal, and child morbidity and mortality, and WHO recommends a period of at least 24 months between delivery and conception to reduce the adverse risks of pregnancy.¹ Encouraging use of effective contraception can ensure sufficient spacing between pregnancies, as well as avoid instances of unsafe

abortion—another contributor to maternal morbidity and mortality. In Bangladesh, the government has committed to ending preventable child and maternal deaths by 2030; however, despite various family planning initiatives, unmet need for contraception remains high with unintended pregnancies accounting for approximately one-third of all pregnancies.²

Women who use traditional or temporary contraceptive methods are more likely to experience unintended pregnancies than those

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using long-acting contraceptive methods. In addition to availability of reliable methods, unmet need for contraception is also dependent on behaviors linked to adherence to the method. In Bangladesh, approximately 36% of married women aged between 15 and 49 years discontinue contraception within one year.³

Figure 1 shows the trends in unintended pregnancy, contraceptive prevalence rate (CPR), and method discontinuation in Bangladesh from 1993–2014; however, it does not indicate the proportion of women switching methods or discontinuing use in order to conceive.

In the 2014 Bangladesh Demographic and Health Survey (BDHS) it was reported that 12% of married women aged 15–49 years in Bangladesh had an unmet need for contraception, with 54% of married women using a modern method of contraception.⁴ Of these women, 33% reported discontinuation of the method after a year, and just 8% of married women used either a long-acting reversible contraceptive or a permanent method. These factors are major contributors to the stagnating total fertility rate (TFR) in Bangladesh between 2004 and 2014.⁴ Although Figure 1 demonstrates some improvements from 2007, with a drop in discontinuation rates and modest improvements in unintended pregnancies and CPRs, it is evident that to achieve Bangladesh's target of 1.7 TFR by 2021, unintended pregnancies and unmet need for contraception need further urgent attention.

The immediate postpartum period is an ideal time to provide contraception in settings where women are unlikely to return to a health facility following delivery. Furthermore, the postpartum period is a particularly vulnerable time for women should they become pregnant. Nevertheless, in Bangladesh, contraceptive services have not been a priority for service providers in hospitals during maternity care, and it is rarely highlighted in prenatal check-ups. The only method that is advocated in hospitals is bilateral tubal ligation among multiparous patients undergoing cesarean delivery both in the public and private sector.

One of the most effective methods of contraception that can be provided during the immediate postpartum period is the copper intrauterine device (IUD), a nonhormonal long-acting reversible method.

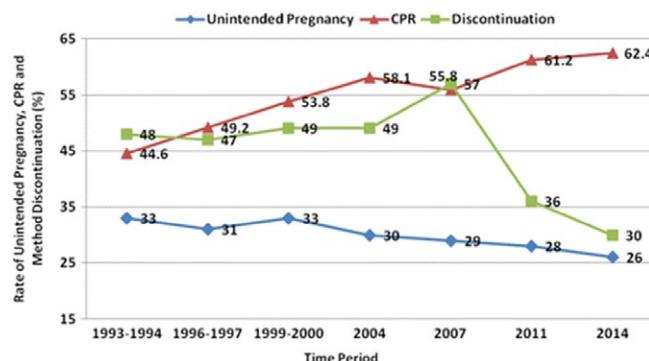


FIGURE 1 Trends in unintended pregnancy, contraceptive prevalence rate, and method discontinuation in Bangladesh from 1993–2014 (BDHS 2014). Reproduced courtesy of National Institute of Population Research and Training (NIPORT), Mitra and Associates, ICF International.⁴ [Colour figure can be viewed at wileyonlinelibrary.com]

The IUD can be inserted in the immediate postpartum period and up to 48 hours following delivery of the placenta (after which insertion is not recommended until 4–6 weeks after delivery); it is effective for up to 10 years but can be removed at any point. In Bangladesh, use of IUDs (both interval and postpartum) is limited to just 0.6% of married women aged 15–49 years.⁴

Women and their families in Bangladesh lack accurate knowledge about the IUD, and a combination of myths regarding IUDs as well as religious beliefs deter women from using postpartum IUDs (PPIUDs). WHO has introduced counselling interventions as a key element in family planning care to improve contraceptive use and compliance to prevent unintended pregnancy.⁵ Therefore, to increase demand for PPIUD in Bangladesh, sensitization and counselling of women and their families in the prenatal, intrapartum, and postpartum periods are essential. Healthcare providers should be well equipped to offer accurate and balanced counselling to women and their families. This will ensure that they receive sufficient information about contraceptive methods regarding effectiveness, correct use, common adverse effects, health risks and benefits, and signs and symptoms that would necessitate return to the clinic.^{6–8}

To address unmet need for contraception as well as reduce maternal mortality in Bangladesh, the Obstetrical and Gynaecological Society of Bangladesh (OGSB), in partnership with the International Federation of Gynecology and Obstetrics (FIGO), developed an initiative seeking to provide women with postpartum family planning (PPFP) counselling and PPIUD services. The initiative was designed to train healthcare providers in PPFP counselling and PPIUD insertion, enabling them to be incorporated into routine prenatal counselling and delivery room practice.

Since January 2015 the initiative has been implemented in six tertiary level teaching hospitals across four major cities in Bangladesh: Dhaka, Sylhet, Chittagong, and Khulna. Table 1 shows the unmet need in these divisions, and the participating hospitals with delivery and interview rates. With high delivery rates there was a concern that doctors and nurses would have limited time capacity to provide effective PPFP counselling to women. Therefore, dedicated lay female counsellors were recruited to provide additional in-depth counselling in PPFP. Although there were initial concerns about introduction of family planning counsellors (never previously employed in Bangladesh) and sustainability aspects, the strategy had been described in other low-resource countries,⁹ which assisted with its implementation in Bangladesh.

Once recruited, counsellors received training on the different contraceptive methods on offer in Bangladesh and details on PPIUD. They were given counselling flipcharts and handouts to use during counselling sessions. Counsellors were asked to provide individual face-to-face and group counselling during the prenatal period, in early stages of labor, and within the first 48 hours of delivery. Counselling was supplemented in the outpatient department (where prenatal check-ups take place) with an audio visual display about PPFP and PPIUD to create awareness among the attending women.

Following clinical monitoring and evaluation visits it became clear that counsellors required more formal in-depth training in counselling

TABLE 1 Unmet need, delivery, and interview rates in participating hospitals in Bangladesh.

Division	Unmet need in division, % ^a	Participating facility in division	No. of trained counsellors	Average monthly delivery rate	Total number of deliveries during study period	Interview rate during study period, %
Dhaka	12	Bangabandhu Sheikh Mujib Medical University and Hospital (BSMMU)	4	156	1539	85
		Shaheed Suhrawardy Medical College Hospital (ShSMC)	4	221	2238	96
		Dhaka Medical College Hospital (DMCH)	5	928	9264	60
Sylhet	18	Sylhet MAG Osmani Medical College Hospital (SOMC)	5	1096	10 951	70
Chittagong	17	Chittagong Medical College Hospital (CMCH)	5	1245	12 417	69
Khulna	9	Khulna Medical College Hospital (KMCH)	5	251	2545	97

^aAcross all women, pregnant and nonpregnant.

Source: Koblinsky et al.³

so that a higher standard of PPFP counselling services could be offered. Therefore, after 18 months of implementation a formal four-day refresher training course was organized for the 28 lay counsellors.

The aim of the present study was to assess the impact of the in-depth refresher counselling course on the performance of 28 lay counsellors in family planning. The measures are indirect and asses PPFP counselling rates, PPIUD consent rates, insertion rates, and removal rates at six weeks postpartum across the six facilities.

2 | MATERIALS AND METHODS

A total of 28 counsellors received refresher training over the four-day course (July 17–20, 2017). The training was delivered by an experienced public health specialist from a partner organization in India, who had developed the course and successfully trained their own local family planning counsellors. Given the similarity of contexts, this was felt to be highly appropriate. Training comprised a comprehensive and structured course including counselling methodology as well as factual information on contraception and PPIUD. It involved a combination of lecture style training and role play, and focused on the GATHER (Greet, Ask, Tell, Help, Explain, Return) approach to counselling.

Participants were assessed by a test before and after the training to assess the change in their knowledge. The test consisted of 10 questions regarding birth spacing, contraceptive methods, and counselling techniques. No medical professionals (doctors, nurses, etc.) were included in this training and the present paper does not investigate the effects of counselling given by these providers.

The impact of the structured training was evaluated by comparing data collected five months before and five months after the training, using regular implementation data collected during the initiative for monitoring and reporting purposes. Pre-training data consisted of all women who gave birth between February 22 and July 21, 2017, and post-training data consisted of all women who gave birth between July 22 and December 18, 2017. Data were collected onto tablets by

Data Collection Officers (DCOs) recruited for the initiative, located in each of the six participating hospitals, using the CommCare platform (Dimagi, Cambridge, MA, USA).

All women delivering in the hospitals who lived in Bangladesh were eligible for inclusion, and all those approached were asked for their consent to participate in the data collection and given the opportunity to refuse or retract at any time. In Bangladesh, studies concerned with data collection for project monitoring are exempt from institutional approval.

Table 1 shows the interview rates for the selected time period for each facility. Women were interviewed using a structured questionnaire specifically developed for the initiative, which asked questions regarding their counselling experiences, consent for PPIUD, and PPIUD insertion. These data were collected following delivery before the women were discharged from hospital. Follow-up information regarding satisfaction with counselling services, continuation of the method if one had been chosen, and complications was collected by DCOs either in person when the women returned for a postnatal check-up at 4–6 weeks, or over the phone. The date of delivery was used to assign women to either the before or after training group. Where delivery date was unavailable, the date of the interview was used as a proxy.

The primary statistical analysis was to investigate if there was a change in the proportion of women consenting to PPIUD (among those who had been counselled) and in the proportion of women who had one inserted (among those who had consented). Initial analysis compared proportions without adjustment for other factors, using either a chi-squared test or Fisher's exact test when numbers were low. Further analysis was performed using logistic regression in Stata version 14.2 (StataCorp, College Station, TX, USA). The effect of training is reported as an odds ratio (OR) or adjusted odds ratio (aOR) with a 95% confidence interval (CI).

As secondary analyses, we compared the proportion of women who were counselled and the proportion who had their PPIUD removed at follow-up 4–6 weeks after delivery, as well as women's self-reported satisfaction with the service. We also conducted sensitivity analyses

of the two primary endpoints in the entire population of women. To allow for any possible difference in the characteristics of women in the two groups, we adjusted for age (in whole number years), site, gravidity and number of living children (both as categorical variables of 1, 2, 3, and 4 or more). For the postpartum outcomes of insertion and removal we also included a binary variable to indicate if any children survived from the current pregnancy. Continuous variables were summarized using median and interquartile range (IQR).

3 | RESULTS

The tests conducted before and after the refresher counselling training showed an increase in understanding among counsellors, with an overall improvement rate of 18%. Counsellors who had been working on the initiative from the start had a higher incidence of correct answers in the pre-training test, which reflects their on-the-job learning, although there was still a 15% improvement in their responses. Newly recruited counsellors showed better improvement in the post-training test, up 25%. Overall, the counsellors reported increased confidence in counselling following the training, along with enhanced knowledge of the need for PPFP, the

range of available methods, benefits of each method, and potential adverse effects.

Data were analyzed to assess the impact of the training on the women delivering in the participating hospitals. A total of 27 622 women who had given birth were interviewed in the 10-month study period: 11 263 (40.8%) before the training and 16 359 (59.2%) after. The median age of women in both periods was 25 years (IQR 21–28 years), and there was good balance of baseline characteristics between the two periods (Table 2).

At 4–6-week follow-up, 1050 women were interviewed (39.9% [n=2633] of those with a PPIUD inserted), by either telephone or face-to-face interview. There was a higher follow-up rate in the before training period (56.9% vs 27.6%). Table 3 shows the outcomes in relation to PPIUD consent and insertion. After training there were fewer removals and an increase in the proportion of women who reported being “very satisfied” with counselling (from 9.9% to 13.6%).

There was a slight decrease in both primary outcomes between the before training and after training time periods (Table 4). The proportion of counselled women who consented to have a PPIUD inserted fell slightly from 13.7% to 12.9% ($aOR\ 0.91;\ 95\% CI\ 0.84\text{--}0.99,\ P=0.03$), while the proportion of women having a PPIUD inserted (after consenting) fell from 91.6% to 88.9% ($aOR\ 0.92;\ 95\% CI\ 0.69\text{--}1.21$,

TABLE 2 Characteristics of women obtained from data analyzed before and after training time periods^a.

Characteristics	Before training	After training
Total interviewed	11 263 (40.8)	16 359 (59.2)
Age, y (missing values: 60 before, 98 after)	25.0 (21.0–28.0)	25.0 (21.0–28.0)
Parity (158 missing values)		
1	4763 (42.5)	6859 (42.2)
2	3510 (31.3)	5161 (31.7)
3	1917 (17.1)	2849 (17.5)
≥4	1013 (9.0)	1392 (8.6)
Did any children survive from this pregnancy? (missing values: 60 before, 98 after)		
Yes	10 547 (94.1)	15 312 (94.2)
Counselled (missing values: 49 before, 107 after)		
Yes	8445 (75.3)	13 617 (83.8)
Location of last counselling session (missing values: 2818 before, 2742 after)		
Home	4 (0.054)	6 (0.04)
Community clinic/Upazilla HC	65 (0.8)	174 (1.3)
Periphery level district hospital	985 (11.7)	1127 (8.3)
Teaching hospital (outpatients)	1134 (13.4)	3913 (28.7)
Teaching hospital ward (inpatients)	6252 (74.0)	8350 (61.3)
Other	5 (0.06)	47 (0.3)
Who were you counselled by in the last session? (missing values: 2818 before, 2742 after)		
Counsellor	5878 (69.6)	9426 (69.2)
Doctor	2367 (28.0)	2027 (14.9)
Other ^b	163 (1.9)	2123 (15.6)
Don't know	37 (0.4)	41 (0.3)

^aValues are given as number (percentage) or median (interquartile range).

^bOther includes: midwife, nurse, community midwife, health education personnel, health assistant, female healthcare worker.

TABLE 3 Effect of training on key outcome measures in relation to PPIUD consent and insertion before and after training time periods.

Characteristics	Before training no. (%)	After training no. (%)
No. of women who agreed to have an IUD inserted		
Among women who reported receiving counselling on PPIUD	1158 (13.7)	1761 (12.9)
Among all women interviewed	1160 (10.3)	1767 (10.8)
IUD inserted		
Among women who agreed to have a PPIUD inserted	1063 (91.6)	1572 (88.9)
Among all women interviewed (missing values: 9 before, 19 after)	1069 (9.5)	1600 (9.8)
Satisfaction with counseling ^a (missing values: 2257 before, 2071 after)		
Very satisfied	895 (9.9)	1946 (13.6)
Satisfied	6274 (69.7)	8618 (60.3)
Fairly satisfied	1830 (20.3)	3711 (26.0)
Unsatisfied	7 (0.08)	13 (0.09)
Women attending 4–6-week follow-up ^b	608 (56.9)	442 (27.6)
IUD removed at postpartum review		
Yes	17 (2.8)	8 (1.8)

^aHow satisfied were you with the postpartum IUD counselling and information provided to you?

^bPercentage of women who had a PPIUD inserted.

$P=0.54$). The overall proportion of women who had a PPIUD showed little change (9.5% vs 9.8%, $P=0.42$). When looking at subgroups (age, parity, and number of living children) in relation to the primary outcomes of consent and insertion there was minimal evidence to suggest change within a specific group (Table 5).

There was good evidence of the beneficial impact of training on the proportion of women who were counselled, which increased from 75.3% to 83.8% (aOR 2.05; 95% CI 1.89–2.21; $P<0.001$) as the number of counsellors before and after were the same. While there was an additional counsellor in each facility following the training, the increase in numbers counselled is not proportional to the increase in personnel. The training also reduced the number of women who had their PPIUD removed at follow-up, from 2.8% to 1.8% (Fisher's exact $P=0.41$). Due to sparse data it was not possible to perform an adjusted regression; the unadjusted odds ratio was 0.65 (95% CI 0.28–1.52; $P=0.32$).

TABLE 4 Effect of training on key outcome measures comparing before and after training time periods.

Outcome	No.	aOR ^a	95% CI	P value
Women counselled	27 316	2.05	1.89–2.21	<0.001
Women consenting to PPIUD	21 928	0.91	0.84–0.99	0.03
PPIUD inserted ^b	2919	0.92	0.69–1.21	0.54
PPIUD removed ^c	1038	0.65	0.28–1.52	0.32
Sensitivity analyses using entire population				
Agreed	27 464	1.00	0.92–1.08	0.92
PPIUD inserted	27 441	0.96	0.88–1.05	0.39

^aResults from logistic regression model adjusted for age, site, gravidity, number of living children.

^bInsertion OR additionally adjusted for survival of child from current delivery.

^cRemoved OR is unadjusted due to data sparsity.

4 | DISCUSSION

It is important to point out some limitations of this analysis. As the data used for analysis was regular monitoring data, it was not designed explicitly for this study. Therefore, certain variables that

TABLE 5 Consent and insertion by subgroup.

Subgroup	Agreed ^a		PPIUD inserted ^b	
	Before, %	After, %	Before, %	After, %
Age range, y				
15–19	11.4	7.2	94.7	87.1
20–24	12.6	10.2	93.4	88.4
25–34	14.6	15.4	92.3	90
35+	17.1	16.2	80	84.4
Parity				
1	8.6	6	96.5	90.4
2	16.3	16.8	93.5	89.3
3	17	17.3	88.3	89.3
≥4	14.5	16.2	83.3	84.3
Number of living children				
0 ^c				
1	8.9	6	94.5	91
2	17.6	18.3	94.1	89.9
3	16.1	17.4	87	86.8
≥4	14.5	16.5	77.4	85

^aPercentage of women who were counselled.

^bPercentage of women who agreed.

^cNumbers were negligible.

may have shown more of the effects of the training were not captured. This included timing of counselling (prenatal, intrapartum, postpartum), number of counselling episodes, or whether the women left using any modern method of contraception other than just PPIUD. Another limitation is that the follow-up rate of women who had a PPIUD inserted was approximately 40%. As no incentives were given, this reflects the reality of postpartum follow-up, and in a way exemplifies why immediate PPFP is so valuable in this context. A one-stop approach means a woman's single visit to hospital can result in maximum benefit. The results analyzed could not therefore include the remaining 60% of women with a PPIUD who did not return for follow-up.

As well as counselling, there are other factors that would have influenced the outcomes that were analyzed. Access to service provision played a role in this study as many women who were counselled and consented during prenatal check-ups in the participating facilities did not go on to deliver at these facilities, and therefore data on these women are not available regarding their counselling experiences and their decisions with regard to PPIUD. Furthermore, the translation of insertions for those women who consented to have a PPIUD was not dependent on counsellors but rather on the availability of trained providers to perform the insertions once consent had been given, contraindications at delivery, or withdrawal of consent at the time of insertion. This explains why only 88.9% of women who consented went on to actually have a PPIUD inserted. This was therefore independent of the counsellors training. It is important to remember that there are standard contraindications to insertion and so even if women do consent, sometimes it is not possible to perform the insertion (for example after prolonged rupture of membranes).

The outcomes measured were part of a complex interaction of many factors of which counselling was only a part, albeit an important one. Effective counselling is paramount when discussing contraception, particularly when sociocultural beliefs have a big influence on women's decision making. In Bangladesh there are many barriers to accepting contraception. Women often cited concerns that their religion would mean that they would not be allowed to be buried with a foreign body in situ were they to die. Similarly, misperceptions with regard to where the IUD could migrate once in the body included the heart and brain and constituted a further barrier to uptake. Close relatives such as a woman's husband and mother-in-law also created another layer of complexity during counselling where often the woman alone was not the decision maker with regard to her contraceptive choices.

Quality in-depth individual counselling in a country such as Bangladesh is of major importance. In the six teaching hospitals counsellors played a key role in dispelling myths and fully informing women of their contraceptive choices. Although ratification by the doctors of new methods was an important component, counsellors counselled nearly 70% of women in the two study groups. Women of reproductive age were purposefully chosen for the counselling role because it was felt that they would understand women's concerns and be better able to create a bond with the patient. Although

initial training was conducted, this study does suggest that more comprehensive, structured training resulted in more confident and informed counsellors who went on to conduct not only more counselling sessions but importantly of a higher quality. While the data do not show an impact on the uptake of PPIUD before and after the training, the increased counselling rate indicates how the training was beneficial in improving the efficiency of the counsellors' work, resulting in more women receiving comprehensive information about their postpartum contraceptive options in order to space their pregnancies.

Satisfaction rates were increased and fewer removals were also likely to be the result of better counselling. The training conducted during this study improved the confidence of counsellors in providing information on PPFP and increased their knowledge of the range of methods, enabling them to provide balanced and effective counselling in an environment where healthcare providers would not otherwise have the capacity to provide systematic counselling to each and every woman.

The lower removal rate highlighted in the data in the five months following training provides further indication that the counsellors were providing more effective counselling. High removal rates generally indicate poor counselling, as women request removal when experiencing common side effects or they do not fully understand the method they have been given. A lower removal rate generally implies that the women who received PPIUD are aware of the possible effects and how to manage them, and fully understand the benefits of the IUD. More comprehensive quality counselling usually results in family members being involved in the decision-making process, which in turn results in fewer removals at six weeks, as the whole family is in agreement about the method. These data were not picked up in the current analysis, but it is postulated that better counselling would have resulted in more holistic decision making and hence fewer removals.

Finally, while we cannot comment on the benefits of the counselling training with regard to uptake of PPIUD, there is an acknowledgement that the training contributed to an increase in the number of women receiving counselling and in continuation of PPIUD. For governments hoping to increase contraception prevalence rates and reduce fertility rates, such as in Bangladesh, adequately trained family planning counsellors present an attractive solution, particularly in hospitals with a high patient flow.

5 | CONCLUSION

While the structured counselling training does not appear to have had a significant impact on PPIUD uptake, this may have been due to a multitude of other factors that influence a woman's decision and ability to access PPIUD. The reduction in removal rates and the increase in counselling rates indicate the value of having well-trained dedicated counsellors to provide comprehensive counselling to women about their postpartum contraceptive options. We believe there is great value in having competent dedicated counsellors available to provide

in-depth counselling that may otherwise not occur given high work-loads of healthcare providers in these large teaching hospitals.

AUTHOR CONTRIBUTIONS

PF, AHA, FD, and MS wrote the manuscript with help from SN. SN cleaned, analyzed, and presented the data with support from MS. All authors reviewed the manuscript before submission. MS worked on the project while employed by FIGO.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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