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ORIGINAL RESEARCH

Family Planning and Contraception

Factors influencing access to preferred contraceptives among women of reproductive age in public primary healthcare facilities in Kajiado Central subcounty, Kenya

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Abstract

Background: Access, health communication, client, healthcare workers, and organizational factors are associated with contraceptive access and can be used as indicators to measure the effectiveness of health services and guarantee that services reach users.

Objective: To evaluate factors influencing access to preferred contraceptives among women of reproductive age in public healthcare facilities in Kajiado Central subcounty, Kenya.

Methods: A cross-sectional descriptive study design was employed. The study targeted 500 family planning clients visiting five public primary healthcare facilities in the Kajiado Central subcounty. A sample of 217 respondents was drawn using systematic sampling method. A structured questionnaire was used to collect data. Data were entered, and descriptive, bivariate, and binary logistic regression analyzes were performed using the statistical package for social sciences (SPSS) version 24.0 (IBM Corp., Armonk, NY, USA). The statistical significance was set at $p<0.05$.

Results: A majority, 114 (58%) respondents, were aged 25-34 years, 169 (86%) were married, 87 (44%) had 3-4 children, and 93 (47%) had attained college education. Fifty percent (110) of the respondents were on short-acting reversible contraceptive methods, whereas 88 (45%) were on an injectable contraceptive (Depo-Provera). Client factors were associated with contraceptive access ($p<0.05$). Client factors ($p<0.001$, OR=12.655, 95% CI [4.701-34.067]), and organizational factors ($p<0.05$, OR=2.541, 95% CI [1.079-5.985]), had a significant relationship with access to contraceptives of preferred choice.

Conclusion: Client and organizational factors influenced access to preferred contraceptives among women of reproductive age in public primary healthcare facilities in the Kajiado Central subcounty.

Keywords: access, contraceptives, family planning, Kajiado, Kenya

Introduction

Health systems consist of all persons and activities with a critical intention of maintaining, restoring, and promoting health (1). The essential building blocks of a health system include stewardship, funding, technologies and vaccines, medical products, information, health personnel, and service delivery (2). A functional health system ensures equitable access to safe, useful, cost-effective, and scientifically sound technologies, vaccines, and medical products (2). Ensuring women's access to preferred contraceptives promotes human rights to life and freedom, freedom of self-expression and opinion, and the right to education and productive work (3). Contraceptives also confer benefits besides preventing pregnancy, including reducing pregnancy-related illnesses and deaths. Family planning (FP) clients may also receive preventive and treatment services (4).

In 2019, 1.1 billion of 1.9 billion women of reproductive age (WRA) (15-49 years) required family planning. A majority, 842 million of these, used varied contraceptive methods, whereas 270 million had unmet contraceptive needs (3). Factors associated with contraceptive access can be categorized into the client, healthcare worker (HCW) and organizational factors, health communication, and access (2). Client factors include age, education level, marital status, age of sexual debut, family size, wealth, and residence (5, 6). Healthcare worker and organizational factors associated with low contraceptive access include limited choices of methods, inaccessibility to services, especially among young women, poor and unmarried women, worry about the side effects of contraceptives, disapproval by culture or religion, low quality of services in the healthcare institutions, bias from providers and users on methods, and gender barriers (3). Other barriers to contraceptive access include patients traveling long distances to seek services, stockouts, and inadequate policies for facilitating contraceptives (7). Social challenges in contraceptive access, including inadequate knowledge, misconception, stigma, and religious and cultural values, may influence women's motivation to access contraceptive methods (8). Access to contraceptives can be used as an indicator to measure the effectiveness of health services and to guarantee that services reach users of the services (9).

Public healthcare facilities are the primary providers of contraceptives, with 60% of users of modern contraceptives obtaining them from government sources (10). The public sector is the primary provider of most FP methods used in Kenya, except for the pill and male condoms, which can be obtained from private providers and retail shops, respectively (10). In Kenya, the Rift Valley, Coastal, and Northeastern regions have the lowest contraceptive prevalence among married women at 53%, 44%, and 3%, respectively (11). Kajiado county, the focus of this study, is in the Rift Valley region. With devolution and policy implementation of the free maternal service policy, there exist health system gaps that hinder the access of contraceptives in Kenya, necessitating the need to research factors influencing access to preferred contraceptives by women in primary healthcare facilities (11). This study, therefore, sought to evaluate factors influencing access to contraceptives among women of reproductive age in public primary healthcare facilities in the Kajiado Central subcounty.

Methods

Study design and setting

A cross-sectional descriptive study design was employed. This study was conducted in Kajiado Central subcounty, Kajiado county, Kenya. Kajiado county borders Nairobi, the nation's capital. It has five subcounties with a population size of 161,862, of which 80,343 were females (12). Kajiado county's household size is 3.5, against the national average of 3.9. Kajiado Central subcounty has the largest average household size of 4.3 (12). Kajiado Central subcounty has five primary healthcare facilities (AIC dispensary, Piliwa dispensary, Olenaru dispensary, Kumpa dispensary, and Nkorika Health center) that offer FP services. It was purposively selected as it had the largest average household size.

Study population

The target population was WRA, seeking FP or contraceptive services in public primary healthcare facilities. Approximately 500 clients visited the five primary healthcare facilities between February and May 2022.

Sample size determination and sampling procedure

The sample size was calculated according to Mugenda and Mugenda's sample calculation formula (13) to achieve a sample size of 217. A census of the five public primary healthcare facilities in the subcounty was undertaken. The 217 respondents were apportioned to each healthcare facility proportionately based on the target population. The clients in each facility were sampled using systematic sampling method of every second client until the required sample size in each facility was attained.

Operational definitions

Client factors are the characteristics of WRA that promote or hinder them from taking contraceptives and include age, marital status, culture and religion, myths, and misconceptions.

Healthcare worker factors are provider aspects that promote or hinder the access of contraceptives among WRA and include healthcare workers' attitudes, numbers, and knowledge.

Organizational factors are components in the organization that promote or hinder access to contraceptives, such as waiting time, infrastructure, operating hours, and if a user fee is charged.

Health communication relates to the communication channels women of reproductive age have to gain knowledge to make informed choices.

Access to preferred contraceptives is measured using five principles: accessibility, acceptability, availability, affordability, and adequacy. This study focused on availability and acceptability.

Data collection and management

Primary data were collected using a structured questionnaire administered by the interviewers. The

questionnaire was a five-point Likert scale: strongly disagree, disagree, unsure, agree, and strongly agree. The Likert scale responses were simplified by recoding them into binary variables. The recoding was guided by the dependent variable: access to contraceptives. Strongly agree or agree responses were recoded as (1) indicating an agreement to clients having access to contraceptives. Not sure, disagree, or strongly disagree were recoded as (0), indicating inaccessibility to contraceptives. The data collection tool was pretested in three primary healthcare facilities in the Kajiado West subcounty.

Study variables

The outcome variable of interest was access (availability or acceptability) to preferred contraceptives. The primary exposure variables of interest were the client, healthcare worker, health communication, and organizational factors.

Quality control

The Cronbach's Alpha reliability test was performed to ascertain the internal consistency of the research instrument. A coefficient of 0.7-1.0 was considered tolerable for consistency (14). The questionnaires were double-checked for accuracy.

Data analysis

Data were coded and entered into the statistical package for social sciences (SPSS) version 24.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics (totals and percentages) were derived. Bivariate and binary logistic regression analyzes were performed to assess the relationship between the dependent and independent variables. The statistical significance was set at $p<0.05$.

Ethical consideration

Ethical approval for this study was sought from the Kenya Methodist University Scientific and Ethics Review Committee (registration number KeMU/SERC/HSM/1/2022). Administrative approvals were granted by the National Council of Science and Technology (NACOSTI) and the Kajiado County Health Department. Each study participant was required to consent to participate in the study.

Results

Sociodemographic and medical characteristics

The response rate in this study was 90.78%. A majority, 114 (58%) respondents ranged between 25-34 years, 169 (86%) were married, 87 (44%) had 3-4 children, 93 (47%) had attained college education, 81 (41%) were self-employed, and 61 (31%) earned between Kenya shillings 11,000-20,000. A-half, 50% (110) of the respondents were on short-acting reversible contraceptive (SARC) methods, whereas 88 (45%) were on an injectable contraceptive (Depo-Provera) (Table 1).

Client factors and uptake of contraceptives

Most clients, 140 (71%), reported that they were not barred from using contraceptives by their denominations or religion. However, a minority, 57 (29%), seemed to support the idea that religion still barres women from using contraceptives. This agreed with the majority, 145 (74%), who felt that other denominations refuse women to use family planning (Table 2).

Healthcare workers' influence on the uptake of contraceptives

A majority, 187, 191, 187 (95, 97%, 75%) of the respondents indicated that the HCWs were highly knowledgeable on the FP methods and that the HCWs advised them on the benefits and side effects of the family planning method and counseled patients before giving them FP, respectively. A minority, 57 (29%) of the respondents mentioned that the HCWs sought approval from their spouse or parents before giving them family planning services, with about the same number, 62 (31%), feeling that they were asked to take unnecessary tests before being given FP (Table 3).

Organizational factors and the uptake of contraceptives

Fifty-one percent (100) of the respondents reported that the waiting bay and observation room were uncomfortable. The service delivery process took more time than expected, with only about half of the respondents, 102 (52%), saying the waiting time was acceptable. A majority, 185 (94%), reported that the operating hours were inconvenient, with some facilities not operating at night and over the weekends. A majority, 159 (81%) of the respondents, said the facility ran out of stock for contraceptives. A majority, 152 (77%) and 132 (67%) reported that the facilities were clean, had water and clean sanitary facilities, respectively (Table 4).

Health communication among family planning clients

A majority, 185 (94%), 182 (92%), 166 (84%), 161 (82%), and 161 (82%) of the respondents were aware of at least one FP method that they could use, were aware that contraceptives help them in spacing children and having children when they wanted, agreed that the HCWs informed them of all FP methods available, agreed to have received relevant communication from HCWs pertaining contraceptive methods, and were told of the side effects of each method and their method of their choice, respectively. However, their choice of contraceptives was highly

Table 1: Sociodemographic and medical characteristics of women of the reproductive age in the Kajiado Central subcounty

	Frequency (n)	Percentage (%)
Age		
18-24	41	21
25-34	114	58
35-44	36	18
45-54	6	3
Marital status		
Divorced	1	1
Single	27	14
Married	169	86
Number of children		
0	6	3.05
1-2	71	36.04
3-4	87	44.16
5 and above	33	16.75
Level of education		
Primary	39	20
Secondary	65	33
College	93	47
Employment		
Employed	66	34
Self-employed	81	41
Unemployed	50	25
Household income the woman has control over per month		
None	41	21
1,500-10,000	53	27
11,000-20,000	61	31
21,000-30,000	24	12
31,000-40,000	11	6
41,000-50,000	4	2
Above 50,000	3	2
Contraceptive method		
None	9	5
Pills	22	11
Coil	34	17
Implant	44	22
Depo-Provera	88	45

limited by available methods at the public healthcare facilities, as reported by the majority, 130 (66%) (Table 5).

Access to contraceptives of choice

Fifty-six percent (111) of the respondents did not get a contraceptive method of their choice. This could be explained by the fact that the majority, 157 (80%), cited that the facilities lacked contraceptive commodities most of the time. A minority, 46 (23%), stated that they were not given FP options to choose from, nor were the contraceptive methods acceptable to them, 51 (26%). A small proportion, 59 (30%), also expressed dissatisfaction with the FP services, with 52 (26%) indicating they would not come back to seek FP services, nor would 14 (31%) refer a friend (Table 6).

Chi-square measures of association

Client factors were significantly associated with clients' access to contraceptives ($p<0.05$). However, the associations of health workers, organizational, and health communication with access to contraceptives were not significant (p-value >0.05) (Table 7).

Overall, 80.7% of the respondents had access to contraceptives (Table 8).

Measure of relationship

Clients' factors ($p <0.001$, OR=12.655, 95% CI [4.701-34.067]), and organizational factors ($p <0.05$, OR=2.541, 95% CI [1.079-5.985]), had a significant relationship with access to contraceptives of preferred choice (Table 9).

Discussion

The sociodemographic characteristics of participants in this study were similar to other studies published elsewhere (15). The study found a significant association between the client's level of education and access to contraceptives, with most women who had access to contraceptives having attended college. A significant association was also found between the number of children a woman had and contraceptive access, with women with more than six children likely to use contraceptives. This was similar to a national study in Kenya (10). Other factors influencing contraceptive access at the family and community level included gender-based barriers, disapproval by culture, stigma, rumors, side effects of contraceptives, misconceptions, myths, and negative religious and cultural convictions, which were also reported elsewhere (3,7-8,16). In sub-Saharan Africa, lack of knowledge, awareness, and education are critical barriers to the access and continuation of contraceptives (17).

Healthcare workers were amiable and often listened to by the clients. This differed from other studies, which found negative attitudes among HCWs that were unfavorable to offering contraceptives to unmarried adolescents (18-20). This may be attributed to the age differences between these studies, in which

Table 2: Client factors and access of contraceptives

Statement		Disagree	Agree
		n (%)	n (%)
i.	My denomination does not refuse women to use family planning.	57 (29)	140 (71)
ii.	I am aware of the members of my denomination who use family planning.	60 (31)	137 (79)
iii.	Other denominations refuse women to use family planning.	52 (26)	145 (74)
iv.	Women still use family planning even when their denominations refuse them to do so.	87 (44)	110 (56)
v.	My culture and traditions allow women to use modern contraceptives such as pills and injections.	143 (74)	54 (26)
vi.	My culture and traditions allow women to use traditional contraceptives such as herbs and withdrawal.	108 (55)	89 (45)
vii.	My partner is aware that I am using family planning.	90 (46)	107 (54)
viii.	My partner allows me to use the family planning method of my choice.	97 (49)	100 (51)
ix.	Family planning has side effects on a woman.	59 (30)	138 (70)
x.	Family planning may lead to infertility in women.	119 (60)	78 (40)
xi.	Family planning makes a woman promiscuous and cheats on her spouse.	130 (66)	67 (34)
xii.	Family planning makes a woman lose the desire for sex.	121 (61)	76 (39)

Table 3: Healthcare workers' influence on the access of contraceptives

Statement		Disagree	Agree
		n (%)	n (%)
i.	The healthcare workers are highly knowledgeable about the family planning methods.	10 (5)	187 (95)
ii.	The healthcare worker advised me of the benefits of the family planning method to take.	6 (3)	191 (97)
iii.	The healthcare worker counsels me before giving me family planning.	10 (5)	187 (95)
iv.	The healthcare workers require approval from my spouse or parents before I get family planning services.	140 (71)	57 (29)
v.	The healthcare worker asks me to take an unnecessary test before giving me family planning services.	135 (69)	62 (31)
vi.	The healthcare worker gave me the family planning method that I asked for.	42 (21)	155 (79)
vii.	The healthcare worker informed me about the side effects of the family planning method before giving me the family planning.	20 (10)	177 (90)
vii i.	The healthcare workers who give family planning are very friendly.	25 (13)	172 (87)
ix.	The healthcare workers who give family planning listen to us when we tell them what we need.	22 (11)	175 (89)
x.	The healthcare workers are adequate in number to handle all the clients in need of family planning.	98 (50)	99 (50)
xi.	Getting family planning services at the hospital takes a short time.	104 (53)	93 (47)

Table 4: Organizational factors and access of contraceptives

Statement		Disagree	Agree
		n (%)	n (%)
i.	The waiting bay and observation room are comfortable.	100 (51)	97 (49)
ii.	The waiting time is acceptable.	95 (48)	102 (52)
iii.	The operating hours are convenient.	185 (94)	12 (6)
iv.	The facility does not run out of stock of contraceptives.	159 (81)	38 (19)
v.	The facility is clean.	45 (23)	152 (77)
vi.	The facility has water and clean sanitary facilities.	132 (67)	65 (33)

Table 5: Health communication among family planning clients

Statement		Disagree	Agree
		n (%)	n (%)
i.	I am aware of at least one family planning method that I can use.	12(6)	185 (94)
ii.	Contraception helps me in spacing my children and having a child when I want.	15 (8)	182 (92)
iii.	I know that I can get a contraception method from a public healthcare facility.	18 (9)	179 (91)
iv.	The healthcare worker informs me of all family planning methods available.	31 (16)	166 (84)
v.	The healthcare worker tells me about the side effects of each method and the method of my choice.	36 (18)	161 (82)
vi.	I received my preferred family planning method at this facility.	44 (22)	153 (78)
vii.	I received counseling before I was given the family planning of choice.	20 (10)	177 (90)
viii.	The public healthcare facility always has the choice of the method I require.	130 (66)	67 (34)

Table 6: Access to contraceptives of choice

Statement		Disagree	Agree
		n (%)	n (%)
i.	I get the contraceptive method of my choice whenever I need.	111 (56)	86 (44)
ii.	This facility always has contraceptive commodities.	157 (80)	40 (20)
iii.	I am counseled before I get a contraceptive method.	20 (10)	177 (90)
iv.	I am given family planning options to choose from.	46 (23)	151 (77)
v.	The contraceptive method I received is acceptable to me.	51 (26)	146 (74)
vi.	I am satisfied with the family planning services.	59 (30)	138 (70)
vii.	I always come back whenever I need family planning services.	52 (26)	145 (74)
viii.	I can refer a friend to this facility for family planning services.	14 (31)	183 (69)

Table 7: Chi-square measure of association

	Access	Client factors	Healthcare worker factors	Organizational factors
Chi-Square	51.782[a]	89.792[a]	185.183[a]	.614[a]
df	1	1	1	1
Asymp. Sig.	0	0	0	0.43

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency was 98.5.

Table 8: Predicted and observed results on the access to contraceptives

		Predicted		
Observed		Disagree (n)	Agree (n)	
Access	Disagree (n)	22	26	45.8
	Agree (n)	12	137	91.9
Overall Percentage				80.7

Table 9: Determinants of access to contraceptives

Variable	B	SE	OR (95% CI)	P-value
Client factors				
Client factors do not influence access (ref)			1.000	
Client factors influence access	2.538	.505	12.655 (4.701-34.067)	0.001
Health worker factors				
Healthcare worker factors do not influence access (ref)			1.0	
Healthcare worker factors influence access	1.427	1.365	4.167 (0.29-60.45)	0.296
Organizational factors				
Organization factors do not influence access (ref)			1.000	
Organization factors influence access	.933	.437	2.541 (1.08-5.99)	0.033
Health communication				
Communication does not influence access (ref)			1.000	
Communication does influence access	.026	1.024	1.026 (0.14-7.63)	0.980

the respondents in this study were aged more than 18 years. The number of HCWs was inadequate, explaining why slightly more than half of the respondents disagreed with the adequate waiting time. Another study in Kajiado county also reported that an inadequate number of qualified healthcare personnel affects the implementation of maternal healthcare programs (21). The HCW shortage is a significant challenge for the effective implementation and attainment of FP security (9). This study established that most clients were on short-acting reversible contraceptive (SARC) methods. These were concurrent with other studies with some HCWs often recommending family planning methods that are much easier and faster for them to provide, for example, the SARC, instead of finding out clients' choices and preferences or what contraceptive the client is likely to be able to continue using (22). Long-acting reversible contraceptives (LARC) are limited in several healthcare facilities because staff lack training on particular methods (7). Other significant barriers to the access of FP, including unsuitable clinic infrastructure, stockouts of contraceptives, long waiting times, and operating hours not being convenient for the clients, were also established in this study (17,23).

Providing contraceptive information, education, and counseling services is as good as providing LARC if looked at from effective use (24). Clients in this study were well informed on the contraceptive methods and their side effects. This contrasted with studies in sub-Saharan Africa, where the absence of knowledge, awareness, and education are critical barriers to the access and continuation of contraceptives (17). Knowledge of family planning methods is a prerequisite for initiating their use. This was similar to the national study cited above (10). The contraceptive method of choice may be easier if HCWs offer a mix of methods, such as barrier methods. Making an informed choice in FP is essential to delivering these services. It is required that all FP providers inform women about the side effects of the methods and what to do when they encounter any problems. This may empower the clients' decision-making on contraceptives, which helps them deal with side effects. When clients make informed choices, users choose the most appropriate method, reducing the likelihood of discontinuing contraceptives (10).

Similar to this study, access to preferred contraceptives remains a significant challenge in most sub-Saharan countries despite a clear need for commodities (25). The introduction of free maternity health in Kenya in 2013 led to increased access of services. However, material and personnel resources were not enhanced to deliver the increased service demand. This was evidenced by a shortage of commodities, inadequate staff, and the inability of existing infrastructure to handle the increase in capacity (18). There is often minimal sexual reproductive health commodities (SRHC) availability within public healthcare facilities and continuous stockouts (25). The shortage of favored contraceptive techniques impacts demand and consistent contraceptive utilization. Gaps in SRHC are said to result from a gap between supply and demand forecasting. Reducing occurrences of contraceptive stockouts requires a well-managed supply chain (7). Stockouts indicate supply chain problems, including poor logistics management information systems, incorrect product selection and quantification, poor budgeting and allocation, poor inventory management, and inadequate monitoring and evaluation (26). A small proportion of the

respondents in this study said the contraceptive methods given to them were unacceptable. Seven in ten women in Africa, South, and East Asia found the available contraceptive methods unacceptable or suitable, hence the nonutilization (9). Overcoming the reasons related to these methods regarding the unmet needs can minimize unplanned pregnancies by up to 59% in these regions (9).

Client and organizational factors were associated with access to contraceptives. This implies that religion, culture, myths, misconceptions, and spousal or family approval significantly influence clients' access to contraceptives. When client factors were considered while providing contraceptives to women of reproductive age, clients were 12.655 times more likely to access contraceptives than when not considered. Additionally, a one-unit increase in client factors led to a 2.538 increase in access to contraceptives. Organizational factors were measured against three indicators: service delivery process, conducive environment, and stock status. Where the waiting time was acceptable, the operating hours were convenient, the facility was well stocked, and it was clean, clients were 2.541 more likely to access contraceptives of their choice, more than where these factors were not considered. Although HCW and health communication factors did not significantly influence access to contraceptives, where HCWs were friendlier, clients were 4.167 times more likely to access contraceptives. Alternatively, where clients were perceived to receive relevant information from the HCWs, they were 1.026 times more likely to access contraceptives than where there was no communication. Similar observations were reported elsewhere (23).

Study strengths and limitations

One of the strengths from the study was that health workers were knowledgeable and friendly towards the clients, which improved access to contraception. Therefore, the study is likely to motivate more health workers to improve their knowledge and attitude towards clients to improve access of health services generally. A limitation anticipated in this study was non-response among women taking contraceptives due to fear of their privacy being breached. The reliance on recall by participants also limited the study. This was overcome by explaining the study's purpose and significance to the participant's and reassuring them of utmost confidentiality and anonymity.

Conclusion

Client factors significantly influenced access to preferred contraceptives among women of reproductive age in public primary healthcare facilities in the Kajiado Central subcounty. This study established that religion or denomination, culture and traditions, myths and misconceptions, and spousal or family approval significantly influence women's access to contraceptives. Additionally, organizational factors significantly influenced access to preferred contraceptives among women of reproductive age. The organizational factors considered in this study include the service delivery process, a conducive environment, and no stockouts of contraceptives. Under service delivery processes, the waiting time and convenience of the operating hours were considered. The conducive environment investigated the comfort of the waiting bay and observation room and the cleanliness of the facility, including having clean running water and sanitary facilities.

Recommendations

This study recommends cultural and religion-sensitive client education to demystify the cultural beliefs, myths, and misconceptions surrounding contraceptive access and possible side effects. Spousal involvement in contraceptive delivery may also increase access. Increased numbers of HCWs, proper planning, and rescheduling of HCWs to ensure adequate coverage to reduce the long waiting hours for the clients accessing the services. The supply chain departments should have proper and accurate demand and stock forecasting, improve inventory management, adopt automated systems, and reduce human interventions to reduce stockouts. In-service training and seminars should be encouraged to upskill and motivate HCWs.

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Conflict of interests

The authors declare no conflicts of interest.

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