

RESEARCH ARTICLE

Availability and quality of family planning services in Idjwi Island, DRC

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Abstract: Objective: The objective of this study was to assess the availability and quality of FP services in health facilities (HFs) on Idjwi Island in the eastern Democratic Republic of the Congo (DRC). Methods: From March 1 to 31, 2022, a descriptive cross-sectional study was conducted in several HFs on Idjwi Island. Identified 31 HFs have been comprehensively included. Data were collected through interviews, literature reviews, and observations, guided by a questionnaire. Results: Of the 31 HFs included, 29 (93.6%) of them provided FP services on an availability basis, of which 27.6% (8/29) met the criteria for high-quality services. The most widely available methods were male condoms, combined oral contraceptive pills, and progestin-only injectable contraceptives. Conclusion: The availability of FP services in HFs on Idjwi Island remains high but their quality is low. To improve access to and use of FP, efforts should focus on improving quality in this rural part of the country.

Keywords: family planning, contraceptive methods, rural environment, Idjwi Island

1 Introduction

Maternal and infant mortality remains high in the Democratic Republic of the Congo (DRC) where maternal mortality was estimated at 846 deaths per 100,000 live births and neonatal mortality was estimated at 28 per 1000 live births [1]. The third Sustainable Development Goal (SDG 3.1) aims to reduce the global maternal mortality rate to less than 70 per 100,000 live births and neonatal mortality to less than 12 per 1,000 live births by 2030 [2]. Family planning (FP) is one of the strategies used to achieve SDG target 3.1 as it can improve maternal and child health outcomes [3, 4].

However, contraceptive methods are still poorly used in the DRC, where among all women aged 15-49 who were not pregnant, 19% used some form of contraceptive method at the time of the survey; only 8% used a modern method and 11% used a traditional method. The rate of contraceptive use is lower in rural areas than in urban areas [1]. There is evidence that besides barriers to contraceptive utilization, FP services availability and quality influence the perception and regular utilization of contraceptives [5, 6]. Because of its impact on contraceptive use, the quality of FP services is a topic that needs to be studied. Some studies have been conducted in the DRC on the evaluation of FP services quality and availability [7, 8]. Mpunga *et al.* [8] conducted an evaluation of the quality of FP services across all provinces of the DRC and found that 33% of health facilities (HFs) provided FP services and 20% met the criteria for high-quality services.

Quality of family care includes, but is not limited to, the availability of services and/or supplies, characteristics of the health care provider, the compliance with the standard of care, and the client's expectations and perception. For clients, quality is linked to availability, wait times, confidentiality, information, and services received. On the other hand, the quality of healthcare providers is linked to service outcomes, safety, reduced morbidity and mortality, and increased service coverage [9].

Although there are several studies on the availability and quality of FP services in Congolese urban areas, none has been carried out on Idjwi Island, which is a rural area in the east of the DRC. Therefore, the objective of the present study was to assess the availability and quality of FP services in HFs on Idjwi Island. Results of this study will be relevant to the improvement of FP policies and interventions on Idjwi Island and will be a reference for monitoring the progress of FP quality.

2 Materials and methods

2.1 Study framework, design and period

This is a descriptive cross-sectional study conducted in Idjwi Island (DRC) from March 1 to 31, 2022. Idjwi Island is a territory located in the middle of Lake Kivu, separated in the north by Goma city, in the south by Bukavu city, in the east by the Rwandan Republic, and in the west by the territory of Kalehe. This island has an area of 310 km² (it is the second largest lake island in Africa) and a population of 320,009 inhabitants according to recent estimates, i.e. a density of 1,035 inhabitants per km². This density is among the highest densities in Africa.

In terms of health, Idjwi Island has a health zone and includes a general referral hospital, three referral health centers, 21 health centers and about ten health posts. The health system in the DRC comprises four types of HFs: (1) hospitals (including national and provincial hospitals, district hospitals and secondary hospitals); (2) referral health centers; (3) health centers; and (4) health posts [8]. To be included in this study, HFs had to be on the Idjwi Health Zone list and had provided data to the National Health Information System in the 6 months prior to the study as an indication that it was active. Only active HFs were included in the sampling frame. A total of 31 HFs were included in this study.

2.2 Study variables

We used a questionnaire that included the following variables: type of HF, location of health facility (North Idjwi or South Idjwi), sector (private or public), contraceptive methods available, availability index, and quality index. This questionnaire was administered to each health facility included in the study. The first author (MNM) had visited all selected health facilities and collected the data through structured interviews with managers and persons responsible for FP services of these HFs.

The study evaluated the availability index and the quality index of FP services. These indices have been used previously by Mpunga *et al.* [8] and are derived from the tools proposed by World Health Organization (WHO) to measure the quality and availability of services [10].

The availability index was based on three criteria. A HF had to meet these three criteria in order to be considered a facility offering FP services:

- (1) Infrastructure: existence of a room in which to provide FP (and other) services that ensured the confidentiality and privacy of the clients to be respected;
- (2) Staff: existence of health personnel assigned to FP services;
- (3) Service utilization: evidence of client use of FP services, based on service statistics (at least one client identified as having obtained FP services in the 6 months prior to the survey).

The quality index was informed by Donabedian's model of quality medical care [11]. According to this model, there are three dimensions to judge quality: (1) the structure of care in terms of inputs, materials, personnel, funds and organizational structure; (2) processes used to provide care (i.e. standards of healthcare); and (3) outcomes. The quality index used in this study was based on four elements:

- (1) Attendance of at least one staff member trained in FP in the two years prior to the survey;
- (2) Existence of FP service delivery guidelines (printed manual of instructions or standards);
- (3) Availability of at least three types of contraceptive methods on survey day (in particular, the three most widely used by clients, which are male condoms, combined oral contraceptive pills, and injectable contraceptives);
- (4) Availability of a sphygmomanometer to measure blood pressure, which is desirable when prescribing certain contraceptive methods.

Since these elements included in our index were a modest measure of quality, only HFs that met all four criteria were classified as having "high-quality"; if one or more of these criteria were not met, HF was assessed as having a "low quality".

2.3 Data analysis

Data were entered using Microsoft Excel 2019 and analyzed using STATA 16. The indices of availability and quality of FP services were calculated as a proportion of all HF. The Pearson chi-square test or the Fisher exact test were used to test the association of different variables. All hypotheses were tested using the alpha significance level of 0.05.

2.4 Ethical considerations

The study was reviewed and approved by the Medical Ethics Committee of the University of Goma (Approval No: UNIGOM/CEM/003/2021). The research team obtained permits from local health authorities prior to the investigation. Data were collected anonymously, with the informed consent of participants.

3 Results

A total of 31 HFs were included in the study. Of the 31 HFs surveyed, 93.5% provided FP services, based on the availability index (i.e., availability of a room for FP service delivery, the availability of personnel assigned to FP services, and evidence of client use of services from service statistics) (Table 1). Referral health centers (100%) and health centers (100%) were more likely to offer FP than health posts (81.8%). This relationship was not statistically significant ($p = 0.1432$). FP was higher in South Idjwi (94.7%) than in North Idjwi (91.7%), but without statistically significant difference ($p = 1.000$). Similarly, there was no relationship between the existence of FP and whether HF was in the public or private sector ($p = 0.1268$).

Table 1 Characteristics of health facilities offering family planning services in Idjwi Island

Variable	Total	FP services available n (%)	FP services not available n (%)	p
Total	31	29 (93.6)	2 (6.5)	
Type of HF				0.1432
Referral health centers	4	4 (100.0)	0 (0.0)	
Health centers	16	16 (100.0)	0 (0.0)	
Health posts	11	9 (81.8)	2 (18.2)	
Sector				0.1268
Private	2	1 (50.0)	1 (50.0)	
Public	29	28 (96.6)	1 (3.5)	
Localisation				1.0000
North Idjwi	12	11 (91.7)	1 (8.3)	
South Idjwi	19	18 (94.7)	1 (5.3)	

Note: FP: family planning; HF: health facility.

The relative availability of different contraceptive methods is shown in Figure 1. Of the 29 HFs that provide FP, the 4 most commonly available methods were male condoms (96.6%), combined oral contraceptives (72.4%), progestin-only injectables (69.0%), and cycle beads (65.5%). Methods available in less than 10% were intrauterine devices (6.9%), tubal ligation [female sterilization] (6.9%), and vasectomy [male sterilization] (3.5%).

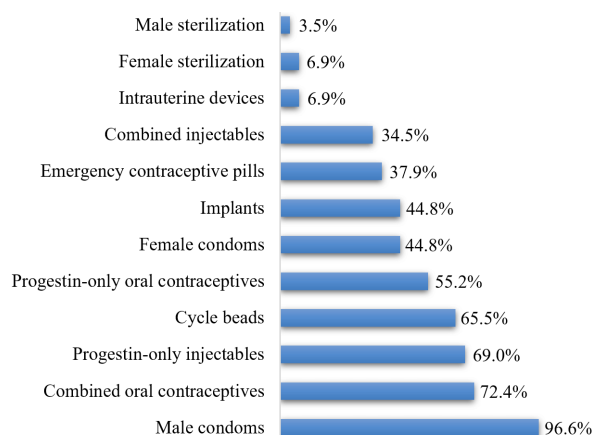


Figure 1 Percentage of health facilities with specific contraceptive methods in stock at the time of survey

With regard to the quality of FP services, we used a 4-element quality index for the 29 HFs with FP services. As indicated in Table 2, service delivery guidelines were available in 34.5% and the presence of trained personnel in the FP (75.9%). Nearly 2/3 (65.5%) of HFs had a sphygmomanometer in good condition, and about 96.6% had at least male condoms, combined oral contraceptive pills, and injectable contraceptives available.

In addition, 8 out of 29 HFs (27.6%) met all 4 quality criteria and thus met the standard of having a high-quality of FP services (Table 3). Quality results show marked differences in location (Table 3). HFs with the highest percentages offering high-quality FP services were in South Idjwi (33.3%) compared to North Idjwi (18.2%) ($p = 0.6706$). Finally, quality was highest in referral health centers (50.0%) and lowest in health centers (25.0%) and health stations (22.2%). This relationship was not statistically significant ($p = 0.5518$).

The number of contraceptive methods available is important in FP services as it serves as an indicator of the choice clients have. The 29 HFs offering FP services had a mean number of

Table 2 Criteria for availability and high-quality of family planning services in 29 health facilities on Idjwi Island

Variable	Number (n = 29)	Percentage
Criteria for availability		
Infrastructure	18	62.1
Staff	26	89.7
FP service utilization	22	75.9
Criteria for high-quality		
FP service delivery guidelines	10	34.5
Sphygmomanometer	19	65.5
Health workers trained in FP	22	75.9
≥ 3 contraceptive methods	28	96.6

Table 3 Quality of family planning services according to the health facilities' characteristics

Variable	Low quality n (%)	High quality n (%)	p
Total	21 (72.4)	8 (27.6)	
Localisation			0.6706
North Idjwi	9 (81.8)	2 (18.2)	
South Idjwi	12 (66.7)	6 (33.3)	
Type of health facility			0.5518
Referral health centers	2 (50.0)	2 (50.0)	
Health centers	12 (75.0)	4 (25.0)	
Health posts	7 (77.8)	2 (22.2)	

contraceptive methods of 5.4 ± 2.0 (Table 4). The number was higher for referral health centers (6.3 ± 1.7) than for health centers (5.9 ± 2.0), or health posts (4.1 ± 1.5).

Table 4 Number of contraceptive methods offered by type of health facilities

Number of contraceptive methods	Type of health facility			Total (n = 29)	p
	Referral health center (n = 4)	Health center (n = 16)	Health post (n = 9)		
2-5	1 (25.0%)	7 (43.7%)	7 (77.8%)	15 (51.7%)	0.1355
>5	3 (75.0%)	9 (56.3%)	2 (22.2%)	14 (48.3%)	
Mean	6.3 ± 1.7	5.9 ± 2.0	4.1 ± 1.5	5.4 ± 2.0	

4 Discussion

This study demonstrates a high availability of FP services in the HFs on Idjwi Island of, DRC. Nearly 94% of HFs had FP services (defined as a room in which FP services could be provided, staff assigned to FP services, and evidence of client use of FP services). And of these HFs, only 27.6% were rated as having high-quality services (defined as having FP service delivery guidelines, FP trained health workers in the past 2 years, a sphygmomanometer, and at least 3 types of contraceptive methods). These results show a high availability of FP services in Idjwi Island compared to the entire DRC where Mpunga *et al.* [8] reported that the availability of FP services was low (33%). Quality was low (27.6%) in the present study, the same as in the DRC as a whole where 20% of HFs had high-quality FP services [8].

The low quality of FP services found in this study highlights the need to improve access and availability of services in order to better meet the demand for FP. The low quality of FP may result in low contraceptive use prevalence on Idjwi Island [12]. But the demand for FP among the population should be added to this low quality. For example, the majority of the rural population is influenced by customary and religious leaders who are often opposed to FP. Thompson *et al.* [12] had found that local priests on Idjwi Island maintain that condoms, injections, and other forms of “unnatural” contraception are prohibited. In addition, other barriers to FP were observed among the Idjwi Island population. Health workers, infrastructure, supplies, funding and outreach programs on this island are insufficient to meet local needs. The use of traditional remedies, the lack of information on FP, the lack of empowerment of women in terms of limited decision-making power in intimate relationships, violence against women, and low educational levels are also limitations to access to FP services [12]. Service costs are the main barrier to the use of FP services [13]. To improve access to and use of FP, health authorities need to consider both supply and demand [8].

Male condoms, combined oral contraceptive pills, and progestin-only injectables were the most widely available methods in HFs in our study. This finding is identical to that made in

the DRC [7, 8, 14] and elsewhere in Africa [15] which also included these three contraceptive methods. The predominance of male condoms identified in these studies would be due to their use in other programs such as HIV and sexually transmitted infection control programs [8, 14].

The study shows that FP service delivery guidelines were present in only 34.5% of the HFs. Information is needed to enable clients to make an informed decision about the contraceptive method that meets their needs.

This study is the first to assess the availability and quality of FP services on Idjwi Island; it included all HFs types available on the island. In addition, pharmacies – the main source of contraception in the 2013-2014 demographic and health survey [1] – were excluded from this study; this could lead to an underestimation of the availability of FP services.

5 Conclusion

The availability of FP services in HFs on Idjwi Island remains high but their quality is low. Male condoms, combined oral contraceptive pills, and progestin-only injectables were the most widely available methods in all HFs. To improve access to and use of FP services, efforts should focus on improving quality in this rural part of the country.

Conflicts of interest

The authors declare no conflict of interest.

List of abbreviations

DRC: Democratic Republic of the Congo;
 FP: family planning;
 HF: health facility;
 WHO: World Health Organization.

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