Abortion History and its Association with Use of Modern Contraceptive Methods in Luanda, Angola

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Abstract

Background: Women in sub-Saharan Africa often use abortion as a method of limiting their fertility. However, it is not well understood whether having an abortion influences contraceptive behavior. The goal of this study was to examine associations between abortion history and use of a modern contraceptive method among women in Luanda, Angola.

Methods: We analyzed data on 1,167 women aged 15-49 years from a 2012 cross-sectional study conducted in Luanda, Angola. The outcome and exposure were based on participant reports of past abortions and current use of a modern method. We used a modified Poisson regression with robust standard errors to estimate the relative risks of using a modern contraceptive method given abortion history.

Results: Among all respondents, 736 (62.6%) reported using a modern contraceptive method. Women who had a history of abortion were 1.21 times more likely to use a modern contraceptive method as compared to those who never had an abortion (RR: 1.21, 95% CI: 1.09 - 1.34), after adjusting for potential confounders. Post-regression estimations of predicted probabilities demonstrated that women with a history of abortion had an 80% probability of using a modern method (95% CI: 0.76 – 0.84), while those who never had an abortion had a 61% probability of using a modern method (95% CI: 0.59 – 0.62).

Conclusion: Further research is needed to understand the causal factors underlying women's post-abortion contraceptive choices.

Background

Women may be motivated to use contraception after having an abortion in order to prevent future unwanted pregnancies and subsequent abortions[1,2]. However, various socioeconomic factors and access to family planning ultimately influence women's contraceptive behavior, regardless of abortion history[3,4]. Understanding the relationship between abortion and contraceptive use is an important first step in addressing contraceptive unmet need and gaps in access to family planning services.

Research on abortion in sub-Saharan Africa (SSA) suggests that many women use abortion as their primary method of family planning (FP), sometimes instead of other contraceptive methods[5]. This is often the case when abortion policies are extremely restrictive and access to contraceptive methods is similarly limited[5]. Studies from Europe, Asia, and Africa have shown that a key predictor of abortion is previously induced abortion, indicating women are likely not getting access to modern methods after their first abortion to prevent another unintended pregnancy[6,7].

Other studies have demonstrated that having an abortion may in fact lead to increased use of contraception[2]. Research on post-abortion contraceptive behavior suggests that women are more likely to use a modern contraceptive method after an abortion if post-abortion care (PAC) services are offered[8,9]. The mixed evidence from these studies indicates a need for additional research to better understand whether women who have abortions in places where it is not widely available are getting the services they need to prevent future unintended pregnancies and repeat abortions.

Despite some improvements in contraceptive uptake and reduction of unintended pregnancies over the past 15 years, contraceptive prevalence remains low in SSA, particularly in the country of Angola[10]. It is estimated that only about 12% of married women of reproductive age in the country use a modern contraceptive method, as compared to the regional SSA estimate of 26%[10,11]. Furthermore, there is no up-to-date data available on abortion in Angola, in

part due to the fact that abortion is only permitted in instances when the mother's life is in danger[12]. As a result, there have been few studies focusing on the contraceptive behaviors of Angolan women who have had abortions. Understanding this relationship is imperative to improving the state of access to family planning services in the country.

The aim of the present study was to investigate the relationship between abortion history and current use of a modern contraceptive method among women in Luanda, Angola.

Methods

Data Collection

The data used for this analysis was obtained from a cross-sectional study conducted in Luanda, Angola in 2012. At the time of the study, this province encompassed nine municipalities including the capital city of Angola. Two of the nine municipalities were rural communities while the other seven were urban.

The study population was women aged 15-49 years who resided in the Luanda Province in October through November of 2012. SINFIC (Sistemas de Informação Industriais e Consultoria), a local marketing firm, collected the questionnaire data on behalf of the University of California, Berkeley Bixby Center for Population, Health, and Sustainability (Bixby Center) and Population Services International (PSI) Angola. A multistage random sampling design was used to capture a representative sample of women of reproductive age from the Luanda province. The sample size was first distributed proportionally to the population size of each municipality. Sampling points, such as churches, hospitals, gas stations, etc., were then determined for each municipality and varied in proportion to the municipality population size. A fixed number of participants were randomly selected from each sampling point and one woman from each household was interviewed. All women who agreed to participate provided verbal consent prior to the interview, and interviewers signed to confirm that consent was given. Ethical approval for this study was provided by the University of California, Berkeley Committee for

Protection of Human Subjects, as well as the Ethical Committee at the Instituto de Saude Publica in Luanda, Angola.

The data collection tool was developed by researchers at the Bixby Center and drew from the Women's Questionnaire of the Demographic and Health Surveys and Angola's Malaria Indicatory Survey[13]. The final tool also included additional standardized questions from the PSI Tracking Results Continuously survey tools[14]. A questionnaire was designed to capture information on women's knowledge, attitudes, and practices related to childbearing and family planning in the region. In addition, women were asked about their experiences and preferences with family planning service provision and delivery. Socio-demographic and economic indicators were also recorded. The data collection tool was initially written in English and translated to Portuguese by the research team, with feedback from PSI Angola. The research team conducted a pilot test of the questionnaire with 30 women of reproductive age in Luanda. Feedback from this initial round was incorporated into the final Portuguese version, which was later back translated into English.

Interviewers randomly selected a fixed number of participants from each sampling point and invited one woman from each household to complete the questionnaire. 1,825 total women of reproductive age living in Luanda were asked to participate in the interview. Of these women, 85% completed questionnaire, 8% started but did not complete, 6% refused to participate, and 2% did not participate due to other reasons.

Variables

The primary dependent variable of interest was the type of contraceptive method the respondent reported using at the time of the study. Each participant reported using one of the following methods: intrauterine device (IUD), implant, injectable, pill, condom, traditional methods (rhythm, lactational amenorrhea method, or withdrawal), or no method. In cases where multiple contraceptive methods were listed, the participant was categorized into the most effective method she reported using. The final outcome variable was then collapsed and coded

as a binary variable for modern methods or traditional / no method. Modern contraceptive methods were defined as contraceptive devices or medications that are used to prevent pregnancy, and thereby included the condom, pill, injectable, implant, and IUD[15].

The primary independent variable, abortion history, was coded as "no abortions" and "one or more abortions." The primary analysis grouped women who reported having a single abortion with those who had multiple procedures due to the rarity of the exposure in our study sample (9.94%).

Additional study variables were constructed and included in the fully adjusted model based on evidence from the literature indicating their role as potential confounders in the study relationship. Socio-demographic and individual factors included age, marital status, education, number of living children, and wealth. The final wealth variable was divided into quintiles and constructed with PCA using the standard PSI toolkit for creating wealth indices[16]. The questionnaire also asked respondents whether they believed contraceptives were accessible to them, measured as a binary "yes" or "no" variable.

Variables for contraceptive self-efficacy, knowledge of contraceptive methods, and community perceptions around family planning were constructed using principal components analysis (PCA) following the PSI PCA toolkit guidelines[17]. For contraceptive self-efficacy, data was collected for a predetermined list of indicators that measured capability of using contraceptives, ability to use methods correctly and consistently to space births, communicate about preventing pregnancy, and negotiate contraceptive use in the face of husband or partner opposition.

Knowledge of contraceptive methods was measured a predetermined set of indicators pertaining to respondents' knowledge of different types of contraceptive methods, including proper use and side effects. Respondents were asked to list all modern contraceptive methods they knew, how they used their own prescribed method, and common side effects of their prescribed method.

Lastly, the variable for community perception was created using 26 questions in a 5-point Likert-scale format to determine community acceptability of family planning use. Respondents answered questions on whether they were able to discuss family planning and contraceptive use with various community members, which included partners, siblings, parents, in-laws, religious leaders, and friends. Response options ranged from "completely disagree" to "completely agree," which were later recoded as "agree / disagree" binary variables for the PCA.

Statistical Analysis

For this analysis, we excluded respondents who did not complete the survey [n = 280] or who were not at-risk of the outcome, meaning they would not be using a contraceptive method. This included women who were not sexually active [n = 129], were pregnant at the time of the study [n = 123], actively trying to get pregnant [n = 32], or infecund or sterilized [n = 69]. We excluded respondents who did not answer all questions for which variables were constructed for this analysis [n = 16]. It was possible to utilize complete-case analysis because these excluded respondents accounted for less than 10% (1.35%) of the final group eligible for analysis. Women who reported wanting another pregnancy at any point in the future were included the study since they may have been using a contraceptive method at the time they were interviewed in order to space their births. The final sample size used in the analysis was 1,176.

We examined descriptive statistics to explore dependent and independent variables of interest. Bivariate analysis using chi-square tests examined differences across the proportions of women who used a modern contraceptive method, by abortion history and each covariate included in the adjusted model.

We used a Poisson regression with robust standard errors to approximate the relative risk of using a highly effective method among women who had at least one abortion compared to those who had no abortions. A logistic regression would likely have resulted in inflated measures of association because the outcome was common in the study population (21.5%). A

log-binomial model was initially used to fit the data, but due to a lack of convergence, we used a Poisson model with robust standard errors in order to estimate relative risk[18].

Models were constructed *a priori* based on findings from the background literature and variables for which we had collected data. The final, fully adjusted model included all potential confounders for which we had collected information; age, marital status, access, knowledge, wealth, education, community perception, and contraceptive self-efficacy.

Post model estimations of predicted probabilities for abortion history were calculated to determine the probability of use of a modern method among women who had zero (0) abortions and among those who had one or more. Statistical significance was set at a cut-off value of $p < 0.05$. All analyses were done in Stata 14.[19].

Results

Table 1 presents all independent variables by the contraceptive method each respondent reported using at the time of the survey. Of the 1,176 women included in the final analytical sample, only 116 (9.94%) women reported having had one or more induced abortions. Bivariate analysis demonstrated a statistically significant difference across one or more contraceptive categories for all covariates ($p < 0.05$).

The most commonly used method by women who reported having an abortion was condoms (32.76%), while the most common method reported by those who had no abortions was no method (39.01%) (Table 2). Among the 116 women who had an abortion, only 6 (5.17%) were using an implant or IUD, which collectively represented the long-acting contraceptive methods (LARC). A smaller percentage of women used LARCs in the "no abortions" category (2.47%).

We assessed bivariate results of use of a modern contraceptive method by abortion history (Table 3). Among those who had one or more abortions, 12.64% were using a modern method at the time of the interview, as opposed to 5.23% who were not. Based on chi-square

analysis, we found a significant difference ($p < 0.05$) between women using a modern method and not using a modern method for all covariates measured, except for contraceptive self-efficacy ($p = 0.210$).

Table 4 displays results from the Poisson regression with robust standard errors, which demonstrated that women who had one or more abortions were 1.21 times more likely to use a modern contraceptive method as compared to those who never had an abortion (95% CI: 1.10 – 1.34, $p < 0.001$). Women who were older, reported having access to contraceptives, and had high community acceptability of FP use were also more likely to use a modern contraceptive method.

We then calculated the fully adjusted post-regression predicted probabilities of using a modern contraceptive method, for women who had no abortions and for women who had one or more abortions. Women who had never had an abortion had a 61% predicted probability of using a modern method (95% CI: 0.59 – 0.62), while those who had one or more abortions had an 81% predicted probability of using a modern method (95% CI: 0.76 – 0.84). The lack of overlap between the 95% confidence intervals of the two exposure groups indicates a significant difference in use of modern methods; as demonstrated in the regression results, women who had one or more abortions were more likely to use a modern method.

Conclusion

This study found that among women in Luanda, Angola, past abortion was significantly associated with current use of a modern contraceptive method. These results demonstrate women who had abortions were likely more motivated to prevent further unwanted pregnancies, and likely had access to modern methods.

Prior studies conducted in other various settings have reported similar findings and potential reasons for this association. A systematic review of nine publications on low- and middle-income countries found that contraception uptake increased post-abortion when there

was access to a wide range of contraceptive methods and comprehensive sexual and reproductive health education[9]. A study by Benson et al. also found that offering a wide range of contraceptive methods at health clinics improved post-abortion modern contraceptive uptake[20].

Though we cannot make inferences on whether the subjects of our study were seen for post-abortion care, this particular element of FP service provision has been shown to improve uptake of modern methods[21]. A prospective intervention study in Zimbabwe also demonstrated increased uptake of modern methods and significantly fewer unplanned pregnancies when PAC family planning was offered[8]. Post-abortion care services may have been available and accessible to the respondents in this study, which led to the higher modern method use observed among women who had an abortion.

It is important to note that the most commonly selected method among women in our study sample who had one or more abortions was condoms. Though condoms are classified as a modern method and can be highly efficacious when used correctly, they have high failure rates and thereby a low effectiveness (up to 18 pregnancies per 100 women per year)[22]. It is therefore difficult to conclude that women in our study who had an abortion were using a method that would effectively prevent another unwanted pregnancy. In addition, our results demonstrated that women who had no abortions most commonly reported using no method, despite responding that they were sexually active and not actively trying to get pregnant. Misinformation or skepticism about certain methods can impede uptake of more effective contraceptives, namely LARCs[23]. Family planning interventions should focus on improving access to more highly effective methods in order to reduce the rates of unwanted pregnancies.

Further research is needed to understand to what extent abortion influences contraceptive uptake in sub-Saharan Africa, as well as how to tailor interventions to offer a wide variety of modern methods to populations that have limited access to FP care services and want to prevent unwanted pregnancies. Prospective studies examining contraceptive use prior to and after an abortion would be more informative in understanding how abortion could directly

influence women's contraceptive practices[24]. Studies with larger sample sizes could potentially assess use of different types of contraceptive methods, such as long-acting reversible contraceptives (LARC), or examine differences among women who had multiple abortions. This study sample did not have adequately large cell sizes (< 10 observations) to be able to make statistical inferences on these particular assessments. Ultimately, studies that are designed to assess the causal factors underlying the relationship between abortion and contraceptive use are needed for increasing uptake of modern methods in Angola.

A major limitation of our study is its cross-sectional design, which does not allow us to establish causality. It is unknown when in time the respondent began using her current contraceptive method relative to when she had an abortion. Though modern methods prevent pregnancies at a greater rate than traditional methods, they may still fail and lead to an unintended pregnancy. We do not know if the respondent had an abortion as a result of method failure or because she was not using any contraceptive method. This does not allow us to establish temporality between the primary exposure and outcome of interest and prevents us from being able to make causal inferences.

This study had other limitations and potential sources of bias. The study population was women in the province of the capital city of Angola, which may not be generalizable to rural or other urban areas of the country. In addition, there may have been information bias due to misclassification of study participants who reported using multiple contraceptive methods. Respondents were grouped into "no method / traditional" and "modern" contraceptive methods based on the most effective method they were using at the time. This may not be reflective of the method they used most frequently, resulting in women who reported using both types of contraceptives being more frequently misclassified as using a modern method. This could lead to non-differential misclassification of the outcome, as it would have occurred independently of the exposure, and result in bias of the measure of association towards the null.

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This study also had several strengths. There are, to date, no comprehensive reports containing information about abortion in the country of Angola. The Demographic and Health Survey (DHS) for Angola includes information about family planning and fertility, but does not include nationwide abortion facts or statistics[25]. Prior abortion estimates have come from small studies or extrapolated figures from other countries in SSA, where it was most recently estimated that there are 34 abortions per 1,000 women of reproductive age[26]. This study demonstrated that these figures might be underestimates of urban centers; in our analytical sample alone, there were 99 abortions per 1,000 women. It is difficult to get accurate abortion information because many abortions in SSA are performed illegally and women usually underreport abortion[26]. The fact that our data reflect a much higher number than region averages leads us to believe there was minimal social desirability bias in our study.

Results from our study provide basic insight into Angolan women's contraceptive behavior and its relationship with abortion history. These results contribute to the growing body of evidence on abortion and contraceptive use in a country with so little information on the topic. Data from this analysis can inform future studies that examine what aspects of abortion might influence use of modern contraceptives in Angola, with the intention of implementing these practices to increase access to effective methods.

Tables & Figures

Table 1. Distribution of contraceptive method type by study covariates

	No Method		Traditional		Condom		Pill		Injectable		Implant		IUD		Total		p-value
	N = 432	%	N = 8	%	N = 412	%	N = 130	%	N = 153	%	N = 21	%	N = 11	%	N = 1,167	%	
Abortion																	< 0.001
0	410	94.91	7	87.5	374	90.78	106	81.54	128	83.66	16	76.19	10	90.91	1,051	90.06	
1+	22	5.09	1	12.5	38	9.22	24	18.46	25	16.34	5	23.81	1	9.09	116	9.94	
Age																	< 0.001
15-19	177	40.97	1	12.50	131	31.80	9	6.92	5	3.27	1	4.76	0	0.00	324	27.76	
20-24	95	21.99	1	12.50	152	36.89	35	26.92	18	11.76	6	28.57	0	0.00	307	26.31	
25-34	106	24.54	4	50.00	102	24.76	61	46.92	66	43.14	5	23.81	5	45.45	349	29.91	
35+	54	12.50	2	25.00	27	6.55	25	19.23	64	41.83	9	42.86	6	54.55	187	16.02	
Marital Status																	< 0.001
Single	324	75.00	4	50.00	333	80.83	68	52.31	39	25.49	5	23.81	5	45.45	778	66.67	
Married / Cohabitating	89	20.60	4	50.00	70	16.99	55	42.31	101	66.01	15	71.43	4	36.36	338	28.96	
Divorced / Widowed	19	4.40	0	0.00	9	2.18	7	5.38	13	8.50	1	4.76	2	18.18	51	4.37	
Access																	< 0.001
No	213	49.31	4	50.00	83	20.15	22	16.92	22	14.38	4	19.05	2	18.18	350	29.99	
Yes	219	50.69	4	50.00	329	79.85	108	83.08	131	85.62	17	80.95	9	81.82	817	70.01	
Contraceptive Self-Efficacy																	0.011
1 (lowest self-efficacy)	132	30.56	2	25.00	124	30.10	31	23.85	27	17.65	4	19.05	2	18.18	322	27.59	
2	236	54.63	4	50.00	233	56.55	74	56.92	90	58.82	9	42.86	6	54.55	652	55.87	
3 (highest self-efficacy)	64	14.81	2	25.00	55	13.35	25	19.23	36	23.53	8	38.10	3	27.27	193	16.54	
Knowledge of Contraceptives																	< 0.001
1 (least knowledgeable)	46	10.65	1	12.50	25	6.07	13	10.00	10	6.54	0	0.00	2	18.18	97	8.31	
2	225	52.08	4	50.00	184	44.66	47	36.15	64	41.83	3	14.29	3	27.27	530	45.42	
3 (most knowledgeable)	161	37.27	3	37.50	203	49.27	70	53.85	79	51.63	18	85.71	6	54.55	540	46.27	
Education																	< 0.001
No education / primary school	214	49.54	2	25.00	122	29.61	51	39.23	86	56.21	8	38.10	3	27.27	486	41.65	
Secondary school	166	38.43	5	62.50	217	52.67	55	42.31	44	28.76	8	38.10	5	45.45	500	42.84	
University or higher	52	12.04	1	12.50	73	17.72	24	18.46	23	15.03	5	23.81	3	27.27	181	15.51	
Wealth Quintiles																	0.003
1 (poorest)	96	22.22	2	25.00	53	12.86	35	26.92	31	20.26	4	19.05	3	27.27	224	19.19	
2	100	23.15	1	12.50	66	16.02	32	24.62	28	18.30	4	19.05	1	9.09	232	19.88	
3	82	18.98	3	37.50	88	21.36	22	16.92	34	22.22	6	28.57	1	9.09	236	20.22	
4	82	18.98	1	12.50	93	22.57	18	13.85	32	20.92	5	23.81	2	18.18	233	19.97	
5 (richest)	72	16.67	1	12.50	112	27.18	23	17.69	28	18.30	2	9.52	4	36.36	242	20.74	
Community Perceptions of FP Use																	< 0.001
1 (least acceptable)	83	19.21	0	0.00	40	9.71	22	16.92	10	6.54	2	9.52	2	18.18	159	13.62	
2	305	70.60	5	62.50	316	76.70	84	64.62	103	67.32	10	47.62	7	63.64	830	71.12	
3 (most acceptable)	44	10.19	3	37.50	56	13.59	24	18.46	40	26.14	9	42.86	2	18.18	178	15.25	
Number of Living Children																	< 0.001
0	5	1.16	0	0.00	1	0.24	0	0.00	0	0.00	0	0.00	0	0.00	6	0.51	
1-2	123	28.47	5	62.50	108	26.21	74	56.92	80	52.29	13	61.90	5	45.45	408	34.96	
3+	304	70.37	3	37.50	303	73.54	56	43.08	73	47.71	8	38.10	6	54.55	753	64.52	

Table 2. Percentage breakdown of type of contraceptive method by abortion history.

Percentage by Contraceptive Method Currently Using

	No Method		Traditional		Condom		Pill		Injectable		Implant		IUD		p-value
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Abortion															< 0.001
0	410	39.01	7	0.67	374	35.59	106	10.09	128	12.18	16	1.52	10	0.95	
1+	22	18.97	1	0.86	38	32.76	24	20.69	25	21.55	5	4.31	1	0.86	
Total	432	37.02	8	0.69	412	35.3	130	11.14	153	13.11	21	1.8	11	0.94	

Table 3. Use of a modern contraceptive method by study covariates.

	Currently Using a Modern Method						p-value
	No		Yes		Total		
	N = 440	%	N = 736	%	N = 1,176	%	
Abortion							< 0.001
0	417	94.77	643	87.36	1,060	90.14	
1+	23	5.23	93	12.64	116	9.87	
Age							< 0.001
15-19	178	40.45	146	19.84	324	27.55	
20-24	96	21.82	213	28.94	309	26.28	
25-34	110	25.00	242	32.88	352	29.93	
35+	56	12.73	135	18.34	191	16.24	
Marital Status							< 0.001
Single	328	74.55	455	61.82	783	66.58	
Married / Cohabitating	93	21.14	249	33.83	342	29.08	
Divorced / Widowed	19	4.32	32	4.35	51	4.34	
Access							< 0.001
No	217	49.32	138	18.75	355	30.19	
Yes	223	50.68	598	81.25	821	69.81	
Contraceptive Self-Efficacy							0.210
1 (lowest self-efficacy)	134	30.45	192	26.09	326	27.72	
2	240	54.55	415	56.39	655	55.70	
3 (highest self-efficacy)	66	15.00	129	17.53	195	16.58	
Knowledge of Contraceptives							< 0.001
1 (least knowledgeable)	47	10.68	53	7.20	100	8.50	
2	229	52.05	304	41.30	533	45.32	
3 (most knowledgeable)	164	37.27	379	51.49	543	46.17	
Education							< 0.001
No education / primary school	216	49.09	275	37.36	491	41.75	
Secondary school	171	38.86	332	45.11	503	42.77	
University or higher	53	12.05	129	17.53	182	15.48	
Wealth Quintiles							0.010
1 (poorest)	98	22.27	128	17.39	226	19.22	
2	101	22.95	132	17.93	233	19.81	
3	85	19.32	153	20.79	238	20.24	
4	83	18.86	154	20.92	237	20.15	
5 (richest)	73	16.59	169	22.96	242	20.58	
Community Perceptions of FP Use							< 0.001
1 (least acceptable)	83	18.86	77	10.46	160	13.61	
2	310	70.45	526	71.47	836	71.09	
3 (most acceptable)	47	10.68	133	18.07	180	15.31	
Number of Living Children							0.001
0	5	1.14	1	0.14	6	0.51	
1-2	128	29.09	281	38.18	409	34.78	
3+	307	69.77	454	61.68	761	64.71	

Table 4. Relative risk of using a modern contraceptive method by abortion history.

Risk of using a modern method, given abortion history	Using a modern method		
	RR	95% CI	p-value
Abortion			
0	1 (ref)	-	-
1+	1.21	1.09 - 1.34	< 0.001
Age			
15-19	1 (ref)	-	-
20-24	1.41	1.23 - 1.62	< 0.001
25-34	1.35	1.16 - 1.56	< 0.001
35+	1.38	1.17 - 1.62	< 0.001
Marital Status			
Never married	1 (ref)	-	-
Ever married	1.04	0.94 - 1.15	0.464
Access			
No	1 (ref)	-	-
Yes	1.75	1.53 - 2.00	< 0.001
Knowledge			
1 (least knowledgeable)	1 (ref)	-	-
2	0.96	0.79 - 1.16	0.668
3 (most knowledgeable)	1.09	0.90 - 1.32	0.382
Education			
No education / primary school	1 (ref)	-	-
Secondary school	1.10	1.00 - 1.22	0.051
University or higher	1.06	0.93 - 1.21	0.369
Wealth Quintiles			
1 (poorest)	1 (ref)	-	-
2	0.93	0.81 - 1.08	0.363
3	1.06	0.92 - 1.21	0.436
4	1.03	0.90 - 1.19	0.646
5 (richest)	1.04	0.91 - 1.20	0.546
Community Perceptions of FP Use			
1 (least acceptable)	1 (ref)	-	-
2	1.14	0.96 - 1.34	0.136
3 (most acceptable)	1.27	1.05 - 1.53	0.012
Number of Living Children			
0	1 (ref)	-	-
1-2	3.47	0.58 - 20.89	0.174
3+	3.60	0.60 - 21.71	0.162

Table 5. Predicted probabilities of using a modern contraceptive method by abortion history.

| Abortion | Currently using a modern method | |
	Adjusted† predicted probability	95% CI
0	0.61	0.59 - 0.62
1+	0.80	0.76 - 0.84

† Age, marital status, access, knowledge, education, wealth, community perceptions, number of living children

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