

## **Post-abortion contraceptive use and continuation in Nepal**

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### **Background**

Until 2002, abortion was illegal in almost all circumstances in Nepal. However, research showed that induced abortion was clandestinely widespread in the country and contributed significantly to high maternal mortality and morbidity rates (FHD/MOH, 1998; CREHPA, 2000). In 2002, Nepal broadly legalized abortion, taking a major step towards reducing high levels of maternal death, disability and illness. Safe abortion, however, is necessary but not sufficient to address maternal morbidity and mortality. The provision of post-abortion contraception is critical for preventing future unintended pregnancies and repeat abortion.

With the expansion of safe abortion care in Nepal, there are new possibilities for improving the health of women. At the same time, maternal mortality remains high (280 per 100,000), and women continue to suffer significant levels of morbidity and mortality from pregnancy, unsafe abortion, and delivery (Suvedi et al. 2009). A key aspect of safe abortion care that has profound potential to improve the health and lives of women and their children is post-abortion contraception. In a country where pregnancy, unsafe abortion, and childbirth put women's lives at great risk, access to contraception, and counseling to help address barriers to use, are essential to prevent morbidity and mortality from unwanted pregnancy.

Government run hospitals in Nepal have policies requiring contraceptive services provision

following abortion services, and all abortion clients receive post-abortion contraceptive counseling. Not surprisingly, there are high levels of initial method acceptance, but little is known about continuation of the method used after abortion (MOHP/CREHPA/Ipas, 2006). A prospective study conducted before legalization of abortion showed that calendar and withdrawal were the most commonly used methods (Tamang, 1996). The same study showed that one out of every six women with induced abortion became pregnant at least once during the 15 months following the abortion, and a majority of the pregnancies were unplanned. A great deal has changed for Nepal in the fifteen years since this study, including improvements to contraceptive availability and use (CREHPA, 2007). Contraceptive prevalence (modern method) in Nepal is 43% and, on average, women have 1.1 more children than their stated ideal family size (MoHP, New Era and ICF, 2011). The unmet need for contraception is high; it is estimated that one in four women at risk of unintended pregnancy are not using a modern contraceptive method (MOHP 2007; Bhandari et al. 2006). One recent study of the oral contraceptive pill and Depo-Provera among women in Nepal found that satisfaction with contraceptive counseling was related to method continuation and satisfaction (Gubhaju, 2009a), but little is known about other factors contributing to continuation. Small cross-sectional studies have provided some descriptive information about contraceptive knowledge and socio-demographic correlates of use (Tuladhar & Marahatta, 2008), but larger, rigorous studies examining contraceptive use and reasons for discontinuation following abortion are needed.

Contraceptive use may be hampered by a number of factors, such as insufficient counseling, difficulties understanding or using methods, unacceptable side effects, non-availability of methods, relationships and demands of family members, or difficulty obtaining or affording

method refills. Social Cognitive Theory (Bandura, 1986) provides a conceptual basis for considering the individual and contextual factors affecting contraceptive use and continuation. According to the theory, cognitive processes including knowledge, intentions, skills, and self-efficacy interact with emotion and the social environment to shape behaviors. The influence of gender norms, power, relationships, and broad social conditions are recognized to be important determinants of health behaviors according to the theory, and it has been widely used in research and interventions for improving contraceptive use (Lopez et al. 2009).

A number of cultural/contextual factors have been found to contribute to contraceptive use in South Asia. Son preference and family size considerations contribute to contraceptive use in Nepal and other countries in South Asia (Jayaraman et al. 2009; Dahal et al. 2008). Family members and society, with regard to dowry and inheritance practices, may exert pressure on women to manage their fertility in accordance with the expectations of others (Mannan, 2002). Furthermore, the ability of women to make autonomous decisions about their health care has been found to be low in Nepal, with data from a national survey showing that nearly three-quarters of households reported women were not involved in decisions about their health care (Senarath, 2009). In addition, relationship attributes, such as the experience of physical or sexual violence, and position in the household may also contribute to women's contraceptive practices and pregnancy outcomes (Puri et al. 2010). In Nepal, as elsewhere, higher education and income characteristics of both women and their husbands have been found to be important in determining contraceptive use (Gubhaju, 2009a). Knowledge and self-efficacy specific to contraception, pregnancy intentions, and beliefs or mores about contraception have also been shown to relate to contraceptive use and are likely to be relevant for Nepali women.

Research with abortion patients in other settings attests to the importance of contraceptive counseling for uptake and continuation (Rasch et al. 2004). A study of post-abortion contraceptive care in Viet Nam concluded that effective counseling must attend to cultural context and include training to treat patients in a respectful and equitable manner (Nguyen et al. 2007). Assessing how contraceptive counseling and commodity supply relate to method use and continuation is important in Nepal, at a time when reproductive health care opportunities are expanding, but the availability of context specific research for designing contraceptive counseling interventions is limited.

For many women, abortion services may be a site of first contact with health care providers and supplies, essential resources for pregnancy prevention. Willingness to adopt a method, use it correctly, and continue use can be influenced by the content and quality of contraceptive counseling (Gubhaju, 2009b). Where high quality care and contraceptive counseling are in place, patient trust and opportunities for follow-up care increase. Because Nepal is still in the process of expanding safe abortion services, women continue to obtain abortions from uncertified and unsafe providers (MOHP/CREHPA/Ipas, 2006), thus unintended pregnancy remains a significant threat to women's health. Women obtaining safe abortions in Nepal may be doing so for the first time, and it is an important opportunity to help them prevent future unwanted fertility. Moreover, there is growing concern among national stakeholders that women obtaining medical abortion have particularly low contraceptive acceptance in Nepal. Understanding use of post abortion contraception and its continuation and factors that inhibit contraceptive use and ways to improve contraceptive care at abortion clinics is essential for improving the health of women in Nepal and other developing countries.

We examined post-abortion contraceptive use, continuation, and factors associated with method discontinuation using a 12 months longitudinal cohort study of women who received induced abortion services in Nepal. Our aim was to identify areas for improvement in post-abortion contraceptive use and its continuation. With the exception of one small study, it is the first to our knowledge to collect quantitative data on post-abortion contraceptive continuation after abortion legalization in Nepal.

## **Data and Methods**

We used data from a prospective cohort of 838 women obtaining legal, abortion at four major health facilities in Nepal. The four study sites – two government hospitals and two private clinics- were selected to represent a range of types of health facilities in diverse geographic settings. Paropakar Maternity and Women’s Hospital, located in the capital city Kathmandu, is Nepal’s largest public maternity hospital. Bharatpur District Hospital, located in Chitwan in the populous Terai region, serves as an important regional facility for surrounding districts. Marie Stopes Clinic in Kaski and Family Planning Association of Nepal (FPAN) Clinic in Itahari are private reproductive health clinics in the Western and Eastern regions of the country, respectively.

From March-May 2011, we recruited women obtaining aspiration or medication abortions from these facilities. Women were eligible to participate if they were aged 16-35 years, obtained an abortion on the day of recruitment, and were willing to complete follow-up visits at 6 and 12 months.

Eligible women were invited to participate in the study after being cleared for discharge or finishing a visit for medication abortion. Trained female research assistants explained study procedures and obtained written informed consent using a standardized script. Participants were offered a handout with contact information for the local study investigators and institutional review board. Interviewers then administered structured questionnaires. First interviews were conducted in a private location in each facility. Participants were contacted after 6 months and 12 months to conduct a follow-up interview, using information and instructions provided by the participants at enrollment. Follow-up interviews were carried out in a private location of the participant's selection, such as her home, work, a clinic, or public location. Interviews asked women about the contraceptive methods they had used since enrollment and reasons for non-use. Participants were again given a small gift for remuneration. Overall, 838 women, aged 16-35, were enrolled at baseline; 654 completed the first follow-up interview, and 624 completed the second follow-up interview.

The baseline and follow-up interviews collected information on access to abortion services (quality of care, past experiences), contraceptive counseling (methods offered and chosen, satisfaction with care, willingness to return), and reproductive health, behaviors, intentions, and attitudes (e.g., pregnancy and family planning intentions, contraceptive behavior including method switching and method satisfaction, health status, sexual activity, reproductive outcomes including pregnancy, repeated abortion or fetal loss or any other pregnancy outcomes).

All data were kept confidential: surveys were assigned unique identification numbers and did not contain identifying information. Participants were offered a small gift as remuneration for their time.

All study protocols received human subjects approval from the Committee on Human Research at the University of California, San Francisco, and from the Nepal Health Research Council, Kathmandu.

## **Measures**

The method chosen at the time of abortion was identified by asking women what method they had selected at the clinic on the day of their visit. Only those who also reported they had received an injection, implant, IUD or sterilization that day were coded as using the method at baseline. At the 6 and 12 month follow-up interviews, women were asked to report the “main method they were currently using”. For analysis of method discontinuation over the 12 months follow-up period, women were asked what method they used in each month since the time of the previous interview. In addition to those receiving the method on the day of their visit, women reporting receiving an injection within 2 months of the abortion visit, and those reporting receiving an IUD or implant within 3 months were coded as initiating the method. These reports were used to create a variable assessing the continuous use of an effective reversible method after abortion. Women who reported receiving an injection, implant, or IUD on the day of the abortion visit, who were then lost to follow up were coded as follows: if injectable contraception was received the participant was coded as lost to follow-up (censored) after 3 months use, those receiving an implant or IUD were coded as lost to follow-up (censored) after 6 months of use.

## **Analysis**

The study used descriptive and multivariate statistical methods. A central focus of analyses was contraceptive use, continuation and factors associated with discontinuation. We present the

prevalence of contraceptive use by methods and by a number of socio-demographic characteristics of women. Factors affecting contraceptive continuation were examined with bivariate and multivariable analytic techniques for cross-sectional baseline data, and for longitudinal data.

We examined characteristics of the study population by any modern contraceptive method used at the time of interview using  $\chi^2$  statistics for categorical variables. Women who completed two follow-up interviews are included in the analyses comparing baseline, six, and 12-month use. For the survival analysis, we estimated time to the event (contraceptive discontinuation or first pregnancy). Each woman contributed observation time to the analysis for the period in which she participated. Individuals were censored when lost to follow-up, when the event occurred, or when they exited the study. For continuation analyses, as well as those for whom contraceptive use could be plausibly inferred (e.g, when injection was given at baseline, 3 months of use was inferred). For those lost to follow-up during the study period, data are included up until the point when they were lost to follow-up (i.e. censored). We plotted 12-month contraceptive discontinuation of modern effective reversible methods with Kaplan-Meier estimates of the probability of continuation or absence of pregnancy.

To assess factors associated with method discontinuation and with pregnancy in the 12 month follow-up period, we estimated Cox proportional hazards models with contraceptive method and covariates from the baseline data, including socio-demographic characteristics, reproductive history, and pregnancy desire. All analyses were conducted using STATA 11 (Stata Corporation, College Station, TX).

## **Findings**

### **Sample characteristics**

The characteristics of the 838 women who participated in the baseline interviews are shown in Table 1. The 838 participants were on average 26 years old (Table 1). Almost all were married (97%), but 16% were not currently living with a husband or partner. Most participants had children (87%). Few (5%) wanted a child in the next two years; 36% wanted to delay childbirth for at least two years; and 59% did not want another child. Over half (57%) of participants had used pills or the injectable in the past, and 6% had used an IUD or implant. While 80% of participants had an aspiration abortion prior to enrollment, 20% obtained a medication abortion.

Table 1 also shows whether or not women initiated a modern method of contraceptive at first interview (baseline). Overall, about 54% of women (449 of 838 women) reported that they have used any modern methods of contraception at the time of first interviews. Method initiation at the first interviews varies by their background characteristics. For example, women who are married, living with partner, residing in rural areas, having more than one living children, having more than primary level education of education are significantly more likely than their counterpart women to initiate any modern method of contraception after abortion. Similarly, women had surgical abortion, received family planning counseling with staff and those who obtained services from private clinic are significantly more likely than those who received medical abortion, not received counseling on family planning and visited public facilities to use a modern contraception immediately after abortion.

***Table 1 about here***

### **Post-abortion contraceptive use by types of methods**

Among those women who completed interviews at 12 months, 56% of women reported adopting a modern method of contraception at the baseline, including injectables (29%), pills (12.5%), condoms (10.9%), IUDs or implants (3.9%), and female sterilization (0.2%). The percentage of women using modern methods decreased to 52% overall by 6 months with some changes in the method mix: injectables (20.7%), pills (11.2%), condom (14.3%), and IUD or implants (4.6%), female sterilization (0.2%) and male sterilization (1.0%). Furthermore, this percentage slightly decreased to about 50% by 12 months: injectables (17.3%), condom (13.0%), pills (11.5%), and IUD or implant (5.6), implants (1.6%), female sterilization (1.0%) and male sterilization (1.3%)(Table 2).

### ***Table 2 about here***

Table 3 shows the percentage of women using modern contraceptive methods in the 12 months after abortion among those not lost to follow-up by selected background characteristics.

At the baseline interviews, use of modern contraceptive significantly associated with whether or not a woman has living children, whether or not currently living with partner, place of residence, types of facility and the availability of contraceptive counseling at the abortion clinic. Women with older age group, had at least one children, living in rural areas, had received contraceptive counseling, living with partner and had received service from private facilities are more likely to accept a modern method of contraceptives than their counterpart women.

In 12 months interview, above trend largely hold true, except in the case of type of facility and desire for another pregnancy. In 12 months time, women receiving abortion service from public

facility are more likely to report using a modern method of contraception than those women who received services from private facilities. Use of modern contraception also associated with desired timing of future pregnancy, and happiness of herself and partner if pregnant in six months (Table 3).

***Table 3 about here***

### **Factors associated with contraceptive continuation and pregnancy**

The overall contraceptive continuation rate for female controlled effective modern methods was 58.2 per 100 person years. The 12-month continuation rate for the injectable was 49.6 per 100 person years and for the pill was 63.8 per 100 person years. Although few women initiated use of long-acting reversible contraception (3.5%), continuation rates were higher for these methods than for the pill or injectable (92.3 per 100 person years,  $p < .01$ ).

A total of 377 women reported using pills ( $n=86$ ), injectables ( $n=262$ ), or LARC ( $n=29$ ) following their abortion, based on retrospective reports and reported receipt of injectables and LARC at the abortion visit. The 12 month continuation rates for these different methods are shown in Figure 1. There was not a significant difference in continuation rates according to unadjusted and adjusted Cox proportional hazard ratios; pills were used continuously by 42% of initiators, and injectables by 35% of initiators. Although relatively few women initiated LARC, 79% remained on the method at the 12 month interview. In adjusted analyses, the factors associated with continuation were pregnancy intentions and the method initiated (data not shown).

***Figure 1 about here***

Among the women contributing follow-up data, 56 reported experiencing pregnancy in the year following their abortion. The pregnancy rates by whether or not women initiated an effective reversible modern method are given in Figure 2. Among women initiating a method, 93% did not experience a pregnancy, whereas 89% of women using less effective or no method following their abortions did not become pregnant.

***Figure 2 about here***

Adjusted Cox proportional hazards analysis of pregnancy rates in the year following an abortion showed that women who reported wanting more children and those with lower socioeconomic status were more likely to experience pregnancy. Regardless of those factors, compared to women who did not obtain an effective reversible method at the abortion visit, those using pills, injectables, and LARC were less likely to become pregnant during follow-up. There were no pregnancies among the women adopting long-acting reversible methods.

***Table 4 about here***

**Reason for discontinuation**

Overall, a cumulative total of 634 episodes of discontinuation for seven selected method were reported within 12 months periods. The most frequently mentioned reasons for discontinuation is fear of side effects or health concerns (33%) followed by inconvenient to use (24%), husband or partner is away (17%), infrequent sex (11%), and desire for a more effective method (10%) respectively. It is worth noting that the reasons for most often cited for discontinuing use of long acting methods, injectables, pills is side effects or health concerns. Absence of husband

or partner and inconvenient to use were the two most often reasons reported for discontinuing use of condoms (Table 5).

### ***Table 5 about here***

## **Discussion and conclusions**

The government of Nepal implemented comprehensive abortion care services in March 2004, and made concerted efforts to improve access to modern contraception. An integral component of comprehensive abortion care services is post-abortion contraceptive counseling and services.

Though modern contraceptive use among married women increased from 26% in 1996 to 44% in 2006, it showed a possible trend reversal with around 43% use estimated in 2011 (MoHP, New Era and ICF, 2011). Contraceptive use trends are discouraging in Nepal where unmet need is high, especially among young couples, and where the number of sexually active unmarried young people has increased considerably in recent years (MoHP, New Era and ICF, 2011).

There has been concern among stakeholders in Nepal that women are using abortion as method of contraception. To our knowledge no previous studies looked into the contraceptive use and its continuation after induced abortion in Nepal. Thus, our study is the first to assess post-abortion contraceptive use and its continuation using a longitudinal data.

Low adoption of modern methods of contraception post-abortion and low continuation rates in the following year were observed in this study. Overall, only 56% of women reported using a modern method of contraception following abortion and the level decreased to about 50% in a year period. Women who had at least one child, were not living with their partner, and had not

received contraceptive counseling at the abortion visit were less likely to use and continue any modern method of contraception after abortion. While women who used MA were less likely than those who had undergone a surgical method (aspiration) to adopt contraception after their abortion visit, this difference narrowed considerably by sixth months and continued to narrow, becoming no different by 12 months. This difference may be explained, to some extent, by the fact that women who opt for MA would like to wait until the confirmation of completion of abortion before initiating use, but otherwise may be no less likely to commence a method. This findings similar to a study conducted recently in India (Zavier and Padmadas, 2012).

Method continuation (or discontinuation) rates were higher among women who adopted a long-acting reversible method, either an implant or IUD after their abortion visit. We did not find women's sociodemographic characteristics or relationship status to be associated with effective method continuation in the adjusted analysis. Only the type of method selected and the desire for another child were associated with discontinuation rates. Pills and injectables had similar rates of discontinuation, considerably lower than for LARC methods. Although use of these methods is very low relative to others, the effectiveness and likelihood of continuation suggest that they may be an important method to offer to all eligible women. Further research on provider willingness to offer these methods according to the most up to date eligibility criteria, and on user satisfaction, as well as contraceptive supply is much needed.

The analysis of pregnancy in the year following abortion showed that the adoption of any effective modern method (i.e., LARC, injectable, pills) preventive pregnancy, and no pregnancies occurred among women initiating LARC. In addition, women having an abortion

who reported not yet having reached their desired family size were more likely to become pregnant within the year following the abortion, suggesting that some of the pregnancies during follow-up were not unintended. Finally, the poorest women in this study, as indicated by household ownership of basic assets, were more likely to experience a pregnancy in the year following their abortion, consistent with other research on unintended pregnancy (Gubhaju, 2009a)

Our data shows that side effects or health concerns, inconvenience of use, and not living with a husband or partner at the time of the abortion, and infrequent sex were four major reasons for discontinuing the methods. These data suggest that despite 50 years history of family planning service in Nepal, the program is not able to provide contraception accommodated the concerns and situations women experience. Our data also suggest that stagnation in contraceptive prevalence in the last five years could be related to increases in employment-related migration by men in Nepal. In the 2011 Demographic and Health Surveys, 37% of Nepali households had a male who had migrated in the prior year, and work was the most common reason for male migration. Women whose husbands are away or who have infrequent sex may face socio cultural barriers to contraceptive use, including provider attitudes. In any case, these women may have unique contraceptive needs. Further research into the preferences of these women and into provider attitudes and practices is needed to design program approaches to better meet their needs, in both the post-abortion setting and in reproductive health care settings more broadly.

Our study has four important limitations. First, though the four recruitment represented diverse geographic regions and both public and non-governmental facilities, they are not representative

of abortion facilities in Nepal, limiting the generalizability of results. Second, we rely on women's self-report of contraceptive experiences, which introduce the possibility of social desirability bias. However, we used highly experienced female researchers in interviewing women about intimate and personal reproductive health experiences, and most women had the same interviewer at each time point, establishing rapport and trust. Third, it is likely that and methods used by participants were influenced by the availability of supplies and providers bias toward a particular method. However, our study is the first to our knowledge to collect information on post-abortion contraceptive use and its continuation using longitudinal study design in Nepal.

In spite of these important limitations, our study findings demonstrate that post-abortion contraception and its continuation among women is low. Various methods related and programme related factors may hinder women's access and ability to use contraception.

Therefore, efforts are needed to improve service quality, particularly counseling, so that women have more options and information, and are forewarned about side-effects that could lead to method discontinuation. The role of husband absence in discontinuation, and whether this puts women at risk of unintended pregnancy, warrants further study. Training of providers is needed to specifically address the unique barriers to contraceptive use among women who have sex infrequently or whose husbands are away, including possible stigma or embarrassment about choosing a method. Further research into whether providers are reluctant to offer contraception to women when their husbands are away would also be useful. Research assessing barriers to LARC provision and reasons for low uptake of these methods is needed, as there is likely room for improvement in use of the most effective methods.

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**Table 1. Characteristics of women interviewed at baseline by whether or not a modern method of contraception was initiated, N = 838**

	Total n, %		Initiated modern method <sup>a</sup> n = 449	Did not initiate modern method <sup>a</sup> n = 389	<i>p</i>
<b>Age (years), mean, SD</b>	26.3	(4.6)	26.5 (4.3)	26.1 (4.8)	NS
<b>Currently married, n, %</b>	810	96.7	54.9	45.1	<.001
<b>Not living with husband or partner, n, %</b>	134	16.0	20.9	79.1	<.001
<b>Has &gt;primary education, n, %</b>	579	69.1	51.0	49.1	.03
<b>Husband has &gt;primary education,<sup>b</sup> n, %</b>	702	84.6	51.7	48.9	.003
<b>Rural residence, n, %</b>	345	41.3	60.0	40.0	.002
<b>Ethnicity, n, %</b>					NS
Upper caste	392	46.8	49.7	50.3	
Advantaged indigenous	132	15.8	58.9	41.1	
Disadvantaged indigenous	224	26.7	56.1	43.9	
Disadvantaged Terai/Dalit/minority	90	10.7	53.3	46.7	
<b>Woman has own mobile phone</b>	597	71.2	51.8	48.2	.11
<b>Lowest quartile asset level, n, %</b>	226	27.0	54.0	46.0	NS
<b>Parity, n, %</b>					<.001
Nulliparous	111	13.3	30.6	69.4	
Parous	727	86.8	57.1	42.9	
<b>Wants no more children, n, %</b>	495	59.1	55.7	49.3	NS
<b>Happy if became pregnant, 6 mo, n, %</b>	123	14.7	52.0	48.0	NS
<b>Husband happy if became pregnant, 6 mo,<sup>b</sup> n, %</b>	203	24.4	52.2	47.8	NS
<b>Most effective contraceptive method ever used</b>					NS
None or condoms	307	36.9	49.8	50.2	
Pills or injectable	475	57.1	56.0	44.0	
IUD, implant	50	6.0	52.0	48.0	
<b>Abortion type, n, %</b>					<.001
Aspiration	671	80.1	58.1	41.9	
Medication	167	19.9	35.3	64.7	
<b>Discussed family planning with staff, n, %</b>	571	68.1	61.7	38.4	<.001
<b>Facility, n, %</b>					<.001
Public hospital 1	374	44.6	44.9	55.1	
Public hospital 2	66	7.9	30.3	69.7	
NGO clinic 1	234	27.9	58.1	41.9	
NGO clinic 2	164	19.6	76.2	23.8	

<sup>a</sup> Oral contraceptive pills, Injectable (DMPA), LARC (implant, IUD) , Condoms

<sup>b</sup>Includes currently married women.

**Table 2. Percentage of women using modern contraceptive methods in the 12 months following an elective abortion, among those not lost to follow up, n = 624**

	<b>Baseline</b>		<b>6 months</b>		<b>12 months</b>	
None <sup>a</sup>	272	43.6	300	48.1	314	50.3
Condom	68	10.9	89	14.3	81	13.0
Pills	78	12.5	70	11.2	72	11.5
Injection	181	29.0	129	20.7	108	17.3
Implant/IUD <sup>b</sup>	24	3.9	29	4.6	35	5.6
Female sterilization	1	0.2	1	0.2	6	1.0
Male sterilization	0	0.0	6	1.0	8	1.3
<b>Use of any modern method</b>	<b>352</b>	<b>56.4</b>	<b>324</b>	<b>51.9</b>	<b>310</b>	<b>49.7</b>

<sup>a</sup>At baseline, 22 women used withdrawal; at 6 months 126 women reported using withdrawal as their main method; at 12 months 111 women reported using withdrawal as their main method.

<sup>b</sup>At baseline, 4 implants and 20 IUDs; at 6 months, 9 implants and 20 IUDs, at 12 months, 10 implants and 25 IUDs.

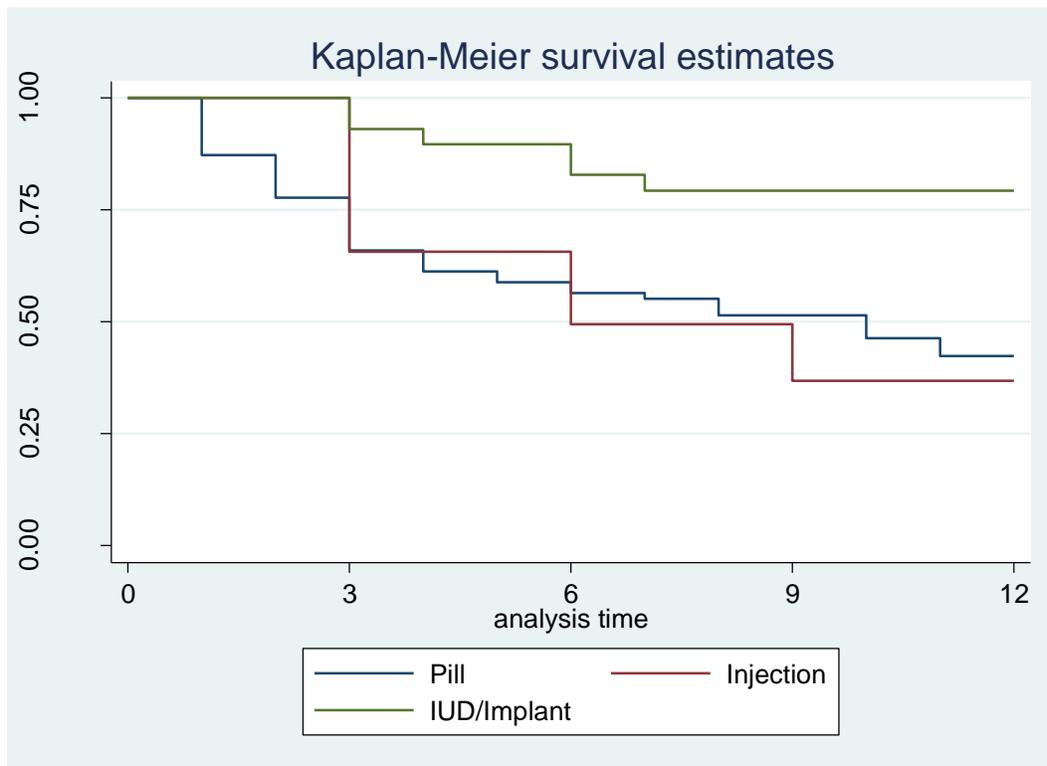
**Table 3. Characteristics associated with modern contraceptive method<sup>a</sup> use after an elective abortion, and in the following 12 months, N = 624**

<b>Characteristics %</b>	<b>Abortion visit</b>	<b>6 months</b>	<b>12 months</b>
<b>Mean age (SD)</b>			
16-20	45.8	47.9	35.4
21-29	58.9	54.1	49.3
30-35	54.2	48.8	53.7
<i>P value</i>	.17	.93	.07
<b>Years of schooling</b>			
≤ Primary education	62.8	55.6	57.8
> Primary education	53.8	50.5	46.4
<i>P value</i>	0.05	.25	.01
<b>Place of residence</b>			
Urban	52.7	51.7	51.7
Rural	62.2	52.3	46.5
<i>P value</i>	.02	.93	.22
<b>Currently living with husband/partner</b>			
Yes	62.3	64.4	64.1
No	16.3	10.9	10.1
<i>P value</i>	<.001	<.001	<.001
<b>Lowest quartile asset level</b>			
Yes	57.6	55.4	48.2
No	56.1	50.9	50.1
<i>P value</i>	0.77	0.39	0.70
<b>Caste/ethnicity</b>			
Untouchable & religious minority	52.9	48.5	57.4
Disadvantaged indigenous	63.7	50.3	47.1
Relatively advantaged indigenous	59.0	54.0	48.0
Upper caste groups	52.5	52.8	49.8
<i>P value</i>	.12	.87	.55
<b>Parity</b>			
Nulliparous	35.9	24.5	15.1
Parous	58.3	54.5	52.9
<i>P value</i>	.002	<.001	<.001
<b>Desire for another pregnancy</b>			
Wants more children	54.7	45.7	41.4
Wants no more children	57.4	55.9	56.5
<i>P value</i>	.56	.02	.001
<b>Any happiness if pregnant, next 6 months</b>			
Yes	56.0	37.7	32.6
No	56.5	53.8	54.6
<i>P value</i>	1.0	.02	<.001

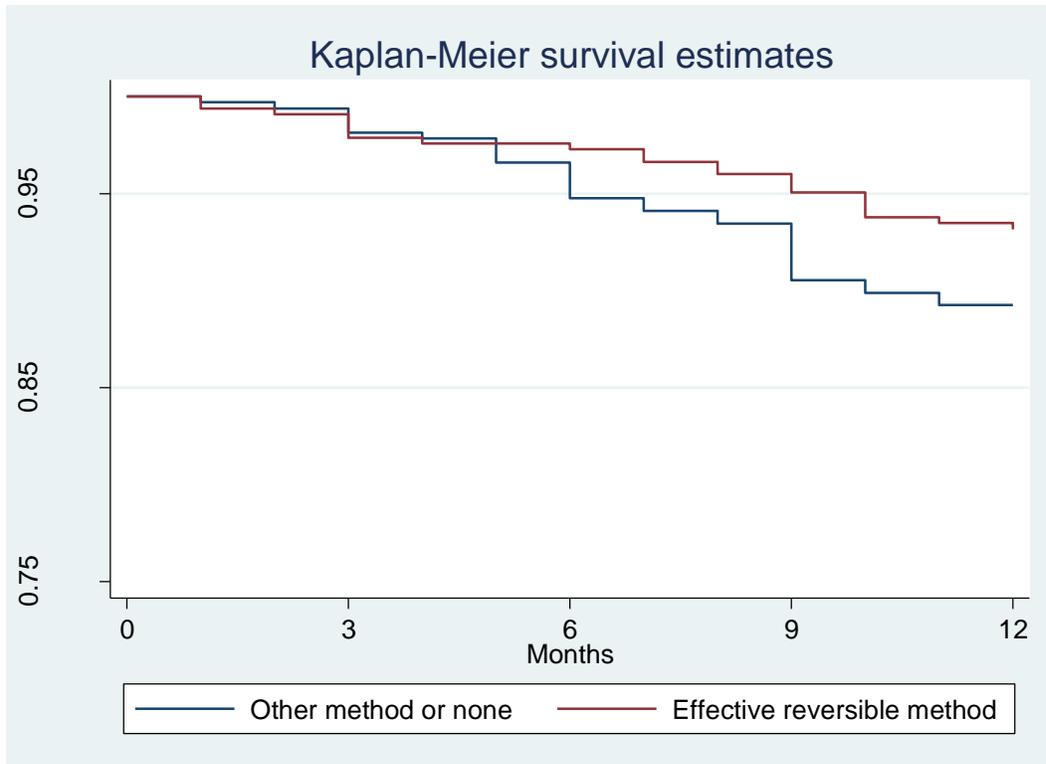
<b>Any happiness of husband if pregnant, next 6 months</b>			
Yes	53.9	41.7	35.4
No	57.3	55.1	55.5
<i>P value</i>	.50	.02	<.001
<b>Abortion type</b>			
Aspiration	61.6	51.0	49.0
Medication	37.1	55.3	52.3
<i>P value</i>	<.001	.43	.56
<b>Received contraceptive counseling</b>			
Yes	64.7	52.5	47.7
No	37.2	50.5	54.3
<i>P value</i>	<.001	.66	.14
<b>Types of facility</b>			
Public facility -1	46.7	61.6	62.4
Public facility-2	29.6	53.7	55.6
Private facility - 3	62.3	40.4	37.7
Private facility- 4	78.0	48.5	39.4
<i>P value</i>	<.001	<.001	<.001
<b>Total % (n)</b>	<b>56.4(352)</b>	<b>51.9 (324)</b>	<b>49.7 (310)</b>

<sup>a</sup>Includes condoms, oral contraceptive pills, injectable contraception, long-acting reversible methods (implant, IUD), and female sterilization.

**Figure 1. Reported continuation of reversible effective modern methods among women initiating use after an elective abortion (n = 377).**



**Figure 2. Analysis of time to pregnancy by whether an effective reversible method was initiated, excluding 1 woman reporting surgical sterilization (N = 653).**



**Table 4. Factors associated with pregnancy in the 12 months following an elective abortion, Cox proportional hazard model, n = 653**

	<b>Hazard Ratio</b>	<b>(95% Confidence Interval)</b>
Initiated effective reversible method	0.56*	(0.31, 0.99)
Age	0.96	(0.90, 1.04)
Not living with partner	0.64	(0.27, 1.52)
Wants more children at some point in the future (baseline report)	3.62***	(1.83, 7.15)
Had medication abortion	0.75	0.38, 1.48)
Public abortion clinic (versus private clinic)	1.06	(0.56, 2.02)
Rural residence	1.52	(0.89, 2.58)
Lowest quartile assets	2.29**	(1.29, 4.05)

**Table 5. Percent distribution of contraceptive methods in the last years by main reasons for discontinuation, according to specific methods**

<b>Reasons</b>	<b>Condom</b>	<b>Pills</b>	<b>Injection</b>	<b>Implant</b>	<b>IUCD</b>	<b>Calendar</b>	<b>Withdrawal</b>	<b>All methods</b>
Side effects/health concern	5.5	43.8	77.0	100.0	85.7	-	2.8	33.7
Inconvenient to use	32.1	33.6	13.5	-	-	15.4	21.5	24.0
Partner/Husband away	14.8	21.8	18.0	-	-	15.4	14.6	16.9
Infrequent sex	12.9	10.1	2.2	-	-	7.7	21.5	11.0
Wanted more effective method	8.0	0.8	0.6	-	-	23.1	31.9	10.1
Lack of access/costly	24.7	4.7	1.7	-	-	7.7	2.1	8.4
Husband/partner disapproved	16.0	1.6	1.2	-	-	7.7	5.5	6.2
Marital dissolution/separation	3.1	5.5	5.1	-	-	7.7	7.6	5.2
Wanted to get pregnant	4.3	2.3	2.2	-	14.3	-	3.5	3.2
Contraceptive failure/become pregnant	3.7	-	-	-	-	15.4	5.5	2.5
Others	1.2	2.4	3.9	-	-	-	-	1.7
<b>Total number of discontinuation episodes</b>	<b>162</b>	<b>128</b>	<b>178</b>	<b>2</b>	<b>7</b>	<b>13</b>	<b>144</b>	<b>634</b>