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Original Research Article

Assessment of contraceptive services for adolescents in the Burundian family welfare association and the youth-friendly centres in Bujumbura, Burundi

Ines Nshimirimana[1]*, Olayinka O. Ogunbode[2], Pasteur Mberimbere[3], Million Teklay Solomon[1], Binta Jallow[1], Iacane Bampoque[1]

[1]Pan African University Life and Earth Sciences Institute (Including Health and Agriculture), University of Ibadan, Ibadan, Nigeria
[2]Department of Obstetrics and Gynaecology, University College Hospital, University of Ibadan, Ibadan, Nigeria
[3]Department of Obstetrics and Gynaecology, KIRA Hospital Swiss Clinic, Burundi

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***Correspondence:**
Dr. Ines Nshimirimana,
E-mail: inesnshimirimana1@gmail.com

ABSTRACT

Background: Many sexually active adolescents throughout the world do not have access to modern contraception, which can result in unintended births. This study evaluates the quality, accessibility and effectiveness of contraceptive services provided to sexually active adolescents in Burundian Family Welfare Association and youth-friendly centres in Bujumbura / Burundi.
Methods: A mixed-methods study design with cross-sectional study and in-depth interviews was used, which recruited 25 healthcare providers and 25 adolescents for in depth interviews and self-administered questionnaires to 287 adolescents and 43 healthcare providers. SPSS version 25 was used to analyse the quantitative and thematic content for qualitative data.
Results: Among the independent variables, correlation analysis showed that adolescents' sexual experience ($p<0.001$), knowledge about contraception ($p<0.001$), fear of side effects ($p<0.001$) and lack of support/encouragement ($p=0.011$) influenced their use of contraceptive services. However, service utilization is negatively impacted by knowledge of contraceptive options. Barriers including lack of support and encouragement and fear of adverse effects may be the cause of this. On the provider side, lack of privacy/confidentiality ($p=0.022$) and limited availability of contraceptive methods ($p=0.018$) are factors influencing the provision of services to adolescents.
Conclusions: The lack of support from parents, the community and healthcare providers, as well as the fear of side effects, prevent adolescents from using contraceptive services. Teachers, parents and healthcare professionals are essential in helping adolescents learn about sexual and reproductive health.

Keywords: Adolescent, Access to contraceptives, Contraceptive service delivery, Healthcare providers

INTRODUCTION

Adolescence is the transition from childhood to adulthood, defined by chronological age. It is divided into three groups: early adolescence (grades 6-8), middle adolescence (grades 9-11) and late adolescence (grades 17-19).[1,2] One fifth of the world's population, over one billion people, are between the ages of 10 and 19 years. Eight and a half per cent of these people live in developing countries.[3,4] A lot of adolescent's struggles to deal with their sexuality and adapt to this difference in their life.

Adolescents still have many unmet needs when it comes to their sexual and reproductive health.[5] The growth is characterized by physiological changes, discovery of new horizons and self-discovery. If not guided, undesirable

conditions may arise. In our culture, aspects like sexuality and reproductive health are usually not taken care of, though they have several benefits.[6] In many parts of the world, adolescents face huge challenges in accessing modern contraception and STI protection. Often, neglect by health providers and lack of accessible options have resulted in unplanned pregnancies.[5]

Some 23 million adolescents aged 15-19 years in poor and middle-income countries want to avoid pregnancy but are not using an effective method of contraception, implying that family planning programs should meet the needs of sexually active adolescents to avoid pregnancy with limited decision-making power and provide them with non-consensual contraceptive methods.[7]

Despite international accords on the sexual and reproductive health and rights of adolescents, low- and middle-income nations continue to have inadequate access to and use of these services for youth, which poses a serious obstacle to development in this field.[8] Since it highly involves both the medical community and the public, adolescent contraception calls for, among others, consent, education, distribution by family planning professionals and educators and follow-up treatment.[9]

In sum, adolescent contraception is an issue of consent, education, distribution and follow-up medical treatment that requires family planning professionals and educators since it highly affects both the medical community and the public.[10] This will place adolescents' health at the centre of various public health issues, including mental health and the sustainable development goals. Full access to contraception services is necessary regarding their sexual and reproductive health.[10]

Burundi ranks 8th out of 86 countries in terms of the highest total fertility rate with a contraceptive prevalence of 18%, the most prevalent being injectable and implants.[11] Burundi's adolescent childbearing increased from 5.9% in 1987 to 8.3% in 2016-17, linked to factors like impoverished neighbourhoods, young marriages and lack of contraception knowledge, potentially limited by sexual and reproductive health education.[12]

The study reviewed the accessibility and availability of the contraceptive methods practiced by adolescents among youth-friendly centres and Burundian family welfare association (ABUBEF) through looking into sociocultural factors, provider attitudes and expenses; it also set up evidence-based suggestions for ways of improvement.

METHODS

Study design

A mixed-methods study design with cross-sectional observational study and in-depth interviews was employed to collect both quantitative and qualitative information.

Study setting

This study was done in ABUBEF clinics and youth-friendly centres of Bujumbura, the economic capital and principal port of Burundi.

Study population

It utilized data from adolescents aged 15-19 years old who attended selected centres and health providers who offered contraception and its related services. They had to agree to provide their experiences and views on the delivery of contraceptive services, as well as give their informed consent.

Sample size

The research involved conducting in-depth interviews with both 25 adolescents and 25 healthcare providers to gather their perspectives on contraceptive service evaluation while incorporating qualitative research concepts of thematic saturation and information power.

Single population proportion formula adolescent-specific was used in estimating the sample size of the quantitative phase of the study. The calculation was based on a 95% confidence interval (Z=1.96) and margin error of 5%. The proportion of adolescents who had accessed contraceptive services was estimated at 0.811, according to reports from selected facilities.

The sample size was finally 287 adolescents, calculated using a systematic random sampling technique. A purposive sampling strategy was employed and 43 healthcare providers (91.5%) were included, considering that there were 47 healthcare providers in the chosen centres overall. The findings' validity is strengthened and selection bias is reduced because to this high coverage rate.

Sampling methods

This study applied a three-stage multistage sampling procedure among health providers and adolescents. The study randomly selected Ntahangwa and Mukaza communes from three major Bujumbura communes using simple random sampling and lottery. After mapping out adolescent contraceptive care institutions in selected communes, a random choice strategy was used to select ABUBEF and youth-friendly centres. A systematic random sampling was used in selecting adolescents and purposive sampling was used in selecting health providers for comprehensive coverage.

Data collection and analysis

The study used different methods of data collection, namely tape recorder and interview guide for qualitative data; in-depth structured interviews for adolescents and health professionals and structured and self-administered questionnaires for quantitative data. The questionnaires

were edited and the contents were translated into Kirundi for uniformity. Information was collected through self-administration after informed consent.

The participant's confidentiality was maintained and the data was thoroughly cleaned and screened for errors. Quantitative data were coded and analysed using SPSS version 25. Thematic content analysis identified key themes and patterns in the data. Data confidentiality was maintained through access controls and secure storage during the research process.

Ethical consideration

The study prioritized ethics: Informed consent by the participants, confidentiality of data and adherence to ethical rules. Data stored safely and accessed only by those authorized. The sensitive issues must be presented with due caution and in a non-judgmental and culturally appropriate way, which assured a responsible and decent research process.

RESULTS

The study focused on adolescents and healthcare providers. Socio-demographic characteristics of participants in the quantitative aspect (Table 1, Table 2).

Findings of quantitative analysis

In terms of satisfaction with the various contraception services, over 85% of the adolescents questioned were indifferent. The majority of adolescents questioned would like to be trained and made aware of sexual and reproductive health (Table 3).

Regarding providers perceptions ninety-five and thirty-five percent (95.3%) of providers agreed that they have the responsibility to educate adolescents on sexual health and contraception, 83.7% of providers agreed that adolescents should have the right to access confidential contraceptive services without parental consent and 65.1% of providers felt that the Burundian health system does not have sufficient resources to provide effective and comprehensive contraceptive services to adolescents (Figure 1).

The research demonstrates a relationship between adolescents' sexual experience and contraception knowledge along with their fear of side effects and support levels and their contraceptive method use which improves with more discussions ($p<0.001$) (Table 4).

The research determined that there was no meaningful link between the duration of providers' experience and their professional training when delivering contraceptive services to adolescent clients. Providers' professionalism was strongly linked to service provision challenges especially concerning privacy and confidentiality matters ($p=0.022$). The restricted access to contraceptive options ($p=0.018$) emerged as another major influencing element (Table 5).

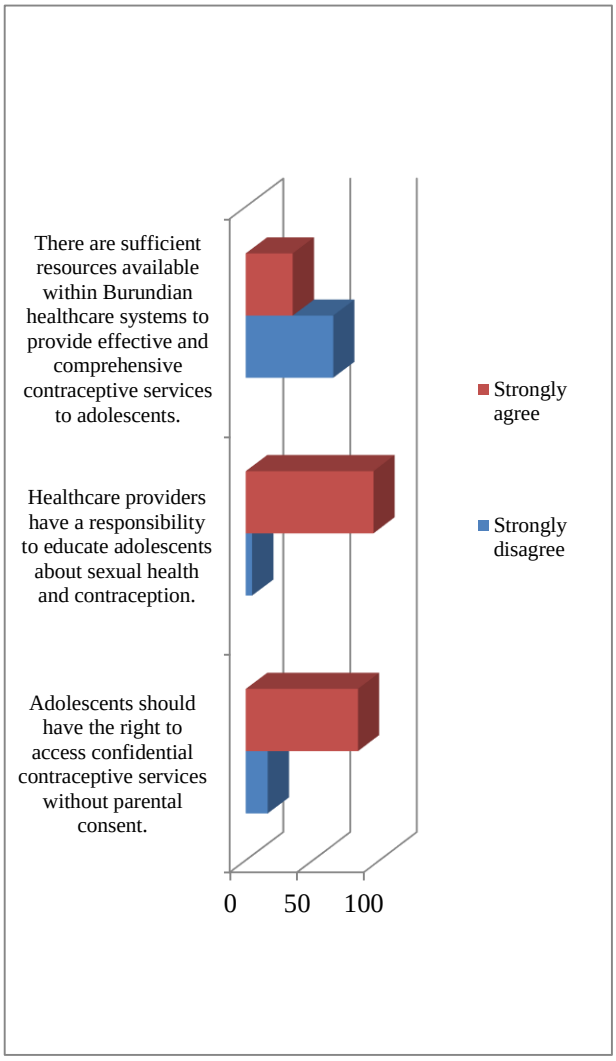

Figure 1: Provider perceptions of adolescent contraception.

Findings of qualitative research

For adolescents, contraception is a method used to avoid having children or becoming pregnant and for a minority it is a method used to space births. Some of them believe that contraception method is only for married people.

"These are the methods used by married couples to avoid having children." Ado 13

The majority of adolescents have not yet considered using contraception. Fears of side effects or belief are the main reasons, but for some, as for others, young age, fear of stigma and lack of partners are the reasons. Of those who do use contraception, condoms are the most common, followed by injectable and then the pill.

"I haven't thought about using contraception as I feel I am not old enough for it." Ado 2.

Of those who had tried, the majority went to youth-friendly centres and pharmacies. Access was easy for the majority, but some reported constraints, mainly related to long queues and lack of privacy. Most of the adolescents we spoke to said that they prefer to buy contraceptive methods such as condoms and morning-after pills from pharmacists because they don't ask any questions.

"I accessed contraceptive services at Kamenge District Hospital, found access easy but noted a lack of orientation signs." Ado 5

The vast majority of providers surveyed had not received any training in the provision of contraceptive services to adolescents. Of those who had received training, some had received training in the organisation and delivery of sexual and reproductive health services to adolescents and young people.

The majority of providers are comfortable discussing contraception with adolescent participants. But there are some who are not. One of the reasons they are uncomfortable is that they feel they are leading adolescents down the wrong path.

"I don't really feel comfortable for two reasons: I don't feel equipped to talk to adolescents about SRH and my religious beliefs forbid it. I do my best not to let that get in the way of helping them." HCP 2.

In terms of challenges to providing contraceptive services to adolescents, the lack of information for adolescents is the challenge mentioned by the majority of providers. The other challenges mentioned were culture/society, due to the fact that sexual and reproductive health is a taboo subject among adolescents; stigma; lack of confidentiality and privacy for adolescents, who are afraid of being discovered by society and being exposed to prejudice.

"Because of my work (in the family planning service), I am stigmatised and hated by the parents around me, who accuse me of encouraging their children to be promiscuous." HCP 4.

As far as opportunities are concerned, the majority of providers suggest strengthening cooperation between all stakeholders (families, schools, health officials, administrators, religious leaders, media), not forgetting the young people themselves, in the actions to be taken.

Some adolescents also suggest that providers should be sensitive and understanding of adolescents' concerns by answering their questions clearly and giving them contraceptive methods easily when they need them.

The majority of adolescents agreed on certain behaviours that health professionals should adopt: for them, providers should be welcoming, open-minded and avoid prejudice.

Table 1: Distribution of adolescents by socio-demographic characteristics.

Variables	Frequency (N)	(%)
Health centres (n=287)		
Public youth-friendly centres	191	66.5
ABUBEF	96	33.5
Age in years (n=287)		
15	73	25.4
16	57	19.9
17	57	19.9
18	61	21.3
19	39	13.5
Gender (n=287)		
Female	142	49.5
Male	145	50.5
Education level (n=287)		
Non-formal	1	0.3
Primary	87	30.3
Secondary	177	61.6
University	22	7.6
Employment status (n=287)		
Unemployed	281	97.9
Employed	6	2.1
Health insurance (n=287)		
No	246	85.7
Yes	41	14.3

Table 2: Distribution of healthcare providers by socio-demographic characteristics.

Variables	Frequency (N)	(%)
Health centres (n=43)		
Public youth-friendly centres	21	48.8
ABUBEF	22	51.1
Gender (n=43)		
Female	34	79.1
Male	9	20.9
Discipline (n=43)		
Nurse	32	74.3
Nursing assistants	2	4.7
Pharmacist	2	4.7
Healthcare community agents	2	4.7
Psychologist	2	4.7
Counsellor	3	6.9
Hospital location (n=43)		
Mukaza commune	29	67.4
Ntahangwa commune	14	32.6

Table 3: Satisfaction levels of adolescent participants with different aspect of contraceptive services.

Variable		Dissatisfied	Neutral	Satisfied
Quality of care (adolescents' satisfaction)	Availability of contraceptive methods	4.5%	87.1%	8.3%
	Privacy and confidentiality	1.4%	87.5%	11.1%
	Provider's knowledge and explanation of contraceptive options	5.9%	88.5%	5.6%
	Support and guidance in choosing a contraceptive method	5.9%	90.5%	3.4%

Table 4: Factors associated with contraceptive service use among adolescent.

Variables		Did not use contraceptive service	Did use contraceptive service	P value
Age in years	15	94.5%	5.5%	0.176
	16	86.0%	14.0%	
	17	84.2%	15.8%	
	18	83.6%	16.4%	
	19	79.5%	20.5%	
Education level	Primary	78.2%	21.8%	0.062
	Secondary	89.8%	10.2%	
	University	90.9%	9.1%	
	Non-formal education	100.0%	0.0%	
Health centres	ABUBEF	81.3%	18.8%	0.071
	Youth-friendly centre	89.0%	11.0%	
Sexual experience	No	99.1%	0.9%	<0.001
	Yes	40.3%	59.7%	
Discussion about contraceptive methods	No	96.4%	3.6%	<0.001
	Yes	66.3%	33.7%	
Knowledge of contraceptive methods	Very poor	92.5%	7.5%	<0.001
	Poor	92.1%	7.9%	
	Average	88.3%	11.7%	
	Good	65.3%	34.7%	
	Excellent	92.9%	7.1%	
Barriers	Lack of knowledge	89.2%	10.8%	0.180
	Fear or concerns about side effects	70.6%	29.4%	<0.0 01

Continued.

Variables		Did not use contraceptive service	Did use contraceptive service	P value
	Lack of privacy/confidentiality	92.6%	7.4%	0.325
	Cultural or religious beliefs	84.1%	15.9%	0.290
	Lack of support or encouragement	27.0%	73.0%	0.011

Table 5: Effective contraceptive service aspects: professionalism and provider readiness.

Variables		Providers profession				P value
		Nurse	Counsellor	Pharmacist	Others	
Years of experience	≤10	75.0%	8.3%	5.6%	11.1%	
	11-20	50.0%	0.0%	0.0%	50.0%	0.972
	>20	100.0%	0.0%	0.0%	0.0%	
Knowledge of contraceptive methods for adolescent	Very poor	75.0%	0.0%	0.0%	25.0%	
	Average	63.2%	10.5%	10.5%	15.8%	0.827
	Good	85.7%	7.1%	0.0%	7.1%	
	Excellent	83.3%	0.0%	0.0%	16.7%	
Felling of being well trained	No	68.8%	0.0%	12.5%	18.8%	0.128
	Yes	77.8%	11.1%	0.0%	11.1%	
Barriers encountering in delivering contraceptive services	Lack of privacy/ confidentiality	52.9%	17.6%	11.8%	17.6%	0.022
	Limited availability of contraceptive methods	33.3%	33.3%	33.3%	0.0%	0.018
	Stigma or cultural barriers	71.9%	9.4%	6.3%	12.5%	0.569
	Inadequate training or knowledge	61.5%	15.4%	0.0%	23.1%	0.233
	Lack of time during consultations	70.0%	10.0%	0.0%	20.0%	0.764

DISCUSSION

The study investigates how well adolescents in Bujumbura, Burundi can access contraceptive services while examining youth-friendly facilities and ABUBEF. Several barriers hinder access such as social stigma together with economic hurdles and confidentiality concerns.

Healthcare providers experience training and belief inconsistencies while socio-cultural determinants create substantial barriers. Contraceptive method awareness shows inconsistency among adolescents who depend on their peers and educational institutions to obtain information.

Socio-economic characteristics

The correlation analysis shows that age and education have no effect on contraceptive use. This may be explained by the fact that school clubs outside regular school hours teach curriculum topics like relationships, sexually transmitted illnesses, gender equality, self-esteem and future objectives. Burundian culture often promotes fear-based teachings, focusing on the detrimental effects of behaviour rather than potential alternatives. This negatively impacts young individuals, hindering their decision-making.[13]

Our findings align with those of Tawiah's study, only in terms of age where the age of the respondents was one of the other factors that had no discernible impact in the use of contraceptive methods.[14] However, Nyarko's study demonstrated that contraceptive prevalence was lowest among adolescents without formal education (3.5%) and highest among those with secondary or higher education (19.9%).[15] And in Hounton's study, Modern contraceptives are less common among younger teens.[16]

Behavioural aspects

Sexual experience

The results of our study lead us to lead us to reject the null hypothesis regarding sexual experience and the use of contraceptive services. Indeed, Adolescents who have had sexual intercourse are the most likely to use contraceptive methods. Adolescents are often more conscious of the dangers of unintended pregnancy after having sex, which may help to explain this.[17] This motivates adolescents to

adopt contraceptive methods in order to prevent unintended effects.

Among those who had already had sexual relations (22%), some did not see the importance of using contraceptive methods because they felt they were not old enough to use them and could not get pregnant. Our findings are similar to those of other studies; in particular a study conducted in Metu town, south western Ethiopia where out of all the research participants, around 22.7% had engaged in sexual activity at some point in their lives.

Of those who had engaged in sexual activity, 19.8% had always worn a condom when engaging in sexual activity with their partners, while 58% had never done so.[18] However, our results differ from the rural Haiti study, where 187 (94%) of the 200 participants had already had sex and 127 (64%) of them had used a contraceptive method.[19] This percentage difference could be explained by the cultural difference of the study population.

Knowledge of contraceptive methods

In our findings, the use of contraceptive services is also associated with knowledge of contraceptive methods. In fact, the more a person knows about methods, the more likely they are to use contraceptive services. Our results are consistent with those found in Rwamagana District, Eastern Province of Rwanda, where they show a significant association between contraceptive use and knowledge of specific contraceptive methods.[20] However, the Muhimbili and Dar es Salaam Universities Tanzania study shows that despite good knowledge of contraceptive methods, contraceptive use remains low.[21]

In contrast to Skrzeczkowska's results, where the main sources of knowledge about contraception are the internet and peers, our findings show that most adolescents know the definition of contraception and the benefits of using it and they have learnt about it either at school, from ABUBEF or from their friends or peers.[22] This can be the source of a lot of misinformation. This is similar to the study in Tanzania, where the main sources of information about contraception were friends, the radio and school.[21] However, even though they know what contraception is, many of them think that it is only for married people or that they are not old enough to use these methods. We can also see from a study carried out in Ethiopia that being young of age has a significant impact on the use of contraceptive methods.[23] And in another study in Lesotho, more than half of respondents agreed that contraceptives can be used by anyone.[24] This difference with our findings could be explained by the way some teachers provide information about contraceptive methods.

Barriers to contraceptive services

In our study, we also found that people who were afraid of the side effects of contraceptive methods were those who had already used contraceptive services. Our findings are consistent with those of Hakizimana's study in rural Burundi, where he found that fear of side effects was the main reason for not using or discontinuing family planning.[25]

Lack of support or encouragement is also a barrier to using contraceptive services. We therefore maintain the alternative hypothesis for these variables. According to the Zambia study in Eastern Province, parents have a significant impact on adolescents' decisions to use contraceptives and teachers and healthcare professionals also have considerable influence, regardless of whether adolescents have access to them.[26]

During the interviews, the young people also mentioned their young age (because they think that using contraceptive methods at their age would lead to infertility) fear of stigmatisation, because for some those who use the methods are sexually vagrant and are frowned upon by society; faith. Other barriers cited included long queues, lack of privacy, difficulty in travelling, lack of money to buy contraceptive methods and questions asked by providers that they felt violated their privacy.

Our findings are similar to those of other studies. A study in south-eastern Nigeria found that adolescents face a number of barriers to accessing contraception, including lack of information, fear of negative consequences, low self-esteem and financial constraints. Family issues, such as poor communication and negative attitudes towards sex education, also make access difficult.[27] In a rural Haiti study, adolescents expressed concerns about privacy, parental opinions and medical professionals' opinions when seeking reproductive health treatment and a lack of understanding about birth control.[19]

In another study conducted in Malawi, the main obstacles to using contraceptives methods include lack of knowledge, fear of side effects, social stigma and cultural and religious beliefs.[28] The lack of a warm welcome from health professionals, waiting times and the fact that health professionals do not provide sufficient information have been identified as barriers to using contraceptive services.[24]

For these reasons, some of the adolescents we spoke to prefer to buy contraceptives such as condoms and morning-after pills from pharmacies, where providers do not ask questions and there are no long queues. However, in the Malawi study, condoms were the most popular method, followed by combined oral pills, implants and injections.[28]

Delivering contraceptive services

During the interview, the majority of providers said that they felt comfortable giving adolescents' information about contraceptive methods. However, some are not and the reason given is that they feel they are leading adolescents down the wrong path. Considering that most

adolescents start having sex at this time, counselling on contraception is a crucial component of regular adolescent health care.

Unfortunately, advising adolescents about contraception makes many medical professionals uneasy.[29] Our findings are similar to those of other studies in Nigeria and South Africa, where health care providers believe that providing contraceptives to unmarried adolescents encourages sexual promiscuity.[30-32]

In our study, barriers such as lack of confidentiality or privacy, limited availability of contraceptive methods have an impact on the provision of contraceptive services, depending on the discipline of the provider (nurse, pharmacist and counsellor or other level of training). This variation in confidentiality by discipline can be explained by the layout of the offices in the centres. Nurses' offices have a space dedicated to a more private consultation. In contrast, pharmacies often have limited space for confidential discussions. This is not the case for the variables: stigma, cultural factors, inadequate training or knowledge, lack of counselling time, support or resources.

These have no impact on the provision of contraceptive services. This could be explained by the fact that providers have acquired knowledge and skills over time through experience and, for some, continuing education. This makes it possible to provide quality contraceptive services. In addition, contraceptive methods are free in public healthcare facilities and Burundi has a reproductive health policy, standards, protocols and a guide on sexual and reproductive health for adolescents and young people, which reduces the impact of these variables.

According to research by Goldstein, lack of training, inadequate interaction with adolescents and young people to preserve skills, time constraints and secrecy were among the obstacles to offering contraceptive techniques.[33] Myths and misunderstandings, religious views, the personal beliefs of healthcare professionals and the fear of social stigma for teenagers were among the obstacles identified in Nyau's study.[26]

In Mwakawanga's study the choice to offer the contraceptive would be triggered, according to the participants, by having a basic understanding of teenage contraceptive services and their rights. However, in the theoretical scenario, it was discovered that the 14-years-old adolescent girl's access to contraceptive services was significantly hampered by the providers' judgmental behaviour, ignorance of the reproductive health rights of adolescents and cultural and religious factors.[34]

Suggestions for improvement

A number of crucial tactics are suggested by health practitioners in Bujumbura to improve contraceptive services for adolescents. These include creating services specifically for adolescents and young adults in medical facilities, offering thorough training and retraining on adolescent and young adult sexual and reproductive health to parents, young people and healthcare professionals and educating these groups about these important issues.

Involving political, medical and religious leaders in adolescents' sexual and reproductive health and supplying them with family planning education materials are essential ways to help them even more. Lastly, for a lasting effect, including adolescent sexual and reproductive health into the elementary, secondary and tertiary curricula is crucial.

Adolescents suggest that health professionals should be sensitive, understanding and welcoming, providing clear answers to their concerns and providing easy contraceptive methods. They also suggest training for adolescents and parents, reorganizing services, using different communication channels and inviting parents to openly discuss ASRH with their children.

Our suggestions echo those of a study in Nepal, where strategies include implementing existing policies; involving adolescents, their families and their communities; training teachers in SRHR so that they can deliver the course effectively in school and set up an out-of-school sex education programme; and building the skills of health professionals so that they can provide services tailored to adolescents.[35]

CONCLUSION

Although youth-friendly centres can be spotted in centres in our study, adolescents don't use them for a variety of reasons. Lack of encouragement/support for adolescents and apprehensiveness regarding side effects, both at parental and community and medical care providers' level, have been found to be important factors in not using contraceptive service. Parents, being in direct contact with their offspring, have an important role in imparting information about healthy sexual and reproductive life to them. Health professionals and teachers are such individuals who have a positive role in using contraceptive techniques in youth.

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