Title

Fertility preferences and family planning intentions among Kenyan women: the influence of pregnancy and childbirth experiences

Authors

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Abstract

The study examines the influence of pregnancy and childbirth experiences on women's reports of fertility preferences and family planning (FP) intentions. We used data collected between January 2012-April 2013 from a cohort of pregnant women in Nyanza Province, Kenya. The study is on-going; this analysis is restricted to 575 women with completed baseline (early pregnancy) and endline (1-6 weeks postpartum) questionnaires. We observed a greater degree of agreement between baseline and endline reports of fertility preferences (kappa=0.65) than reports of FP intentions (kappa=0.56). Reports at 1-6 weeks postpartum than early during pregnancy showed that fewer women intended to limit and more wanted to space childbearing for >2 years; consequently, more women intended to use injectables or LARC, and fewer intended to use other modern methods or be sterilized. Findings demonstrate the importance of assessing women's experiences with pregnancy complications and childbirth to inform postpartum FP counseling and specific method choices.

Extended Abstract

Background and Significance

Women's reports of fertility preferences and family planning use intentions are often inconsistent, yet few recent studies have examined this incongruence. While much attention has been given to the wording of fertility preference questions in surveys, there has been less attention given to the timing of ascertainment of fertility preferences. Data from pregnant women are not usually analyzed separately from those from non-pregnant or postpartum women, and thus, whether women's fertility preferences ascertained during pregnancy differ from those assessed in the postpartum period is unknown. Discordant reports on both fertility preferences and family planning use intentions at these two times may also be associated with the index pregnancy outcome and women's experiences during pregnancy and childbirth, but no study to date has examined such associations.

The two main research questions for this study are:

1) Do women's future fertility preferences differ depending on when this information is ascertained: early during pregnancy or 1-6 weeks postpartum?
2) Are women's future fertility preferences congruent with their reports of family planning use intentions early during pregnancy and 1-6 weeks postpartum?

Methods

We used data collected between January 2012-April 2013 from a cohort of pregnant women in Asembo and Gem districts covered by the Health and Demographic Surveillance System in Nyanza Province,

Kenya. All pregnant women <20 weeks gestation in the study areas were invited to participate in an on-going study to examine use of maternal health services. Women were interviewed upon enrollment (baseline interviews completed; n1=1,162), at 30-32 weeks gestation (follow-up interviews on-going; n2=896), and 1-6 weeks of the end of pregnancy irrespective of outcome (endline interviews on-going; n3=575). This analysis is restricted to the 575 women with completed endline questionnaires by April 2013. Identical fertility and family planning intentions questions were asked at baseline and endline. We calculated the level of agreement (kappa-statistic) between women's reports of fertility preferences (space ≤2 years, space >2 years, limit childbearing, unsure) and family planning intentions (no method, injectables, LARC, other modern methods such as pills, condoms, spermicides, female sterilization, traditional methods, unsure) at endline versus baseline. Bivariate analyses were performed to examine the congruence between fertility preferences and family planning use intentions at baseline and endline.

Among women who shifted their family planning use intentions from one method at baseline to any other method at endline, we further explored family planning intention shifting *to* and *from* injectables, the most prevalent contraceptive method intended for use in this population; sample size limitations prevent us from examining family planning intention shifting *to* and *from* any other method. Thus, as a sub-analysis, we also addressed the following research question: What are the predictors of family planning intention shifting *to* and *from* injectables, compared to shifting family planning intentions *to* and *from* any other method, respectively. Among the 306 women who switched their family planning intentions between baseline and endline, we fitted separate logistic regression models for women's intention to switch *to* and *from* injectables for all women and for women with a live-birth. Models for all women were adjusted for gestational age at baseline, fertility preferences at endline, age, gravidity, marital status, education, religion, HIV treatment during pregnancy, any pregnancy complication, main decision-maker regarding contraceptive use, and pregnancy outcome; models for women with a live-birth were additionally adjusted for place of delivery and self-rated birth experience.

Key findings

We observed a greater degree of agreement between baseline and endline for fertility preferences (kappa=0.65) than for family planning use intentions (kappa=0.56) (Table 1). Overall, 42.4% and 53.2% of women reported changes in their fertility preferences and family planning use intentions between baseline and endline, respectively. In the postpartum period compared with early during pregnancy (<20 wks gestation), significantly fewer women intended to limit childbearing (34.8% vs 43.5%) and more wanted to space childbearing for >2 years (43.1% vs 37.4%); consequently, more women intended to use injectables (52.0% vs 48.9%) and LARC (12.9% vs 5.9%), and fewer intended to use other modern methods (7.7% vs 11.5%) or be sterilized (4.9% vs 10.8%).

More specifically, among women who reported wanting to limit childbearing at both times points, 8.8% and 23.6% reported wanting to use LARC and be sterilized, respectively, when interviewed early in pregnancy; 22.5% and 12.5% of women provided these answers, respectively, when interviewed 1-6 weeks postpartum (Table 2). Of women who reported wanting to space childbearing for ≤2 years at both time points, 29.4% and 39.0% also reported not wanting to use a family planning method when interviewed early during pregnancy and 1-6 weeks postpartum, respectively. Notably, among women who reported wanting to space childbearing for >2 years at both time points, 61.5% reported wanting to use injectables or LARC when interviewed early in pregnancy compared to 76.6% providing these answers when interviewed 1-6 weeks postpartum.

Overall, 20.5% of women changed their family planning use intention *to* and 17.4% *from* injectables. Women who switched their use intention *from* injectables at baseline to any other method at endline

were almost 3 times more likely to be gravida 2/3 than gravida 1, and 1.7 (95% CI: 1.04-2.80; all women model) and 1.98 (95% CI: 1.18-3.32); women with a live-birth model) times more likely to have experienced pregnancy complications (Table 3). Women who switched their use intention *to* injectables at endline from any other method at baseline were more likely to do so with each additional gestational week at baseline and if gravida 4+ than gravida1; also, they were 2.48 (95% CI:1.39-4.42; all women model) and 2.42 (95% CI: 1.31-4.48; women with a live-birth model) times more likely to report wanting to space for >2 years than limit childbearing. In addition, women with a live-birth were 2.19 (95% CI: 1.00, 4.85) times more likely to have neutral views on their birth experience than to report a good/very good birth experience.

Discussion and implications

To our knowledge, this is the first study to show the incongruence between women's future fertility preferences and family planning use intentions ascertained during pregnancy versus in the postpartum period. Our findings highlight the need for ascertainment of fertility and family planning preferences as close to the time of women's choosing a contraceptive method postpartum as possible. Moreover, the findings demonstrate the importance of assessing women's experiences with pregnancy complications and childbirth to inform postpartum family planning counseling needs and specific method choices. Because Kenyan women, especially those living in Nyanza province, continue to experience a high unmet need for contraception, understanding how their pregnancy and childbirth experiences change their future fertility preferences can help clinicians and family planning counselors better meet their contraceptive needs.

Note: This abstract presents preliminary results (data collected up to April 2013); the full sample will be used to update the analyses and prepare the manuscript.

Table 1. Discordance of reports of fertility preferences and family planning use intentions early during pregnancy and in the postpartum period (N=575)

Fertility preferences and family planning use intentions	Early during pregnancy N (%)	Discordant reports n (%)[1]	Postpartum period N (%)	Kappa-statistic
Fertility preferences				
Limit childbearing	250 (43.5)	96 (38.4)	200 (34.8)	**0.65**
Space childbearing ≤2 years	85 (14.8)	49 (57.7)	118 (20.5)	
Space childbearing >2 years	215 (37.4)	75 (34.9)	248 (43.1)	
Unsure	25 (4.4)	24 (96.0)	9 (1.6)	
Total		**244 (42.4)**		
Method intended for use				
No method	92 (16.0)	57 (62.0)	100 (17.4)	**0.56**
Injectables	281 (48.9)	100 (35.6)	299 (52.0)	
LARC	34 (5.9)	18 (52.9)	74 (12.9)	
Other modern	66 (11.5)	49 (74.2)	44 (7.7)	
Female sterilization	62 (10.8)	48 (77.4)	28 (4.9)	
Traditional	9 (1.6)	8 (88.9)	11 (1.9)	
Unsure	31 (5.4)	26 (83.9)	19 (3.3)	
Total		**306 (53.2)**		

Note: [1] Percentages calculated relative to reports early during pregnancy (column 1).

Table 2. Associations between fertility preferences and family planning use intentions early during pregnancy and in the postpartum period

Family planning method	Want to limit childbearing		Want to space childbearing ≤2 years		Want to space childbearing >2 years	
	Early during pregnancy N (%)	Postpartum period N (%)	Early during pregnancy N (%)	Postpartum period N (%)	Early during pregnancy N (%)	Postpartum period N (%)
No method	19 (7.6)	16 (8.0)	25 (29.4)	46 (39.0)	38 (17.7)	29 (11.7)
Injectables	119 (47.6)	88 (44.0)	36 (42.4)	48 (40.7)	118 (54.9)	163 (65.7)
LARC	22 (8.8)	45 (22.5)	0 (0.0)	2 (1.7)	12 (5.6)	27 (10.9)
Other modern	14 (5.6)	10 (5.0)	15 (17.7)	15 (12.7)	34 (15.8)	19 (7.7)
Female sterilization	59 (23.6)	25 (12.5)	1 (1.2)	1 (0.9)	1 (0.5)	2 (0.8)
Traditional	3 (1.2)	3 (1.5)	2 (2.4)	2 (1.7)	3 (1.4)	6 (2.4)
Unsure	14 (5.6)	13 (6.5)	6 (7.1)	4 (3.4)	9 (4.2)	2 (0.8)
Total	*250 (100.0)*	*200 (100.0)*	*85 (100.0)*	*118 (100.0)*	*215 (100.0)*	*248 (100.0)*

Table 3. Results from logistic regression models of family planning use intention switching *to* and *from* use of injectables

Characteristics	Use intention switched *from* injectables		Use intention switched *to* injectables	
	All women OR (95% CI) N=554[1]	**Women with a live birth OR (95% CI) N=488**	**All women OR (95% CI) N=554[1]**	**Women with a live birth OR (95% CI) N=488**
Gestational age at baseline (weeks)	0.99 (0.94, 1.04)	1.01 (0.96, 1.07)	**1.05 (1.01, 1.10)***	**1.05 (1.01, 1.10)***
Fertility preferences postpartum[2]				
Limit childbearing (ref)	1.00	1.00	1.00	1.00
Space childbearing ≤2 years	1.45 (0.72, 2.93)	1.15 (0.52, 2.57)	1.05 (0.50, 2.19)	1.33 (0.60, 2.93)
Space childbearing >2 years	1.29 (0.70, 2.36)	1.25 (0.65, 2.38)	**2.48 (1.39, 4.42)***	**2.42 (1.31, 4.48)***
Age (years)	0.99 (0.93, 1.04)	0.97 (0.91, 1.04)	**1.06 (1.01, 1.12)***	**1.07 (1.01, 1.13)***
Gravidity				
1 (ref)	1.00	1.00	1.00	1.00
2/3	**2.99 (1.18, 7.57)***	**2.88 (1.05, 7.89)***	0.55 (0.26, 1.16)	0.63 (0.28, 1.37)
4/5	**2.73 (0.93, 8.04)****	2.44 (0.75, 7.91)	**0.33 (0.13, 0.82)***	**0.39, (0.15, 1.02)****
6+	2.97 (0.79, 11.07)	3.72 (0.88, 15.67)	**0.39 (0.13, 1.20)****	**0.37 (0.11, 1.13)****
Marital status				
Single (ref)	1.00	1.00	1.00	1.00
Married/co-habiting	0.68 (0.35, 1.30)	0.86 (0.40, 1.85)	1.03 (0.56, 1.90)	0.84 (0.44, 1.61)
Education (years)	1.07 (0.97, 1.19)	1.08 (0.96, 1.21)	0.98 (0.89, 1.07)	1.00 (0.90, 1.11)
Religion				
Catholic (ref)	1.00	1.00	1.00	1.00
Protestant	1.39 (0.73, 2.66)	1.32 (0.64, 2.75)	0.72 (0.41, 1.26)	0.88 (0.47, 1.63)
Other	0.79 (0.32, 1.94)	0.74 (0.27, 1.99)	0.87 (0.40, 1.72)	1.04 (0.48, 2.27)
HIV treatment during pregnancy				
Yes	0.82 (0.34, 1.96)	0.56 (0.18, 1.69)	0.77 (0.34, 1.72)	0.73 (0.30, 1.79)
No (ref)	1.00	1.00	1.00	1.00
Any pregnancy complications				
Yes	**1.71 (1.04, 2.80)***	**1.98 (1.18, 3.32)***	0.97 (0.59, 1.59)	0.87 (0.52, 1.45)
No (ref)	1.00	1.00	1.00	1.00
Decisions regarding family planning				
Mainly respondent (ref)	1.00	1.00	1.00	1.00
Mainly husband/partner	1.06 (0.47, 2.36)	1.20 (0.50, 2.86)	0.75 (0.34, 1.64)	0.78 (0.34, 1.81)
Joint decision	0.95 (0.58, 1.57)	0.94 (0.55, 1.62)	0.86 (0.55, 1.37)	0.92 (0.57, 1.50)
Live birth				
Yes (ref)	1.00		1.00	
No	1.64 (0.67, 3.98)		1.47 (0.55, 3.63)	
Place of delivery				
Home (ref)		1.00		1.00
Govt hospital/health centre		1.06 (0.50, 2.26)		1.67 (0.82, 3.34)
Mission hospital/health centre		1.00 (0.44, 2.29)		1.27 (0.58, 2.80)
Other		**0.17 (0.02, 1.35)****		1.35 (0.46, 3.91)
Self-rated birth experience				
Good/very good (ref)		1.00		1.00
Neither good nor poor		0.72 (0.25, 2.06)		**2.19 (1.00, 4.85)***
Poor/very poor		1.32 (0.50, 3.50)		1.15 (0.46, 2.88)

Notes: [1]Information about HIV treatment during pregnancy missing for 21 women; [2]Indicator for women reporting "unsure" included in the model. Figures in bold are statistically significant at * $p<0.05$; ** $p<0.10$.