

Title

Correlates of sexual and reproductive health service use
by young people in Jinja district, Uganda

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Abstract [199 words]

Objective This study examines correlates of sexual and reproductive health (SRH) service use by young people (14 to 24 years of age) in Jinja district, Uganda. **Methods** We use survey data collected between December 2006 and March 2007 from a representative sample of 1223 young people living in Jinja district. We fit nested logistic regression models of ever use of SRH services by all young people and, separately, by young people who have ever had sex, adjusting for key covariates of interest. **Findings** Married or in union youth, those who reside in rural areas, live without parents, and have an occupation other than being a student are less likely to use SRH services than their counterparts. The perceived risk of pregnancy and of contracting a sexually transmitted infection, and the practice of contraception are positively associated with young people using SRH services. Among young people who had sex, the likelihood of them ever using SRH services decreases with each additional sexual partner they have. **Conclusion** Efforts to expand SRH service utilization by young people in Uganda can be accelerated by investments in specifically targeted sexual education programs and increased availability and accessibility of youth-friendly health facilities offering SRH services.

Key words: sexual and reproductive health, young people, Uganda

Background

Uganda's population of 28.5 million is growing at 3.1% annually, a doubling rate of 22.6 years [1]. The 2006 Uganda Demographic and Health Survey (UDHS) shows that the total fertility rate (TFR) in Uganda is 6.7 children per woman, a slight decrease from the previous 2000/01 UDHS that indicated a TFR of 7.1 children per woman [2,3]. The country's population is characterized by a youthful age structure, with half of people being younger than 15 years [1]. Adolescents and young people below 25 years of age, about 35% of the population [1], have a number of unmet needs that society must address if this large segment of the population is to realize its full potential. The belief that adolescents are healthier given that they have survived childhood diseases and do not suffer from degenerative diseases specific to older ages has led to their neglect by the Ugandan health system. However, conditions related to sexual and reproductive health (SRH), such as early and unwanted pregnancy, unsafe abortion, sexually transmitted infections (STIs) and HIV/AIDS primarily affect the youth. Given that SRH behavior patterns acquired during adolescence have lifelong consequences, research on young people's SRH-related behaviors is needed so that appropriate and timely interventions are developed and implemented.

Adolescent pregnancy is an important public health problem in Uganda [4]. It is the result of early exposure to sexual intercourse, which also marks the beginning of exposure to the risk of contracting STIs, of early marriages and of limited use of contraception by young women in Uganda. The 2006 UDHS shows that about one quarter (24%) of women aged 20 to 49 years were sexually active by age 15 and 69% by age 18, and the cumulative percentage of sexually active women increases steadily to reach 86% by age 20 [2]. Although the minimum legal age for a woman to get married in Uganda is 18 years, marriage among young girls is a common practice. Among women aged 20 to 49 years, 16% were married by age 15 and 53% by age 18 [2]. Only some 6.5% and 21.3% of women 15 to 19 and 20 to 24 years of age, respectively, were using a contraceptive method in 2006 [2].

Adolescent pregnancy and early childbearing are associated with increased risks related to unsafe abortions and pregnancy complications, maternal morbidity and mortality, as well as negative educational and socio-economic consequences. A large proportion (41.8%) of pregnancies to Ugandan women aged less than 20 years are mistimed or unwanted [2]. Faced with an unwanted or mistimed pregnancy and out of fear of being rejected by society, many young women regard induced abortion as the only option available to them. In Uganda, abortion is highly restricted by law, but it is practiced clandestinely; it is estimated that one in every five pregnancies results in an induced abortion [5]. A large study conducted by Agyei and Epema in Uganda showed that 15% of ever pregnant female youth, aged 15 to 24 years, had terminated a pregnancy [6]. Another study showed that 68% of abortion patients in a teaching hospital in Uganda were 15 to 19 year-olds [7]. Also, a study led by the African Youth Alliance and conducted in several districts of Uganda found that 9% of male adolescents had been involved in an abortion (e.g., helping their girlfriends to abort), while 3% of female adolescents reported ever having an abortion [8]. Complications of pregnancy, abortion and childbirth are the leading causes of disability and death among women between ages 15 and 19 years in Uganda [4].

Uganda has been hailed as a success story in the fight against HIV that has seen a reversal in prevalence from a peak of about 15% in 1991 [9] to about 6.7% currently [1]. Since 1992, the largest and most consistent declines in HIV have occurred among the 15 to 19 year-olds [9]. The main channel for HIV/AIDS spread in Uganda is heterosexual intercourse, with young women being the primary victims. Among adolescents aged 15 to 19 years, females are 8.6 times more likely to be infected than males [10]. Another factor driving the HIV/AIDS epidemic among adolescents is cross-generational sex that is often unprotected [11]. Evidence from Uganda shows that some adolescents have sexual relationships with older, usually wealthier, men or women [4,12]. These types of sexual relationships are increasing because of the HIV/AIDS epidemic -- older men seek out adolescent girls as sexual partners in an attempt to avoid contracting HIV since it is believed that adolescents are still “safe” from infection [13].

Utilization of health care is generally low in Uganda. About 42% of births are delivered with the assistance of skilled medical professionals [1], while the latest maternal mortality estimation exercise places the maternal mortality ratio in Uganda at 550 deaths per 100,000 live births [14]. This is partly contributed by the fact that 52 % of the population lives more than 5 Km away from a health center, and even fewer (26.4%) live in the proximity of a hospital [15]. Moreover, health facilities in Uganda lack appropriate human resources, while the inadequately skilled nursing assistants constitute the bulk of medical staff at all levels of service delivery [16]. Thus, it is not a surprise that young people in Uganda face multiple barriers to accessing SRH information and services. As a result, for example, only about one third of adolescent males (34%) and females (32%) have detailed knowledge about pregnancy prevention [17]. Furthermore, qualitative research carried out in Kabarole district, Uganda, finds widespread misinformation and misconceptions about contraceptives and a serious gap in knowledge and understanding of the “dual protection” against STIs, including HIV/AIDS, and against pregnancy [18].

Research has shown that existence of youth-friendly health services encourages young people to use them. A study by Mbonye conducted among adolescents attending services in eight health facilities throughout Jinja district, four of which had implemented youth-friendly services, showed that more adolescents were accessing services from the youth-friendly sites; moreover, adolescents accessing services from the youth-friendly sites were more knowledgeable about adolescent health problems, factors that contribute to these problems, as well as contraceptive methods and ways to protect themselves against HIV and other STIs [19]. However, adolescent friendly services are not widely available in Uganda. Adolescents interviewed in a recent study conducted in Kabarole district in Uganda in 2007 agreed that SRH services are not adolescent friendly, lacking privacy and confidentiality for adolescents and specific training of health workers on how to relate appropriately to adolescents [20]. Such service-related aspects further reduce the likelihood of young people in Uganda seeking SRH information and services from health facilities.

Study Objective

This study examines correlates of SRH service use by young people (14 to 24 years of age) in Jinja district, Uganda. Separate, similar analyses are conducted on the entire sample of young

people, as well as on a restricted sample comprised of only those who have had sex given our interest in this particular segment of young people.

Methods

This analysis uses survey data collected between December 2006 and March 2007 from young people, 14 to 24 years of age, living in Jinja district, Uganda. A multistage sampling framework was applied to the five health sub-districts in Jinja district, and the sample was apportioned between the five health sub-districts with probability proportionate to size. Simple random sampling was used to select first, one sub-county out of each sub-district and then, two parishes within the selected sub-county; subsequently, a systematic sampling technique was applied to select three villages from each selected parish. Thus, the survey collected data from a total of 30 villages. Within each village, a simple random start was used to decide the first household to be visited, after which each household with a young person within the age group of interest was identified. All eligible study participants living in the selected households were invited to participate in the study until the required sample size was achieved. Parental consent to participate in the study was first obtained for individuals under 18 years of age; all study participants provided a written informed consent before being interviewed. If the selected individual was not at home at the time of the 1st visit of the research team, an appointment was made for a re-visit. The team re-visited the house up to two times before labeling a person as unavailable for an interview. The study response rate was 95%.

The study questionnaire collected data on young people's socio-demographic characteristics, their sexual and reproductive health knowledge, related attitudes, perceptions, and behavior, as well as available sources of reproductive health services. Questions were translated into Lusoga, and back translated into English to ensure that translation was accurate. The instrument was pre-tested in Mukono District.

We conducted exploratory uni- and bivariate analyses, and fitted nested logistic regression models of ever use of SRH services by young people and by young people who have ever had sex, respectively, adjusting for key covariates of interest. We grouped these covariates in three groups that were subsequently added in our regression models: (1) socio-demographic characteristics, (2) SRH knowledge, perceptions, and behavior, and (3) characteristics of the nearest available health facility. The socio-demographic characteristics included: gender (male, female), age, education (none, primary, secondary, postsecondary), marital status (married/in union, single/separated/divorced/widowed), living arrangements (living with both parents, only one parent or without parents), primary residence (urban, rural) and occupation (student, agriculture, non-agriculture, no occupation). The SRH knowledge, perceptions, and behavior group of covariates included: whether or not young people were ever pregnant or ever made someone pregnant (yes/no), whether they or the woman they made pregnant ever had an induced abortion (yes/no), whether they ever perceived themselves at risk of contracting a STI or at risk of being or getting someone pregnant (at risk, not at risk, don't know), whether they know at least one method of contraception (yes/no) and if they are current users of contraception (yes/no). All study participants have answered the question about using contraception as we considered that even young people who have never had sexual intercourse might have used in the past or have recently started to use a contraceptive method in preparation for a planned sexual intercourse. Additionally, in the regression models fitted on the entire sample we included a binary variable

identifying persons who have ever had sex, while in the regression models fitted on the restricted sample of people who have had sex, we included two additional covariates: age at sexual debut and the number of sexual partners in the last month used as a proxy under the assumption of a constant number of monthly sexual partners for young people in our sample. We also controlled for two characteristics of the nearest health facility: the proximity of the facility (less /more than 5 km) and the facility ownership categorized as government/mission health facility, private/NGO health facility and don't know.

All analyses are conducted using STATA version 9.1, and adjusted for complex survey design using Taylor's linearization method. The study was approved by the Ethical Committee of the National Council of Science and Technology in Uganda.

Findings

Table 1 shows the characteristics of the sample of young people in our study. The mean age of study participants was about 19 years, and more than half (55.4%) of our interviewees were females. About one third of the sample is comprised of people with no (2.6%) or only primary education (31.4%), and about 19% of the sample consists of married or in union young people. Two thirds of our study participants live with at least one parent and almost 70% of them live in rural areas in Jinja district. More than half of the sample is comprised of students (51.4%), some 16% of our study participants work in agriculture, over a quarter of them have a non-agricultural occupation and 6.6% are neither students nor employed.

More than three quarters (75.7%) of the people in our sample have had sex, and about 31.5% have ever been pregnant or made someone pregnant. Almost 60% of our interviewees have perceived themselves to be at risk of contracting an STI, and 25.5% of them to be at risk of getting pregnant or making someone pregnant. A vast majority (92%) of study participants knows at least one method of contraception, but only 18.7% are currently using such a method. Among young people who had sex, the mean age at sexual debut was 16.5 years, and the average number of sexual partners in the last month was 2.

Table 2 shows results from logistic regression models of ever use of SRH services by young people in Jinja. After controlling only for socio-demographic characteristics, males seem to be significantly more likely to seek SRH services than females (OR=1.42), but this association is only marginally significant after additionally controlling for SRH-related variables and further for variables related to the nearest health facility. Based on the fully-adjusted model, married and in union young men and women as compared to singles, and those who live without parents as compared to those living with both parents are 52% less likely to use SRH services. Urban than rural residence is associated with an increased likelihood of young people seeking SRH services (OR=1.6). Young people with either agricultural or non-agricultural occupations are significantly less likely than students to use RSH services (OR=0.44 and OR=0.49, respectively).

Young people who have ever had sex are more than 2 times more likely to seek and use SRH services than those who have not had sexual intercourse (OR=2.12). Perceived risks of contracting an STI and becoming or making someone pregnant are significantly and positively associated with an increased likelihood of attending SRH services (OR=2.01 and OR=3.08,

respectively). Interestingly, young people who are using contraception are almost 4 times more likely to have used SRH services than their counterparts (OR=3.96).

Results from logistic regression models of ever use of SRH services fitted on the restricted sample of young people who have ever had sex are shown in Table 3. This second part of our analysis identifies the same socio-demographic and sexual knowledge, perception and behavior covariates as predictors of young people ever seeking SRH services; moreover, the magnitude of the observed associations is similar. Age at first sex does not seem to be associated with SRH service use, and it appears that the more sexual partners a person had in the last month the less likely he/she is to have ever used such services (OR=0.91).

Discussion

This study aimed to identify correlates of SRH service use by young people (14 to 24 years of age) in Jinja district, Uganda. Of special interest were sexual behavior variables related to age of first sexual intercourse and the number of sexual partners for young people who have had sex. Thus, we have conducted similar analyses on the entire sample and subsequently on the sub-sample of young people who have ever had sex, approximately 76% of the entire sample.

Our analyses show that married and in union young people and those who reside in rural areas in Jinja are less likely to have ever used SRH services than their counterparts. Given the Ugandan culture, it is likely that married and in union young people obtain sexual-related information and advice through *senga*, a traditional channel for sex education to be passed from older to younger men and women. Young people residing in rural areas are less likely to have easy access to affordable SRH services, and thus it is not surprising that we find them to be less likely to seek such services.

While several studies examined the relationship between key socio-demographic characteristics and young people's sexual behavior, few have studied the relationship between sexual behaviors and risk perception, and to our knowledge, our study is the first to explore associations between pregnancy and STI/HIV risk perception and SRH service utilization. An analysis using data from the 2004 National Survey of Adolescents conducted in Uganda found a significant positive association between perceived risk of contracting an STI and risky sexual behavior among males but not females [9]. Two other studies, one conducted among university students attending Makerere University [21] and one among adolescents in Mbale District, Uganda [22] showed that whereas knowledge on methods of prevention of pregnancy and STIs was high it was not followed by appropriate behavioral patterns. On the same line, our study does not find a significant association between knowledge of at least one method of contraception and the use of SRH services by young people in Jinja.

The study conducted among Makerere University students also showed that more female than male students obtained sexual information from their parents, while more male students identified their previous sexual partner as source for such information [21]. Our study shows that young people, males and females, who are living with only one rather than both parents are marginally significantly less likely to have ever used SRH services, while young people living without either parent are less than half as likely to have done so. Thus, it appears that parents'

presence in the household is important for young Ugandan people, potentially representing both a source of sexual education and information and a factor increasing the likelihood of young people seeking health services when needed. Also, our study finds that students are more likely to have used SRH services than young people who are out of school. This finding matches results of a previous study conducted in Kabarole district, Uganda, which showed that out-of-school adolescents are less likely to practice safe sex and to use modern family planning methods than in-school adolescents [23].

Importantly, this analysis finds significant positive associations between young people's perceptions of pregnancy and STI risk and their use of SRH services. It appears that young people are able to assess their sexual behavior-related risks and to act responsibly by seeking the health services they need. Additionally, our study shows that users of contraception are significantly more likely to have ever sought SRH services. It might be that family planning is the main SRH service sought by young people, but also, this finding implies that young people make use of the information and services offered to them in health facilities once they overcome their initial fear of accessing SRH services. On the other hand, among young people who had sex, the likelihood of them using SRH services is lower the larger the number of sexual partners they have. In light of the other study findings, this latter finding suggests that maybe it is fear of finding out an unfavorable medical result or fear of being judged by the medical personnel influencing young people who have multiple sex partners not to access SRH services.

This study is not without limitations. Due to the cross-sectional nature of the data we can only examine associations of our outcome of interest rather than causal relationships. Our sample is representative of young people, 14 to 24 years of age, living in Jinja district, but the extent to which results of this analysis can be extrapolated to characterize the situation in other districts of Uganda remains unknown. We did not have enough power to examine the associations of interest separately among males and females, and such an analysis would have shed more light on ways to specifically target young men and women with sexual education messages and interventions.

Previous research conducted in Uganda showed that adolescents who have been exposed to information on where and how to access SRH services are more knowledgeable and more likely to have use such services [24]. Thus, the Ugandan Government, NGOs and donor agencies working on reproductive health in Uganda should increase the number of sexual education programs and find ways to deliver messages related to SRH service availability to young people. In light of our findings, such measures should particularly target young people who have already had sex, those residing in rural areas, married or in union, and those who are no longer in school.

Conclusions

Youth face multiple barriers to accessing SRH information and services. Sometimes services may not exist at all or where they exist, they are not friendly, not affordable or are opposed by adults. Efforts to expand SRH service utilization by young people in Uganda can be accelerated by investments in specifically targeted sexual education programs and increased availability and accessibility of youth-friendly health facilities offering SRH services.

Table 1: Sample characteristics (N=1223)

Characteristics		N (%)
Socio-demographic	<i>Gender</i>	
	Female	677 (55.35)
	Male	546 (44.65)
	<i>Age (years)</i>	mean=18.9; std dev=2.8
	<i>Education</i>	
	None	32 (2.62)
	Primary	384(31.40)
	Secondary	747 (61.08)
	Postsecondary	60 (4.91)
	<i>Marital status</i>	
	Single/separated/divorced/widowed	989 (80.87)
	Married/in union	234 (19.13)
	<i>Living arrangements</i>	
	Live with both parents	511 (41.78)
Live with one parent	298 (24.37)	
Live without parent(s)	414 (33.85)	
<i>Residence</i>		
Rural	854 (69.83)	
Urban	369 (30.17)	
<i>Occupation</i>		
Student	629 (51.43)	
Agriculture	191 (15.62)	
Non-agriculture	322 (26.33)	
No occupation	81 (6.62)	
Sexual and reproductive health knowledge, risk perception and behavior	<i>Ever had sex</i>	
	No	297 (24.28)
	Yes	926 (75.72)
	<i>Ever pregnant / made someone pregnant</i>	
	No	838 (68.52)
	Yes	385 (31.48)
	<i>Ever induced abortion</i>	
	No	1128 (92.23)
	Yes	95 (7.77)
	<i>Ever perceived to be at risk of contracting STIs</i>	
	Not at risk	406 (33.20)
	At risk	716 (58.54)
Don't know	101 (8.26)	
<i>Ever perceived to be at risk of becoming pregnant / making someone pregnant</i>		
Not at risk	316 (25.84)	
At risk	595 (48.65)	
Don't know	312 (25.51)	
<i>Know at least one method of contraception</i>		
No	100 (8.18)	
Yes	1123 (91.82)	
<i>Current use of contraception</i>		
No	994 (81.28)	

	Yes	229 (18.72)
	<i>Age at first sex (years)</i>	mean=16.5; std dev=2.0
	<i>Number of sexual partners in the last month</i>	mean=2.0; std dev=2.9
Nearest health facility	<i>Proximity of health facility</i>	
	Less than 5km	1150 (94.03)
	More than 5km	73 (5.97)
	<i>Ownership of the nearest health facility</i>	
	Government/mission facility	964 (78.82)
	Private/NGO facility	251 (20.52)
	Don't know	8 (0.65)
Study outcomes	Ever used sexual and reproductive health service	
	No	785 (64.19)
	Yes	438 (35.81)
	Ever used sexual and reproductive health service if ever had sex	
	No	544 (58.75)
	Yes	382 (41.25)

Table 2. Results from logistic regression models of sexual and reproductive health service use by young people in Jinja, Uganda (N=1223)

Ever used sexual and reproductive health services		OR (95% CI)			
		Model I	Model II	Model III	
Socio-demographic	<i>Gender</i> Female (Ref) Male	1.42 (1.09, 1.85)	1.31 (0.97, 1.78)*	1.29 (0.95, 41.75)*	
	<i>Age</i>	1.06 (1.00, 1.12)	0.97 (0.91, 1.04)	0.97 (0.91, 1.04)	
	<i>Education</i> None (Ref) Primary Secondary Postsecondary	2.86 (0.95, 8.61)* 4.79 (1.60, 14.38) 6.22 (1.82, 21.29)	1.15 (0.35, 3.70) 2.21 (0.69, 7.11) 2.65 (0.71, 9.98)	1.18 (0.36, 3.84) 2.28 (0.70, 7.38) 2.83 (0.74, 10.76)	
	<i>Marital status</i> Single/separated/divorced/widowed (Ref) Married/in union	0.63 (0.41, 0.95)	0.49 (0.30, 0.91)	0.48 (0.29, 0.79)	
	<i>Living arrangements</i> Live with both parents (Ref) Live with one parent Live without parent(s)	0.74 (0.53, 1.04)* 0.48 (0.35, 0.67)	0.70 (0.47, 1.03)* 0.49 (0.34, 0.71)	0.70 (0.48, 1.04)* 0.48 (0.33, 0.69)	
	<i>Residence</i> Rural (Ref) Urban	1.78 (1.35, 2.33)	1.56 (1.14, 2.12)	1.60 (1.17, 2.19)	
	<i>Occupation</i> Student (Ref) Agriculture Non-agriculture No occupation	0.58 (0.37, 0.92) 0.66 (0.45, 0.97) 1.03 (0.61, 1.72)	0.45 (0.27, 0.76) 0.51 (0.32, 0.79) 0.94 (0.52, 1.71)	0.44 (0.26, 0.73) 0.49 (0.32, 0.77) 0.94 (0.52, 1.71)	
	Sexual and reproductive health knowledge, risk perception and behavior	<i>Ever had sex</i> No (Ref) Yes		2.09 (1.38, 3.17)	2.12 (1.40, 3.22)
		<i>Ever pregnant / made someone pregnant</i> No (Ref) Yes		1.17 (0.74, 1.87)	1.20 (0.75, 1.90)
		<i>Ever induced abortion</i> No (Ref) Yes		1.20 (0.67, 2.19)	1.14 (0.64, 2.03)
		<i>Ever perceived to be at risk of contracting STIs</i> Not at risk (Ref) At risk Don't know		2.06 (1.43, 2.97) 1.41 (0.79, 2.49)	2.01 (1.39, 2.92) 1.39 (0.78, 2.48)
		<i>Ever perceived to be at risk of becoming pregnant / making someone pregnant</i> Not at risk (Ref) At risk Don't know		3.04 (1.98, 4.66) 3.50 (2.19, 5.61)	3.08 (2.01, 4.74) 3.52 (2.19, 5.65)
<i>Know at least one modern method of contraception</i>					

	No (Ref) Yes		1.33 (0.76, 2.33)	1.35 (0.77, 2.37)
	<i>Current use of contraception</i> No (Ref) Yes		3.98 (2.76, 5.75)	3.96 (0.74, 5.72)
Nearest health facility	<i>Proximity of health facility</i> Less than 5km (Ref) More than 5km			1.42 (0.79, 2.54)
	<i>Ownership of the nearest health facility</i> Government/mission facility (Ref) Private/NGO facility Don't know			1.14 (0.80, 1.61) 0.15 (0.01, 1.87)

Note: OR=odds ratio; CI= confidence interval; figures in bold are statistically significant at a level of alpha=0.05 or better; * figures are statistically significant at a level of alpha=0.1.

Table 3. Results from logistic regression models of sexual and reproductive health service use by young people in Jinja, Uganda who ever had sex (N=926)

Ever used sexual and reproductive health services if ever had sex		OR (95% CI)			
		Model I	Model II	Model III	
Socio-demographic	<i>Gender</i> Female (Ref) Male	1.19 (0.88, 1.61)	1.18 (0.84, 1.66)	1.15 (0.82, 1.63)	
	<i>Age</i>	1.00 (0.94, 1.07)	0.93 (0.85, 1.02)	0.93 (0.85, 1.02)	
	<i>Education</i> None (Ref) Primary Secondary Postsecondary	2.20 (0.70, 6.91) 3.47 (1.10, 10.90) 5.07 (1.39, 18.48)	0.94 (0.28, 3.13) 1.46 (0.44, 4.92) 2.32 (0.58, 9.31)	0.94 (0.28, 3.16) 1.48 (0.44, 5.00) 2.49 (0.61, 10.13)	
	<i>Marital status</i> Single/separated/divorced/widowed (Ref) Married/in union	0.58 (0.38, 0.91)	0.47 (0.28, 0.78)	0.45 (0.27, 0.77)	
	<i>Living arrangements</i> Live with both parents (Ref) Live with one parent Live without parent(s)	0.71 (0.48, 1.05)* 0.45 (0.31, 0.65)	0.70 (0.45, 1.09) 0.50 (0.33, 0.75)	0.71 (0.45, 1.11) 0.48 (0.31, 0.73)	
	<i>Residence</i> Rural (Ref) Urban	1.92 (0.40, 2.62)	1.59 (1.12, 2.26)	1.64 (1.15, 2.33)	
	<i>Occupation</i> Student (Ref) Agriculture Non-agriculture No occupation	0.47 (0.29, 0.75) 0.54 (0.35, 0.81) 0.83 (0.46, 1.48)	0.44 (0.26, 0.76) 0.52 (0.32, 0.84) 0.80 (0.41, 1.55)	0.43 (0.25, 0.75) 0.51 (0.32, 0.83) 0.80 (0.41, 1.55)	
	Sexual and reproductive health knowledge, risk perception and behavior	<i>Age at first sex</i>		1.10 (1.00, 1.21)	1.10 (1.00, 1.22)*
		<i>Number of sexual partners in the last month</i>		0.91 (0.85, 0.98)	0.91 (0.85, 0.98)
		<i>Ever pregnant / made someone pregnant</i> No (Ref) Yes		1.34 (0.83, 2.15)	1.36 (0.84, 2.20)
		<i>Ever induced abortion</i> No (Ref) Yes		1.22 (0.68, 2.20)	1.17 (0.65, 2.11)
		<i>Ever perceived to be at risk of contracting STIs</i> Not at risk (Ref) At risk Don't know		2.07 (1.35, 3.19) 1.40 (0.70, 2.77)	2.01 (1.31, 3.11) 1.35 (0.68, 2.71)
<i>Ever perceived to be at risk of becoming pregnant / making someone pregnant</i> Not at risk (Ref) At risk Don't know			2.99 (1.78, 5.01) 3.36 (1.92, 5.85)	3.01 (1.79, 5.07) 3.36 (1.92, 5.89)	
<i>Know at least one modern method of contraception</i>					

	No (Ref) Yes		1.19 (0.63, 2.24)	1.21 (0.64, 2.28)
	<i>Current use of contraception</i> No (Ref) Yes		3.98 (2.69, 5.89)	3.97 (2.68, 5.88)
Nearest health facility	<i>Proximity of health facility</i> Less than 5km (Ref) More than 5km			1.45 (0.77, 2.72)
	<i>Ownership of the nearest health facility</i> Government/mission facility (Ref) Private/NGO facility Don't know			1.00 (0.68, 1.48) 0.11 (0.01, 1.50)*

Note: OR=odds ratio; CI= confidence interval; figures in bold are statistically significant at a level of alpha=0.05 or better; * figures are statistically significant at a level of alpha=0.1.

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