Covert contraceptive use and discordant fertility preferences among Ethiopian Couples

Biruk Tensou[1] and Michelle J. Hindin[2]

1 Addis Ababa Mortality Surveillance Program, Faculty of Medicine, Addis Ababa University, Addis Ababa, Ethiopia
2 Population, Family and Reproductive Health, Johns Hopkins Bloomberg School of Public Health.

Corresponding author: Biruk Tensou
Addis Ababa Mortality Surveillance Program
Faculty of Medicine, Addis Ababa University
Addis Ababa, Ethiopia P.O.Box 42988
Phone: +251 116 555-320
e-mail: Biruktensou@gmail.com

Abstract

***Introduction**: In sub-Saharan Africa decisions related to reproductive health are influenced by men. In settings where the overall contraceptive prevalence is low, a significant proportion of women use contraceptives covertly. In this study we use couple data from the 2005 Ethiopian Demographic and Health Survey to estimate covert contraceptive use and to identify its determinants.*

***Method**: We have included all monogamous couples who reported current contraceptive use. We estimated covert use from women's responses about their husband's knowledge of contraceptive use and from couples' discordant responses on use and type of method. We used logistic regression to identify the correlates of covert use.*

***Results**: We found that 7.8 percent of women use contraceptives secretly, but based on discordant responses, 26.4 percent of women used contraception without full knowledge of their partners. Women who want fewer children than their partners reported more secret use and couples who have the lowest agreement on fertility preference were the most likely to report secret use.*

***Conclusion**: In settings, like Ethiopia, where modern contraceptive use is relatively low, addressing couple communication is needed to improve the efficacy of family planning programs.*

Introduction

In sub-Saharan Africa decisions related to contraceptive use, timing and number of births are influenced by men [1-5]. Men's dominance is expected to block the initial departure from high fertility norms particularly when they controlled most methods of contraception[6]. The ability of women to control their fertility is a precondition to fertility transition. Women require autonomy to make decisions in controlling their fertility[7-9]. Moreover, differences in socio-economic and demographic characteristics of couples contribute to differences in reproductive preferences. For instance, husband and wife age difference is a determinant of reproductive preference among couples[10]. Family planning programs will have a higher probability of success if they focus on couples, albeit most focus on women[11, 12]. Scattered evidences demonstrated that involving couples in reproductive health programs makes a difference [12]. The ICPD Programme of Action specifically states: "Special research should be undertaken on factors inhibiting male participation in order to enhance male involvement and responsibility in family planning"[13]. On the other hand, some women do not wish to have their husbands involved in reproductive decisions[14]. For instance, women used contraceptives covertly as strategy to subvert male authority[15].

The average population growth of most sub-Saharan Africa countries is well above 2.5% with a doubling time of less than 30 years[16-19]. Family planning services have become the interventions to slow population growth[20-22]. However, social and cultural factors have been shown to hinder the use of contraceptives[23]. Men and women may have conflicting fertility goals, and, particularly in sub-Saharan Africa, the assumption that couples necessarily operate as a decision making unit, is unrealistic[24]. Instead, some bargaining must be done as individual spouses try to optimize their gain from their relationship. For instance, women's contraceptive use may occur without the knowledge or consent of their partners to exploit the benefit of fertility limitation without affecting their conjugal relationship, albeit the fact that the success of contraceptive use is enhanced by communication and approval of partners [25-30].

Evidence about covert contraceptive use has been growing, albeit quantifying such use is a major problem[14, 24]. High rates of injectable use in some sub-Saharan African countries have raised concerns about covert use since injectables can readily be used without partner knowledge or consent. Modern methods that can be used covertly include the pill, injectable, intrauterine devices and subdermal implants[14]. Behavior dependent methods such as periodic abstinence were also employed secretly, whereby women contrived illness or menstruation or "faced the wall" to indicate that they were unwilling to have sexual relations[31, 32]. Traditional methods such as herbal concoctions can also be employed secretly, although their efficacy is limited[33].

The common definition of covert use is contraceptive use without the knowledge of the spouse[14, 34]. Scattered evidences in many developing countries demonstrated that significant proportion of women use contraceptives with out the knowledge of their husbands. A study in Uganda found that over 15 percent of women were using contraceptives without their partners' knowledge[31]. Studies in a rural Kenyan setting also showed that 20 percent of contraceptive users admitted using without their husbands' knowledge[35]. In an urban area of Zambia, it was observed that 7 percent of women using contraceptives said that they were using it covertly[14, 31, 36]. A qualitative study in urban Mali reveals that 30 percent of contraceptive users had hidden their use of birth control method from their husbands[24].

Covert contraceptive use is inversely related with overall Contraceptive Prevalence Rate (CPR). For example, in Brazil, where the prevalence of family planning among married women is around 70 percent, covert use comprises only 2 percent. By contrast, in the Central African Republic, where contraceptive prevalence is just 3 percent among all married women, covert use stands at 52 percent[14]. The prevalence of covert use among married women also varies by place of residence, with rural users reporting higher rates than those who live in urban settings; because overall family planning prevalence in rural areas tends to be lower. Moreover, spousal communication, partner

disapproval of family planning, conflicting fertility preferences are the determinants of covert use[14].

The study area

Ethiopia is one of the most populous countries in Sub-Saharan Africa with a rate of growth 2.6%. Preliminary results of the 2007 population and housing census demonstrated the population size to be 74 million with male to female ratio 102:100. Spatial distribution reveals that the population is dominantly rural (84% vs 16%)[37]. The Total Fertility Rate (TFR) is relatively steady with values of 6.4, 5.5 and 5.4 in 1990, 2000 and 2005, respectively[38, 39]. Ethiopia is a country with deeply rooted customs and traditions that pose serious threats to the reproductive health of women, such as, female genital mutilation, early marriage and decision making about practice of contraceptives [40-43].

A national family planning program was initiated four decades back. However even after four decades, family planning use is among the lowest in Africa with 8% in 2000 and 15% in 2005. Much of the increase in the use of modern methods over the last decade is attributable to the increase in the use of injectables[38, 40]. The low contraceptive prevalence rate in Ethiopia is a combined effect of access to specific methods, cultural and religious barriers, including male opposition [44]. Prior research in Ethiopia has shown that reproductive health services are conditioned to age, marital status or spousal consent [43, 45]. A majority of women state that both they and their husband jointly made the decision to use a contraceptive method. However, independent decision-making is low. For example, less than one in four women stated that using contraception was mainly their decision alone. Spousal communication about family planning with husband is also low (34%) with a significant proportion of women (27%) believing their husbands disapprove of them using family planning[40]. One study conducted in Adama, 100km south of Addis Ababa, revealed that the proportion of covert use ranges from 8.7% to 22.7%. Fertility desire of husbands and spousal communication were key determinants of secret use of contraceptive use [46].

In this paper, we use the 2005 Ethiopian Demographic and Health Surveys to explore covert contraceptive use among married couples. We include data from both husbands and wives in order to better understand couple communication and knowledge around contraceptive use. In addition to using the standard measure of covert use, which is whether the woman reports she is a method secretively, we also explore two additional measures. The first looks at whether husbands report knowing their wives are using a contraceptive method, and second, what method she is using.

Data and Methods

The 2005 Ethiopian Demographic and Health Survey couple data is used in this study. A total of 2968 couples were included in the survey. The survey includes a direct question for women who were currently using contraceptives "Does your husband or partner know that you are using a contraceptive currently?" We first estimated covert use from the direct response of women about their husband's knowledge of contraceptive use. Women who reported that they have not told their husbands that they are using contraception were classified as covert users. We also expanded the estimation of covert use to include discordant responses. First, we estimated discordant response when the wife report use and husband report non-use of modern methods. Secondly, we also considered where couples' report use but report different methods. In the estimation of covert use from discordant report we included those who reported male condoms, withdrawal, etc. as overt users.

We used multivariate logistic regression to identify the determinants of using contraceptives covertly or with limited involvement of husbands. The independent variables included are place of residence; decision making on household matters; fertility preference; wealth index; age and education difference of couples; religion; etc. We examine the concordance correlation coefficients to measure the level of agreement about fertility preference by practice of contraceptive. The Lin coefficient combines measures of both precision and accuracy to determine whether the observed

data significantly deviate from the line of perfect concordance (i.e., the line at 45 degrees) [47].

Results

Nearly 17 percent (n=517) reported current use of contraceptives. Among this 97 percent of the respondents were monogamous couples. Hence, the study includes a total of 503 monogamous couples who reported current use of contraceptives.

Couple Characteristics

Demographic characteristics of couples demonstrated that husbands tend to be older than their wives with a median age for husbands 36 years and for wives 28 years. The mean age difference among couples is 7.5 years. Husbands and wives have similar characteristics such as religion (kappa index=0.88) and ethnicity (kappa index=0.74). In the majority of the couples (24 percent), neither the husband nor his wife is educated. Only eleven percent of wives are more educated than their husbands. Nearly 38 percent of the wives were currently working at the time of the survey while the proportion of husbands working was 95 percent. Wives' earnings compared to husbands' earnings revealed that 65 percent of women earn less than their partners. More than half of the couples belong to the richest wealth category.

Nearly 69 percent of women reported contributing to the final say on household matters. According to women, decisions on how to spend the husbands' incomes is mainly joint (72 percent) followed by husband the husband have the final say (21 percent).

Nearly 23 percent of the husbands reported never use of contraceptives. Knowledge of at least one modern method is universal among women but slightly lower among men (99 percent). More than one-fourth of husbands want more children than their wives, with a mean ideal number of children 4.8 for husbands and 4.2 for wives.

Covert Contraceptive Use

We found that 7.8 percent [95% CI: 5.4- 10.1] of women in couples used contraceptives secretly according to the women's reports. Nearly 2 percent of the wives reports covert use, albeit their husbands report current use. An additional 17.8 percent of women reported use of contraceptives while their husbands did not report use or reported using a different method than their husbands said they were using (0.8 percent). Hence, 26.4 percent [95% CI: 22.6- 30.3] of women practiced use of contraceptives covertly or with partial knowledge of their husbands (Table 1). The latter figure is higher for the rural areas (29.4 percent) than the urban areas (23.1 percent). Among couples with discordant responses on contraceptive use, 30 percent of women reported using pills and 23 percent injectables without full consent of their husbands (data not shown).

Table 1 about here

Factors Associated with Covert Use

Males with limited knowledge of their wife's behavior increased with age of the wife ranging from 23.9 percent among those aged 15-24 to 32.8 percent for women aged 35-49. Similarly, male involvement on their wife's use of contraception is lower among illiterate couples (31.6 percent) and for couples with 10 or more year's age difference (32.2 percent). The proportion of clandestine use varies by wealth index (14.3 percent for the poorest to 5.5 percent for the richest). Women who don't have any of the final say in household decisions have a lower discordant response on contraceptive use than those with the final say in some decisions (22.8 percent versus 28.1 percent). Likewise, those women who reported that their husband's are pronatalist are more likely to have discordant response (40.0 percent versus 22.9 percent).

Husbands' pronatalist attitudes are indexed from the report of wives about their partner's fertility desire and timing of children. Table 2 reveals that 20 percent of

covert users reported that their husbands were pronatalist. Illiterate couples have a greater proportion of both covert use and discordant responses. The proportion of covert users is higher among rural residents. Likewise, wealth index has a significant association with covert use or use without full consent of husbands.

Table 2 about here

Table 3 shows the results of multivariate logistic regression indicate that husband's pronatalist attitude emerges as a strong determinant of both covert use (OR=2.0, 95% CI: [1.1-3.5], P>z=0.016) and use without involvement of partner's full knowledge (OR=6.1, 95% CI: [2.6-14.1], P>z=0.0001). Husbands' pronatalist attitude can be explained further by exploring fertility goals of couples. The mean children ever born reported by husbands is higher than wives (3.6 vs 3.4, Pr(T < t) = 0). Couples agreement about ideal number of children reveals a low level of concordance (concordance coefficient=0.23). Results of mean comparison test on ideal number of children reveals husband's report more (4.8 vs 4.3, Pr(T < t) = 0). Sex composition also reveals husband's prefer more sons than wife's (2.6 vs 2.2, Pr(T < t) = 0). Couples who report covert use are more likely to have discrepant fertility goals (Table 4).

Table 3 and 4 about here

Discussion

Men's perception about contraception often differs from those of their wives. This is mainly due to lower levels of contraceptive use and with greater conflict of future contraceptive use[14, 48]. One of the manifestations of efficacy of contraceptives is open agreement of couples about contraceptive use and method shift, a matter which is related to clandestine use. The quantitative measurement of covert use adopted in this study gives an overall magnitude of clandestine use. Discordant response is one of the main proxies for estimating clandestine use [14, 24]. The use of discordant response

may over estimate the proportion of covert users, which might be one limitation of the methods where there is extramarital affair [14] . However, in this study we have included only monogamous couples. All couples do not have sexual partner other than their spouses. This suggests that discordant responses are due to lack of male involvement in family planning. Moreover, another limitation of discordant response is it may be the result of problems related to identifying the method. However, results of couple analysis about knowledge of at least one method demonstrated that knowledge of contraception by both spouses is relatively high (84 percent), which overcomes our limitation. Moreover, among couples in which only one partner knows a method, husbands are more likely to know the method than their wives. Longitudinal and qualitative studies should be designed to explore further about practice of contraceptives and consequences of clandestine use.

The two rounds of Ethiopian Demographic and Health survey (EDHS) conducted in 2005 and 2000 revealed that the rate of increase in contraceptive prevalence rate is 88 percent. However, the rate of fertility decline is only 1.8 percent. One of the reasons of steady fertility level is due to meager male involvement. Men's fertility experiences are more varied than women's, with fewer biological constraint's and higher sexual freedom [49]. Women want fewer children than do their husbands due to health and time costs associated with frequent childbearing [50-52]. Men's dominance over reproductive decisions has been hypothesized to be a force for delaying the onset of fertility decline [53-55]. Hence, women should be authorized to exercise their rights in making decisions that affect their reproductive health. The effect of couples' literacy level on covert use of contraceptive might be explained through spousal communication about contraception among literate couples. Spousal communication is an important step toward eventual adoption of contraceptive methods. Hence, promoting spousal communication about fertility desire and contraception should be encouraged in reproductive health service organizations which is largely female-oriented [45]. This study demonstrated that reproductive health interventions should target couples to be more efficient.

In many countries population policies specify fertility reduction targets to be achieved with in a given point of time in the future. Contraceptive prevalence is treated as one of the determinants of fertility. The government of Ethiopia being aware of the effect of population growth formulated a population policy, which aims at reducing the fertility rate by 48 percent by the year 2015 and yet the decline in fertility rate is far below the objective [56]. For this reason the efficiency of reproductive health programs should be evaluated. Reproductive health programs should target male involvement. Reproductive health is one indicator of poverty. Hence, targeting couples or men at the aggregate level will bring a new direction to achieve Millennium Development Goals.

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Table 1. Proportion of covert contraceptive use by socio-economic characteristics of couples n (%)							
		Covert use		Discordant report of use		Discordant report of method	
		Yes (n=39; 7.8%)	No (n=464; 92.2%)	Yes (n=129; 25.7%)	No (n=374; 74.4%)	Yes (n=133; 26.4%)	No (n=370; 73.6%)
Education difference	Both illiterate	17 (8.8%)	176 (91.2%)	60 (31.1%)	133 (68.9%)	61 (31.6%)	132 (68.4%)
	Husband more educated	16 (7.7%)	192 (92.3%)	46 (22.1%)	162 (77.9%)	49 (23.6%)	159 (76.4)
	Wife more educated	6 (5.9%)	96 (94.1%)	23 (22.6%)	79 (77.5%)	23 (22.6%)	79 (77.5%)
Age difference	Husband is younger	0 (0.0%)	8 (100.0%)	1 (12.5%)	7 (87.5%)	2 (25.0%)	6 (75.0%)
	Husband is older by 0-4 years	12 (8.1%)	136 (91.9%)	38 (25.7%)	110 (74.3%)	39 (26.4%)	109 (73.6%)
	Husband is older by 5-9 years	13 (6.7%)	182 (93.3%)	41 (21.0%)	154 (79.0%)	43 (22.1%)	152 (77.9%)
	Husband is older by 10+ years	14 (9.2%)	138 (90.8%)	49 (32.2%)	103 (67.7%)	49 (32.2%)	103 (67.8%)
Wealth index	poorest	3 (14.3%)	18 (85.7%)	7 (33.3%)	14 (66.7%)	7 (33.3%)	14 (66.7%)
	poorer	5 (11.9%)	37 (88.1%)	14 (33.3%)	28 (66.7%)	14 (33.3%)	28 (66.7%)
	middle	12 (18.5%)	53 (81.5%)	26 (40.0%)	39 (60.0%)	27 (41.5%)	38 (58.5%)
	richer	3 (3.5%)	83 (96.5%)	15 (17.4%)	71 (82.6%)	15 (17.4%)	71 (82.6%)
	richest	16 (5.5%)	273 (94.5%)	67 (23.2%)	222 (76.8%)	70 (24.2%)	219 (75.8%)
Wife decision on household matters	No decision	13 (8.2%)	145 (91.8%)	36 (22.8%)	122 (77.2%)	36 (22.8%)	122 (77.2%)
	Some decision	26 (7.5%)	319 (92.5%)	93 (27.0%)	252 (73.0%)	97 (28.1%)	248 (71.9%)

Table 2 Proportion of covert contraception by couple characteristics				
Couple's characteristics		Covert Use	Discordant report of Use	Discordant report of Method
Wife make some Decision	Yes	7.5	27.0	28.1
	No	8.2	22.8	22.8
Husband is pronatalist	Yes	20.0*	39.0*	40.0*
	No	4.3*	21.8*	22.9*
Middle and higher wealth index	Yes	12.7+	33.3+	33.3+
	No	7.1+	24.6+	25.5+
Husband is Older than Wife	Yes	7.9	25.9	26.5
	No	0.0	12.5	25.0
Rural Resident	Yes	10.4*	29.0*	29.4+
	No	4.7*	21.8*	23.1+
Illiterate couples	Yes	8.8	31.1*	31.6*
	No	7.1	22.3*	23.2*

* p<0.05
+ p<0.1

Table 3 Logistic models of Contraception			
Variables	Covert Use	Discordant report of Use/Non-Use	Discordant report of Method
Wife make some Decision	1.00	1.31	1.41
Husband is pronatalist	5.48*	1.99*	1.97*
Educated couples	0.61	0.35*	0.33*
Middle and higher wealth index	0.78	1.18	1.13
Married by abduction	1.77	1.07	0.98
Husband is Older than Wife	0.81	0.76	0.57
Rural Residence	1.27	0.87	0.85

* p<0.05
+ p<0.1

Table 4. Concordance correlation coefficient about Ideal Number of children reported by couples by practice of contraceptives				
		Total	Son	Daughter
Covert Use	Yes	0.26	-0.129	0.088
		[95% CI: 0.17-0.34]	[95% CI: -0.349-0.091]	[95% CI: -0.252-0.428]
	No	0.024	0.218	0.244
		[95% CI: -0.3-0.34]	[95% CI: 0.136-0.3]	[95% CI: 0.154-0.334]
Discordant report of use	Yes	0.084	0.002	0.09
		[95% CI: -0.08-0.248]	[95% CI: -0.137-0.141]	[95% CI: -0.088-0.267]
	No	0.3	0.266	0.275
		[0.2-0.4]	[95% CI: 0.174-0.358]	[95% CI: 0.176-0.374]
Discordant report of method	Yes	0.083	-0.002	0.098
		[95% CI: -0.077-0.243]	[95% CI: -0.134-0.130]	[95% CI: -0.076-0.272]
	No	0.3	0.283	0.276
		[95% CI: 0.21-0.4]	[95% CI: 0.19-0.375]	[95% CI: 0.176-0.375]

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