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Research article

Exploring the Adequacy of Family Planning Services to Adolescents needs: Results of a cross-sectional Study from two settings in the Democratic Republic of the Congo

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Abstract

The aim of this paper was to assess the adequacy of family planning (FP) services to adolescents' needs in the DRC. Methods: A cross-sectional study was conducted in 61 health facilities providing the FP. The data were collected by interview with managers, direct observation, and document review. The dependent variable was "Uptake of FP by adolescents aged 15-19", a dichotomous variable assessed "yes" when the FP was used by at least one adolescent and "no" when no adolescent used the FP during the study period. Independent variables were: wide range of contraceptives methods; audio and visual privacy of FP room; community support; FP free or subsidized and Nonjudgmental service provision. The index of availability of adolescent-friendly FP services was calculated; Pearson's chi-square and Odd Ratio were used to test all associations and the logistic regression helped to measure the effect size of specific associations. All hypotheses were verified using the alpha significance level of .05. Results: About 80.3% of health facilities offered FP to adolescents. Most of contraceptives were offered to adult than to adolescents. Of all facilities, 11.5% were assessed as "high Friendly", 63.9% as "moderate Friendly" and 24.6% as "Low Friendly" in FP. Overall, Uptake of FP by adolescents reported in 68.9% health facilities was significantly associated to the availability of a "wide range of the contraceptive methods" (OR=.030; CI95% [0,003 - 0,285]; p=.002) and the "Nonjudgmental service provision" (OR=.019; CI95% [0.001 - 0.265]; p=.003). Conclusions: Several FP services remain inaccessible to adolescents. The majority of health facilities do not meet the criteria needed to provide friendly FP to adolescents. To improve the uptake of FP among adolescents, health authorities need to take into account all elements considered important by teenagers.

Key words: adolescents, friendly, family planning, services, DRC

Introduction

Unsafe abortion is a significant yet preventable cause of maternal mortality and morbidity worldwide, most common in adolescents in developing countries [1]. Substantial numbers of adolescents worldwide, especially in low income countries experience the perverse health effects of early and unprotected sexuality, such as Sexually Transmitted Infections, unintended pregnancies, unsafe abortions, pregnancy-related morbidity and mortality as well as its social consequence and economic costs [2].

A recent publication showed that adolescent's sexual health can be focused on three interrelated components: recognizing adolescent's sexual rights, sexuality education and counseling, and confidential high-quality services provision. The provision of adequate Sexual and Reproductive Health (SRH) care for adolescent remains problematic in some countries [3].

Family planning is one of the high-impact interventions in improving health outcomes in women aged 15-49. Implementation of innovative approaches in family planning contributed to the improvement of the modern contraceptive prevalence rate and the decrease in unmet needs worldwide [4]. Implementing innovative approaches and interventions in adolescents can significantly increase the uptake of contraceptives. Of these approaches can be included: building community support for the provision of contraceptives to adolescents; enacting and implementing laws and policies requiring the provision of sexuality education and family planning for adolescents; providing sexuality education within and outside schools; making health services adolescent-friendly; integrating contraceptive services with other health services; and providing contraception through a variety of outlets [5]. However, there is

still little progress in adolescents' access to and use of family planning services, for several reasons [6]. Adolescent's extended and well-implemented interventions in family planning contribute to preventing health risks related to pregnancy, reduce child mortality, help to prevent HIV / AIDS, give people the capacity to act and strengthen education, reduce teenage pregnancies, slow population growth, reduce the number of deaths among young mothers and newborns [7, 8]. Some studies highlight a limited access to a wide range of contraceptive methods, especially injectable and long-acting reversible contraceptives (LARCs), in both public and private facilities of low and middle income countries. Such situation results in an important number of women aged 15-49 intending to use contraception that are not using their preferred contraceptive method [9]. To prevent unintended pregnancies in adolescents, a special focus should be made on special elements, such as the desire to use protection, availability of good contraceptive methods, ability to obtain a contraceptive method, and ability to use it.

Improving availability of contraceptive methods does not automatically lead to an increase of the contraceptive use and reduced numbers of adolescent's abortions [3]. Apart from contraceptive availability, knowledge of contraceptive methods which could impact on their use is still limited among women 15-49 years-old [5, 8]. According to a theory of change published in 2015, in order to be friendly to young people, family planning services should meet the following criteria: nonjudgmental service provision, respect of audio and visual privacy, proposing a wide range of contraceptive methods, offering free or subsidized services and community support [10]. Unfortunately, adolescents in the majority of low income countries are still facing barriers to access family planning services and contraceptives, mainly due to poor availability of services of high quality and stigma [11]. To solve this problem, programs offering family planning supported either stand-alone adolescent health facilities, adolescent-friendly contraceptive services in a separate room or in a corner dedicated to adolescents within existing health facilities. Mixed effects as results of these innovative approaches were observed [12]. Scaling-up of some of these strategies was challenging for countries, especially due to programs and health systems' complexity, and resource requirements, threatening their long-term sustainability [13]. The results from a systematic review pointed out domains considered as important by adolescents seeking health care in family planning. Of these domains are counted: geographical and financial accessibility to facility and health care, staff attitude and medical competency, communication, guideline-driven care, age appropriate environments, adolescent's involvement in health care, health outcomes [14] and respect of privacy [13]. Of these domains, the most highlighted was the friendliness and respectful of health workers, knowing how to talk to adolescents, and appearing to value them when they are seeking information [14, 15].

In the Democratic Republic of the Congo, early fertility in youth aged 15-19 is still high, estimated at 138 ‰. The prevalence of modern contraceptive methods remains low nationwide, among adolescents (5.0%) as well as in all women aged 15-49 (8.1%) [16]. A study conducted in 2017 at the national

level showed low availability of family planning services (33.0%) and their uneven distribution between rural and urban areas. Male condoms, combined oral contraceptives, progestin-only injectables and female condoms were the most available contraceptive methods in health facilities. The LARCs, counted among the most popular methods in women aged 15-49, were lacking [17]. Existing family planning services are little used by young people; and the causes explaining such low interest may range from adolescents' factors to providers' barriers resulting in limited access to family planning. One of the barriers is financial access to health care, which is essentially obtained through direct payments of health services by users. Most health interventions, including family planning, are paid for both adult women and adolescents aged 15-19. To date, no study has analyzed the friendship of existing family planning services to adolescent's needs and desires, aspect which can help to inform policy makers. The aim of this paper was to assess the adequacy of the existing family planning services to adolescents needs in the Democratic Republic of the Congo.

Methods

Study setting

This study was implemented at the operational level of the national health system. The health district in the DRC covers an average population of 150,000 inhabitants and contains two types of health facilities (health centres and the district hospital) that provide a well-defined package of care. All health facilities are designed to provide reproductive health services, of which the antenatal care (ANC), deliveries, the post natal care (PNC), the family planning, the post abortion care etc [18]. At the local level, multiple approaches are used to offer family planning to women aged 15-49, including health facility-based approaches, community-based distribution, social marketing strategy using private pharmacies, etc. The health system strengthening strategy advocates improving the delivery of health care and services through health centres and hospitals. A health district is considered to offer family planning when there are at least 5 health facilities offering a functional FP service (three criteria: availability of at least three different methods of family planning including a long-acting method; staff trained in FP; availability and use of standards and guidelines on FP) [19]. The persistent challenges in the provision of reproductive health services result in low modern contraceptive prevalence, high proportion of unintended pregnancies and high fertility rate [16].

Design of the study

A cross-sectional study was conducted from January to March 2018 in 61 health facilities from the rural health District of Gombe Matadi, located in the province of Kongo Central, and three urban Districts from the province of Kinshasa (Kisensu, Lemba and Matete). All surveyed health facilities provided family planning services, according to the report posted on the District Health Information System (DHIS2) platform of the Ministry of Health in 2017. In each facility, the data were collected by interview with health facility managers, direct and participatory observation, and document review. Based on the Health District Organization Standards document, two groups of health facilities were identified, according to their technical

plateau: the group “hospitals” was constituted of the district hospital, secondary hospitals, referral health centres and any other health facility with high technical plateau; and the group “health centres” included all health facilities offering a minimum package of activities[20].

In order to identify the key elements in deciding about “the friendliness” of family planning services for adolescents, the research team drew on the theory of change developed in 2015 by High-Impact Practices in Family Planning (HIPs) [10]. According to this theory of change, five key barriers are highlighted in the access and use of contraceptive methods by adolescents, including provider attitudes and social norm; lack of confidentiality; limited method choice; cost of accessing family planning services and limited client knowledge. Based on this theory, we developed the study conceptual model presented in Figure 1.

Dependent and independent variables

Dependent variable

Assuming that only adolescent-friendly family planning services can be used by adolescents, we defined the dependent variable as "Uptake of family planning by adolescents". Based on family planning statistics from July to September 2017, uptake of family planning by adolescents was assessed “1” which means “yes” when the FP service was used by at least one adolescent 15-19 in the visited health facility; on the other hand, uptake of family planning by adolescents was assessed “0” which means “none” when the FP service was not used by adolescents 15-19 throughout this time.

Independent variables

Five dichotomous independent variables were used: Wide range of contraceptives methods; Audio and visual privacy of

FP; Community support; Free or subsidized services; Nonjudgmental service provision.

Wide range of contraceptives methods:

If the health facility had at least three modern contraceptive methods at the time of the survey, including long-acting methods, the facility was classified “1” which means availability of a significant number of contraceptive in the facility. For each health facility providing less than three modern contraceptive methods, it was assessed “0”. In this study, the modern contraceptive methods included both natural and artificial methods, such as pills (Combined oral contraceptives and Progestin-only oral contraceptives), Intra Uterine Device (IUD), injectables (Progestin-only injectables and combined injectables), implants, male and female condoms, vaginal methods, emergency contraceptive pills, Cycle Beads, female and male sterilization.

Audio and visual privacy of the FP room

When the consultation room offered intimacy conditions that were both auditory and visual, the health facility was classified "1"; on the other hand, if one or two of these criteria were lacking, this variable was assessed "0".

Community support

In this study, the community support was sought through the existence of community-based distribution of contraceptives in the health facility; and this innovation approach was designed to impact social norms and improve adolescent’s uptake of family planning. When the health facility worked with at least one community relays in charge of community-based distribution of contraceptives, the facility was classified “1”; if there was not community-based distribution of contraceptives, the facility was assessed “0”

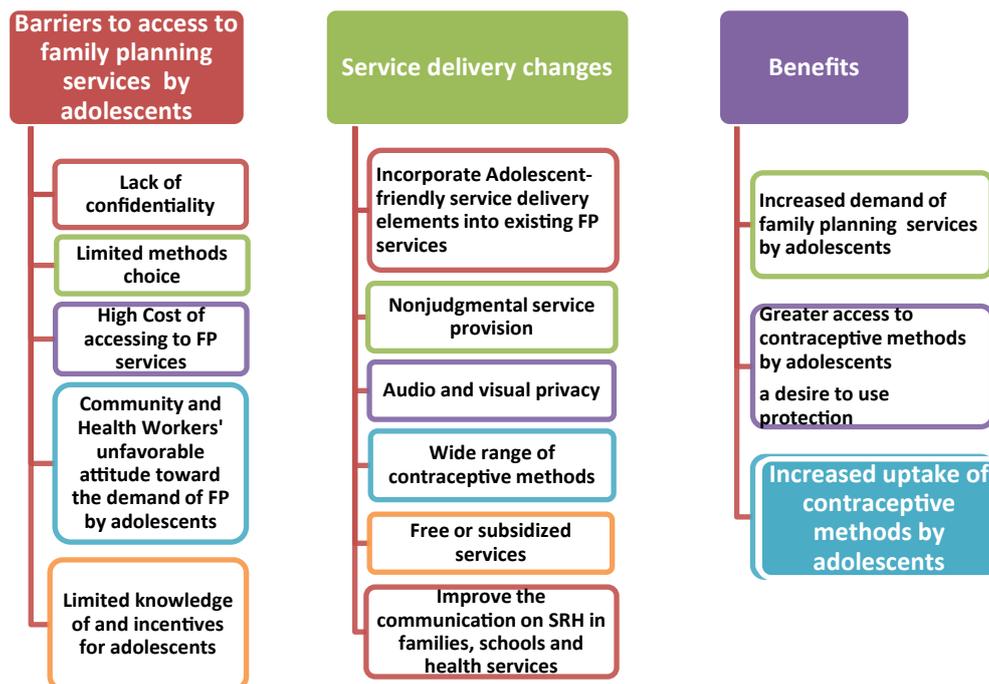


Figure1. Improving Access and Use of Family Planning Services by Adolescents: Conceptual Framework [10].

Free or subsidized service

To improve access to and utilization of FP service by adolescents, the financial barrier must be lifted. If the access to FP was free or subsidized, the health facility was ranked “1”; the facility was ranked “0” when the FP was not free or was unsubsidized for adolescents.

Nonjudgmental service provision

Judgmental provision of family planning in youths was evaluated by the providers' attitude towards the demand of family planning methods by adolescents. To assess the staff attitude, we asked whether or not the respondent intended to prescribe unconditionally the contraceptives to adolescents on request. Then, interviewers confronted the interviewee's answer to his face. When the health workers' attitude was “non-judgmental”, the facility was classified “1”; on the other hand, when there was “judgment” or “mistrust” concerning the demand of FP by adolescents, the facility was ranked “0”.

Data collection and analysis

The data collection was organized by a team of interviewers recruited among medical doctors and nurses from health facilities not selected for the study. They were trained by the principal investigator, and then collected the data using structured interviews with managers and the person in charge of family planning services in all selected facilities. With this procedure, the following data were collected: general information on the facility, incorporation of adolescent-friendly service delivery elements into existing FP services, essential equipment and hygiene in the family planning consultation room, availability of family planning methods, mode of access to FP services for adolescents, the level of the community support, the providers' attitude towards adolescents seeking FP, monitoring and supervision of the health facility and others.

The data collectors extracted data from patients' records and directly observed conditions in the facilities, with focus on the adolescent-friendly criteria (i.e., counting contraceptive products in stock, assessing audio and visual privacy of the FP room, evaluating the provider's attitude towards the demand of family planning by adolescents, observing family planning outreach materials, assessing fees and procedures charged to adolescents for family planning use). To measure the dependent variable, we analyzed contraceptive registers and counted the number of clients aged 15-19 having benefited from the FP methods during July, August and September 2017. This approach was also used to verify the availability and use of service delivery guidelines and whether or not the supervision topics also related to family planning activities. About 10% of health facilities were revisited by the supervisor to validate the data.

Data were entered using CS Pro 7.0, using double entry for quality control. They were then exported to SPSS Statistics version 21 and WINPEPI version 11.54 for statistical analysis and testing of associations. Microsoft Excel 2010 was used to produce graphs and charts.

We calculated the proportion of facilities in which adolescent-friendly service delivery elements were incorporated into existing services; those having at least three different contra-

ceptives methods; those who's the FP room preserved visual and auditory privacy. We also calculated the proportion of facilities with FP services free-offered/subsidized; those where the community support was planned or managed by providers and those whose providers' attitude was nonjudgmental. An index of availability of adolescent-friendly family planning services was calculated as a proportion of all facilities. To estimate this index, a scale of measurement was developed, by combining the five independent variables. Availability of adolescent-friendly family planning services was estimated “high” when each independent variable was assessed “1”; it was “moderate” when 3 to 4 independent variables were assessed “1”; and it was “low” when at most two independent variables were classified “1”. Pearson's chi-square test and Odd Ratio (ORs) were used to test the association of different variables. The logistic regression (LR) helped to measure the effect size of specific associations between the dependent and independent variables. All hypotheses were tested using the alpha significance level of .05.

Ethical Review

The study was reviewed and approved by the Ethics (Human Subjects) Committee from the School of Public Health of Kinshasa under the registration number ESP/CE/027/2018. The research team successfully completed the NIH Web-based training course on "Protecting Human Research Participants" before conducting the survey. They obtained authorizations from national, provincial and local health authorities prior to the data collection. Data were collected anonymously, after obtaining verbal informed consent from all participants.

Results

A total of 61 health facilities were successfully surveyed from four Health Districts. All health facilities offered family planning services at the time of the survey. However, 49 (80.3%) provided family planning to adolescents aged 15-19; of which 29 (47.5%) were organized in the same room as for adults and 20 (32.8%) were managed together with others services.

According to the results in Table 1, 31.1% of health facilities came from the health district of Kisenso, 24.6% from Matete, 24.6% from Gombe Matadi and 19.6% from Lemba. Most of health facilities (42.6%) were state-managed; 34.4% managed by non-profit/Confessional organizations and 22.9% belonged to private for profit managers. The health centres (82.0%) were the more prevalent facilities; followed by hospitals (18.0%). Of all visited health facilities, 46 (75.4%) offered at least three different contraceptive methods at the time of the study, including all health facilities from the district of Lemba (100%), 14 out of 15 (93.3%) facilities from Matete and 15 out of 17 (89.5%) health facilities of Kisenso. The health district of Gombe Matadi was the least with 3 out of 15 (20.0%) health facilities offering at least three different contraceptive methods. On the other hand, 92.8% of private for profit, 90.5% of non-profit/confessional organizations and 53.8% of public health facilities offered at least three contraceptives methods. Table 1 also shows that 91.0% of hospitals and 72.0% of health centres offered at least three different contraceptive methods Table 1.

Table 1. Distribution of Health Facilities with Contraceptives Methods by Health Districts and by the management authority (N=61).

	Nb. contraceptive methods	
	1 – 2 (N=15 ;%)	≥ 3 (N=46 ;%)
Types of Health facilities		
Hospitals	1 (9.1)	10 (90.9)
Health Centres	14 (28.0)	36 (72.0)
Management authority		
Government / Public authorities	12 (46.2)	14 (53.8)
Non-profit/ Confessional Organization	2 (9.5)	19 (90.5)
Private for-profit	1 (7.1)	13 (92.9)
Health Districts		
Gombe Matadi	12 (80.0)	3 (20.0)
Kisenso	2 (10.5)	17 (89.5)
Lemba	0 (0.0)	12 (100.0)
Matete	1 (6.7)	14 (93.3)

As shown in Table 2, 49 out of 61 health facilities (80.3%) offered Family Planning service to adolescents aged 15-19. This result means that about 20.0% of facilities providing family planning to adults did not extend to unmarried adolescents; and the difference was significant (<0.001). Overall the health facilities offering contraceptives to adults were higher than facilities that offered the same contraceptives to adolescents. Discrimination between adults and adolescents regarding access to a large game of contraceptives was significantly important for 7 of 16 modern contraceptive methods: male condoms (<0.001), implants (0.047), emergency contraceptive pills (<0.001), intrauterine devices (0.006), progestin-only oral contraceptives (0.046), female sterilization (<0.001) and male sterilization (0.012). No significant difference was found for the rest of the contraceptive methods between adults and adolescents (Table 2).

Figure 2 presents the results in relation to user-friendliness elements of family planning services sought in health facilities. Among the 5 principal elements of adolescent-friendly FP services, the most prevalent was the promotion of FP (93.4%), followed by Nb. of facilities with contraceptive methods ≥ 3 (73.8%) and intimacy of the FP room (70.5%). On the other hand, No stigmatization of adolescents (50.8%) and financial accessibility to FP service (44.3%) were the least prevalent elements. Globally, of all visited health facilities, 7 (11.5%) were assessed “high Friendly FP services”, 39 (63.9%) were assessed “moderate Friendly FP services”, while 15 (24.6%) were assessed “Low Friendly FP services”. It is important to note that only 7 out of 61 visited health facilities gathered all 5 elements at the same time; the rest of the health facilities had 1 to 4 items of interest (Figure 2).

Figure 3 describes the methods used by providers to promote Family Planning services. Beyond its availability, the use of family planning depends on the way the marketing is done. Principal ways used to make the family planning known to users (including adolescents aged 15-19) were: antenatal care (ANC), churches visits, at childbirth, home visits, curative care, post-abortion care, posters and leaflets, school visits and media. Of these means, the most used by providers were ANC (96.7%) and churches visits (93.4%); Posters and leaflets (27.8%),

Table 2. Health Facilities offering Family Planning to adolescents 15-19 and Number of contraceptive methods available.

Variables	Facilities providing contraceptive methods (N=61)				P value
	To adults (Nb., %)	To adolescents (Nb., %)	To adults (Nb., %)	To adolescents (Nb., %)	
Offered contraceptive methods	61	100.0	49	80.3	< .001
Types of family planning methods					
Male condoms	61	100.0	49	80.3	< .001
Implants	48	78.7	38	62.3	.047
Method of breastfeeding and amenorrhea	44	72.1	0	0.0	-
Combined oral contraceptives	43	70.5	35	57.4	.131
Female condoms	42	68.9	38	62.3	.446
Emergency contraceptive pills	40	65.6	19	31.1	< .001
Progestin-only injectables	39	63.9	35	57.4	.459
Intrauterine devices	36	59.0	21	34.4	.006
Progestin-only oral contraceptives	34	55.7	23	37.7	.046
Cycle Beads	27	44.3	33	54.1	.277
Combined injectables	23	37.7	18	29.5	.338
Two-day methods (cervical mucus)	23	37.7	14	23.0	.076
Basal temperature method	18	29.5	17	27.9	.841
Female sterilization	15	24.6	NA	-	-
Sympto-thermal method	13	21.3	10	16.4	.487
Male sterilization	6	9.8	NA	-	-

School visits (11.5%) and the media (3.3%) were the least used methods.

Table 3 is focused on the availability and uptake of family planning by adolescents 14-19 into visited health facilities, according to some variables, such as Types of Health Facilities, Location of the facility, Management authority, Training on family planning and Training on Adolescent Sexual and Reproductive Health. Regarding to these results, a significant difference was found in the availability of family planning services depending on the geographical location: urban health facilities offered more FP service than rural health facilities ($P<.001$). Taking into account the Management authority, FP service was more available in Non-profit/ Confessional Organization, followed by Private for-profit and by Government / Public authorities ($P=.0003$). By building on the training of providers in Sexual and Reproductive Health care for adolescents, a difference in the FP supply was also decelerated between facilities: all health facilities whom providers were trained in Adolescent Sexual and Reproductive Health offered FP services to adolescents; unlike health facilities that do not have providers trained in Adolescent Sexual and Reproductive Health ($P=.007$). On the other hand, any significant difference was found in the availability of FP between hospitals and health centres ($P=.148$); and based on the training status of providers in Family Planning ($P=.335$).

Table 3 also showed associations between uptake of Family Planning by adolescents and the location of health facilities ($P=.010$) and its Management authority ($P<.001$). On the other hand, no significant association was found between uptake of Family Planning by adolescents and types of health facilities

(P=.089), training status of providers on family planning (P=.478) and training on Adolescent Sexual and Reproductive Health (P=.189). Finally, the results in Table 3 globally indicate that each time the FP service was organized in the health facility, it was used by adolescents (Table 3).

Table 4 presents the main results obtained by comparing “uptake of family planning by adolescents” according to the study independent variables. Of the five tested independent variables, these results show that uptake of family planning by adolescents was significantly associated with three variables: Audio and visual privacy of PF room (P<.001), Nonjudgmental service provision (P<.001) and availability of a wide range of contraceptives methods (P<.001). When the FP service was “Nonjudgmental”, it was used 45 times more than when it was judgmental. In the same way, the facilities whose family planning services had a wide range of contraceptives methods

were 28 times likely to be used by adolescents. Similarly, when the FP room guaranteed audio and visual privacy, the FP service was used 16 times more than when privacy was not guaranteed. Factors such as “community support of the FP” (P=.074) and “Free or subsidized service” (P=.783) do not influence the uptake of FP by adolescents (Table 4).

Regarding the financial resources requirement to access to FP service, an average of 43 health facilities CI95% [23 - 57] offered free FP services, including the counseling and the contraceptive methods. Of all contraceptive methods analyzed, male and female condoms were free in all health facilities. The rest of contraceptive methods were offered at prices ranging from USD 0.5 to USD 137.5 in facilities where FP service was lucrative. Among methods that were the most expensive, male sterilization cost USD 137.5 and female sterilization cost USD 71.6. All other methods cost US \$ 3.7 or less (Data not shown).

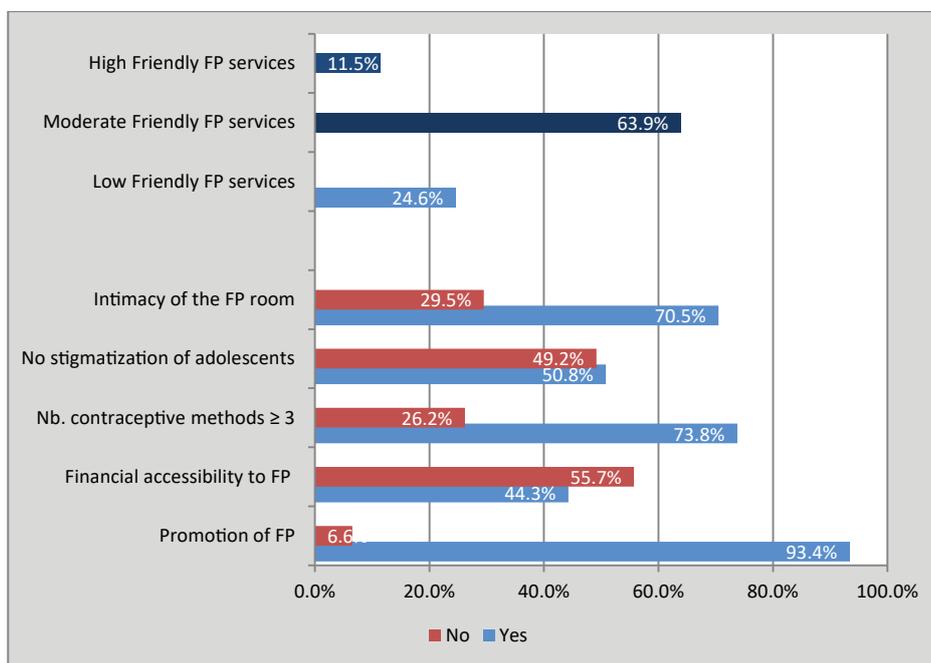


Figure 2. User-friendliness level of Family Planning services in Health Facilities from Kinshasa and Kongo Central provinces (N=61).

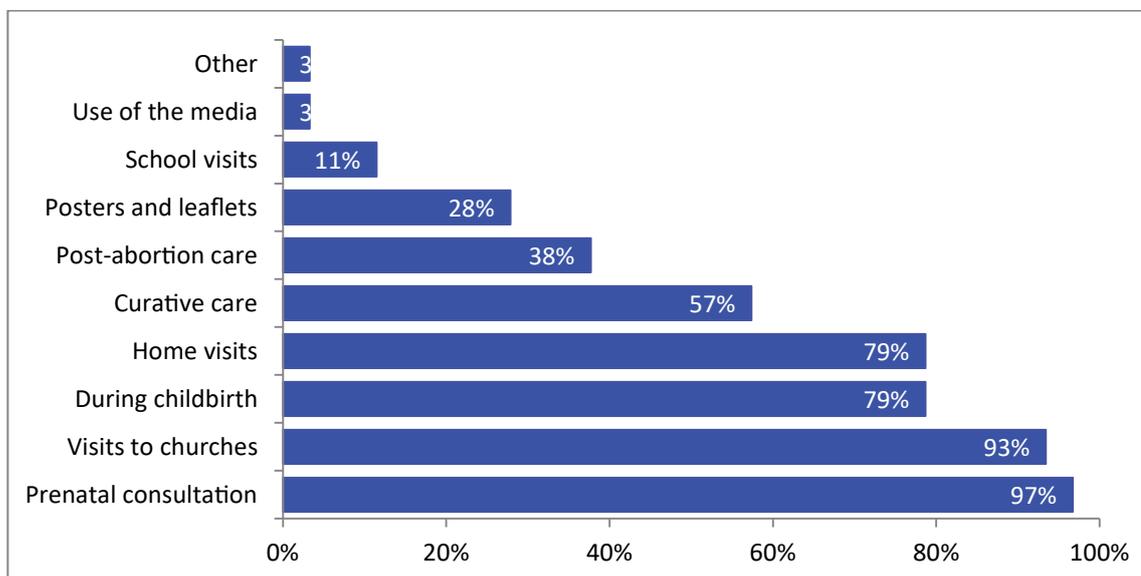


Figure 3. Methods used to promote the Family Planning in Health Facilities of Kinshasa and Kongo Central provinces, DRC(N=61).

Table 3. Availability and uptake of family planning by adolescents 14-19 into health facilities of Kinshasa and Kongo central, DRC.

	Availability of PF Services for Adolescents (N=61)				Uptake of FP Services by Adolescents (N=61)					
	Yes (Nb, %)	No (Nb, %)	P value	OR	CI, 95%	Yes (Nb, %)	No (Nb, %)	P value	OR	CI, 95%
Types of Health Facilities			.148					.089		
Hospitals	14 (22.9)	1 (1.6)				13 (21.3)	2 (3.3)			
Health Centres	35 (57.4)	11 (18.0)				29 (47.5)	17 (27.9)			
Location of the facility			< .001	30.46	3.69 - 251.68			.010	4.29	1.39 - 13.24
Urban	36 (59.0)	1 (1.6)				30 (49.2)	7 (11.5)			
Rural	13 (21.3)	11 (18.0)				12 (19.7)	12 (19.7)			
Management authority of the facility			< .001					< .001		
Government / Public authorities	15 (26.6)	11 (18.0)				12 (19.7)	14 (22.9)			
Non-profit/ Confessional Organization	21 (34.4)	0 (0.0)				20 (32.8)	1 (1.6)			
Private for-profit	13 (31.3)	1 (1.6)				10 (16.4)	4 (6.6)			
Training on family planning			.335					.478		
Yes	28 (45.9)	5 (8.2)				24 (39.3)	9 (14.8)			
No	21 (34.4)	7 (11.5)				18 (29.5)	10 (16.4)			
Training on Adolescent Sexual and Reproductive Health			.007	17.37	1.04 - 289.93			.189		
Yes	20 (32.8)	0 (0.0)				16 (26.2)	4 (6.6)			
No	29 (47.5)	12 (19.5)				26 (42.6)	15 (24.6)			

Table 4. Family planning uptake by adolescents based on some health facilities characteristics.

Variables	Uptake of FP by adolescents (N=61)				
	Yes (Nb., %)	No (Nb., %)	OR	CI, 95%	P value
Community support of the FP			0.72	[0.09 - 5.54]	.074
Yes	39 (68.4%)	18 (31.6%)			
No	3 (75.0%)	1 (25.0%)			
Audio and visual privacy of PF room			16.03	[4.30 - 59.77]	<.001
Yes	37 (86.0%)	6 (14.0%)			
No	5 (27.8%)	13 (72.2%)			
Nonjudgmental service provision			45.00	[5.58 - 362.87]	<.001
Yes	30 (98.8%)	1 (3.2%)			
No	12 (40.0%)	18 (60.0%)			
Wide range of contraceptives methods			28.17	[6.39 - 124.13]	<.001
Yes	39 (86.7%)	6 (13.3%)			
No	3 (18.8%)	13 (81.3%)			
FP service free or subsidized			0.61	[0.21 - 1.79]	.783
Yes	17 (63.0%)	10 (37.0%)			
No	25 (73.5%)	9 (26.5%)			

Table 5 summarizes the results obtained from the logistic regression whose model took into account the “uptake of Family Planning by Adolescents” as the dependent variable and the study independent variables. In contrast to the results provided in Table 4 where three factors were individually associated with the uptake of FP by adolescents, Table 5 indicates that only two independent variables had a significant association with the dependent variable. Uptake of family planning by adolescents was significantly influenced by the availability of a “wide range of the contraceptive methods”

Table 5. Uptake of Family Planning by Adolescents adjusted by some characteristics of Family Planning services, DRC (N=61).

Variables	B	Std. Error	Sig.	OR	95% CI
[Wide range of contraceptives methods = 1]	-3,498	1.144	.002	.030	[0.003 - 0.285]
[Nonjudgmental service provision = 1]	-3,956	1.341	.003	.019	[0.001 - 0.265]
Constant	4,632	1.347	.001	102.753	

($p=.002$) and the “Nonjudgmental service provision” ($p=.003$). The presence of stigma within the health facility had a negative effect on the uptake of family planning by adolescents (OR=.019; CI95% [0.001 - 0.265]). Similarly, these results also showed that when the contraceptive methods were lacking in the health facilities, the uptake of family planning by adolescents decreased (OR=.030; CI95% [0,003 - 0,285]) Table 5.

Discussion

The main results from this study showed that 8 out of 10 existing family planning services were offered to adolescents aged 15-19. While most of the FP services for adolescents were integrated into existing FP services; only one in ten was assessed high Friendly for adolescents. Uptake of family planning by adolescents was significantly associated to the availability of a wide range of the contraceptive methods in the health facility and the Nonjudgmental service provision. This study also highlighted stigmatization and discrimination that exist between adults and adolescents to access to a wide range of most popular contraceptives.

The provision of family planning remains insignificant for both adults and adolescents in the DRC

In the DRC, recent studies indicate that less than half (40.0%) of health facilities organized the family planning services. This situation makes the family planning inaccessible to a large part of the population [21]. Despite the fact that the health districts visited in this study have several health facilities that offer family planning, it has been reported a persistent low coverage in family planning services at the Health District level across the country. In reference to the health policy documents, to be considered as offering family planning, a health district should provide this intervention within at least 5 health facilities; and each facility is called to offer at least three different contraceptive methods, including at least one long-acting [19]. Availability of family planning services in both private and public sector remains low in the DRC, despite the fact that some progress has been observed from 2014 to 2017 [17, 21]. The increasing in the number of facilities offering family planning seems to be accompanied of the increase in the number of contraceptive methods and the uptake of modern contraceptive methods, only in big and privileged cities. In the province of Kinshasa for example, the modern contraceptive prevalence rate (mCPR) among married women jumped from 18.5% to 26.7% [21]. However, we showed through this study a lacking of contraceptive methods within health facilities, particularly in the rural health district of Gombe Matadi. These results are consistent with findings from other studies, which also highlighted the problems of equity in the distribution of quality family planning services from rural and urban regions [17]. A little emphasis is placed on the balanced distribution of FP services between rural and urban areas; urban settings are often favored, whereas, in low income countries, the majority of the population lives in rural areas.

The low availability of family planning services is more accentuated in adolescents as shown through this study: one in five health facilities with FP do not provide this service to adolescents. In addition, in facilities that are willing to provide the FP

to adolescents, a wide range of most preferred contraceptives, such as male condoms, implants, emergency contraceptive pills and intrauterine devices are not allowed to youths, mostly due to the providers’ misconceptions. This result is consistent with the finding from a recent study yielded in Angola, which also showed a limited access to a wide range of contraceptive methods, particularly injectables and long-acting reversible contraceptives (LARCs) in both public and private facilities [8]. These facts, associated to the low contraceptive knowledge among women aged 15-49 may contribute to the persistent low modern contraceptive prevalence in some low income countries from Africa.

According to the results from a recent study conducted in the DRC, some formidable challenges remain to implement the PF, of which can be cited: uncertain political situation, cultural norms favoring high fertility, a thin patchwork of service delivery institutions, logistical issues in a vast country with weak infrastructure, and low capacity of the population to pay for contraceptive services [21]. While studies focused on the availability and the distribution of FP services are increasing, little is known on the proportion of family planning services that are user-friendly for adolescents in the DRC. Advocating for policy and guideline revisions; improvement of the quality and accessibility of an expanded method choice and action on social norms and comprehensive reproductive health information are suggested as vital to achieving full access and full choice for all sexually active young people [22].

The existing family planning services are not accommodate to adolescents’ needs

Evidence indicates that adolescents attend health services that are tailored to their needs [2]. The analysis of the organization of the reproductive health service in an African country highlighted the lack of adolescent-friendly services mainly due to the lack of youth-friendly training among the staff and lack of a dedicated space for young people [11]. A study showed that health service providers lacked competency to provide counseling and interpersonal communication to young people seeking the family planning service [23]. This situation is reflected, among other things, by the fact that health facilities do not appear to uphold the right of adolescents to access to family planning services independently. Cases of breach of confidentiality have been reported [11]. These barriers add to others bottlenecks mentioned in this study contribute to maintain the low use of family planning by adolescents. Sustainable scale-up of adolescent-friendly contraceptive services needs to pursue simultaneously their expansion and institutionalization. Advocacy complemented by intensive capacity building can contribute to the adoption of adolescent-friendly contraceptive services through the national health policy documents, which encourage adapting existing services to adolescent’s needs [13].

We showed through this study that only one out of 10 visited facilities were assessed “high Friendly” family planning for adolescents, by meeting all applied criteria (wide range of contraceptives methods, audio and visual privacy, community support, free or subsidized service and nonjudgmental service provision). In a large number of health facilities in the DRC remain some barriers that prevent adolescents from using

services. Such result can largely explain why FP services are less frequented by unmarried adolescents whose modern contraceptive prevalence rate stays low [16, 24]. The low proportion of high friendly family planning services mentioned through this study is mainly due to low affordability of services, stigmatization and low privacy of the care setting.

It is recognized that the financial barrier to accessing health services is a major bottleneck in adolescent's FP uptake in both high and low-income countries [25]. Based on our results, the majority of contraceptives methods were charged less than \$ 4; however, this amount was estimated high for teens. The financial dependence of adolescents on their guardians (parents and others) could hamper their autonomy and the decision to use the family planning service when needed. In the DRC, contraceptives are subsidized, mainly by international NGO and to a lesser extent by the public authorities. But this beneficial action could have an influence by improving the FP uptake by youths if effective mechanisms to monitor and control providers were effective. It is possible that some currently marketed contraceptives are actually totally subsidized.

Audio and visual privacy are among the elements that reflect the quality of care; and both adolescents and adults value privacy of health care [23]. However, if to guarantee the confidentiality, providers offered Sexual and Reproductive Health services to adolescents following several approaches (such as the clinics for young people and adolescents, adolescent's health care in a separate room, ect ..); it is currently recommended to incorporate the elements of comfort into existing health services. Recent studies actually showed that many strategies used other times to improve adolescents' access to family planning services, and mainly focused on audio and visual privacy have been ineffective [26]. These include the youth centres where, even some recreational activities are often organized. The youth's centres are reported by adolescents themselves to not lead to increased uptake of Sexual and Reproductive health care [27]. Beyond all these barriers, adolescents attach a great deal of importance into the availability of a wide range of contraceptive methods and the absence of stigmatization in health facilities, thus disregarding the low audio and visual privacy of counseling rooms, common in rural environment.

Socio-cultural norms and taboos regarding adolescent sexual behavior are among the most significant factors preventing adolescents from accessing services. They contribute to adolescents' own fear and shame, judgmental attitudes of service providers, and disapproval from parents and community gate-keepers [23]. According to our findings, half of health care providers stigmatize adolescents when they visit health facilities seeking family planning care. However, these results contrast with the high number of training on FP those health workers receive and in which they are supposed to be trained on the specific approach to provide FP to adolescents. Stigma is a real barrier to the uptake of FP. In the context of the DRC, stigma is partly explained by the persistence of social norms that are unfavorable to family planning in general, to that of adolescents in particular and also highlighted in others studies [21, 23]. The need to address socio-cultural norms and community knowledge and attitudes has been also highlighted [23].

More is not done to improve access to and uptake of family planning by adolescents

In order to improve access to and use of family planning, in the DRC, the Ministry of Health has put in place promising initiatives, such as the social marketing of subsidized contraceptives at both traditional and non-traditional channels; and strengthening of services in military health facilities. Family planning also is being institutionalized in nursing schools where students started distributing contraceptives as community-based distributors. If these initiatives resulted in a significant progress in the modern contraceptive prevalence rate at the national level [21], they appear to be ineffective in adolescents since they do not result in a remarkable improvement of their contraceptive prevalence rate. To produce results in adolescents, managers of programs should ensure that only effective actions upon the level of knowledge of adults and adolescents are well-implemented; this could stimulate adolescents to ask for the FP services. A study reported the conservative attitude of health service providers with regards to providing contraception to young people. They reported being torn between personal feelings, cultural and religious values and beliefs and their wish to respect young people's rights to accessing and obtaining contraceptives [23].

The promotion of the family planning is important to increase its uptake by women aged 15-49. One of the findings from this study indicated that the providers are promoting Family Planning, mostly at the ANC, using the churches and home visits, and during child birth. However, most of these strategies target the use of family planning services by adults. These methods may be ineffective when it comes to improving adolescent FP use. In this case, methods targeting adolescents, such as outreach through schools and youth clubs may be needed. However, we found in this study that adolescent's awareness through schools and the media were the least used methods by health workers. The challenge in this context is to use health care providers for outreach activities outside the health facility. Health facilities that do not have providers trained in Adolescent Sexual and Reproductive Health were likely to less offer FP to adolescents. It is possible to profoundly improve adolescent sexual health with comparatively small costs, if adolescent sexuality is not condemned but instead sexuality education and sexual health services are provided. Each year new groups of young people mature, requiring new efforts [3].

Problems of knowledge of contraceptive methods by women of childbearing age, particularly adolescents, are better known to have negative effects on attendance at family planning services [23]. Although this study did not focus on knowledge, attitudes and practices of adolescents in family planning, the results obtained by crossing adolescents' uptake of FP and the availability of FP show that every time the friendly FP service was organized, it was attended by teenagers. It stay possible that yet a substantial proportion of women aged 15-19 are not using their preferred method among the methods they know of, such as demonstrated by Nieto-Andrade et al [6].

Strengths and limits of the study

This study has the merit of being interested in the elements

of comfort and quality, which can influence the use of health services in general and those of family planning in particular. The criteria used in this study to judge the user-friendliness of services can also be applied to adolescents aged 15 to 19, as well as to adult wishing to attend FP services.

However, this study has some limitations: it only dealt with the supply side, without questioning the demand side by interviewing adolescents and family heads to gather information on their level of knowledge, attitudes, practices, perceptions and preferences on family planning.

Conclusions

Family planning remains an important intervention for adolescent health. Apart from the fact that the family planning service is less organized in health facilities, some available services are not accessible to adolescents. The majority of FP services are unfriendly and do not meet the needs expressed by adolescents. Beyond the actions to be carried out on the knowledge of contraceptive methods, their acceptability and use among adolescents, advocacy should be organized with health officials to make family planning services available and accessible.

Prospect

One of the main barriers to accessing and uptake existing Family Planning services is the “limited knowledge of and limited incentives for adolescents. Referring to the conceptual framework, there is a need for another study aiming to measure adolescents' knowledge of Sexual and Reproductive Health and Family Planning in the context of the DRC.

List of Abbreviations

FP: family planning, DRC: The Democratic Republic of the Congo, SRH: sexual and reproductive health, LARCs: long-acting reversible contraceptives, DHIS2: district health information system; HIPs: high-impact practices in family planning; ANC: antenatal care, PNC: postnatal care; IUD: intra-uterine device; “mCPR: modern contraceptive prevalence rate; NGO: nongovernmental organization; RIPSEC: renforcement institutionnel pour les politiques de santé basées sur les evidences en République Démocratique du Congo”.

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Conflicts of Interest

“The authors declare no conflict of interest.”

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