The effect of method specific attributes on contraceptive discontinuation and switching: Analysis of longitudinal data from Nairobi and Homa Bay in Kenya.

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Abstract

While studies of the determinants of contraceptive discontinuation are less consistent across countries and regions, there is a lack of comprehensive framework that addresses the multiple and complex reasons that influence the decision to stop or switch using a method. In particular, there are few studies that examined how method specific beliefs influence the decision to discontinue or switch a contraception. We examine the extent to which transition from current use to past use is associated with method specific beliefs using data from two rounds of a prospective longitudinal study on 'Improving Measurement of Unintended Pregnancy' (STEP UP) collected from married women ages 15-39 years from Nairobi and Homa Bay County. Detailed information on respondent's characteristics, fertility preferences, contraceptive behavior and method related attributes/beliefs on six modern contraceptive methods and Calendar data were collected. Data analysis involves both single and multiple decrement life-table analysis.

Preliminary results show that while contraceptive use is fairly high in the two sites, contraceptive discontinuation is also high exposing women to unintended pregnancies. The twelve month discontinuation rate for all methods was 36.5%, and the probability of method switching during the same period was 16.9%. The most common method specific attributes and beliefs reported included method causes infertility, it is unsafe to use a method for a long time without break, method interferes with menstruation and method causes side effects. Such method related concerns and beliefs contributed to nearly 52% of the overall discontinuation rate. Higher discontinuation rates were observed among users of traditional and short-term methods compared to users of long-acting and reversible methods. These findings call for improved family planning counselling by providing accurate information on how contraceptive methods work, the side effects of each method and the benefits associated with them.

Background

A large body of research on contraceptive discontinuation using Demographic and Health Surveys (DHS) is available from developing countries. Evidence from these sources indicate that contraceptive discontinuation is a common problem in developing countries. Analysis of DHS data from 19 developing countries showed that on average, 38% of women discontinue using reversible methods by the 12th month of initiation [3]. Such high rates of contraceptive

discontinuation for reasons other than a desire for pregnancy is a public health concern because of its association with negative reproductive health outcomes [2, 6]. It contributes to higher fertility rates, unwanted pregnancies and abortions with adverse effects on maternal, neonatal and child health outcomes [7-9].

While studies of the determinants of contraceptive discontinuation are less consistent across countries and regions, there is a lack of comprehensive framework that addresses the multiple and complex reasons that influence the decision to stop or switch using a method. In particular, there are no studies that examined how method specific beliefs influence the decision to discontinue or switch a contraception. This study examines the extent to which transition from current use to past use is associated with changes in method-specific beliefs.

Methods

We use longitudinal data from two rounds of a prospective study on 'Improving Measurement of Unintended Pregnancy' (STEP UP) collected from married women ages 15-39 years (5236 at round 1 and 4290 at round 2) from Nairobi Urban Demographic and Health Surveillance Site (NUHDSS) and Homa Bay County in 2016 and 2017 respectively. The Nairobi study was nested in the NUDHSS implemented by the African Population and Health Research center (APHRC) where households are visited twice a year to collect data on key socio-demographic and health indicators. The Homa Bay study, done by the Population Council, used a multi-stage cluster sampling design to identify households and individual respondents. Information on respondent's socio-demographic characteristics, fertility preferences, contraceptive behavior and method related attributes/beliefs on six modern contraceptive methods were collected during round 1 and round 2 surveys. Moreover, calendar data were collected during the second round survey asking women all episodes of contraceptive use during the preceding one year. The calendar data included retrospective records of births, pregnancies and contraceptive use. Women were asked about their contraceptive use status retrospectively and for any month in which the women reported discontinuing contraceptive use, she was asked for the primary reasons for stopping the method. Data analysis involved both single and multiple decrement life-table analysis.

Results

The proportion of women who were using a method of contraception improved slightly between round 1 and round 2 for both sites (74% to 77% in Nairobi and 64.5% to 64.7% in Homa Bay) respectively. However, contraceptive method mix has not changed much except for slight increases in the proportion of women using Pill in Nairobi and Implant in Homa Bay. Injectables and Implants are the most commonly used methods in both Nairobi and Homa Bay (Table 1).

Method	Nairobi				Homa Bay			
	Round 1 (2016)		Round 2 (2017)		Round 1 (2016)		Round 2 (2017)	
	(%)	No.	(%)	No.	(%)	No.	(%)	No.
Pill	8.3	233	11.1	244	2.5	61	2.5	53
Injectable	32.3	907	32.7	722	26.7	647	26.5	551
Implant	19.5	549	19.4	428	17.8	432	20.6	430
IUD	1.8	51	2.0	44	0.5	11	0.7	14
Sterilization	0.9	24	0.2	4	2.7	66	0.4	8
Condom	1.7	47	1.2	27	8.7	210	9.9	207
Rhythm	6.0	170	7.0	154	3.4	83	3.2	67
Other	3.7	103	3.6	79	2.2	53	0.9	19
Pregnant	6.7	188	6.1	135	10.0	243	8.8	183
Not using	19.2	540	16.8	370	25.5	618	26.5	551
Total	100.0	2,812	100.0	2,207	100.0	2,424	100.0	2,083

Table 1 : Contraceptive Prevalence among married and cohabiting women by method at round 1 and round 2 by site, Nairobi & Homa Bay ,Kenya

NB: Analysis will include all women interviewed at R1 and R2

Preliminary results show that while contraceptive use is fairly high in the two sites, contraceptive discontinuation is also high exposing women to unintended pregnancies. The twelve month discontinuation rate for all methods combined was 36.5%, with more women from Homa Bay discontinuing than women from the Nairobi slums (43.3% vs 32.2%). The probability of method switching during the twelve month period was 16.9% with more episodes of switching in Nairobi than Homa Bay. The most common method specific attributes and beliefs reported included method causes infertility, it is unsafe to use a method for a long time without break, method interferes with menstruation and method causes side effects. Side effects, health concerns and other method related concerns contributed to 43% of the overall discontinuation rate. Other main reasons for discontinuation included desire to become pregnant and wanting more effective methods. Higher discontinuation rates were observed among users of traditional and short-term methods compared to users of long-acting and reversible methods.

(Results from multiple decrement lifetables examining the effects of method related beliefs on discontinuation will be finalized soon)

These findings call for improved family planning counselling by providing accurate information on how contraceptive methods work, the side effects of each method and the benefits associated with them.

Table 3: Twelve month probabilities of discontinuation per 100 episodes of method use, by method and characteristics of users, Nairobi & Homa Bay, Kenya, 2017

Method	Method failure	Desire to become pregnant	Other fertility related reasons	Side effects or health concerns	Wanted more effective method	Other method related reasons	Other reasons	Any reason	Switched to another methods	Number of episodes of use
Implants	0.9	2.8	0.2	12.5	0.0	0.7	3.6	19.6	11.3	**1063**
Injectable	3.4	5.8	2.0	20.1	1.8	3.8	4.1	35.8	16.5	**1856**
Pill	9.3	10.5	5.5	19.8	6.5	10.7	4.5	51.9	26.9	**445**
Condom	7.5	10.3	10.4	1.1	18.2	14.3	8.6	53.8	26.6	**376**
Rhythm	7.4	11.8	2.1	0.0	14.3	2.1	5.6	37.1	21.3	**314**
Others	4.6	5.4	0.8	5.7	15.8	6.7	11.4	41.8	24.2	**315**
Total	**4.2**	**6.3**	**2.7**	**14.0**	**5.8**	**4.9**	**5.1**	**36.5**	**16.9**	**4369**