

ORIGINAL RESEARCH ARTICLE

Men's Attitudes Towards Contraception in Sub-Saharan Africa

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Abstract

This paper examines male attitudes towards family planning in Sub-Saharan Africa. Studying attitudes is ideal as they can be calculated for all men, at any point in their lives, regardless of marital status, sexual activity, or fertility desires. We find that positive attitudes towards family planning have increased across Sub-Saharan Africa in the last two decades. We analyze both the association of positive attitudes with a variety of demographic characteristics (age, marital status, education, and religion) and the relationships with multiple forms of discussion about family planning (radio, television, friends, and partners). We find higher approval at older ages and higher levels of education, and lower levels of approval among Muslims compared to Christians. Interactions between characteristics and discussion of family planning demonstrate that hearing or talking about contraception has different associations for different groups. This paper offers a new way to explore fertility and reproductive health in Sub-Saharan Africa. (*Afr J Reprod Health* 2015; 19[3]: 41-54).

Keywords: Men, Africa, Attitudes, Contraception, Communication.

Résumé

Cet article examine les attitudes des hommes envers la planification familiale en Afrique subsaharienne. Étudier les attitudes est idéal, car elles peuvent être calculées pour tous les hommes, à tout moment de leur vie, indépendamment de l'état civil, l'activité sexuelle, ou les désirs de fécondité. Nous constatons que des attitudes positives envers la planification familiale ont augmenté dans toute l'Afrique sub-saharienne au cours des deux dernières décennies. Nous analysons à la fois l'association des attitudes positives et une variété de caractéristiques démographiques (âge, état civil, éducation et religion) et les relations avec les multiples formes de discussion sur la planification familiale (radio, télévision, amis et partenaires). Nous constatons qu'il y a beaucoup plus d'approbation à un âge avancé et à des niveaux plus élevés de l'éducation, et qu'il y a des niveaux bas d'approbation parmi les musulmans par rapport aux chrétiens. Les interactions entre les caractéristiques et la discussion de la planification familiale démontrent qu'entendre parler ou de parler de la contraception a de différentes associations pour les différents groupes. Cet article propose une nouvelle façon d'explorer la fécondité et la santé de la reproduction en Afrique subsaharienne. (*Afr J Reprod Health* 2015; 19 41-54).

Mots-clés: hommes, Afrique, attitudes, contraception, Communication

Introduction

The goal of this paper is to create and explore demographically a measure of contraception that can be calculated for all men, at any point in their lives, regardless of marital status, sexual activity, or fertility desires. We do so by examining men's attitudes towards contraception.

The questions used to establish attitudes in this paper include:

1. Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?
2. (Do you agree or disagree-) Contraception is women's business and a man should not have to worry about it.

3. (Do you agree or disagree-) Women who use contraception may become promiscuous.

When studying men's sexual lives in Sub-Saharan Africa (and elsewhere), benefit exists in examining attitudes as well as behaviors. In contrast to studying contraceptive use, general attitudes towards contraceptive use are not partner specific, accurate reporting of contraceptive use is not required, and positive attitudes can exist even among individuals desiring children in the near future. This last point is especially important in Sub-Saharan Africa where fertility in many countries remains high. By examining attitudes towards use, we have a preview of potential actual use as the desired family size decreases.

Studies are often hindered by men's inclusion only as partners of women and the limited definitions of partnerships considered, for example restricting couples to those who are in long term unions, monogamous, or legally recognized¹⁻². Men are more likely than women to report non-marital sexual relations, and unmarried men are more likely than unmarried women to report causal partners³. Therefore including men outside of long term relationships is essential when constructing a non-biased picture of men's sexual activities and attitudes.

In marriage, many men interviewed by the Demographic and Health Surveys (DHS) report more than one wife (ranging from 1.7% in Madagascar 2008 and Lesotho 2009 to 30.5% in Guinea 2012), while a woman having two husbands is rare enough to warrant international news coverage⁴. Bingheimer⁵ finds that multiple partnerships are more common among men living with women than those married to their partners in Sub-Saharan Africa. This finding is consistent with the previous work⁶ which finds that men who are living with women have much higher odds of needing protection against sexually transmitted infections than those who are married. Bingheimer⁵ also finds higher rates of multiple partnerships among never married men than married (non-polygamous) men and that formerly married men also have high rates of multiple partners in countries he studies in Sub-Saharan Africa.

The reason men's multiple partnerships complicate sexual health research is the difficulty in determining their need for and use of contraception. While a woman using a non-coitus dependent method is protected against pregnancy with all partners, a man, for example, may rely on one partner to use a female method, while using condoms with a second, and no method with a third. McGinn, Bamba, and Balma⁷ find this situation to be common with abstinence following childbirth. Men in their Burkinabe focus group report that while wives may practice abstinence, men "take care of themselves elsewhere⁷."

Attitudes are also an ideal way to study men's sexual and reproductive health as information on contraceptive use is not required. By not studying actual use, we remove the potential bias of covert female use of contraception as well as the bias in

men's own reporting- Ezeh and Mboup⁸ find gaps in contraception use reported by men and women in the five Demographic and Health surveys they review.

In areas with high fertility and low contraceptive use, attitudes can indicate the general reception of family planning by the community. Attitudes offer more information about reproductive health of individuals wanting children in the near future (those who in an unmet need analysis are labeled as having no demand for family planning). Mahmood and Ringheim⁹ find that while most men in Pakistan want more children, the majority also approve of family planning. Here, attitudes are an indicator that family planning methods could be accepted by many and lead to lower fertility if the desired family size decreased.

Approval for family planning as a precursor to use is especially important in Sub-Saharan Africa where many countries still have high fertility or have seen their fertility levels fall and then stall¹⁰. As Bietsch discusses, unmet need may be low due either to high levels of contraceptive use or to low demand for contraception because of the desire among many people to have another child soon. Analysis of attitudes can offer insight in this latter scenario, where most people have little need for contraception because of high fertility desires. Their attitudes, however, offer a potential view of what might happen if their fertility desires did decline. Of course, for contraceptives to be used to delay or avoid births, they must be available and affordable, but approval of their use in general is a first step in the actual use of contraception.

Several previous studies have looked at men's attitudes towards family planning in Sub-Saharan Africa and worldwide. In interviews with urban Sudanese men, Khalifa¹¹ finds that most men (91%) approve of family planning if their wife's health were in danger, while only 57% approve of use of family planning because of limited economic resources. In Pakistan, Mahmood and Ringheim⁹ report that more husbands than wives approve of contraceptive use.

Most research on male attitudes relies on wives' reports of their husbands' beliefs. Joesoef, Baughman, and Utomo's¹² paper on the determinants of contraceptive use in several Indonesian cities finds that husbands' approval is

the most important determinant, though the authors caution that wives may misperceive their husbands' approval, or project their own approval onto their perception of their husbands'. In Niger and The Gambia, Cotten, Stanback, Maidouka, Taylor-Thomas, and Turk¹³ find husband's disapproval to be a primary reason given by women who discontinue use of contraception. Husbands' approval is shown to be an important, though not the most important, determinant of contraceptive use in other surveys. In qualitative interviews in the Philippines, Casterline, Perez, and Biddlecom¹⁴ find that while husbands' attitudes are not often cited as a primary reason for not using a contraceptive method, husbands' preferences are repeatedly mentioned by women in interviews when discussing reproductive matters.

Studies from Sub-Saharan Africa in the late 1980's^{11&15} find that many men believe that women should not use contraception without their husband's consent. The Sudanese men in Khalifa's study also believe that husbands should provide contraception if it is to be used. This finding differs from those from other research over the following decades. Mbizvo and Adamchak's¹⁶ analysis of Zimbabwean men finds that while respondents believe that men should make decisions concerning the number of children to have and the use of contraception, women should obtain the family planning methods. This finding is similar to results from Maharaj's¹⁷ study in South Africa, where men report that the responsibility of obtaining contraception belongs to their wives.

Hulton and Falkingham¹⁸ propose that men may misunderstand methods and services, have little or no communication with their spouses about family planning, and believe that if their wives used contraception they would become promiscuous. Men's fears surrounding their wives' faithfulness is also found in many qualitative interviews conducted by Silberschmidt¹⁹ in the Kisii district of Kenya, who reports that husbands fear their wives will engage in sexual relationships with other men if they are allowed to use contraception. At the same time, many women report using family planning covertly to avoid their husbands' disapproval¹⁹.

Men in South Africa are found to have varying attitudes for different contraceptive methods¹⁷. Most men approve of family planning to

regulate fertility, but are resistant to condom use as they associate condoms with promiscuity.

Two other recent studies examine men's attitudes in Sub-Saharan Africa, not towards contraception, but gender. In a 2009 analysis of Demographic and Health Survey male surveys, Johnson and Gu²⁰ find that men who are supportive of women's rights are less likely (though only slightly) to report having had a sexually transmitted infection in the last year. Snow, Winter, and Harlow²¹ observe an association between men's tolerance of wife beating and higher fertility aspirations in five East African countries. These studies suggest that men's broader attitudes towards gender are also related to their sexual and reproductive health.

This paper will examine the association between several demographic characteristics and approval of family planning. In addition, methods in which men learn or communicate about contraception will be explored, as well as the interaction effects between these modes of communication and men's demographic characteristics. Means of communication include media (radio and television), talking to friends/neighbors, and talking to partners.

Oni and McCarthy²² conducted a study in Ilorin, Nigeria in which 60% of the men interviewed report learning general information about family planning from radio, television, or newspapers. In a review of 24 interventions targeting men's sexual health knowledge and practice, Stenberg and Hubley²³ conclude that large-scale media campaigns may be one option to reach and engage men. According to recent Demographic and Health Surveys, listening to the radio at least once a week is a common activity among men living in Sub-Saharan Africa- ranging from 38% in Ethiopia (2011) to 90% in Kenya (2008-2009). Watching television is increasing in popularity, and recent surveys find that viewership ranges from 14% in Chad (2004) to 91% in Gabon (2012). Hearing about family planning from the media is reported by a majority of men in 20 out of 36 Sub-Saharan African countries with Demographic and Health Surveys.

While media can reach a large number of men with a general message, men also learn and talk about contraception with the people around them. A

survey of American teenage males²⁴ finds that male peers are the most commonly cited source of information about sex and reproduction. In Sub-Saharan Africa, McGinn⁷ suggest friends and family members can sensitize and familiarize those around them about family planning.

Most studies looking at discussion of family planning focus on couples, and many find positive associations between spousal communications and contraceptive use. In Oni and McCarthy's²² study of men in Ilorin, Nigeria, spousal communication about family planning is associated with current contraceptive use, men's correct reporting of their partner's use, and use of both male and female methods. In Becker and Costenbader's²⁵ 23 country analysis of couples' reports of contraceptive use, discussion of family planning between spouses is a predictor of concurrence in reporting the same method of contraception. Kimuna and Adamchak²⁶ analyze couple communication in the 1993 Kenya DHS and find a significant increase in the likelihood of ever using contraception (net of other controls) when men report discussing family planning with their partners. In an earlier survey (Kenya DHS 1989), Lasee and Becker²⁷ show that one partner's prediction of the other's approval of family planning is more likely to be correct if the couple discussed family planning than if they did not. Additionally, Salway's²⁸ analysis of couples in Ghana finds a positive association between discussion of family planning and contraceptive use, even after controlling for confounding variables.

Partners who do not discuss contraception may make assumptions about their partners' attitudes. For example, Bongaarts and Bruce show that 68% of women (from six DHS surveys in Sub-Saharan Africa) who report their husbands' disapproval of family planning have never discussed the subject with them. However, discussion of family planning does not necessarily lead to the correct knowledge of partner's attitudes. In an analysis of the 1989 Kenyan DHS, Lasee and Becker (1997) find that while 82% of couples report discussions of family planning, only 75% of husbands correctly identify their wives' attitude towards contraception, and even fewer women correctly report their husbands (67%).

One problem with the structure of the DHS questionnaire and other surveys surrounding spousal

discussion is that only the occurrence of discussion is questioned, not who initiated or the outcome of the conversation. Because of this structure, several problems occur when studying spousal communication. The first is the issue of reverse causality- does discussion of contraception use occur because couples are already using contraception, perhaps when a problem arises with their method of use? Another issue is that couples may discuss contraceptive use, and one partner can voice disapproval, which may lead to the couple not using contraception. An additional issue that is identified in the literature is that partners may incorrectly assume their partner's approval because of their willingness to discuss contraception. This misperception is found by DeRose, Doodoo, Ezech, and Owuor³⁰ in an analysis of 21 Sub-Saharan African countries in which women who discuss family planning with their husbands are less likely to correctly report their husband's disapproval than those who do not. The authors suspect that a husband's willingness to discuss family planning may signal his approval of contraceptive use to his wife, leading to an unrecognized conflict between the spouses.

The goal in this paper is to examine these modes of communication and approval of family planning and also to introduce interactions between modes of communication and a variety of demographic characteristics to see the relative importance of communication for different groups.

Methods

Data for this paper are from the Demographic and Health Surveys conducted in Sub-Saharan Africa. DHS has conducted surveys of men, independent of marital status, in the region since 1991. Inclusions of questions regarding attitudes towards and communication about family planning vary across surveys. In earlier surveys, the only contraception attitude question included was "would you say that you approve or disapprove of couples using a method to avoid getting pregnant?" In later surveys, additional statements were given and men were asked to agree or disagree with each. These statements addressed more gendered attitudes towards contraception, such as "contraception is women's business and a man should not have to

worry about it.”, “Women who use contraception may become promiscuous.”, and “A woman is the one who gets pregnant so she should be the one to use contraception.” The last of these statements was given in only a handful of surveys and is therefore not included in the following analysis.

Trends in country level averages for the three questions are shown in Figures 1-3. For the country-level data presented in Figure 1, a regression with country fixed effects finds a statistically significant increase in approval, around 6 percentage points per decade. As can be seen, this question was commonly asked from the early 1990s till the mid-2000s. Figure 2 shows the percent of men in each survey who disagree with the statement that contraception is women's business. This question was asked in fewer surveys, and the trend, while not statistically significant, is nearly the same as for the first question, with a 6 percentage point increase per decade. Figure 3 shows the last attitude question included in this paper, the percent of men who disagree with the idea that contraception makes women promiscuous. The trend in the country approval (found with a regression that contains country level fixed effects) is significant and larger than the previous two, with an estimated 15 percentage point increase per decade. The latter two questions were asked mostly in the new millennium. In the early to mid-2000s, the general approval question along with gender statements were included in many male surveys and are thus the focus of the remainder of this paper.

The regression analyses in this paper combine seven surveys that include all questions of interest: Burkina Faso (2003), Ghana (2003), Malawi (2004), Mozambique (2003), Niger (2006), Nigeria (2003), and Tanzania (2004-2005). Together, these surveys interview 23,311 men. Excluding those over age 50 (thus restricting the analysis to men 15-49) and those with missing information on variables of interest (115 observations) results in a final sample size of 21,019 men.

A measure of attitude towards contraception is created by adding together results from three attitude questions:

1. Would you say that you approve or disapprove of couples using a method to avoid

getting pregnant?

2. (Do you agree or disagree-) Contraception is women's business and a man should not have to worry about it.

3. (Do you agree or disagree-) Women who use contraception may become promiscuous.

To construct the measure, respondents are given 1 point for each positive attitude towards family planning. Positive attitudes are considered approval of the first question and disapproval with the second and third. During the interview, subjects are also given the option to answer “no opinion” to any of the three questions. Following Joesoef *et al.*'s¹² example, lack of opinion is considered a negative opinion towards family planning and therefore counts as 0. Combining these responses together, each man is assigned a family planning attitude score ranging from 0-3. With the additive attitude score as the outcome variable of interest, ordered logit models are used for the analysis.

The following regressions include indicators for age, marital status, education, and religion. Categorical variables for age are separated into 5 year groups, with 30-34 serving as the reference group. Marital status is divided into never married, married (reference group), living together as if married, and divorced or widowed. Educational categories are cut at no education, some or completed primary education (reference group), some or completed secondary education, and higher. Religious affiliations include Muslim (reference group), Christian, and other (generally those of traditional beliefs).

Forms of communication are included in the analysis as dummy variables. In the questionnaires, interviewees are asked if they have heard about family planning on the radio in the last few months. The same format is used for family planning and television. Interview subjects in these seven surveys are asked an open ended question about who they have discussed family planning with in the last few months, allowing them to list as many people as they have talked to. These responses are used to create dummy variables for friends (including neighbors) and partners. Men do not indicate the type of relationship they have with the partner with

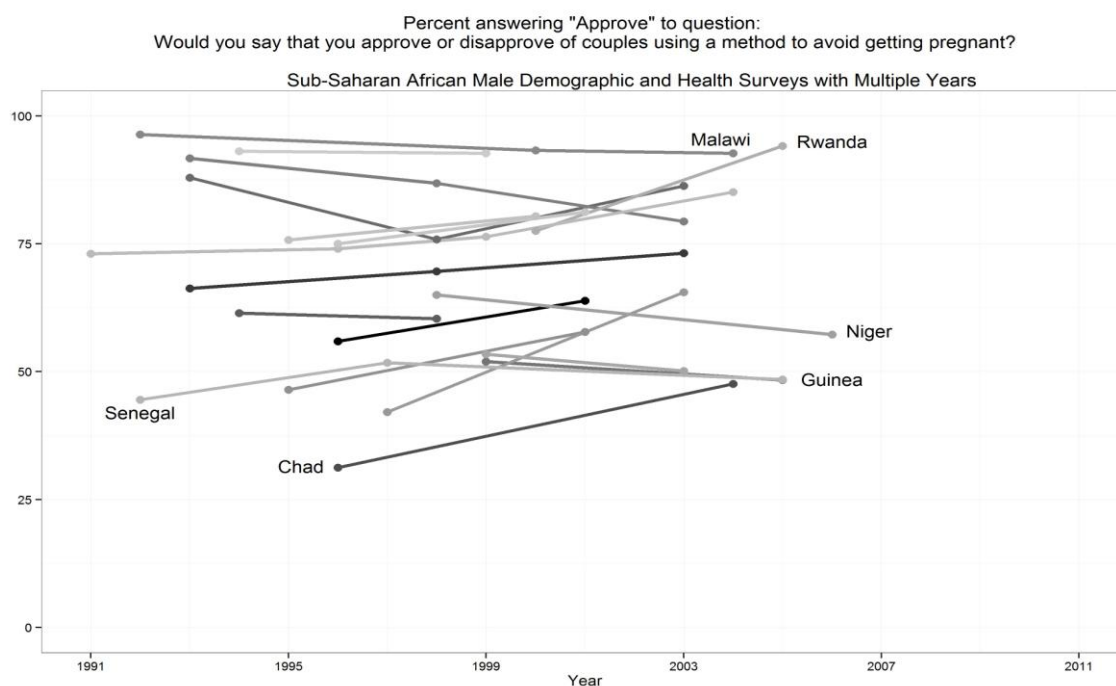
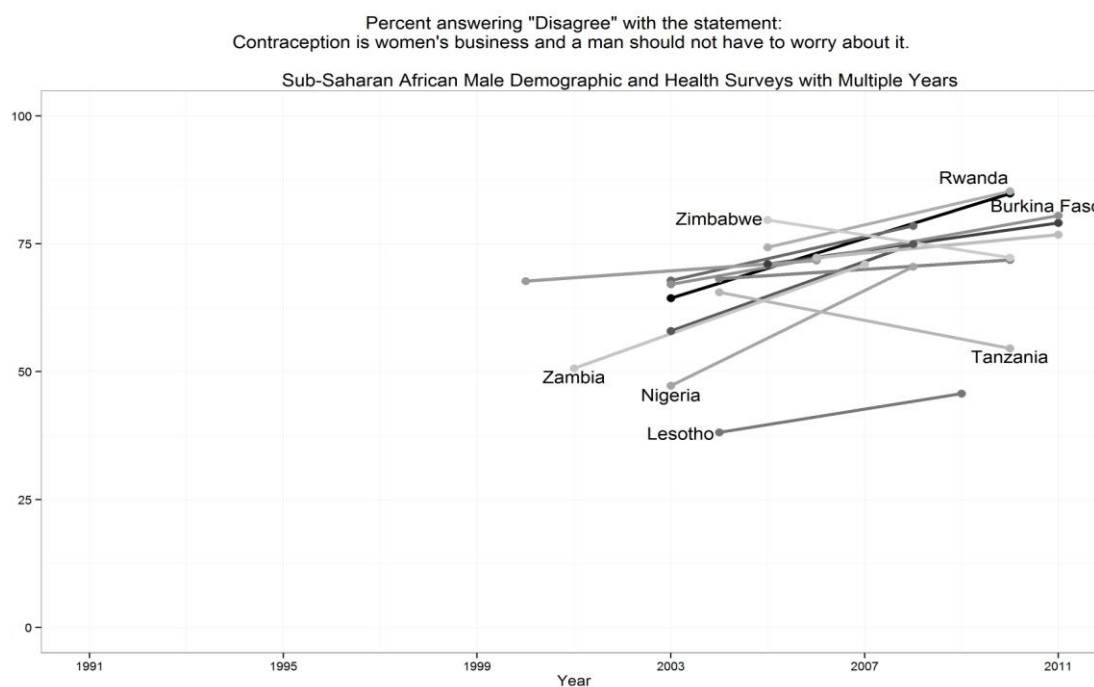
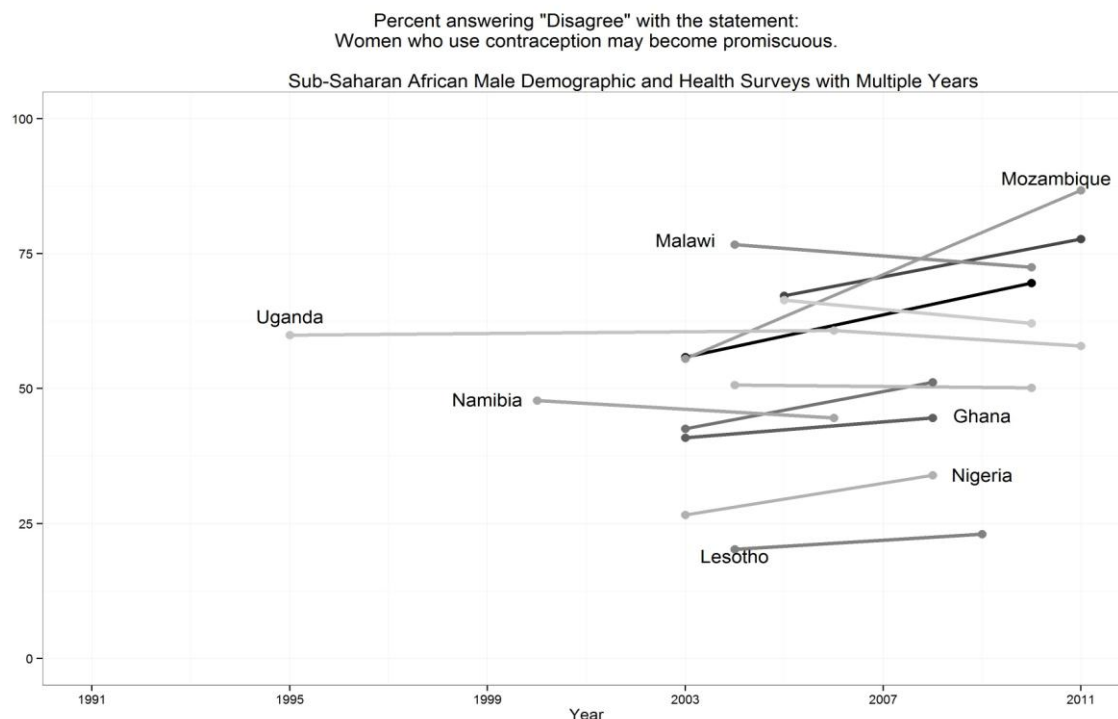
Figure 1**Figure 2**

Figure 3

whom they discuss family planning. There is a potential bias in that only men with some sort of partner can discuss family planning with a partner. It is difficult to measure partnership here, though 4,608 of the 21,019 men in the analysis have reportedly never engaged in sexual intercourse. This finding does not mean, however, that they have never had a partner with whom they could discuss family planning.

Interaction effects between the modes of communication and demographic variables are created to examine the relative importance of each mode in different sub-groups. Modes of communication are examined in their own interaction model (though all 4 modes are included).

Results

Regression results from the ordered logit analyses are presented in Table 1. The ordered logit results can be interpreted as shifts in a latent distribution of family planning approval, so along with coefficients and standard errors, Table 1 presents the shift in

standard deviations (SD) of the latent distribution for each variable. This measurement is calculated by dividing coefficients by $\pi/\sqrt{3}$. Column I

displays results from the regression including only demographic and social variables. The distribution of approval scores by age (controlling for the other variables) are lowest in the youngest age group (0.52 standard deviations lower than the reference group, age 30-34), increase to age range 30-44, and then are again statistically lower for the oldest age group (-0.07 SD). By marital status, there are no statistically significant differences between married men (the reference group) and never married men and those living with women but not married. Men who are divorced or widowed have a statistically lower distribution of scores on the approval of family planning scale than married men, with a decrease of 0.12 SD on the underlying latent scale. While men with no education have a coefficient less than zero (and therefore an expected approval score lower than those with primary education, all else equal), men with secondary and higher education

Table 1a: Ordered Logit Regressions for Approval of Family Planning (on a score of 0-3) for men in 7 Sub-Saharan African Countries

	I			II		
	Coefficient	SE	SD Change	Coefficient	SE	SD Change
Age 15-19	-0.94***	0.06	-0.52	-0.74***	0.06	-0.41
Age 20-24	-0.38***	0.05	-0.21	-0.29***	0.05	-0.16
Age 25-29	-0.16***	0.05	-0.09	-0.13***	0.05	-0.07
Age 30-34 (Reference)						
Age 35-39	-0.05	0.05	-0.03	-0.03	0.05	-0.02
Age 40-44	-0.06	0.05	-0.03	-0.03	0.05	-0.02
Age 45-49	-0.13**	0.06	-0.07	-0.10*	0.06	-0.06
Married (Reference)						
Never Married	-0.03	0.04	-0.02	0.09**	0.05	0.05
Living Together	-0.03	0.06	-0.02	0.00	0.06	0.00
Divorced or Widowed	-0.22***	0.07	-0.12	-0.10	0.07	-0.06
No Education	-0.32***	0.04	-0.18	-0.20***	0.04	-0.11
Primary Education (Reference)						
Secondary Education	0.66***	0.04	0.36	0.50***	0.04	0.28
Higher Education	1.25***	0.08	0.69	1.04***	0.08	0.57
Muslim (Reference)						
Christian	0.15***	0.03	0.08	0.15***	0.03	0.08
Other Religion	-0.36***	0.05	-0.20	-0.23***	0.05	-0.13
Family Planning Radio				0.59***	0.03	0.33
Family Planning Television				0.21***	0.03	0.12
Family Planning Friends or Neighbors				0.29***	0.03	0.16
Family Planning Partner				0.67***	0.05	0.37
Interaction Type						
Mode*Age 15-19						
Mode*Age 20-24						
Mode*Age 25-29						
Mode*Age 35-39						
Mode*Age 40-44						
Mode*Age 45-49						
Mode*Never Married						
Mode*Living Together						
Mode*Divorced or Widowed						
Mode*No Education						
Mode*Secondary Education						
Mode*Higher Education						
Mode*Christian						
Mode*Other Religion						
Cut 1	-2.71	0.06		-1.95	0.06	
Cut 2	-1.09	0.05		-0.29	0.06	
Cut 3	0.18	0.05		1.03	0.06	
N	21019			21019		

*Includes dummy variables for surveys

Data from the Demographic and Health Surveys

Table 1b: Ordered Logit Regressions for Approval of Family Planning (on a score of 0-3) for men in 7 Sub-Saharan African Countries

	III			IV		
	Coefficient	SE	SD Change	Coefficient	SE	SD Change
Age 15-19	-0.75***	0.11	-0.41	-0.80***	0.07	-0.44
Age 20-24	-0.24**	0.10	-0.13	-0.32***	0.06	-0.17
Age 25-29	-0.11	0.09	-0.06	-0.10*	0.06	-0.06
Age 30-34 (Reference)						

Age 35-39	0.15	0.10	0.08	-0.08	0.06	-0.04
Age 40-44	0.21**	0.10	0.12	0.05	0.07	0.03
Age 45-49	-0.08	0.11	-0.04	-0.12*	0.07	-0.07
Married (Reference)						
Never Married	-0.19**	0.08	-0.10	0.05	0.06	0.03
Living Together	-0.10	0.10	-0.05	0.02	0.07	0.01
Divorced or Widowed	-0.34***	0.13	-0.19	-0.10	0.09	-0.05
No Education	-0.30***	0.06	-0.16	-0.25***	0.04	-0.13
Primary Education (Reference)						
Secondary Education	0.76***	0.07	0.42	0.55***	0.05	0.30
Higher Education	1.66***	0.17	0.92	1.18***	0.14	0.65
Muslim (Reference)						
Christian	0.14**	0.06	0.08	0.25***	0.04	0.14
Other Religion	-0.33***	0.07	-0.18	-0.18***	0.05	-0.10
Family Planning Radio	0.46***	0.10	0.25	0.57***	0.03	0.31
Family Planning Television	0.23***	0.03	0.13	0.27***	0.10	0.15
Family Planning Friends or Neighbors	0.29***	0.03	0.16	0.28***	0.03	0.16
Family Planning Partner	0.70***	0.05	0.39	0.67***	0.05	0.37
Interaction Type						
	Radio			Television		
Mode*Age 15-19	0.08	0.13	0.04	0.19	0.12	0.10
Mode*Age 20-24	-0.08	0.12	-0.05	0.07	0.11	0.04
Mode*Age 25-29	-0.04	0.11	-0.02	-0.08	0.10	-0.04
Mode*Age 35-39	-0.25**	0.12	-0.14	0.14	0.11	0.08
Mode*Age 40-44	-0.35**	0.12	-0.19	-0.27**	0.12	-0.15
Mode*Age 45-49	-0.04	0.13	-0.02	0.06	0.12	0.04
Mode*Never Married	0.39***	0.10	0.21	0.11	0.09	0.06
Mode*Living Together	0.11	0.12	0.06	-0.02	0.12	-0.01
Mode*Divorced or Widowed	0.33**	0.15	0.18	0.04	0.14	0.02
Mode*No Education	0.16**	0.07	0.09	0.23***	0.09	0.16
Mode*Secondary Education	-0.36***	0.08	-0.20	-0.08	0.07	-0.04
Mode*Higher Education	-0.78***	0.19	-0.43	-0.15	0.17	-0.08
Mode*Christian	0.02	0.06	0.01	-0.28***	0.07	-0.16
Mode*Other Religion	0.18**	0.09	0.10	-0.15	0.11	-0.08
Cut 1	-2.06	0.09		-1.94	0.07	
Cut 2	-0.38	0.09		-0.27	0.07	
Cut 3	0.94	0.09		1.05	0.07	
N	21019			21019		

Table 1c: Ordered Logit Regressions for Approval of Family Planning (on a score of 0-3) for men in 7 Sub-Saharan African Countries

	V			VI		
	Coefficient	SE	SD Change	Coefficient	SE	SD Change
Age 15-19	-0.71***	0.07	-0.39	-0.75***	0.06	-0.42
Age 20-24	-0.24***	0.06	-0.13	-0.31***	0.06	-0.17
Age 25-29	-0.09	0.06	-0.05	-0.14***	0.05	-0.08
Age 30-34 (Reference)						
Age 35-39	0.03	0.06	0.02	-0.01	0.06	-0.01
Age 40-44	0.03	0.06	0.02	-0.07	0.06	-0.04
Age 45-49	-0.04	0.06	-0.02	-0.14**	0.06	-0.08
Married (Reference)						
Never Married	0.01	0.05	0.01	0.07	0.05	0.04
Living Together	0.00	0.07	0.00	-0.11*	0.07	-0.06
Divorced or Widowed	-0.18**	0.08	-0.10	-0.101	0.07	-0.06
No Education	-0.22***	0.04	-0.12	-0.25***	0.04	-0.14
Primary Education (Reference)						
Secondary Education	0.51***	0.04	0.28	0.50***	0.04	0.28
Higher Education	1.11***	0.10	0.61	1.10***	0.08	0.61
Muslim (Reference)						

Christian	0.18***	0.04	0.10	0.14***	0.04	0.08
Other Religion	-0.22***	0.05	-0.12	-0.23***	0.05	-0.13
Family Planning Radio	0.58***	0.03	0.32	0.59***	0.03	0.32
Family Planning Television	0.21***	0.03	0.11	0.21***	0.03	0.11
Family Planning Friends or Neighbors	0.37***	0.11	0.20	0.28***	0.03	0.16
Family Planning Partner	0.71***	0.05	0.39	0.35***	0.13	0.19
Interaction Type						
		Friends		Partners		
Mode*Age 15-19	0.02	0.15	0.01	0.01	0.42	0.01
Mode*Age 20-24	-0.20	0.13	-0.11	0.13	0.17	0.07
Mode*Age 25-29	-0.18	0.11	-0.10	0.05	0.14	0.03
Mode*Age 35-39	-0.25**	0.13	-0.14	-0.12	0.14	-0.07
Mode*Age 40-44	-0.24*	0.13	-0.13	0.25*	0.15	0.14
Mode*Age 45-49	-0.31**	0.14	-0.17	0.16	0.16	0.09
Mode*Never Married	0.33***	0.11	0.18	0.16	0.23	0.09
Mode*Living Together	-0.05	0.15	-0.03	0.67***	0.16	0.37
Mode*Divorced or Widowed	0.35**	0.16	0.19	-0.32	0.35	-0.18
Mode*No Education	0.11	0.09	0.06	0.52***	0.12	0.28
Mode*Secondary Education	-0.03	0.08	-0.01	0.08	0.11	0.04
Mode*Higher Education	-0.19	0.16	-0.11	-0.28	0.20	-0.15
Mode*Christian	-0.14**	0.07	-0.08	0.07	0.10	0.04
Mode*Other Religion	-0.10	0.13	-0.05	-0.01	0.17	-0.01
Cut 1	-1.95	0.07		-2.01	0.07	
Cut 2	-0.28	0.07		-0.35	0.06	
Cut 3	1.04	0.07		0.97	0.06	
N	21019			21019		

have positive coefficients. Finally, for the three religious categories, Christians have statistically higher approval scores than Muslims (controlling for other characteristics), while the non-Christian, non-Muslims have lower scores than Muslims.

Column II introduces the four modes of communication about family planning into the model. All are positive and highly statistically significant, indicating a positive association between discussion of family planning and approval. The largest shift in the underlying scale of the four dummy variables belongs to conversation with partner (0.37 SD), followed by radio (0.33 SD), friends (0.16 SD), and television (0.12 SD). The demographic variables included in both models show fairly similar results, the one exception being marital status, where in the later model, those who are never married have a positive and significant coefficient (in reference to married men), and there is no longer a statistical difference between married and formerly married men.

Columns III-VI explore interactions between the modes of communication and demographic variables. In all cases, the main effect of all four discussion and communication variables are positive and highly statistically significant.

Looking at the interactions between marital status and radio, never married and formerly married men show positive interactions (both in reference to married men), though the main effects are both negative. For formerly married men, combining the interaction and main effect closes the gap (there is no longer a statistical difference in the underlying distribution) with married men who also hear about family planning on the radio, while for never married men the interaction closes and exceeds the main effect difference: the main effects shift the latent distribution by 0.46 SD for married men and 0.46-0.19 SD for never married men. But the interaction shifts the distribution for never married men who hear about family planning on the radio by an additional 0.39 SD, resulting in an underlying distribution for approval by never married men who hear about family planning on the radio (for a combined shift of the latent distribution by 0.66 SD) to be statistically higher than the distribution of approval for married men who hear about family planning on the radio (0.46 SD). The interactions for the various marital groups and hearing about family planning on television are not statistically significant. When the focus shifts to friends and neighbors, looking at the coefficients for the main

effects, only formerly married men have a statistically different association with approval than married men (a shift downwards of 0.18 SD), and this relationship is negative. But in terms of interactions, both formerly married and never married men have positive and significant interactions (0.35 SD and 0.33 SD, respectively), suggesting that the importance of communication with peers may be more important for those who are unmarried than for those who are married. Finally, for discussion with partners, while the main effect for men living, but not married to, a woman is negative (-0.06 SD), the interaction with discussion is positive (0.37 SD), highly statistically significant, and the combined main and interaction effect is a statically higher distribution than the distribution of responses for men who are married to their partners, controlling for all other variables.

When examining the interactions between the different modes of communication and education, we see in most cases a reversal of the main effect. For those who hear about family planning on the radio, the size of the coefficients for the interaction effects are lower with higher levels of education. For those with no education, the interaction effect is positive and statistically significant (0.09 SD); this finding is in comparison to those with primary education who hear about family planning on the radio. On the other side, the interactions for secondary and higher education and radio are negative and statistically significant. The interaction latent shifts (-0.20 and -0.43 SD, respectively) are smaller than the main effects (0.42 and 0.92 SD, respectively), and statistically, the distribution of approval scores for those with primary education who report hearing about family planning on the radio is lower than that among those with secondary and higher education who report similar experiences. This finding suggests that while hearing about family planning on the radio is associated with higher approval of family planning, it does not close the gap in education status and approval. For television, only the interaction term for those with no education is statistically significant. This positive association is nearly as large as the main effect for the comparison of those with no education to those with a primary education (0.16 SD for the interaction compared to -0.13SD for the main effect), and for men who hear about

family planning on the television, there is no statistical difference in the distribution of approval for those with no and primary education. In the interaction regression with peers, there appears no difference in interactions based on educational attainment. For discussion of family planning with partners, the only statistically significant interaction exists for men with no education, an interaction so large that for men who discuss family planning with their partners, the distribution for men with no education is statistically higher than for those with primary education. Examining modes of communication and education, the largest interaction effects (with primary education as the reference group) are for those men with no education.

Turning to religion, the main relationships between religious groups and family planning approval remain constant through the four regressions with interactions, with Christians having statistically higher coefficients compared to Muslims, and others having statistically lower. Looking at the interaction effects between religious groups and radio, the interaction for others is positive and statistically significant, though not large enough to close the gap between others and Muslims and when both hear about family planning on the radio. For television, the interaction for Christians is negative and significant, and equivalent to the main effect of Christians compared to Muslims, so that when both religions hear about family planning on the television, there is no statistical difference in the distribution of their approval scores. For friends and neighbors, the interaction for Christian is also negative and statistically significant. The interaction between religious groups and discussion of family planning with a partner shows no statistically significant differences, though the pattern of main effects remains the same.

Discussion

Results presented in the previous section point to varying levels of approval of family planning among demographic sub-groups in Sub-Saharan Africa.

Looking first at the age pattern that appears throughout the regression analyses, the results

suggest that adolescents, the youngest men in the analysis, have the lowest level of approval, controlling for other demographic variables. This finding may occur because adolescents are the least likely to be sexually active, married, to have children, or to ever have used contraception, and have therefore have not thought about contraception, its use, or their attitudes towards it. While the relationship between the never married group (highly correlated with the youngest age group) and married men are not statistically different when looking at the main effects, in all four interaction regressions the coefficients for the never married interaction with mode of communication are positive (though only significant for radio and friends/neighbors). It may be that never married men are more amenable to outside influence on their attitudes about family planning. Alternatively, there may be a shift in the generations in terms of acceptability of discussing family planning and the influence of others on your opinions.

The relationship between formerly married men and married men in these analyses is similar to that with never married men. Both interactions with radio and friends/neighbors are positive and significant, again suggesting that men not living with women may be more amenable to outside influences.

For men who live with women but are not married to them, the main difference with married men is the positive interaction for discussion of family planning with partners. The reason for this finding is debatable. It could be that married men are less open to their partners shifting their opinions than men living with women. Additionally, the type of conversation could be fundamentally different. As marriage is, in general, a child-bearing institution in Sub-Saharan Africa, conversations in marriage could consist of men voicing their disapproval of contraception because of pronatalist tendencies. Men who are living with women but not married to them may be more willing to discuss and approve of family planning as the relationship is less permanent. Whatever the case, this result brings to mind a finding from Bietsch's study⁶ of sexually transmitted infections- that men who are living with women are much more likely to have additional partners than married men (excluding polygamous

men's multiple wives). Both of the analyses illustrate that differences exists between married men and men living with women in terms of their sexual actions and attitudes.

Turning to education, there appears a consistent pattern of higher levels of education associated with higher levels of approval. This pattern mirrors results found by Bietsch⁶, where higher levels of education were associated with higher odds ratios of desires to space/limit versus have a child soon, limit versus space (of those not desiring a child in the next two years), and use of contraception among those with demand for contraception. Interestingly though, when looking at the interactions between modes of communication and approval, the educational gradient goes in the opposite direction- interactions between modes of communication and lower educational statuses have larger coefficients than higher levels of education. This finding is especially true when comparing those with no education to those with primary education.

With religion there is pattern of acceptance, from highest among the Christians, to the Muslims in the middle, and the "others" at the lower end. This ordered pattern was also observed by Bietsch⁶ in terms of desire to space/limit childbirths and use of contraception. Looking at the interaction models for the different modes of communication, there is no discernible pattern, though for television and friends/neighbors, Christians receive less of an impact than Muslims.

Conclusion

This paper has constructed a new measure of contraception for men in Sub-Saharan Africa. Because of the low reported use of contraception and complicated sexual partnerships, examining men's attitudes offers a universal means of analyzing men's sexual and contraceptive behaviors. This paper has shown variation in attitudes by demographic characteristics and the outside influences that may shape these attitudes. As the trends have shown, positive attitudes towards family planning are increasing throughout Sub-Saharan Africa, and with decreasing desired number of children and increasing access to contraceptive services, positive attitudes may translate into

increased contraceptive use and declines in fertility in a region with some of the highest fertility in the world.

Acknowledgements

The author wishes to thank James Trussell, Charles Westoff, German Rodriguez, and Elizabeth Armstrong as well as an anonymous reviewer for their thoughtful comments on previous drafts. This research was conducted at Princeton University's Office of Population Research, support was provided by grants from the Eunice Kennedy Shriver National Institute for Child Health and Human Development (grant #5R24HD047879) and from the National Institutes of Health (grant #5T32HD007163).

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