International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Ahmed MM et al. Int J Reprod Contracept Obstet Gynecol. 2025 Oct;14(10):3222-3229
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20253065

Original Research Article

Knowledge of family planning among muslim women of reproductive age in Garissa County

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Received: 01 July 2025
Revised: 11 August 2025
Accepted: 08 September 2025

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ABSTRACT

Background: Kenya's unmet need for family planning (FP) remains high, at 13.9%, despite government efforts to promote FP methods. Challenges persist, especially in rural areas like Garissa County, where contraceptive prevalence is low, at 12.7%. To determine the level of knowledge of FP among Muslim women of reproductive age in Garissa county.
Methods: A cross-sectional mixed methods research design focused on Muslim women aged 15-49 in Garissa County. The study involved 187 participants selected through stratified random sampling. A proportionate sample of women was calculated per subcounty. Data collection used semi-structured interviews with selected women and focus group discussions with community health volunteers from seven subcounties. Quantitative data were analyzed using the Statistical Package for Social Sciences through descriptive analysis. Qualitative data was analysed thematically.
Results: Eighty-two percent of women were aware of FP, mainly through community health workers (66%). Only 44% attended FP workshops, showing limited interest in education; additionally, only 39% practiced FP. Among those who used FP, 56% had husbands unaware of their usage.
Conclusions: There was knowledge of contraceptives and FP methods, largely due to information shared by community health workers and volunteers. Friends and media also spread FP awareness. However, attendance at FP workshops was low and actual use of FP methods was limited. About half of the women's partners were also aware of and supportive of FP.

Keywords: Family planning, Garissa county, Knowledge, Muslim women, Reproductive age

INTRODUCTION

Family planning (FP) knowledge and uptake remains inadequate in many of the world's poorest and most densely populated countries.[1] FP choices are important, not only for contraception, but also for preventing ovarian and uterine cancer, addressing conditions like polycystic ovarian cysts and other ovarian cysts, alleviating heavy menstrual periods and managing acne.[2] The ability of women to control the spacing of their pregnancies directly affects their health.[3] Research recommends that closer birth spacing and larger families are associated with reduced parental investment, which can affect children's academic achievement, as well as their mental and behavioral development.[4]

Communities should embrace FP, as its knowledge, attitudes and practices improve people's social and economic wellbeing. Widespread criticism for fertility changes is placed on women's greater usage of contraceptives.[5] Due to women's FP uptake, couples now have the option to limit pregnancy during the female reproductive cycle.[6] The projected sharp rise in global population would exacerbate current issues with the environment, food security, energy, biodiversity and human health.[7] Total fertility rate has a significant impact

on population increase, but more study is required to detect how important certain components are in determining fertility.[1] The fundamental human rights include the right to receive comprehensive information and access to contraceptive services.[8] This right is recognized by significant international agreements which emphasize the importance of providing individuals with accurate information and a variety of effective and acceptable FP methods.

Malaysia has seen significant advancements in family planning since the program started in 1966, with the contraceptive prevalence rate (CPR) rising from 8.7% in 1967 to 52.9% in 2014. However, there has been a decline to 42.8% in 2022 for any method, with modern methods at 34.5%. Among married women aged 15-49, the current CPR is 64.7%, with condoms (19.8%) and pills (11.0%) being popular.[9] Yet, 48.1% of women have low awareness of family planning, indicating the need for enhanced education and access compared to Vietnam and Thailand.

Sierra Leone faces significant challenges in family planning, particularly among adolescents, with 28% of births from teenage pregnancies leading to 40% of maternal deaths in this group.[10] Only 1% of women aged 15 to 24 use condoms, while 23% use modern contraception, mainly due to poor sexual health knowledge and limited negotiation power. Addressing unmet contraceptive needs could reduce maternal mortality by 29%. In Somalia, family planning is also inadequate, with just 1% of the population using modern methods and over 25% of women having unmet needs, often due to cultural barriers.[11] Similarly, South Sudan's critically low uptake of contraceptives exacerbates its high maternal mortality rate of 789 per 100,000 live births.[12]

The government of Kenya has instituted public awareness campaigns, integrated FP into primary healthcare, trained healthcare workers on FP and provided free or low-cost contraceptives like pills, injectables, implants and condoms in public health facilities.[13] In spite of these initiatives, there is still the challenge of FP knowledge, especially in rural Kenya. Data from the KNBS indicates that Kenyan women face the challenge to conceive healthy children, giving birth to one unwanted child on average.[14] Data from KNBS indicates that Kenya's unmet need for FP stood at 13.9%.[15] In Kenya, 1.8 million married women have unwanted pregnancies each year.[16]

Due to high fertility rates in Garissa County as well as the linked anthropogenic factors, use of FP is low. The unmet need for FP in Garissa County is 10.8%.[15] Garissa County faces significant challenges in terms of contraceptive prevalence, which is currently at a low rate of 5.5%. This directly affects the Maternal Child Health (MCH) indicators in the region, as evidenced by the high maternal death rate (MMR) of 641 and infant mortality rates, compared to the national average of 414 deaths per 1000 live births.[15] The low contraceptive prevalence rate in the county is closely related to the high total births per woman of 6.1, exceeding the national average of 3.9.[15]

The rapid population growth in Garissa County adds further strain to an already economically challenged region. Currently ranked among the poorest counties in the country, the increasing population will exacerbate the economic burdens faced by the county.[15] The consequences of Garissa County's unmet FP needs extend beyond the county itself and have a national impact. These consequences hinder the nation's aim in achieving the SDGs and affect the economy of the country.

Previous studies present various knowledge gaps. One study assessed religion and gender effect perception of FP and noticed that religious traditions and gender equality highly affect the perception of contraceptive measures.[17] The study presents a contextual gap as it was carried out in Tanzania. Another examined anthropogenic factors affecting FP use among Islamic communities and concluded that socio-cultural factors are definitely associated with FP use.[18]

This study presents a methodological gap as it was a qualitative study. A third study evaluated seers of post-birth family contraceptive perception.[19] It presents a conceptual gap as its variables differ from those in the current study. Thus, there was a need to determine the level of knowledge of FP among Muslim women of reproductive age in Garissa County.

METHODS

Study type

A cross-sectional research design was adopted. The adoption of a cross-sectional design enabled the examination of various aspects by integrating both quantitative and qualitative approaches, allowing for inferences to be drawn about the target population at a specific moment in time. The research employed interviews and focus group discussions to collect data. Purposive sampling was used for focus groups to ensure the collection of accurate information from participants.

Study place

This research was conducted in Garissa County from May-2024 to Dec-2024. The study covered the sub counties engaging the target participants from the community in different villages hence there was no specific site or hospital. Garissa has an area of 44,736 km² and borders Somalia. Its neighbors Lamu, Tana River, Isiolo, and Wajir Counties. It has seven sub-counties: Hulugho, Garissa, Dadaab, Balambala, Ijara, Fafi, and Lagdera. Garissa County had a population of 841,353-382,344 females and 458,975 males. Its primary economic activity is pastoralism.

Selection criteria

This research targeted 191,067 women of reproductive age in Garissa County. The county is predominantly Muslim, justifying the population focus, Thus, the inclusion criteria. The homogeneity in FP experiences among this group made them well-suited to give credible responses. Muslim women of reproductive age.

Muslim women aged 15-49 years and resided in Garissa County, women who were capable of participating and provide informed consent; while the exclusion criteria were Muslim women of reproductive age who were severely ill and/or hospitalized at the time of data collection.

Table 1: Target population for women aged 15-49 years.

Sub county	Population
Balambala	7,325
Dadaab	42,070
Fafi	30,440
Garissa	37,224
Hulugho	30,427
Ijara	32,155
Lagdera	11,426
Total	191,067

Source: KNBS (2019)

The minimum sample size for females aged 15-49 years in Garissa County was approximated by using the formula n= (Z^2 P (1-P))/e^2 Where n is the minimum sample size. Z= 1.96, e=0.05 and p= 12.7% (the total FP uptake rate for Garissa County). The study included an estimated nonresponse rate of 10% into the study for enhanced accuracy. A sample of 187 participants was involved in the study. Table 2 shows the sample size of the study.

Table 2: Sample size for women aged 15-49 years.

Sub county	Population	Sample
Balambala	7,325	7
Dadaab	42,070	41
Fafi	30,440	30
Garissa	37,224	36
Hulugho	30,427	30
Ijara	32,155	32
Lagdera	11,426	11
Total	191,067	187

Stratified random sampling was applied in the selection of respondents. The respondents were selected from villages in the subcounties, which were chosen through random sampling. A proportionate number of women aged 15-49 years to the total population was calculated to determine the sample size per subcounty.

Procedure

The sampling process employed a multistage stratified sampling design aimed at ensuring comprehensive representation across various sub counties in Garissa. Initially, sub counties were randomly selected to capture the diversity and unique characteristics of different areas, enhancing the generalizability of the findings. Following this, a second layer of simple random sampling was applied to select villages within each chosen subcounty, ensuring that every village had an equal chance of inclusion. Once the villages were identified, households were stratified based on religious affiliation, specifically focusing on households with Muslim women of reproductive age (15-49 years). This stratification was essential for addressing the study's targeted demographic. Within these identified strata, systematic random sampling was utilized to select Muslim women, involving the definition of a sampling interval and selecting participants at regular intervals from an ordered list. This approach aimed to accurately reflect the characteristics of the target population, thereby ensuring that the findings would be relevant and applicable to the broader community of Muslim women in reproductive age.

The research employed mixed methods. Semi-structured interview schedules were used to collect data from selected Muslim females aged 15-49 years, with the researcher providing guidance on questionnaire completion. The study sought consent from the respondents. Respondents were assured of confidentiality, and their names were not requested on the questionnaires. Additionally, participants were not exposed to any risks.

To gather qualitative information on components affecting FP (FP) uptake among Muslim females aged 15-49 years in Garissa County, key informant interview guides were used to interview 10 health workers and 7 women group leaders. The women group leaders played a critical role in the community by providing leadership in training women on social, cultural, and economic matters.

The study also conducted focus group discussions with participants from each of the seven subcounties, resulting in a total of seven FGDs. Indeed, suggested that qualitative data saturation could be achieved with a sample size of five to fifteen respondents. Community health volunteers, who possess vast knowledge of factors influencing FP uptake in the community, were included in the FGDs.

An authorization letter was requested from Amref International University. The researcher then submitted the proposal to the Amref Ethics Committee for approval before applying to the National Council of Science and Technology for a research license. The information was exclusively intended for academic purposes. Participants received a comprehensive briefing on the research's purpose, and their mutual consent was sought. This was accomplished through written invitations to respondents, including detailed explanations provided before any study

requirements were communicated. The study prioritized caution before administering data collection instruments. Additionally, a clear introduction to the study's aim and purpose was provided to the respondents.

Moral principles were carefully considered throughout the study, ensuring that no respondent was coerced or compelled to provide the necessary data. Parental consent was sought in the case of minor respondents, followed by assent from the minors. Respondents willingly disclosed the requested information, which was kept private. To safeguard sensitive information, the study maintained the integrity of the gathered data. All information collected during the data collection process was handled with the utmost confidentiality to preserve the dignity of the participants. Measures were taken to prevent the identification of any participant based on the data presented in the surveys, thereby protecting participants' rights and privacy. Participants were instructed to avoid adding their names or any identifying details in the questionnaire to ensure anonymity. No compensation was provided for taking part in the study.

The study engaged community elders and religious leaders, recognizing that the community is patriarchal and men are in charge. Engaging the community elders and religious leaders enabled the researchers to understand community norms and gain their support during the study. The leaders were requested to mobilize women of reproductive age in the community to be sensitized about the study and its objectives. They were briefed in detail about the study objectives, its methodology and how the data would be disseminated after the study's completion. The community elders and religious leaders were provided with samples of the study tools when necessary.

Statistical analysis

The accuracy and consistency of the questionnaires were verified. Data were cleaned and thereafter analysed. This was through input of data into excel spreadsheets, the data was coded and thereafter tabulated. This helped to identify irregularities in participants responses, whereby specific values assigned for analysis. The coded data was then uploaded too SPSS. Demographics of participants and their knowledge on FP were analysed and frequencies and percentages calculated. On the other hand, thematic analyses were conducted on qualitative data. Hence, participant responses from the FGDs were organised to identify themes and patterns for analyses.

RESULTS

A sample of 187 women aged 15-49 years in the seven sub counties in Garissa were interviewed, through a semi-structured interview guide and demographic information was collected. Table 3 displays the employment status and demographics of the sampled women. Additionally, 108 (58%) respondents were self-employed, 41 (22%) employed and 38 (20%) unemployed. The age distribution shows that 46% were aged 19-29 (86 participants), while 39.6% were aged 30-39 (74 participants). The 40-49 age group had 19 participants (10.6%) and the least represented were those aged 17-19, totaling 8 (4%). Marital status indicated that 137 participants (73.2%) were married, 34 (18.2%) single and 16 (8.6%) divorced. Table 3 indicates that 19.8% had 3 children, while 17.6% had none. A total of 15% had 2 children, and 12.8% had 4. The distribution also included those with 5 (6.4%) and 6 (9.1%) children, while 4.3% had 8 or more. The mean number of children was 3. Educational attainment revealed that 64 (34.22%) had no education and 64 (34.22%) had only primary schooling, while 15 (8%) completed secondary school and 44 (23.56%) attended university.

Table 3: Demographic characteristics.

Characteristic	Categories	Frequency (N)	Percentage (%)
Employment status	Self-employed	108	58.00
	Employed	41	22.00
	Unemployed	38	20.00
	Total	187	100.00
Age range (in years	17-19	8	4.00
	20-29	86	46.00
	30-39	74	39.00
	40-49	19	11.00
	Total	187	100.00
Marital status	Married	137	73.20
	Single	34	18.20
	Divorced	16	8.60
	Total	187	100.00
Number of children	None	33	17.65
	1	2	1.07
	2	28	14.97
	3	37	19.79
	4	24	12.83
	5	12	6.42
	6	17	9.09
	7	12	6.42
	8	8	4.28
	9	7	3.74
	10	7	3.74
	Total	187	100.00
Level of education	No formal education	64	34.22
	Primary level	64	34.22
	Secondary level	15	8.00
	University level	44	23.56
	Total	187	100.00

General knowledge of family planning

Results indicated a general knowledge of the existence of FP. Table 4 indicates that 154 out of the 187 interviewed were aware of FP. This was 82.5% of the sampled women.

Additionally, a focus group discussant highlighted, "Yes, many women express a desire to use FP, but they are often afraid of their husbands' reactions."

Table 4: Knowledge of FP among women.

Variable	Category	Frequency (n=187)	Percentage (%)
General knowledge of FP	Aware of FP	154	82.5
Awareness of FP methods	Pills		57
	Injections		49
	IUCD, implants, female condoms		32,24 and 18 respectively
	Natural FP, cycle reading		11
Source of FP information	Community health workers	123	66.00
	Friends	45	24.00
	Newspapers	9	4.60
	Television	5	2.40
	Others	5	3.00
	Total	187	100.00
Attendance of FP workshops	Attended workshop	82	44.00
	Did not attend	105	56.00
	Total	187	100.00
Use of FP methods	Currently using FP	73	39.00
	Not using FP	114	61.00
	Total	187	100.00
Decision-making on FP	Solely woman's decision	67	35.70
	Solely husband's decision	95	51.00
	Joint decision	25	13.30
	Total	187	100.00
Husband's approval of FP	Approves	93	50.30
	Disapproves	48	25.70
	Indifferent/unaware	46	24.00
	Total	187	100.00

Awareness of family planning methods

Table 4 indicates that among those aware of FP methods, the majority (57%) were aware of pills as a form of contraception. Other methods mentioned included injections (49%), female condoms (32%), intrauterine contraceptive devices (IUCD) (24%) and implants (18%). Additionally, natural family planning (8%) and cycle reading (3%) were also noted, although these methods were less commonly known.

Sources of family planning information

The wide knowledge of contraceptives was driven by many initiatives. When asked on how they knew about FP, participants mentioned various sources, but the largest source of information on FP was community health workers. Sixty-six percent of those the participants mentioned that they knew about FP through community health workers. Through friends was the second most popular source of knowledge on FP at 24%. Newspaper was at 4.6% and television at 2.4%. these are represented in Table 4. This was supported by the women focus group discussions. In Hulugho Sub-county, the knowledge on FP was through hospitals where women were sensitized about FP during every postnatal and ANC visit.

Attendance of family planning workshops

In other constituencies such as Dadaab, Ijara, Garissa township, Lagdera, Mbalambala and Fafi, the recurring theme of community-based workers was important as they drove the message on FP practices to many in Garissa County. The community health workers FGDs indicated that they tried to organize community workshops to spread the message on FP. The community health volunteers in Fafi sub county indicated that they organized sensitization events to spread knowledge of FP. The one in Mbalambala sub county recommended elaborate mobilization by the community, that could be organized through events. Only 82 (44%) of the 187 participants said that they attended a FP workshop within the last year.

Use of family planning methods

Table 4 shows the response of the women, when they were asked if they had considered using FP; only 73 responded in the affirmative. Only 39% of the respondents used FP. There was consensus during the FGDs held in Fafi

constituency by the women group leaders that there was low demand for FP in the region. This was similar for the community health volunteers in the same constituency in the same area that said

"There's a hidden demand for family planning. Many women confide in us about their desire to space their children, but they're afraid to openly express this need due to cultural and religious beliefs. We need to create safe spaces where women can discuss these issues without fear of judgment."

Decision-making and partner involvement in family planning

Among the 39% of women who used FP methods, more than a half did it in secret, without informing their partners. Of the 76 women, 43 (57%) indicated that their partners had no knowledge that they were using FP methods.

Husband's approval of family planning

Results indicate that the decision to use FP methods was largely made by the husband, among those couples who were open about it. Additionally, respondents also had a significant role to play as 13.3 % said that it was a joint decision, 35.7% said that the respondent was the sole decision maker, while 51.0% said that the decision was solely made by the husband. Results indicated that 94 (50.2%) approved, 47 (25.1%) disapproved while 46 (24.7%) were indifferent.

Additionally, a focus group discussant highlighted,

"Yes, many women express a desire to use FP, but they are often afraid of their husbands' reactions."

DISCUSSION

Knowledge and awareness of family planning methods and its sources

Findings indicated that 82.5% of respondents were aware of FP methods. This aligns with previous studies which found widespread awareness, though actual uptake varies due to social and regional disparities.[20] Observed that while Muslim women in Nepal were aware of injectables, permanent methods were rarely used.[21] Another study highlighted persistent misconceptions and cultural barriers among Muslim populations.[22]

In Garissa, only 39% of respondents used FP and 57% of FP users in Garissa did so without informing their spouses. This affirms findings on how male dominance and religious norms restrict FP decisions.[17]

The current national FP strategy aims to reduce unmet FP needs currently 13.9% nationally and 10.8% in Garissa.[15] However, knowledge alone has not led to behavioral change. Indeed, the two studies emphasize that engaging religious/community leaders and using community health structures can close the gap between FP awareness and actual use.[3]

Sociodemographic factors that influence the uptake of FP

Results showed that slightly more than half (50.3%) of the women had used FP and the current usage (38.5%) which was a lower than the national average. This is despite the overwhelming knowledge of the methods. The Constitution of Kenya explicitly states that every person has the right to the highest attainable standard of health, including reproductive health care but despite this, the study reveals that while a majority of Muslim women in Garissa have knowledge of FP methods, actual usage remains low due to factors such as fertility concerns, side effects and opposition from partners. This is supported by studies by [21] who found that although 70% of the participants had strong understanding of contemporary contraceptives, only 47% actually used them. This study also found that there was low usage due to different reasons such as fertility issues, challenges with side effects, opposition from partners, which aligns with the findings of another study by who examined data on sub dermal implant users' uptake rates, side effects and dropout rates as well as the sociodemographic features of those users finding that women discontinued the use of implants due to side effects, health concerns and their desire to sire more kids.[23]

Cultural factors that influence the uptake of FP

Factors such as religion was found to have a positive effect on the uptake of FP in Garissa establishing that men have more control over the reproductive choices of women. Men were found to hold more power on decisions of the uptake of FP as confirmed by the study done by[24] who used focus group discussions to explore the relationship between religious beliefs and FP in Tanzania. This study showed that prevailing gender dynamics often undermine women's knowledge, leading to negotiations or the covert use of contraceptives. Preference of larger families and the practice of polygamy was associated with lower intake of contraceptives. This is in consistence with the study of [17] which reported that motivations like having a big family, polygamous relationships, high mortality rates and the cultural preference of having boys negatively affected FP uptake. The study further highlighted the limited decision-making ability of women in regards to their reproductive health. The study highlighted the importance of collaboration between religious leaders and healthcare providers to address misconceptions about FP and encourage its acceptance among the Muslim communities.

CONCLUSION

The purpose of this study was to determine the knowledge of FP amongst Muslim woman in Garissa county. Results indicate that the women are aware of contraceptives and

other FP methods. This was enabled by the network of community health workers and volunteers who have been attributed as the main spreader of knowledge and information about FP. Most of the women, 82%, knew about FP, mainly from community health workers (66%). Friends contributed 24%, while media sources accounted for 10%. Despite this knowledge, only 44% attended workshops, indicating limited interest in further education. Only 39% of women used FP. The study also indicated that 50% of the partners were aware of FP and were supportive.

Recommendations

This study recommends that community health workers should enhance their training to focus on the misconceptions and cultural sensitivity around FP. They should also work with the community on a regular basis to discuss FP openly with both male and female. Additionally, religious leaders should be engaged to aid in advocacy for FP, and encourage them to emphasize on the teachings that encourage FP. They should also be used to create awareness campaigns and help with addressing misconception and misinformation on FP to reduce skepticism. Then, the government and policy makers at the Ministry of Health should develop policies that target the active role of males in advocating for FP. They should also provide adequate resources to marginalized communities to advocate for FP. In the same vein, targeted educational programs should be implemented to address concerns such as infertility and side effects, which have hindered people from up taking FP.

ACKNOWLEDGEMENTS

Authors would like to thank AMREF University for their support in this research. Additionally, the authors appreciate the County government of Garissa for their support, which enabled access to necessary data and relevant stakeholders.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Ahmed MM, Nyagero J, Karama M. Knowledge of family planning among muslim women of reproductive age in Garissa County. Int J Reprod Contracept Obstet Gynecol 2025;14:3222-9.