

Adolescent fertility and contraceptive use in rural northern Ghana: A mixed methods study

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Introduction and Objectives

Ghana is home to a burgeoning youth population, with 22 percent of its total population between the ages of 10-19 (UNICEF, 2012). Despite this, programming targeting the sexual and reproductive health needs of adolescents remains limited and adolescents remain at high risk for teen pregnancy and sexually transmitted infections. Adolescent girls, in particular, experience challenges in accessing reproductive services arising from a myriad of social, cultural, and institutional factors. As a result, contraceptive use across Ghana remains low among teen girls, with only 19.5% indicating they had ever used any method and 15.2% any modern method. Furthermore, married teens have the highest level of unmet need among all women, with 61.7% indicating an unmet need for family planning (Ghana DHS, 2008).

The Upper East Region is Ghana's most rural and impoverished region. The majority of the population receives primary health care through Ghana's Community Health Planning and Services (CHPS) initiative, a program which places nurses directly into rural communities to provide doorstep services. While CHPS has had a pronounced impact on reducing both maternal and child mortality⁴, success in addressing adolescent reproductive health needs has not been achieved. In light of this challenge, this study uses a combination of quantitative and qualitative methods to better understand factors related to adolescent pregnancy and contraceptive use. Findings from survey data quantify the level of contraceptive use among teen aged women and assess the determinants of teen contraceptive use and teen pregnancy. Data from a qualitative study of health worker attitudes and provision of family planning (FP) services to adolescents in the same area is utilized to understand the health system context in which teens seek contraceptive services. Results from this investigation will be used to reposition adolescent-oriented FP services in a new health systems initiative of the Ghana Health Service (GHS).

Methods

Survey data derive from a household survey conducted in rural communities in the Upper East Region of Ghana from April through August of 2011. A total of 5,511 women between the ages of 15 and 49 were interviewed in 66 randomly sampled enumeration areas. This paper uses survey responses from 957 women aged 15 to 19. Survey data assess the determinants of teen pregnancy and contraceptive use. Exposure to integrated primary healthcare services is measured using a distance to nearest facility proxy. Distance to nearest functional CHPS compound assesses exposure to Ghana's frontline primary health care program (CHPS) and exposure to higher level facilities (i.e., sub-district level health centers, clinics, and district and regional hospitals) is measured using a distance to nearest facility other than CHPS proxy. Logistic regression is used to model the effects of selected covariates on ever use of contraceptive methods and ever having been pregnant.

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⁴ Binka, FN, AA Bawah, JF Phillips, A Hodgson, M Adjuik, B MacLeod. 2007. Rapid achievement of the child survival Millennium Development Goal: Evidence from the Navrongo Experiment in northern Ghana. *Tropical Disease and International Health*, 12(5): 578-593.

The qualitative portion of the study explored health workers' perceptions related to their provision of FP services to adolescents. The study was conducted with contraceptive providers in four districts of the Upper East Region during July and August of 2013. Community health workers, midwives and district health management staff were included, representing each tier of the district health system. A total of 8 in-depth interviews and 3 focus group discussions were conducted. Data analysis was conducted using Nvivo10 software following a deductive content analysis approach. Themes emerging during review of the transcripts were sorted and grouped according to key categories.

Preliminary Results

Of the 17% of teens ever pregnant, the great majority (83%) were married. Muslim teens were less likely than teens practicing traditional or no religion to have ever been pregnant (OR = 0.28). Pregnancy was strongly associated with ever use of a FP method (OR = 5.2) and having heard about a FP method (OR = 1.78). Wealth, education and literacy were not associated with having been pregnant.

Table 1: Selected demographic characteristics, childbearing experience, reproductive preferences and use of contraceptive methods among 957 women aged 15 to 19*	n	%
Married	168	17.6
Completed primary education or higher	747	78.1
Registered with National Health Insurance	533	55.7
Pregnancy and Childbearing		
Currently pregnant	37	3.9
Has had one or more live births	126	13.2
Ever been pregnant	159	16.6
Did not want to be pregnant at time of current pregnancy (pregnant now, n= 37)	13	35.1
Did not want to be pregnant at time of previous pregnancy (not pregnant now, n= 122)	35	28.7
Ideal number of children desired (mean)	5	n/a
Family planning use		
Currently using any method	67	7.0
Currently using any modern method	62	6.5
Ever used any family planning method	108	11.3
Anticipate future use of any method to delay or avoid pregnancy	482	50.5
Method of current use among all teens		
Injection	26	2.7
Pill	16	1.7
Condom	18	1.9
Other	5	0.5
Heard about family planning in last few months from any media	352	36.8

Table 2: Odds of ever having been pregnant among 955 women aged 15 to 19*	Odds Ratio	p-value	95% Confidence interval
Age	1.80	0.00	(1.44, 2.24)
Education (reference: Did not complete primary)			
Completed primary level of education or higher	0.75	0.44	(0.37, 1.54)
Residence (reference: Rural)			
Urban	0.72	0.52	(0.27, 1.95)
Literacy (reference: Not able to read or read with difficulty)			
Easily read in either English or local language	0.53	0.12	(0.23, 1.19)

Wealth Index (reference: Poorest 1/3)			
Least poor 1/3	1.29	0.50	(0.62, 2.69)
Less Poor 1/3	1.04	0.92	(0.50, 2.17)
Religion (reference: Traditional or no religion)			
Christian	1.43	0.52	(0.47, 4.34)
Muslim	0.28	0.03	(0.09, 0.90)
Current marital status (reference: Not currently married)			
Currently married	78.55	0.00	(39.16, 157.57)
NHIS Membership (reference: No current NHIS membership)			
Current NHIS membership	1.51	0.18	(0.83, 2.76)
Family Planning Use (reference: Never used a method)			
Ever used a method to avoid or delay pregnancy	5.17	0.00	(2.45, 10.89)

Analysis of the determinants of having ever used a contraceptive method found that literate teens were twice as likely to use FP as their peers (OR = 2.1). Having a current National Health Insurance (NHIS) membership was also positively associated with ever use of contraception (OR = 1.53). Prevalence of NHIS membership is likely higher among women who ever experienced a pregnancy since membership is free for pregnant women. Having ever experienced a pregnancy was highly correlated with ever use of contraception (OR = 5.21). Finally, household wealth and teen use of FP are negatively associated. The least poor third of teens had 0.4 times the odds of ever using FP relative to the poorest teens.

Table 3: Odds of ever having used a contraceptive method among 955 women aged 15 to 19*	Odds Ratio	p-value	95% Confidence interval
Age	1.05	0.52	(0.90, 1.23)
Education (reference: Did not complete primary)			
Completed primary level of education or higher	0.67	0.16	(0.38, 1.17)
Residence (reference: Rural)			
Urban	1.67	0.13	(0.87, 3.20)
Literacy (reference: Not able to read or read with difficulty)			
Easily read in either English or local language	2.10	0.01	(1.22, 3.60)
Wealth Index (reference: Poorest 1/3)			
Least poor 1/3	0.43	0.00	(0.25, 0.75)
Less Poor 1/3	0.62	0.07	(0.37, 1.03)
Religion (reference: Traditional or no religion)			
Christian	0.75	0.49	(0.34, 1.69)
Muslim	0.90	0.82	(0.37, 2.20)
Current marital status (reference: Not currently married)			
Currently married	0.81	0.62	(0.36, 1.84)
NHIS Membership (reference: No current NHIS membership)			
Current NHIS membership	1.53	0.06	(0.99, 2.37)
Family Planning Use (reference: Never used a method)			
Heard about family planning in the media recently	1.85	0.01	(1.20, 2.85)
Experience of pregnancy (reference: Never pregnant)			
Ever pregnant	5.21	0.00	(2.38, 11.37)
Distance to nearest health facilities and services			
Distance to nearest functional CHPS zone, in km	1.01	0.79	(0.91, 1.13)
Distance to nearest health facility other than CHPS, in km	0.93	0.31	(0.81, 1.07)

*Results presented in these tables have been condensed

The qualitative investigation found that health care workers' apprehension to provide FP services to adolescent clients posed a significant obstacle to adolescent contraceptive use. Nurses mentioned requesting parental consent for provision of contraception and lecturing adolescents on the importance of abstinence. Passing of personal judgments on youth who sought FP services was common:

“The adolescents, when they request for certain methods, we ourselves we don't want to offer them those services, we think they are very young, they cannot have those methods.”

Some health staff indicated that their practice of withholding contraceptive services from adolescents was in response to attitudes held by local male leaders. One health worker described a typical meeting with male elders in her community as follows:

“They indicated that if we allow [young women] to practice FP they will be promiscuous so we told them that adolescents, we do not allow them to take any method but we counsel them to abstain in order to complete their education.”

There was some indication that health care worker attitudes and practices towards adolescents are changing, as many staff noted the gravity of health complications that may result from teenage pregnancy.

Discussion and Conclusions

Adolescents who have begun childbearing are more likely to have ever used contraception than their peers. Having ever experienced a pregnancy was highly correlated with ever use of contraception (OR = 5.21), suggesting that pregnancy may precipitate both membership in the NHIS and use of FP through increased exposure to contraceptive counselling offered alongside postnatal services. Reaching pregnant teens with FP is important as this group of adolescents is certainly more likely to be at risk of further pregnancy – however, it is crucial to also reach those teens who are sexually active yet are not receiving FP. Due to cultural sensitivity, questions about sexual activity were not asked in this survey.

Qualitative data describe a context of adolescent “unfriendly” contraceptive services in the region in which teens travel to specific and rare “adolescent friendly” providers for services. Quantitative data confirm this, by demonstrating that distance to nearest facility has no impact on contraceptive use. Previous analysis has shown that proximity to nearest CHPS facility is significantly and positively associated with FP use among all women of reproductive age.¹ In this study, neither distance to nearest CHPS nor distance to other health facility are predictive of ever use of contraception.

Further exploration is warranted of the experiences of adolescents, both married and unmarried, who have sought the use of contraceptives through the health system of Upper East Region. Quantifying adolescent sexual activity and met and unmet need for FP is also important. In spite of these limitations, our findings confirm that there is significant need to introduce adolescent friendly FP services into the health system of UER. Qualitative data document extensive barriers faced by unmarried adolescents seeking FP services - yet unmarried adolescents appear to be just as likely as married adolescents to use these services. Results from this investigation will be used by the GHS to reposition adolescent-oriented FP services in a new health systems initiative targeting key groups at risk of pregnancy: teens who are not in school or who are illiterate. In addition, services will be designed for unmarried adolescents as well as those who are married.

¹ Spatial and Socio-demographic determinants of contraceptive use in the Upper East region of Ghana. Submitted 2014. Achana, FS et al.