New Measures of Family Planning Attitudes and Their Association with Use of Modern Contraceptives using Longitudinal Data from Uganda

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Abstract

Background Few large-scale surveys include specific questions about attitudes regarding family planning (FP), despite evidence that concerns are influential. **Methods** Six questions measuring FP attitudes were included in PMA2020 Uganda Round-6. Bivariate and multivariable multilevel logistic regressions modeled the association of individual and community attitudes on modern contraceptive use among 2,033 married, non-pregnant women. **Results** Agreeing that FP reduces worry about pregnancy increased odds of using by 63%, while agreeing that using FP causes conflict in the family reduced odds by 25% . Agreeing that using contraception affects future fertility and that it is unhealthy to not get a menstrual cycle were not associated with current use. Future analyses will assess how attitudes towards contraception affect uptake and discontinuation over one year. **Discussion** Women may use contraception though they believe there are consequences for health, but avoid use if they believe it will cause conflict. Dispelling myths and engaging partners is critical to meeting women's needs.

Background

Contraceptive use affords numerous health, social and economic benefits. According to recent estimates, contraceptive use averted 272,040 maternal deaths in 2008 and that satisfying unmet need for contraception could reduce maternal deaths by 29% [1]. Recognizing the importance of promoting such an effective intervention, the FP2020 initiative set the goal of increasing access to modern contraceptives to 120 million additional women in the world's poorest countries by 2020. Despite the ambitious goal and commitments of governments, however, the world is not on track to achieve the FP2020 goal [2]. In their midterm report, FP2020 highlighted several persistent challenges across multiple countries that must be addressed, including unmet need and contraceptive discontinuation [3].

While use of modern contraceptives has increased in recent years, unmet need remains high as a result of individual, couple and social considerations [3]. People's perceptions of contraception are often colored by myths, misconceptions and negative attitudes towards modern family planning [4, 5]. A growing body of evidence from Low and Middle Income Countries (LMICs) confirms that fear of side effects and health concerns associated with modern methods is often among the most common reasons reported for contraceptive non-use, discontinuation or switching [4–6]. Another common socio-cultural barrier to method uptake and continuation is partner's opposition which may compromise a woman's ability to freely access and use a method

of their choice [7, 8]. Finally, community norms, such as approval or sanctions against use of family planning, has been shown to be associated with contraceptive use and levels of unmet need [9, 10]. The decision to use contraception is thus shaped by internal and external motivations. Despite evidence of the importance of these factors surrounding the decision to use family planning, there are few large scale, nationally representative surveys that ask about specific attitudes or beliefs surrounding family planning, rather relying on proxy measures of community acceptance based on fertility intentions, aggregated socio-economic variables, and community level use patterns.

Our objective was to assess whether individual attitudes, perceptions of partner's attitudes, and community norms, as measured through the aggregated responses at the community level, towards family planning was associated with current use of a modern contraceptive method.

Methods:

Study population

We used data from PMA2020 Uganda Round 6, fielded in April and May of 2018 and will use the follow-up data from the Round 6 Follow-up Study that is currently being fielded. PMA2020 is a nationally representative survey of women age 15-49. In Uganda, 110 Enumeration Areas were selected using probability proportional to size sampling and all occupied households enumerated. Forty-four households were randomly selected within each Enumeration Area, consented, and interviewed. All women age 15-49 who were either usual members of the household or who slept in the household the night before were approached for interview, and if consented, interviewed by a trained experienced interviewer. A total sample of 4,227 women were included in Round 6. We expect approximately 3,700 women will complete the follow-up survey.

Measures

Six questions measuring attitudes towards family planning were introduced in Uganda PMA2020 Round 6 survey conducted in April-May 2018. They measured both positive and negative attitudes and perceptions surrounding family planning use, shown in Table 1 below. For this abstract, we used baseline data. All attitudes measures were recategorized into binary responses (agree or disagree) for the logistic bivariate and multivariable analyses.

To assess the effect of community level attitudes on modern contraceptive use, we averaged the responses from eligible female who completed the survey within each EA, removing each respondent's answer from the mean calculation to limit endogeneity.

Table 1: Question wording and answer choices for contraceptive attitude questions included in Uganda Round 6	
Question wording	**Answer choices**
If a woman uses family planning, she can have sex without worrying about pregnancy	1. Strongly disagree
A woman's beauty will last longer if she practices family planning	2. Somewhat disagree
It is acceptable for a woman to use family planning before she has children	3. Somewhat agree
If a woman uses family planning, she will not be able to get pregnant when she wants to	4. Strongly agree
It is unhealthy for women not to get periods when they are using injectables, pills, or implants	
Using family planning creates conflict in a couple	

To assess association using the cross-sectional data, we conducted bivariate logistic regression of the individual and community mean responses to determine their unadjusted association with modern contraceptive use. We then used multivariable logistic models, including the individual binary responses and relevant socio-demographic variables (desire to delay pregnancy for at least two years, age, marital status, parity, education, wealth quintile, and urban or rural residence). To account for clustering of respondents by geographic location, we considered the enumeration area as a random-effect term. As no community aggregated measures demonstrated any association with individual contraceptive use, we did not include these in the multivariable model. We removed pregnant women from the analysis as they are not "at risk" of using contraception during pregnancy. Similarly, we restricted the analysis only to married women, since the perception of husband's support and fertility intentions would be less relevant to unmarried women. In total, 2,033 currently married, not pregnant women were included in the bivariate and multivariable regression.

We will conduct random effects bivariate logistic regression to model the individual unadjusted association of the individual and community mean responses with two outcomes; 1) uptake of a contraceptive method over the one year period and 2) discontinuation of a method over the one year period. We will then use multivariable logistic models, including the individual binary responses and relevant socio-demographic variables (desire to delay pregnancy for at least two years, age, marital status, parity, education, wealth quintile, and urban or rural residence).

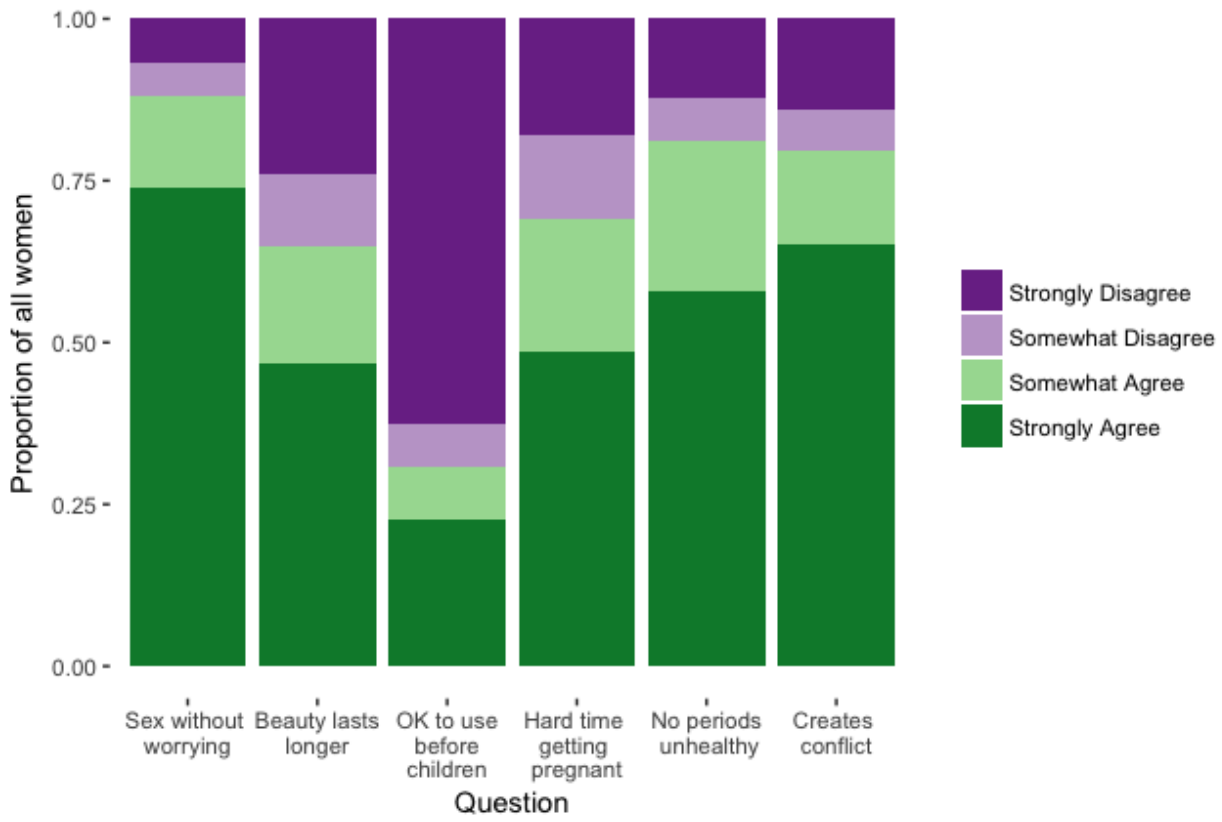
Results

Descriptive results from Uganda Round 6, inclusive of all currently married, non-pregnant women, are shown in the tables below. Final results will include only those women who completed both waves of the survey.

Table 2. Sample composition of de facto females aged 15-49; PMA Uganda Round 6		
	%	SE
Individual demographic variables	n=	
Female age (mean years)	27.9	0.2
Pregnant	11.0	0.7
Highest schooling level		
No schooling	9.5	--
Primary	54.8	--
Secondary or more	35.7	--
Parity		
0	25.6	--
1-2	28.1	--
3-4	19.9	--
5+	26.4	--
Household wealth category[2]		
Lowest	20.3	--
Middle lowest	19.1	--
Middle	19.8	--
Middle highest	19.0	--
Highest	21.8	--
Urban residence	22.4	2.8
Unmet need (all women)	20.5	1.3
Modern contraceptive use	30.3	1.5

Women's individual attitudes towards family planning are presented in Figure 1. The majority of women agreed that using family planning removed worry from having sex (88.5%), and 66.3% reported that practicing family planning would preserve their beauty (66.3%). However, women also held negative views about contraception. Specifically, a majority believed that using contraception would make it difficult to get pregnant once the method was stopped (65.6%), that not having a period while using a hormonal method was unhealthy (81.3%), and that using a method of family planning would create conflict between a husband and a wife (80.4%). Just about one third of women (32.1%) agree that using family planning was acceptable before first birth.

Figure 1: Distribution of Responses to Questions on Family Planning Attitudes



Individual opinions about family planning had mixed associations with current contraceptive use. Women who agreed that using contraception removes worry from pregnancy had significantly higher odds of using a modern method than women who did not (OR: 1.90, $p<0.01$), while women who agreed that using family planning caused conflict in a couple had significantly lower odds of currently using a modern method (OR: 0.74, $p<0.01$). There were no statistically significant associations with modern contraceptive use for the remainder of the questions. None of the community norms, when measured as the average agreement within a community, were associated with an individual's use of a modern method.

Table 3. Bivariate association between a) individual agreement with each statement and community scores on individual use of a modern method of contraception

	Individual Attitudes (ref: Disagree)		Community Score	
	OR	p	OR	p
If a woman uses family planning, she can have sex without worrying about pregnancy	1.90	<.01	1.28	0.20
A woman's beauty will last longer if she practices family planning	1.23	0.06	1.05	0.66
It is acceptable for a woman to use family planning before she has children	1.02	0.88	0.98	0.93
If a woman uses family planning, she will not be able to get pregnant when she wants to	1.01	0.96	1.07	0.60
It is unhealthy for women not to get periods when they are using injectables, pills, or implants	1.11	0.46	1.22	0.19
Using family planning creates conflict in a couple	0.74	<.01	0.79	0.18

Results from multivariate analysis mostly confirmed bivariate analysis (Table 4). Women who agreed that use of family planning reduced worry about pregnancy had higher odds of using a modern method of contraception than women who disagreed (aOR: 1.63, p<.01) while women who agreed that using family planning created conflict in a marriage had lower odds of use than women who disagreed (aOR: 0.75, p=.01), after adjusting for relevant background characteristics. Relative to women age 15-19, women age 20-39 were more likely to be using a modern method of contraception (aOR varied from 1.68 to 2.31, p=.02 and p<.01, respectively), while women age 45-49 were less likely (aOR: 0.63, p<.01). Higher parity, education and wealth were all associated with higher odds of current contraceptive use. The random-effect term was significant, indicating that there were significant unobserved contextual characteristics related to contraceptive use that were not captured in our current models.

Table 4. Multivariable multilevel relationship of individual attitudes and sociodemographic characteristics with modern contraceptive use among married women		
	aOR	p-value
	n=2,033	
Individual		
If a woman uses family planning, she can have sex without worrying about pregnancy	1.63	<.01
A woman's beauty will last longer if she practices family planning	1.14	0.17
It is acceptable for a woman to use family planning before she has children	1.03	0.74
If a woman uses family planning, she will not be able to get pregnant when she wants to	0.94	0.55
It is unhealthy for women not to get periods when they are using injectables, pills, or implants	0.86	0.17
Using family planning creates conflict in a couple	0.75	<.01
Sociodemographic variables		
Wait 2+ years	1.91	<.01
Age		
15-19 (ref)		
20-24	2.16	<.01
25-29	2.31	<.01
30-34	1.81	0.01
35-39	1.68	0.02
40-44	1.02	0.92
45-49	0.63	0.08
Married	1.78	0.00
Parity		
0 (ref)		
1-2	2.57	<.01
3-4	2.80	<.01
5+	3.49	<.01
Highest schooling level		
None (ref)		
Primary	1.57	<.01
Secondary and higher	1.83	<.01
Household wealth category		
Lowest (ref)		
Lower	1.32	0.01
Middle	1.92	<.01
Higher	2.07	<.01
Highest	2.25	<.01
Residence		
Rural (ref)		
Urban	1.08	0.61
EA-level Random Effect	0.46	
95% CI	0.35-0.60	

Next Steps

The next stage of analysis will include the observations from the follow-up interviews, conducted one year after the original interview. We will use baseline attitudes to assess the probability of contraceptive uptake and contraceptive discontinuation over the one year period.

Discussion

Only two individual attitudes about contraception were associated with use of a modern method; that use of family planning could remove worry about pregnancy and that use caused conflict in a marriage. Opinions on the health implications of using a contraceptive method – that it may cause infertility and that it is unhealthy to not get a period – were not associated with use; the majority of women, both users and non-users, agreed with these statements. This apparenty contradictory finding – that women may use contraceptive products even though they believe that there are long-term consequences for health - indicates that there is considerable work to be done in dispelling myths around the health consequences of using contraception and that much more goes into the decision to use contraception than personal considerations of safety. Women may choose to use contraception even if they believe that there may be adverse health outcomes if they are motivated to prevent pregnancy. Whether or not these attitudes are associated with contraceptive uptake and discontinuation will be explored in the next phase of a longitdudinal study in Uganda, where the women who participated in Uganda Round 6 will be re-contacted in April-June 2019.

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