Assessing the Impact of Family Planning Advice during Maternal-Child Care Service Utilisation on Contraceptive Use in Rural Uttar Pradesh, India

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Running heading: Family Planning advice, contraceptive use and its unmet need in India

Summary

The study attempts to assess the impact of advice on family planning (FP) during Maternal-Child health care (MCH) services on contraceptive use and unmet need for FP by adopting propensity score matching method and using data from District Level Household Survey (2007-08) that covered 76,147 currently married women aged 15-44 years in Uttar Pradesh State of India. Results show that MCH service utilisation (Antenatal care (ANC), institutional delivery, Postnatal care (PNC)), advice on FP during ANC, and PNC visit has led to increase current use of contraception by 3.7% (p<.01), 7.3% (p<.01), and 6.8% (p<.01) respectively; however, these services have not motivated to reduce unmet need in that pace. MCH service utilisation including counselling on FP is more effective to increase current use of spacing than use of limiting method. Findings support the need for "effective advice or counselling on FP" interventions to reduce unintended births and unmet need for FP. Urgent efforts are needed to ensure the integration of FP advice and MCH services with equal opportunity to receive information for all women irrespective of their social background.

Introduction

Utilisation of family planning (FP) methods averts almost 2,72,000 maternal deaths reported worldwide and 86,366 maternal deaths occurred in India every year (Ahmed et al., 2012), and it is the main strategy for prevention of unwanted pregnancies (Liu et al., 2008; Singh et al., 2009). Although, family planning programmes were first introduced in the early 1950s in developing countries to slow rapid population growth, later it has been emerged as integrated approach of maternal-child health (MCH) services for many years globally (Waddington and Egger, 2008). In developing countries, where integration was a key element of the health system, birth rates has decline, as more women has been able to avoid unintended pregnancies (Ringheim, Gribble and Foreman, 2011). India has integrated MCH and FP services through the National Population Policy-2000, the National Health Policy-2002, the Reproductive and Child Health Program (Phase I-1997-2004, Phase II-2005-10), and the National Rural Health Mission (2005-12)(MoHFW, 1997; MoHFW, 2000; MoHFW, 2002; MoHFW, 2005) to improve MCH and FP service. Despite all policies and programs implemented in India, it is far behind to achieve its fertility goals, and due to lower contraceptive use, higher unmet need and unintended fertility is evident (IIPS and MI, 2007).

The continuum of care throughout antenatal, natal and the post-natal visit/session is critically important in India where both mothers and children are vulnerable to range of health risks resulting in high maternal and neonatal mortality. In the process of continuum of care, advice

and counselling are important components and key to improving health behaviour and care seeking during antenatal, natal and in the post-partum period (Nikiéma, Beninguisse and Haggerty, 2009). The information provided during the antenatal care (ANC) visits enables women and their family members to take care of their new born children and adopt health-promoting behaviour and to identify and act on medical emergencies that may arise during antenatal, natal and post-natal care (PNC) visits (Renkert and Nutbeam, 2001; WHO, 2003). Advice on appropriate FP methods ensures spacing between the children and preventing unwanted births. Although there is evidence to show the effectiveness of advice and counselling during antenatal visits contributes to the inconsistent pattern of ANC service utilisation and skilled birth attendance in the developing country settings (Magoma *et al.*, 2010; Magoma *et al.*, 2011; Pembe *et al.*, 2009).

Counselling on FP is standard care for women who have just given birth. Role of birth spacing is very important domain in postpartum period and it can improve MCH situation (Ahmed et al., 2012; Levitt *et al.*, 2004). Moreover, demand for FP methods may be high after delivery. In the light of integration, most recent multi-country study based on Demographic and Health Survey data reports positive relationship between MCH service and contraceptive use (Hotchkiss *et al.*, 2005; Hotchkiss *et al.*, 1999; Seiber *et al.*, 2005; Zerai and Tsui, 2001) and it is not explain by the exogenous variables (Ahmed and Mosley, 2002). Moreover, ANC service gives opportunity to reach women who would be the main target of FP services. Because of this, standard strategies have used ANC as an entry point in the delivery of core reproductive health services, including FP (WHO, 2004).

Promotion of ANC, natal care, PNC, FP advice or counselling during ANC/PNC session and use of modern contraceptive methods are some of the key interventions. Studies have shown that there is a preference among health workers for promoting ANC (Matthews *et al.*, 2001; Pallikadavath, Foss and Stones, 2004; Ram and Singh, 2006), institutional delivery (Sugathan, Mishra and Retherford, 2001) and FP advice are very limited. In addition, earlier research suggests that ANC package included FP advice and counselling significantly increased the quality of care (Birungi and Onyango-Ouma, 2006). Previous research in the south Asia region (Anwar *et al.*, 2004; Dhakal *et al.*, 2007; Sines *et al.*, 2007) particularly in India has shown that PNC is limited to service utilisation and inequality (Jat, Ng and San Sebastian, 2011; Mistry, Galal and Lu, 2009; Singh *et al.*, 2012a) to all women.

Moreover, randomized control trail study by Lopez *et al.*, 2012 on educational interventions for contraceptive use reveals that women with an immediate postpartum counselling sessions and many contacts were influenced to use FP methods. A very limited studies of trails review on integrated service delivery found that there was no consistent benefit on outcomes of integration, costs or health system performance in developing settings (Briggs, Capdegelle and Garner, 2001). However, two of the trails showed that integration of FP service delivery results in increased contraceptive use (Huntington and Aplogan, 1994; Taylor and Parker, 1987).

The present study is, therefore, an attempt to investigate continuity of service utilisation from ANC to contraceptive use in a rural setting of India, using a large-scale cross-sectional data set that was designed to monitor the indicators of the MCH and FP programme in India. Further, the main contribution of this paper is to assess the impact of MCH service utilisation namely,

ANC, institutional delivery, and PNC visit on the contraceptive use and unmet need for FP among women. Moreover, the study also assesses the role of FP advice received by women during the MCH care services in increasing the current use of contraceptives and reducing the unmet need for FP. It hypothesizes that the advice on FP has not motivate women to use modern contraceptive method, and consequently has not reduce unmet need for FP methods. The analysis is in a rural setting of India as the Government programme National Rural Health Mission (NRHM) is focussed in rural area that has the higher fertility and lower FP use. This assessment of MCH service utilisation and particularly advice during ANC and PNC visit would be crucial for further strengthening of such Government programme efforts.

Methods

Data source and study settings

The present study utilises data from the third wave of District Level Household and Facility Survey (DLHS-III, 2007-08) that covered all 601 administrative districts from 34 states and union territories of India and. This survey provides estimates on MCH services and FP use at the district level in order to monitor and provide corrective measures to the NRHM. The survey adopted a multi-stage stratified sampling design and used set of structured questionnaires for collection of data(IIPS, 2010).

As the present work is focused on rural Uttar Pradesh state of India, which is among the largest rural population state of India and constitutes 18.6% rural population (India, 2011) and it is significantly diverged in its socioeconomic, demographic, geographic and cultural profile (IIPS

and MI, 2007). Nowadays, it has been passing through the third stage of demographic transition, with an estimated death rate of 8.2 per thousand population and infant mortality rate of 63 per thousand births (RGI, 2011). A large proportion of the state's population suffers from poverty, with low female literacy and low women autonomy. In the Human Development Index, it ranked 13th among the 15 major states of India (Commission, 2011).

Recent data from the Indian Demographic Health Survey (2005-06) for Uttar Pradesh state, India suggests only 27% of pregnant women made 3+antenatal visits for their most recent pregnancy, 21% delivered their most recent births in health facility, and only 15% of women reported receiving PNC after their most recent birth. Moreover, only 29% of women were using any modern contraceptives and unmet need for limiting methods (21%) is higher than that for spacing methods (9%). However, the trends in service utilisation of MCH care and FP use over the last two decades do not reflect much improvement (IIPS and MI, 2007).

In DLHS-III, the information was gathered from a representative sample of 90, 415 households 87,564 ever-married women (aged 15-49 years) and 76, 147 currently married women (aged 15-44 years) of 70 administrative districts in Uttar Pradesh. The study considers currently married women of age group 15-44 who have given birth in the reference period for the analysis. Data on antenatal, natal, post-natal care were collected from all women who had given birth in five years preceding the survey and were restricted to the most recent birth. The household and ever married women response rates were 94% and 84%, respectively. Appropriate weights given in the data are used.

Measures

Outcome variables

Current use of modern FP methods

The information was obtained from currently married women by asking question "whether you or your husband currently using any FP methods?" Those responded affirmatively, were further asked about name of the method to report. Contraceptive prevalence rate (CPR) for spacing method is defined as the percentage of currently married women themselves or their husband using an intrauterine device, oral pills, condoms, injectable, foam or jelly and implants on the survey date. CPR for limiting method is defined as the percentage of currently married women themselves or their husband using sterilization on the survey date. Total current use of modern contraceptive refers to current use of spacing and limiting.

Unmet need for modern FP methods

Unmet need for spacing methods includes the proportion of currently married women who are neither in menopause or had hysterectomy or are currently pregnant who want more children after two years or later and are currently not using any FP method. The women who are not sure about whether and when to have next child are also included. Unmet need for limiting method includes the proportion of currently married women who are neither in menopause or had hysterectomy nor are currently pregnant and do not want any more children but are currently not using any FP method. Total unmet need refers to unmet need for limiting and spacing.

Exposure variables

The study considers three critical services namely-ANC visits, institutional delivery, and PNC within two weeks of delivery in MCH service utilisation. Further, women attending all three critical services are considered as received all MCH services and it is taken as exposure to MCH programme. Moreover, the study examines the advice during ANC and PNC visits as exposure to MCH programme. The detailed information on advice received is as follows-

During ANC visit, women were asked if they had received advice on seven essential components of MCH care specific services. These components include: (1) breastfeeding, (2) keeping the baby warm, (3) need for cleanliness at the time of delivery, (4) nutrition for mother and child, (5) need for institutional delivery, (6) spacing methods of FP, and (7) limiting methods of FP. Exposure variable used in the analysis are the FP advice received during ANC visits. It includes spacing and limiting methods of FP.

During PNC visit, women were asked if they had advice on four essential components of MCH care specific services. It include: (1) abdomen examined, (2) advice on breastfeeding, (3) advice on baby care, and (4) advice on FP methods. Exposure variable FP advice received during PNC visit were used in the analysis.

Explanatory variables

Analysis consider the socio-demographic predictors such as women's age, education, children ever born, religion, ethnicity-caste, and household wealth quintiles in control variables.

Analytical Approach

Continuum of service utilisation

To assess the continuum of service utilisation, the proportion of women using services across the two consecutive services in a sequential manner as considered services are expected to receive are analysed. The percentage of those who receive the next service out of those who had received its prior service is taken as the continuum of service utilisation whereas the complement of these percentages provide dropout. Chi-square test is applied to examine the association between the services in bivariate analysis. All tests are two tailed and a p-value of <0.05 is considered statistically significant.

Propensity score matching (PSM)

In order to examine the impact of FP advice received during ANC/PNC sessions and maternal health care service utilisation on unmet need and current use of modern FP methods, the study adopted radius caliper method of PSM (Rosenbaum and Rubin, 1985; Stuart, 2010). This approach gives an opportunity to access the impact of exposure on program outcomes through cross-sectional survey data (Rosenbaum and Rubin, 1983; Rubin and Thomas, 1996; Williamson et al., 2012).

Propensity score is estimated by logistic regression, with the dichotomous exposure/treatment variable, for instant, 1 = exposed to FP advice during ANC session; 0 = unexposed to FP advice during ANC using associated observed background characteristics of the women and household as predictor variables. The principal assumption in this method is that conditional of propensity score, the observable selected characteristics of the exposed and control groups have similar distributions (Rosenbaum and Rubin, 1983). This assumption test is applied by using 'ptest' command. Even if this 'balancing' property is satisfied, the study still has to assume that

selection to the exposed group is not based on unobservable characteristics that also affect outcome variables. A better approach would be to match the observable characteristics measured before FP advice received, since these should not be influenced by FP advice.

In this case, difference in unmet need and current use of modern FP methods between exposed and control groups can be directly compared to show the impact of exposure on the exposed group, known as average treatment effect on treated (ATT). Additionally, comparing the difference in unmet need and current use of modern FP methods between control and matched exposed groups can show the impact of exposure on the unexposed, known as average treatment effect on untreated (ATU). These two average effects were weighted by the proportion of women in exposed and control groups, respectively, to arrive at the impact of the service received on unmet need and current use of modern FP, known as average treatment effect (ATE), which measured the increase/decrease in unmet need and current use of FP due to FP advice and maternal health care service utilisation.

The study initially examined the impact of FP advice and maternal health care service utilisation on unmet need and current use of modern FP methods by comparing the unmet need and current use of FP exposed women to service received against that among matched control women. To assess whether the average effect is statistically significant, bootstrapped SE around the estimates (Lechner, 2002; Oakes and Kaufman, 2006) is estimated. The study has used STATA 11.0 (StataCorp, 2009) package for the entire analysis.

Results

Continuum of MCH and FP service utilisation

The Figure 1 shows the continuum of MCH and FP service utilisation in rural Uttar Pradesh at different stages of services. Nearly 63% women have received any ANC, out of those only 29% have delivered their babies in institutions compared to 11% of those who did not receive any ANC.

Among women who had received both prior services, 68% have availed PNC services as compared to 24% among those who have received any ANC and skipped institutional delivery, 62% among those who did not go for any ANC but went for institutional delivery, and 17% among those who did not avail both prior services. Moreover, women who had received all three critical services, 24% are currently using modern contraceptive methods in contrast to 14.0% among who have not availed any MCH services. These results show the prior service utilisation promotes the subsequent service utilisation and finally the continuum of MCH and FP service utilisation.

Contraceptive use and unmet need for FP by different MCH programme variables

The current use of modern contraceptive method among women who have received all MCH services (any ANC, Institutional delivery, PNC) in 2007-08 is 24% in contrast to 17% among those who have not received such services. Moreover, it is 27% among women who have received advice on FP during ANC visit, and is 29% among those who have received advice on FP during PNC. These bivariate results reveal that advice on FP particularly during PNC have motivated women to use modern contraceptive methods. Since there is about 12% effect of

PNC in increase of current use of FP. However, these results do not control women's characteristics.

In addition, contraceptive use by type of method is 16% for spacing and 9% for limiting method among those who have received all MCH services in compare to only about 8% for spacing and 9% for limiting among those who have not receive such services. Moreover, it is 16% (spacing) and 11% (limiting) among those who have received FP advice during ANC visit, and is 18% (spacing) and 11% (limiting) among those who have received FP advice during PNC. These findings suggest MCH services utilisation have influenced FP use particularly of spacing method. In other words, advice during ANC and PNC have been effective to increase CPR for spacing method by 8 % (p<0.01) and 9 % (p<0.01) respectively.

The paper highlights the effect of MCH service utilisation on reducing unmet need for FP through bivariate analysis as shown in Table 1. It reveals that about 35% of women who have received all MCH services have unmet need for FP in compare to 39% who have not received such services. Moreover, nearly 34% women who had received FP advice during ANC or PNC reported unmet need for FP. These bivariate results reveals that all MCH service utilisation and FP advice has marginal effect on unmet need for FP. By type of contraceptive methods, utilisation of MCH services and advice during ANC or PNC visit are more effective in reducing unmet need for FP for limiting methods. These bivariate results reveal the higher effect of MCH service utilisation on use of modern methods; however, these are not effective to reduce unmet need for FP.

The average treatment effect of MCH service utilisation on contraceptive use and unmet need for FP: Results from PSM method

The study estimates the impact of service utilisation on current use of contraception and unmet need for FP by the estimated difference in both the outcomes, between treated (receivers) and the matched control (non-receivers) groups. The utility of this matching analysis is that one get actual impact of the treatment as it controls background variables as well as the characteristics of women who could not be treated/participated which could be the result of selected women receiving services or selection biasness from the health provider side. In fact, Indian study using the same data set reveals that women with lower socio-economic background are less likely to receive MCH counselling (Singh *et al.*, 2012b). Moreover, the effect of the programme on the group who did not participate, that is, if they could have been participated what would be the effect on outcome, is given.

Results from Table 2, the average treatment effect (ATE) of all MCH service utilisation on current use of contraception is 3.7% (p<0.01). Moreover, the ATEs of receiving FP advice during ANC and PNC visit are 7.3% (p<0.01) and 6.8% (p<0.01), respectively. This slight higher effect of ANC is due to the higher effect on untreated group, that is, the effect when the women who did not go could have gone for ANC. On the other hand, ATE of utilisation of all MCH services on reducing unmet need for FP is only 0.5%; however, receiving advice during ANC and PNC have led to reduce unmet need by 3.1% and 1.4% points, respectively. The ATEs of exposure to MCH services by type of method are estimated consistently higher for spacing methods. ATEs of availing all MCH services are 2.9% (spacing) and 0.8% (limiting), of receiving FP advice during

ANC were 4.0% (spacing) and 3.3% (limiting), and of receiving advice during PNC are 3.6% (spacing) and 3.2% (limiting).

The overall message bring out from this analysis is that the MCH service utilisation including FP advice during ANC and PNC visit have led to increase current use of contraception; however, these services have not motivated to decline in unmet need with that pace. Moreover, ATEs of these exposure variables are higher on current use of spacing method than that on limiting method. While by type of method, there is not much difference in ATE of MCH services utilisation (including advice) on unmet need for FP.

Discussions

The research study shows the continuity of different MCH services and FP use by comparing the utilisation of succeeding services between two groups, that is, who have received the prior services and who have not received. Even being a higher priority state of Government programmes, Uttar Pradesh data has shown the lower levels of service utilisation with the higher discontinuation of MCH and FP services (Yadav, 2012). These results show the prior service utilisation promotes the subsequent service utilisation. The highest dropout is observed at the very first level, that is, ANC visit to institutional delivery in rural Uttar Pradesh. If women go for institutional delivery there is high possibility that she will go for PNC. Moreover, use of modern FP is 24% who had availed all prior services (ANC, ID, PNC) in compare to only 14% who had not received any service.

NRHM has increased the level of MCH and FP service utilisation through RCH programme in India(MoHFW, 2005). The approach of integration is cost effective, help in net savings and

benefits assessed by the health system outweigh the initial costs (Rodriguez-Barocio *et al.*, 1980); improved household income, and invest in health, education and well-being(Joshi and Schultz, 2007). The study find the utilisation of critical MCH services (any ANC, institutional delivery, PNC) have been effective to increase subsequent contraceptive use and reduce the unmet need for FP marginally. The increase in FP could be the confounding effect of integration of MCH and FP services in India (Taylor and Parker, 1987; Toth, 2008); however, there is a need to strengthen this integration to reduce unmet need for FP. While comparing by type of methods, MCH service utilisation are more effective in increasing spacing method and reducing unmet need for limiting method.

Research from developing countries indicates that FP advice recipients are more likely to use contraceptive than those who do not receive it (Do and Hotchkiss, 2013). A recent study from developed country among women found counselling regarding FP methods to be more effective in increasing contraceptive use (Lee *et al.*, 2011). Similar results are found in the present research that the advice/counselling on FP during ANC/PNC session has been effective on both contraceptive behaviour outcomes. Moreover, advice/counselling on FP during PNC is found to be more effective to improve contraceptive behaviour as found in previous studies (Fagan *et al.*, 2009; Glasier, Logan and McGlew, 1996; Koenig *et al.*, 1992; Ozvaris, Akin and Yildiran, 1997). However, if the ATE that also includes the counselling effect among women, who have not received such counselling if they could have received it, is considered the effect is higher for ANC visit. In other words, it implies higher impact of advice on FP during ANC visit than any other MCH programme variables. This could be due to the dropout of women with lower socio-economic characteristics at the very early stage of MCH care, that is, ANC and if

they could have come to ANC, CPR could have been much higher. Other research suggest that there is a significant inequality among social groups to receiving advice/counselling on FP during ANC/PNC visit and the poor are less likely to receive these (Singh et al., 2012a; Singh et al., 2012b). The reasons for such anomalies not only depends on system's efficiency but also associated with cultural or social barriers.

In low resources setting such as Uttar Pradesh state in India, health system approach to improving ANC/PNC services should be prioritize with more effective advice or counselling on FP to reduce unintended births. Although, FP advice is part of the routine PNC services, its opportunity to receive information and support for health behaviours such as getting proper guidance on FP use should be provided to all women irrespective of their social background.

Although findings of this study offer important insights into MCH outcomes and its association with contraceptive use and unmet need for FP, these results must be interpreted in the light of study limitations. In DLHS-III, the information on advice during ANC/PNC session was obtained from women and thus might be affected by recall bias. The analysis was also restricted only to the last birth that took place in the three years preceding the survey. In this study, could not examine the quality of PNC services offered in public/private health facilities. Nevertheless, our findings hold important implications for programmes perspective.

Figure 1 Flow chart of process of service utilisation at different levels in rural Uttar Pradesh, 2007-08

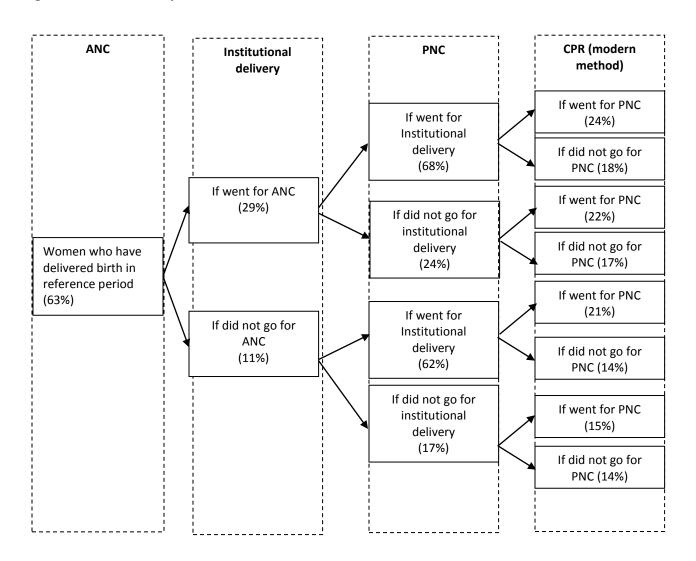


Table 1 Current use of contraceptive and unmet need for family planning methods by selected MCH service utilisation, rural Uttar Pradesh, 2007-08

MCH Service Utilisation variables	Outcome variables								
	Current use of family planning methods			Unmet need for family planning methods					
	Total	Spacing	Limiting	Total	Spacing	Limiting			
ANC, ID & PNC									
No	16.5	8.0	8.5	38.6	10.7	27.8			
Yes	24.2	15.7	8.5	34.8	13.7	21.1			
Difference	7.7†	7.7†	0.0€	-3.8 [†]	3.0 [†]	-6.7 [†]			
Advice received on family planning	methods	during ANC vis	sits						
No	15.9	7.8	8.1	38.8	11.2	27.6			
Yes	26.7	15.9	10.9	33.9	10.4	23.5			
Difference	10.8 [†]	8.1	2.8 [†]	-4.9 [†]	-0.8 ^{††}	-4.1			
Advice received on spacing method	ds of fami	ly planning dur	ing ANC visits						
No	-	7.9	-	-	11.2	-			
Yes	-	16.8	=	-	10.5	-			
Difference		8.9 [†]			-0.7€				
Advice received on limiting method	ds of fami	ly planning dur	ing ANC visits						
No	-	-	8.1	-	-	27.5			
Yes	-	-	11.3	-	-	23.1			
Difference			3.2 [†]			-4.4 [†]			
Advice received on family planning	methods	during PNC vis	sits						
No	16.5	8.2	8.3	38.5	11.1	27.4			
Yes	28.5	17.6	10.9	34.2	11.2	23.0			
Difference	12 [†]	9.4 [†]	2.6 [†]	-4.3 [†]	0.1^{\dagger}	-4.4 [†]			

Note: ANC, antenatal check-up; ID, Institutional delivery; PNC, postnatal check-up; $\chi 2$ test are performed, significance level- $^{\dagger}p$ <0.01, $^{\dagger\dagger}p$ <0.05, $^{\bullet}p$ <0.10

Table 2 Average treatment effect of MCH service utilisation on contraceptive use and unmet need for family planning, rural Uttar Pradesh, 2007-08

Treatment variables	Outcome variables	Treated [#]	Untreated ^{\$}	ATT	ATU	ATE
		(%)	(%)	(%)	(%)	(%)
MCH utilisation (ANC, ID & PNC)	Current use of modern methods	24.3	20.4	3.8	3.7	3.7 [†]
	Current use of spacing methods	15.8	12.4	3.4	2.8	2.9^{\dagger}
	Current use of limiting methods	8.5	8.0	0.4	0.8	0.8
	Unmet need for modern methods	34.7	35.1	-0.3	-0.6	-0.5 [†]
	Unmet need for spacing methods	13.6	11.9	1.6	1.5	1.5
	Unmet need for limiting methods	21.2	23.1	-1.9	-2.1	-2.0 [†]
FP advice/counseling received during	Current use of modern methods	26.7	19.9	6.8	7.4	7.3 [†]
ANC sessions	Current use of spacing methods	15.9	11.8	4.1	4.0	4.0^{\dagger}
	Current use of limiting methods	10.8	8.1	2.7	3.4	3.3^{\dagger}
	Unmet need for modern methods	33.9	36.5	-2.5	-3.2	-3.1 [†]
	Unmet need for spacing methods	10.5	11.7	-1.3	-1.7	-1.6
	Unmet need for limiting methods	23.5	24.8	-1.3	-1.5	-1.5
FP (spacing) advice/counseling received	Current use of spacing methods	16.8	12.3	4.5	4.4	4.4 [†]
during ANC sessions	Unmet need for spacing methods	10.6	11.9	-1.3	-1.6	-1.5€
FP (limiting) advice/counseling received	Current use of limiting methods	11.2	8.2	3.1	4.1	4.0 [†]
during ANC sessions	Unmet need for limiting methods	23.1	24.4	-1.3	-1.8	-1.7 [†]
FP advice/counseling received during	Current use of modern methods	28.6	20.8	7.8	6.8	6.8 [†]
PNC sessions	Current use of spacing methods	17.7	12.9	4.7	3.5	3.6 [†]
	Current use of limiting methods	10.9	7.9	3.0	3.2	3.2 [†]
	Unmet need for modern methods	34.2	36.1	-1.8	-1.3	-1.4 [†]
	Unmet need for spacing methods	11.2	11.7	-0.5	-0.6	-0.6 [†]
	Unmet need for limiting methods	23.0	24.3	-1.4	-0.7	-0.8 [†]

"Treated (exposed to treatment variable); Suntreated (Unexposed to treatment variable); ATT- Average treatment effect among treated; ATU- Average treatment effect among untreated; ATE- Average treatment effect; ANC, antenatal check-up; ID, Institutional delivery; PNC, postnatal check-up; Significance level-†p<0.01, ††p<0.05, €p<0.10

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