



Contraceptive use and associated factors among youth aged 15-24 years in Kicukiro District, Rwanda

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ABSTRACT

Access to contraceptives is of a particular importance in reducing high rates of unplanned pregnancies and increased rates of sexual transmitted infections and HIV/AIDS. In Rwanda there is a significant proportion of sexually active youth who engage in premarital sex. The study was cross-sectional with quantitative and qualitative approaches. A sample size of 354 were used for the quantitative and 10 health providers working in family planning services at 5 selected health facilities for the qualitative data. The study considered sexually active young people aged 15-24 years prior to the study. Quantitative data were collected using a questionnaire while qualitative data were collected using interview guides. Quantitative data were analyzed using Statistical Package for Social Science version 21. Thematic analysis was used and codes were made for different themes for qualitative data. Contraceptive use among youths aged 15-24 years in Kicukiro was found to be at 59.3 %. The majority were female with 68.4%, those of 20-24 years made 78.2 % of the study respondents while 77.4 % were single. Condom was the most used at 51.1%, followed by contraceptive pills at 28.0% and injectable at 9.9 %. 65.5 % of respondents sought information from mass media and radio while 12.4 % were from community outreaches and 9.9 % from hospital and health workers. Factors that were associated statistically with contraceptive use among youth include: age [AOR= 3.486; 95% CI= 1.869- 6.502; P<0.001], wealth status [AOR= 14.868; 95% CI= 1.246-177.389; P=0.033], employment [AOR=5.099; 95% CI=1.352-19.227; P= 0.016] were all revealed to influence the use of contraceptives among youth. Qualitative data showed positive attitudes in contraceptives provision though some restrictions to in-school and unmarried young people were reported. Among the factors highlighted that attract youths from using contraceptives are the contraceptive knowledge and information on consequences of unwanted pregnancies, the benefits of using contraceptives. Among factors that hinder the demand as mentioned by providers are lack of confidentiality, misconceptions and fear of using something with that could affect their ability to reproduce. Contraceptive use among youths of 15-24 years is still low. Interventions aiming at improving knowledge, attitudes and accessibility to contraceptive methods use among youth are recommended.

Introduction

Young people constitute a bigger proportion of today's world population than it was before especially in low and middle income countries (LMICs). World Health Organization defines young people as those between aged between 10 and 24 years, and its definition it includes the sub-groups of adolescents (ages 10 to 19) and youths (ages 15 to 24). While the definitions sometimes vary between organizations and researchers, these age cohorts undeniably made of different subgroups with different family needs, socioeconomic, parity, employment, marital and education statuses, and unique sexual and reproductive health behaviors[1].

Reproductive health needs of young people are usually most acute where only age creates a set of cultural and social expectations that can affect and limit their ability to act on their desire and preferences to practice and use contraception services. Accessing family planning services is considered a fundamental human right and a socio-economic necessity. Every woman has a fundamental right to decide on the number of children she wants to have and when she wants to have them [2].

Young people still face social and economic barriers globally in accessing sexual and reproductive health (SRH) information and services which continuously contribute to increased levels of unwanted pregnancies, abortions, mortality and morbidity of mothers as well as high rates of sexual transmitted infections.

Singh *et al.*, (2012) stated that inadequate use and low rate of contraceptives among youths has led to unplanned pregnancies, unsafe abortions, fistula, infant mortality which are public health concerns[3]. United Nations report (2013) have reported globally, the prevalence of contraceptive is at 63%, whom nine out of ten woman who are in the reproductive age relies on a modern contraceptive[4]. In Sub-Saharan Africa region, prevalence rate of contraceptives is at 25% while worldwide female sterilization was the most common method used with 26%, IUDs at 14% and the emergency contraceptive pills which is at 9%. In Nigeria, a study done have shown that the pattern of contraceptive usage among youth was at 34.2% out of which a majority of them used condoms [5].

In a study conducted by Nyarko (2015) in Ghana found that the use of contraceptives among women in Ghana was at 18.3 % with 14.6 % reported to have used modern contraceptive methods and 3.7 % used traditional contraceptive methods[6]. An analysis of studies conducted among university students reported the low rates of contraceptives usage among sexually active, never married women, 31% in Nigeria, 36% in Tanzania, 26% in Zambia , 18% in India and 4% in the Philippines, 59% in Colombia (2010), and 32% in Guatemala[7].

Rwanda has a young population where 62% of country's population is below the age of 24 and with a fertility of 4.2 children per woman per average. With this big number of young people that enters the childbearing age, it is a fact that their reproductive behavior will determine Rwanda's population growth and size for many years ahead[8]. Rwanda Demographic and Health Survey (2014-2015) have shown that among married women of 15-49 years old the use of various family planning methods is at 53% where 48% use any modern method and 6% use any traditional method. For unmarried sexually active women of 15-49, modern family planning use is at 35% and less than 1% use a

traditional method[9].

Interventions and efforts to improve family planning accessible and quality care especially to youths is of a very important role to better understand where they could get family planning services including contraceptives and to inform key players on points of interventions in addressing and tackling the barriers that young people still face to access family planning services [10].

Inadequate use of contraceptives among youths has led to unintended pregnancies, unsafe abortions, disability such as fistula, infant mortality and high teenage pregnancies which are public health concerns [11].

It has been revealed that access to contraceptives and family planning services youths usually face with scrutiny and denial from getting the service with regard to their age. World Health Organization (WHO) medical eligibility criteria for contraceptive use, states that age alone should not constitute a medical reason for denying any method to adolescents [12].

Unplanned pregnancies in Rwanda are at higher rate, especially in youth and remain a public health concern. Young people still engage in early sexual activity before marriage and in unprotected sex. RDHS (2014-15) revealed that about 20% had sexual intercourse by age 18, 39% have had sexual intercourse at 20 years and only 2% revealed to had sexual intercourse before 15 years and currently 7% of adolescent women between 15-19 years old are already mothers or are pregnant expecting their first child[9].

Despite being sexually active, low contraceptive use among the youths have been reported in Rwanda. Currently among unmarried sexually active women of 15-19 years old and in 20-24 years of age, the use of any modern contraception method is at 11.6% and 34.3% respectively. This means that about 88.4% unmarried women between 15- 19 years and 65.7% of 20-24 years who are active sexually are not using any method of contraceptive[9].

Kicukiro district has the highest percentage of teenage pregnancy in Kigali city where 12.8 % of adolescents has been pregnant [13]. Understanding the current use of contraceptive use among youths as well as the factors associated with use in this age category will help to develop interventions in order to increase the use and uptake of family planning services and help to develop sensitive programs and strategies that are youth-friendly towards meeting contraceptive needs of youth of Rwanda.

Research methodology

The aim of the study is to determine prevalence and predisposing factors of contraceptives use among youths aged 15-24 years old in Kicukiro District. The study was cross-sectional using both quantitative and qualitative approaches. For quantitative approach, questionnaires were developed during the assessment based on specific objectives of this study to gather quantitative information about contraceptive use. Key informants interview guides were conducted with health service providers with relevant knowledge about family planning that helped in generating qualitative information related to the issue of contraceptive use and associated factors among youth.

Study population and procedure of the study

The study took place in Kicukiro district in the city of Kigali. The population was sexually active youths of 15 to 24 years irrespective of educational and occupational status. 354 young male and female were considered in the study. The study also employed 10 health care providers within the study area who are on daily basis involved in family planning services. Kicukiro district has been selected due its highest percentage of teenage pregnancy in Kigali city where 12.8 % of adolescents has been pregnant [13].

The researcher used approved questionnaire in collecting quantitative data and key informant interviews were done for qualitative component. The questionnaire has three parts which asked the respondents about their socio-demographic characteristics and factors associated with contraceptive use. Data collection was conducted by the researcher. For qualitative data, the interviews were carried out with focal persons in charge of family planning services at selected health facility of the target population. The interviews were recorded using a voice recorder to avoid interruptions of notes taking during the interviews. After interviews and reviews, a detailed report written for each dialogue was generated.

Data Analysis

The filled questionnaires were checked for completeness before analysis and then coded and entered in the computer. Data entry were done based on extraction tool. The analysis was done using the Statistical Package for Social Science (SPSS) version 21 and data were presented using graphs and tables with frequencies and proportions. Chi- square test values were used to test the significance of the association between the dependent and independent variables. The statistical level of significance was set at $P < 0.05$.

Qualitative data was analyzed through thematic analysis method and codes for different themes were made. The researcher read and revised all of the transcripts for several times using thematic analysis in order to identify predetermined and emerging themes and to be familiar himself with the data. After entering the data into a computer, the coding process was done. Audio recordings were transcribed verbatim and analyzed using content analysis. The analysis looked for patterns and associations on the emerging themes, focusing on the drivers and barriers to contraceptives.

Results

This study involved 354 young people of 15 to 24 years who are sexually active, of which majority 242 (68.4% percent) were females. Most of the respondents were within 20 to 24 years (78.2% percent). Further 73.4 % of the participants were from urban setting. Regarding wealth status, most of the respondents were from category III of economic class with 74.3 %. With regards to marital status, singles occupied 77.4 % of the respondents and 19.8% were married. Considering the religion, 96 % of the respondents were affiliated to Christianity and only 4 % were Muslims. Most of the respondents (95.5%) know how to read and write where 55.9 % of all the respondents

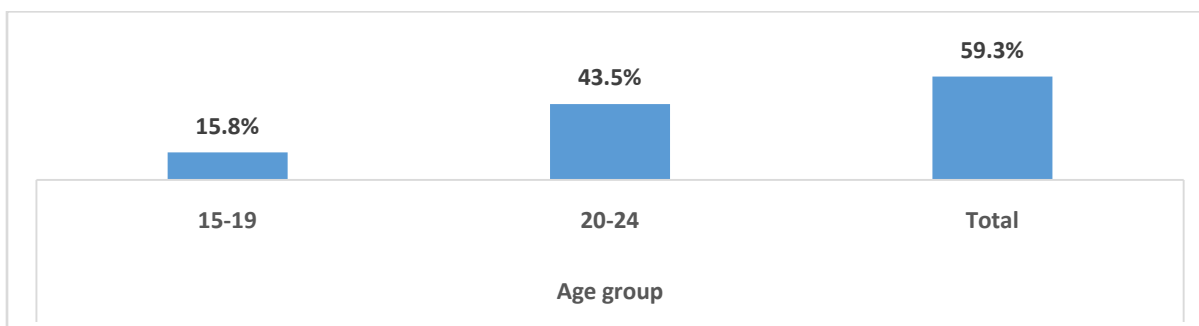
had finished secondary schools and 15 % had joined university and 92.9 % were not employed.

Table 1. Socio-demographic characteristics of respondents

Variable	Frequency (N=354)	Percent (%)
Gender		
Female	242	68.4
Male	112	31.6
Age group		
15-19	77	21.8
20-24	277	78.2
Area of residence		
Urban	260	73.4
Rural	94	26.6
Wealth status		
Category one	8	2.3
Category two	65	18.4
Category three	263	74.2
Category four	18	5.1
Marital status		
Single	274	77.4
Married	70	19.8
Separated	6	1.7
Divorced	4	1.1
Religion		
Christianity	340	96.0
Islam	14	4.0
Level of education		
None	16	4.5
Primary	87	24.6
Secondary	198	55.9
University	53	15.0
Employment Status		
Employed	25	7.1
Non employed	329	92.9

Source: Primary data

Figure 1. Prevalence of contraceptives use among youth of 15 to 24 years in Kicukiro District



Source: Primary data

Out of 354 sexually active youth aged 15-24 respondents, the prevalence of use of contraceptives among youth was at 59.3% where 15.8 % of all users were between 15-19 years old and 43.5 % were aged between 20 to 24 years old.

Table 1. Contraceptive related characteristics and contraceptive use

Characteristics	Frequency (N=354)	Percent (%)
Type of contraceptive used		
Condoms	181	51.1
Emergency pills	19	5.4
Contraceptive pills	99	28.0
Injectables	35	9.9
Implants	12	3.4
IUD	6	1.7
Natural family planning	2	0.6
Source of contraceptives information		
Friends/ Relatives	29	8.2
Mass media/Radio	232	65.5
Hospital/ Health worker	35	9.9
School teacher	14	4.0
Community outreach	44	12.4
Reason for preferring a method		
Because it is easy to use	242	68.4
Because it is cheap	9	2.5
Because of its long duration	38	10.7
Privacy purpose	10	2.8
Less side effects	55	15.5
Reasons for using more than one contraceptives		
Because of dual protection role	97	27.4
The method of choice was not available	19	5.4
Opted for long term method	73	20.6
Side effects	165	46.6
Primary purpose of using contraceptives		
Prevention of pregnancy	186	52.5
Prevention of STIs and HIV/AIDS	128	36.2
Enhancing sexual performance	40	11.3
Access of contraceptives		
Public/government health care facility	241	68.1
Drug shop	96	27.1
Community based distributor	14	4.0
Other/Specify	3	0.8

Source: Primary data

Among the contraceptives used, condoms was most preferred method by users with 51.1%, followed by contraceptive pills at 28.8% and injectables at 9.9 %. Regarding the sources of information, mass media was the most common source of information with 65.5%, 12.4 % got

contraceptives information from community outreaches and 9.9 % from hospital and health workers. Concerning the reasons for preference, 68.4% of the respondents have chosen a method because it was easy to use while 15.5% their preference based on a method with less side effects and 10.7% preferred a method because of its long duration. About the reasons for using particular contraceptives included, 52.5 % was to prevent pregnancy, 36.2 % to prevent HIV/AIDS and STIs and 11.3 % to enhance sexual performance. Regarding the source of contraceptives, 68.1% of the respondents have obtained the contraceptives from public health facilities, 27.1 % from drug shops and only 4 % obtained from community based distributors. These findings showed that the main source of providers of contraceptives among young people was public health facilities.

When study participants were asked whether they had heard before of contraceptives, majority (98.3%) of the respondents reported to have heard about contraceptives and condoms were reported as the most known contraceptive method with 46.3%, followed by contraceptive pills at 34.7 % and injectables at 8.5 %. Other than condoms, pills and injectables, implants and IUD were reported to be used at a very small percentages by the respondents.

Table 3: Association between sociodemographic factors and contraceptive use

Variables	Contraceptive use				Chi square	P value
	Yes		No			
	N	%	N	%		
Gender					0.686	0.408
Female	140	39.5	102	28.8		
Male	70	19.8	42	11.9		
Age group					7.328	0.007
15-19	56	15.8	21	5.9		
20-24	154	43.5	123	34.7		
Area of residence					3.617	0.057
Urban	162	45.7	98	27.7		
Rural	48	13.6	46	13.0		
Wealth status					14.242	0.003
Category one	7	2.0	1	0.3		
Category two	30	8.3	35	9.9		
Category three	167	47.2	96	27.1		
Category four	6	1.7	12	3.4		
Marital status					26.029	<0.001
Single	144	40.7	130	36.7		
Married	60	16.9	10	2.8		
Separated	3	0.8	3	0.8		
Divorced	3	0.8	1	0.3		
Religion					6.793	0.009
Christianity	197	55.6	143	40.4		
Islam	13	3.7	1	0.3		
Level of education					14.964	0.002
None	6	1.7	10	2.8		
Primary	42	11.9	45	12.7		
Secondary	121	34.2	77	21.8		
University	41	11.6	12	3.4		
Employment status					9.168	0.002
Employed	22	6.2	3	0.8		
Not employed	188	53.1	141	39.8		
Knowledge about contraceptives					1.708	0.191

Yes	208	58.8	140	39.5		
No	2	0.5	4	1.2		
Being told of contraceptive by a health worker					0.50	0.823
Yes	142	40.1	99	28.0		
No	68	19.2	45	12.7		
Family support					6.793	0.009
Yes	13	3.7	1	0.3		
No	197	55.6	143	40.4		

* Significant at p<0.05 bolded

Source: Primary data

As shown in table 3 above for association of socio-demographic characteristics with the use of contraceptive among youth, age group, wealth status, marital status, religion, education level, employment status and family support were found significant with the contraceptive use. The age of the respondents is significant to the use of contraceptives ($\chi^2=7.328$ p-value 0.007) showing that the percentage of youths who have ever used the contraceptive use is high at age of 20-24 which is 43.5 % and 15.8 % with 15-19 years have been reported using the contraceptives. About the wealth status, the results showed that the association between wealth status and contraceptive use is significant ($\chi^2=14.242$ p-value =0.003) where about 47.2 % of youth were in the category three. The association between marital status and ever use of contraceptives was found to be statistically significant ($\chi^2= 26.029$ p-value <0.001). The results indicate that 40.7 % of those who ever used a contraceptives were single and 16.9 % of those who had ever used a contraceptive were married.

Religion and having used the contraceptives were found to be statistically significant ($\chi^2=6.793$ p-value =0.009) with 55.6 % of all users who were Christians and 3.7 % of Muslim youths had ever used a contraceptive. Regarding education status, the results show that the level of education was likely associated to contraceptive use ($\chi^2=14.964$ p-value=0.002). Those with at least secondary education, 34.2% of them had ever used a contraceptive while 11.6 % of those with university had ever used a contraceptive. Employment status was associated with the use of contraceptives ($\chi^2=9.168$ p-value =0.002) where 53.1% of all users were employed. Having the support from the family was also associated with the use of contraceptives with ($\chi^2=6.793$ p-value= 0.009) where 55.6 % of all the users were not supported by their families.

Multivariate Analysis

Multiple logistic regression analysis was applied to identify the variables that are independently associated with the use of contraceptives among youth. All significant variables in bivariate analysis were taken into the full model to detect the variables which are independently associated with the use of contraceptive in youths.

The results for identified factors that are associated with the use of contraceptives in Kicukiro district are presented in the table below:

Table 4: Multivariable analysis for factors associated with contraceptive use among youth

Variables	AOR	95 % CI		P value
		Lower	Upper	
Age group				
15-19	Reference			
20-24	3.486	1.869	6.502	<0.001
Wealth status				
Category one	Reference			
Category two	7.012	0.721	68.190	0.93
Category three	3843	0.414	35.664	0.236
Category four	14.868	1.246	177.389	0.033
Marital status				
Single	Reference			
Married	0.133	0.061	0.287	<0.001
Separated	1.459	0.220	9.667	0.695
Divorced	0.382	0.035	4.179	0.430
Level of education				
None	Reference			
Primary	0.634	0.183	2.193	0.472
Secondary	0.307	0.093	1.009	0.052
University	0.149	0.039	0.574	0.006
Employment status				
Employed	5.099	1.352	19.227	0.016
Not employed	Reference			

*Significant at p<0.05 bolded; AOR= Adjusted odds ratio; CI = Confidence Interval

Source: primary data

Youth of 20 to 24 years old were 3.5 times more likely to use contraceptive that those with 15-19 years [AOR= 3.486; 95% CI= 1.869- 6.502; P<0.001]. The effect of wealth on the use of contraceptives was statistically significant after controlling for other variables. Those in category IV were 15 times more likely to use a contraceptive compared to those from other wealth categories [AOR= 14.868; 95% CI= 1.246- 177.389; P=0.033]. Being married was 0.133 times less likely to be associated with the use of contraceptives that those who are single [AOR=0.133; 95% CI=0.061-0.287; P= <0.001]. The level of education also was found to be less likely influencing contraceptive use. Young people with university education were 0.149 times less likely to have used a contraceptive compared to those with no education [AOR=0.149; 95% CI=0.039-0.574; P= 0.006]. Being employed was 5.099 times more likely associated with using contraceptive compared to non-employed youths [AOR=5.099; 95% CI=1.352-19.227; P= 0.016].

Discussions

The prevalence of contraceptive use in Kicukiro district among youth is 59.3 % and this study revealed that 43.5 % of all users were aged between 20-24 years and 15.8 % all users were between 15-19 years old. Significant increase is observed compared to the prevalence found in last demographic health survey at national level among reproductive women which was 53%[9]. The contraceptive use in Rwanda context has been improving since the last demographic health survey with now modern contraceptive prevalence rate for the whole population reaching 53%. Rwanda have included family planning program in the national budget with partially funding the program and over the last decade, the government's role in funding and support has increased. In interviews, most of the informants believed that providing family planning services to young and unmarried people is necessary since they make a big proportion of the population and are currently underserved.

"If the young people come for contraceptives, since you cannot stop and prevent them from having sex and protect them from contracting HIV and other STIs or getting pregnant when they are not ready, I see it is their right to get the service" (Health Provider 7).

Comparing with other African countries like Burkina Faso (11.2%), Ethiopia (24.1%) Nigeria (34.2%) the rate of Rwanda rate looks higher (Sennen *et al.*, 2015). On a global scale, this prevalence is lower to global contraceptive prevalence which estimated at 63% [15]. Factors identified as statistically associated with the use of contraceptives among youth include age [AOR= 3.486; 95% CI= 1.869- 6.502; P<0.001], wealth status [AOR= 14.868; 95% CI= 1.246- 177.389; P=0.033], and employment status [AOR=5.099; 95% CI=1.352-19.227; P= 0.016]. Age was associated with the use of contraceptives. Similarly, in a study conducted in Malawi showed that women aged 20-24 years showed a larger increase in contraceptive use than those aged 15 to 19 years [16].

The increase in wealth status in youths was found to increase the likelihood of using contraceptives among youths. Contrary to what would be expected, in a study conducted in Uganda showed that wealth was not associated with contraceptive use among women of 15-34 years [17]. Young people who are employed were found to be more likely associated with using contraceptives than those who are not employed [AOR=5.099; 95% CI=1.352-19.227; P= 0.016]. This is similar to the findings of a study done in Ghana by Nyarko, where employed young people were 2.99 times more likely to use contraceptives than the non-working[6].

The present study found that marital status and education level were negatively associated with the use of contraceptives in youth. Marital status was negatively associated with the use of contraceptives. Those who were married were negatively associated with the use of contraceptives [AOR=0.133; 95% CI=0.061-0.287; P= <0.001] and this is in contrast with a study done by Mandiwaet *al.* (2018), which investigated factors that are associated with contraceptive use among young women in Malawi and showed that married women were 6.24 times using contraceptives than their unmarried counterparts[16].

Education was surprisingly found not be among the positive determinants of contraceptive use and uptake where there was a negative association in contraceptive use in among educated youth than non-educated [AOR=0.149; 95% CI=0.039-0.574; P= 0.006]. The results showed that youth with university education were 0.149 times less likely to use a contraceptive. This is different to what was found in Ghana which showed that having secondary or higher education was 11.53 times using contraceptives than those with no formal education[6]. This study have explored also providers' perceptions on the subject regarding the provision of contraceptives to young people attending family planning services. The findings showed a positive attitude of service providers in support of allowing young people from accessing and using contraceptives as the demand for the service is increasing. On the other hand, some service providers have biases related to age and marital status believing that if the use of contraceptives is started to be experienced too early would lead to fertility delays or sometimes to infertility:

"I think youths who are still under 18 , at school and unmarried don't need to be given contraceptive with whatever they are doing and we should be cautious on dispensing contraceptives to youth who are students because it just leads them into sexual practices while they are not ready yet to get married" (Health provider 6).

Similarly to a study done in Uganda showed that service providers prefer at first the abstinence and counselling about sexual education rather than providing contraceptives when young and unmarried people sought contraceptive services [18].

In addition, some providers had beliefs that if contraceptives are started to be used early, before having children and by unmarried young people would lead to promiscuity and problems related to delayed fertility or infertility which resulted in hesitation or refusal to be given some types of contraceptives. One of the providers said: *"Somehow allowing youth to use contraceptives promote promiscuous behavior. Because they know there are safe, that is why I always prefer to advise them first about abstinence before giving them any method. These adolescents only fear pregnancy and nothing"* (Health provider5).

Among the factors highlighted by that affect the turn up and uptake of contraceptives among young people such as misconceptions and fears, lack of confidentiality and fear to use something with consequences that could affect the reproduction ability were limiting some youths from using modern contraception.

Conclusion

The study findings showed that 59.3 % youth in Kicukiro District use modern contraceptives. A positive and significant increase is observed compared to the prevalence found in last demographic health survey. The findings showed a positive change in providers 'perceptions with regard to provision of contraceptives to young people but still, some few providers showed restrictions in delivering the service to young people to the unmarried and in-school young people, therefore, hence there is a need for improving the availability, accessibility and adequate information regarding contraceptive choices and uptake among young people.

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