Community Level Factors Influencing Contraceptives Use among Pastoralist Women in West Pokot County, Kenya: A Community-Based Cross-Sectional Study

Samuel L. Kipunaa[1], Mary C. Kipmerewo[2], Alex K. Chebor[3]

[1]Department of Nursing and Clinical Studies, School of Health Science, Mama Ngina University College, Gatundu, Kenya.
e-mail: loparsmmy@gmail.com ORCHID: https://orcid.org/0000-0003-2636-6660
[2]Department of Reproductive Health, Midwifery and Child Health, School of Nursing, Midwifery and Paramedical Sciences, Masinde Muliro University of Science and Technology, Kakamega, Kenya.
e-mail: mkipmerewo@mmust.ac.ke ORCHID: https://orcid.org/0000-0003-1220-6439
[3]Department of Community Health and Extension, School of Nursing, Midwifery and Paramedical Sciences, Masinde Muliro University of Science and Technology, Kakamega, Kenya.
e-mail: achebor@mmust.ac.ke ORCHID: https://orcid.org/0009-0008-9811-6162

Received May 22, 2025, accepted June 23, 2025, published October 1, 2025.

ABSTRACT

Context: Family planning is an essential aspect of reproductive health, crucial for controlling population growth, improving maternal and child health, and empowering women. However, its use in the pastoralist communities is still low. There is limited evidence about the determinants for non-utilization of contraceptives by marginalized populations.

Aim: The study assesses community-level determinants affecting contraceptive usage among pastoralist women in West Pokot County, Kenya.

Methods: The study employed a community-based, cross-sectional, correlational design involving 578 women aged 15–49 years. Multistage sampling was used, with 40 out of 115 community units being sampled. Quantitative data were gathered through a structured interview questionnaire, while the key informant guide and focused group discussion guide were used for qualitative data.

Results: The study shows that 328(56.7%) of the respondents were aged between 14 and 29 years. The majority, 514(88.9%) of the respondents were married, and only 33(5.7%) were singles. The findings reveal religion support ($p<0.001$), cultural support ($p<0.039$), discussion with spouse ($p<0.001$), person who decided number of children ($p<0.043$), type of health facility seeking services from, and instances that could not access Family Planning method were associated with the uptake ($p<0.05$). Religion support (OR= 1.80; 95% CI: 1.31-2-46), cultural support (OR= 1.54; 95% CI: 1.02-2.32), discussion on family planning method with husband (OR= 2.46; 95% CI: 1.8- 3.37), who decides number of children jointly (OR=1.48; 95% CI: 1.00-2.17, p=0.043), and type of health facility seeking family planning services, private clinic (OR= 1.99; 95% CI: 0.99-3.97, p=0.051) and faith based facility (OR= 2.91; 95% CI: 1.26- 6.72, p=0.012) were markedly correlated with the use of family planning. Qualitative data identified distance and cost as significant barriers to accessing family planning. A participant had this to say: *"You can get family planning methods in a government hospital, but it is not always easy to get there because it is far (distance) from where we live...*".

Conclusion: The study concludes that socio-cultural factors and social norms influence the use of contraception within the pastoral community; their culture favors large families, gives men and mothers-in-law a say in making reproductive health choices. Health system factors were also identified as influencing family planning uptake; facility type and distance to a health facility were major factors.

Keywords: Contraceptive use, community, pastoralist, West Pokot, women

Citation: *Kipunaa, S. L., Kipmerewo, M. C., & Chebor, A. K. (2025).* Community-level factors influencing contraceptive use among pastoralist women in West Pokot County, Kenya: A community-based cross-sectional study. *Evidence-Based Nursing Research, 7*(4), 1-11. https://doi.org/10.47104/ebnrojs3.v7i4.405

1. Introduction

Globally, women's access to family planning (FP) services remains a significant public challenge. According to the World Health Organization, approximately 214 million women of sexual maturity desiring to prevent conception are not utilizing any contraceptive methods; this indicates a large unmet need for modern contraceptives *(United Nations (UN), 2022).* Among this group of people, approximately 25% of couples desire to space their pregnancies yet do not employ contraception. Delivering prompt contraception knowledge and support to couples and individuals at medical centers or within communities helps diminish unmet needs *(Boadu, 2022).* In developing countries, approximately 230 million women would like to delay or stop pregnancy. However, they are not presently employing any technique; thus, they have an unmet need for family planning. The majority of these women are in sub-Saharan Africa *(Kantorová et al., 2020; Mahuro & Kimani, 2021).*

The utilization of contraception has been demonstrated to avert around 272,000 maternal deaths globally, representing a 44 percent decline in mortality among mothers *(Okezie, 2022).* Notwithstanding the capacity to avert unintended pregnancies, usage of contemporary contraceptives is minimal among pastoralist women of reproductive age in West Pokot County, where

[1]*Correspondence author: Samuel Lopar Kipunaa*

it accounts for only 23% of the women *(Kenyan National Bureau of Statistics (KNBS), 2022).*

The use of contraceptives in the pastoralist communities is low due to issues related to do with demand, access, or supply *(Hailemariam et al., 2024).* Providing effective and acceptable family planning services to pastoralists, who comprise the major rural population, has been a challenge for healthcare providers and the healthcare system at large *(Gichangi et al., 2021).*

Women from pastoralist communities have limited access to contraceptives; the reasons given were spouses' dominance on reproductive health issues and decision making about contraceptive use, which has limited their access to the services *(Alemayehu et al., 2021)*. Within pastoralist communities, culture and religion have been implicated in increasing the number of children; therefore, women have limited power over the control of FP use *(Wasswa et al., 2021; Ibikunle et al., 2024).*

Additional community-level variables influencing family planning uptake include myths and beliefs, adverse effects experienced by certain women, and the use of social media *(Alemayehu et al., 2020).* The community residents' and leadership's criticism of family planning may deter women from using contraceptives. *Mahuro and Kimani (2021)* investigated men's viewpoints on gender roles and cultural norms regarding family planning utilization, and they identified misunderstandings about adverse effects as a significant impediment *(Mahuro & Kimani, 2021).*

Traditional beliefs and practices can influence attitudes towards family planning. In many pastoralist societies, large family sizes are culturally valued, and the use of contraceptives may be viewed negatively or misunderstood *(Ibikunle et al., 2024).* Culture is a barrier to the uptake of contraception. Many cultures require multiple children to expand the family and society.

The place of residence of women is a great determinant in shaping the usage of contraception; urban or rural residence affects the contraceptive utilization patterns either positively or negatively *(Kananura et al., 2023).* Rural setup has been implicated to be a barrier as it limits the availability of women to contraceptive services and knowledge *(Idris et al., 2025).* Research by *Calhoun et al. (2022)* indicated that urbanized women were inclined to utilize contraception than their rural counterparts. These disparities were attributed to increased access to social services, including healthcare, educational resources, and reproductive health programs *(Calhoun et al., 2022).*

The nomadic or semi-nomadic lifestyles of pastoralists can impede access to health facilities. Women may neglect to utilize services for contraception due to several community-level variables, including the availability and accessibility of these services. Challenges encompass physical inaccessibility, the absence of healthcare facilities offering complimentary family planning services within the community, and the typical number of operational days of these facilities are open to provide FP services *(Nkole et al., 2021)*. Based on this background, the study therefore sought to assess community-level variables that influence contraceptive use in the pastoral community of West Pokot County.

2. Significance of the study

The World Health Organization (WHO) has identified family planning as one of the six critical health interventions necessary for ensuring secure motherhood by reducing the mortality rate of mothers and their children *(Askew et al., 2024).* Nevertheless, Sub-Saharan Africa continues to possess the highest rate of fertility globally, accompanied by the most significant unfulfilled demand for contraceptive services *(Gujo & Kare, 2021).* The primary cause of the elevated fertility rate in the region is the minimal utilization of contraceptives, particularly in pastoral settings *(Noormal et al., 2022).*

The study is relevant as it supports SDG 3.7.1 on contraceptive use, aligning with the Africa we want. Agenda 2063 seeks to enhance the percentage of women of sexual maturity whose family planning requirements are fulfilled and satisfied by contemporary contraceptive techniques. Additionally, it supports Kenyan policies that aim to increase universal access to contraception in areas with low demand and uptake. Consequently, the Kenyan government has pledged to elevate the Morden contraceptives Prevalence Rate (McPR) for women in sexual maturity to 66% and to diminish the unfulfilled demand for family planning, thereby enhancing the percentage of women in this demographic whose family planning requirements are fulfilled and fully satisfied with current methods of contraception from 14% to 10% by 2030. This reduction was achieved by focusing attention on underserved and hard-to-access populations, including pastoral zones *(Kamuyango et al., 2024).*

The findings were also used to inform other studies in similar settings, specifically regarding community-based health education as an intervention in communities. This research will contribute to the broader understanding of how community-based approaches can impact health behaviors in rural and underserved populations. It provided empirical evidence on the specific needs and responses of pastoralist communities, offering valuable lessons that can be applied to similar contexts both within Kenya and globally.

There is limited research specifically on community factors within pastoral communities that influence contraceptive uptake. Most existing studies either generalize their findings to broader populations or focus on urban settings, leaving a gap in understanding the specific needs and responses of pastoralist women. This study aims to address that deficiency by providing focused insights into this distinct demographic.

3. Aim of the study

The study aims to assess community-level determinants affecting contraceptive usage among pastoralist women in West Pokot County, Kenya.

3.1 Research hypothesis

There is no significant relationship between community-level factors and utilization of family planning among women of reproductive age in the pastoral population of West Pokot.

4. Subjects & Methods

4.1. Research Design

A community-based, cross-sectional, correlational study assessed community-level determinants of FP usage amongst women in West Pokot's pastoralist communities. This design was appropriate since it allowed the description of the contraceptive prevalence rate and the association among the community-level variables. Additionally, it provided a clearer understanding of the complex variables within pastoral environments that influence communities' contraceptive decisions.

4.2. Study Setting

The research was conducted in West Pokot County, one of Kenya's 47 counties, located in the northwest and covering 9,169 km², with a population of 673,757, according to the 2019 census *(KNBS, 2022).* Comprises six sub-counties and is predominantly pastoral. Poor infrastructure, underdeveloped roads, and rough terrain limit access to healthcare services. The county has four hospitals, eight health centers, and 142 dispensaries.

4.3. Subjects

The study enrolled 578 women of reproductive age from pastoralist communities in West Pokot County, Kenya.

Sample size determination

This study adapted Fleiss's JL formula for two proportions to calculate the sample size, as it is best suited for comparing two proportions *(Ko & Lim, 2021).*

$$N=\frac{[(z\alpha/2+z\beta)^2 \times (p1\ (1-p_1) + p_2\ (1- p_2)]}{(p_1- p_2)^2}$$

Where,

$Z\alpha/2$ = the confidence level at 95% (α is 0.05 = 1.96)

$Z\beta$ = the critical value of the normal distribution at β (for a power 80%, β is 0.2 = 0.84

P_1 = the sample proportion (expected) of women using family planning methods in the control group = 3.4% = 0.034

P_2 = the sample proportions (expected) of women using family planning methods in the intervention group at post-test = 10% = 0.1 (as it is a part of an experimental study)

$$n=\frac{[(1.96+ 0.84)^2 \times 0.034(1- 0.034) + 0.1(1-0.01)]}{(0.034- 0.1)^2} = 222$$

To address non-responses, thirty percent was appended to the minimum sample. The total sample size was 578.

Sampling technique

The study employed multistage cluster sampling to select 40 community units in West Pokot County. Participants were selected using simple random sampling from 578 women aged 15-49 years in households.

Focused Group Discussion participants were recruited purposively to represent the diversity of women in the setting and maintain heterogeneity. Key Informants (7 Ministry of Health officials at the county and sub-county levels, and health facilities) were purposely selected based on their knowledge and experience in family planning programs and community health services.

4.4. Tools of Data Collection

4.4.1. Structured Interview Questionnaire

Data were gathered using a structured survey modified from an Ethiopian research study*, Alemayehu et al. (2021)*. The questionnaire was designed and pretested before being administered to women of childbearing age within the pastoralist society, who are the primary target group for this study. The tool was translated into the Pokot dialect. The instrument gathered data on the contraception rate of prevalence in the study area and community-level factors that promote or hinder the uptake of family planning. This tool aimed to assess community-level factors that influence contraceptive uptake. A Cronbach's Alpha test was done to check the reliability of the data collection tool, a sample of 58 participants from Kipkomo sub-county, Cronbach's alpha (α) = 0.89, indicating satisfactory consistency.

4.4.2. Focused Group Discussion Guide

A focus group discussion (FGD) guide was used to gather information from the women. The semi-structured guide was designed with expert consultations and tested in Kipkomo sub-county, based on the key themes in the study objectives. The discussion encouraged participants to disclose attitudes and behaviors that might not have been captured during individual interviews. Furthermore, the tool helped gain insight into the community's shared understanding of family planning and its social influencers. Saturation was achieved with a total of seven FGDs.

4.4.3. Semi-Structured Key Informant Interview

A semi-structured Key Informant Interview (KII) guideline was used to collect qualitative data. The key informant interviews included county/sub-county department of health officials who are directly involved in the management of reproductive health services. This method helped provide further information regarding the determinants that affect the use of FP methods in the pastoral community. Saturation was achieved at seven in-depth interviews.

4.5. Procedures

Ethical consideration approval to conduct this study was issued by the Institutional Scientific and Ethics Review Committee (ISERC) of Masinde Muliro University (MMUST/ISREC/043/2024) and the National Commission for Science, Technology, and Innovation (NACOSTI-417540), with permission from county offices in West Pokot. Verbal consent was obtained from all participants after a detailed explanation of the study's aims, protocols, and confidentiality measures.

Interviews from FGDs were translated into English by a Pokot speaker and transcribed. Peer review validated all qualitative findings to ensure reliability.

Data were collected by eight trained research assistants who conducted face-to-face interviews with those who agreed to participate in the study. The interviews took place in community settings over six months (June-November 2024), using the local dialect.

Questionnaires were checked for completeness before data was entered into Softwire and cleaned for further processing. Qualitative data were recorded, and transcription was performed on the audio recordings of key informant interviews and focus group discussions, which were converted into verbatim text. Data was organized by participant, accompanied by metadata detailing the context of each interaction. The data was then securely stored in an encrypted digital format.

4.6. Limitations of the study

This study used both quantitative (questionnaires) and qualitative (KII & FGD) approaches in data collection. The mixed-methods approach facilitated triangulation of data, enriching the study findings. Therefore, the study provided insights into the community's perspective regarding contraception. The study was limited to the pastoral community, which is unique in terms of cultural practices, economic activities, and geographical settings (remote and hard to reach). The results from the study, therefore, may be generalized with caution to other settings with different cultures that may influence family planning practices. A pastoral setting varies significantly from urban settings in terms of environmental conditions and access to family planning information and services. These variations may influence the outcome of studies, making generalization challenging.

4.7. Data analysis

The software used for data analysis in this study was STATA version 16. Descriptive statistics, such as percentages and frequencies, were used. Logistic regression was adopted to establish predictors of family planning acceptance. Odds ratios (ORs) with their 95% confidence intervals (CIS) were reported. A *p*-value of less than 0.05 was deemed significant. Qualitative data from FGDs and KIIs underwent thematic analysis through coding and theme identification.

5. Results

Table 1 below presents demographics of the study participants; about 328 (56.7%) of the respondents were aged between 14-29 years. The majority, 514(88.9%) of the respondents were married, and only 33(5.7%) were singles. Christian Protestants were the majority at 323 (55.9%). Overall, 74.2% of the respondents had either no formal education or had not completed their primary level education, with only 11.6% having attained a secondary/tertiary education. This finding corresponded with the occupation of the respondents, where the majority (82.7%) were either pastoralists or none.

Table 2 illustrates the cultural and social norms that influence the use of family planning. Regarding religion, less than half, 41.9%, reported that their religion supported contraception use, while 58.1% did not agree. Nearly all participants, 500 (86.5%), expressed that their culture does not support the use of family planning, and 78(14.5%) reported that their culture is supportive.

The highest proportion, 387(67%), reports that the decision on the number of children is vested in the husband/spouse, while the remaining 191(33%) accounts for self, joint decisions, and decisions made by the mother-in-law. Regarding communities' perspective on family planning use, nearly all 437(75.6%) respondents reported disapproval of its use by their community. About the decision on whether to use contraception, a majority, 56.7% was solely dependent on their husbands.

Table 3 shows the health system factors influencing family planning uptake. Notably, 385(66.6%) of participants live 5-10 kilometers away from a health facility. More than half, 338(58.5%), reported being unable to access family planning services due to the absence of healthcare workers. A slightly higher proportion of participants, 297(51.4%), indicated that they lacked access to their preferred family planning method when they visited the health facility.

Table 4 summarizes the qualitative data from Focused Group Discussions and Key Informants' interviews, identifying key themes and subthemes that provide a detailed understanding of the community's perspective regarding family planning use. Cultural beliefs and traditional values favor large families, and men's as well as the community's disapproval of contraception use were significant factors identified. Regarding health facility factors, facility type, distance, availability, and cost of accessing services were identified as barriers.

Table 5 presents the results of the multivariable logistic regression analysis examining the association between community-level factors and the use of contraception. Religion support ($p<0.001$), cultural support ($p=0.039$), discussion with husband ($p<0.001$), person who decided the number of children jointly ($p<0.043$), facility type ($p<0.051$), instances that could not access FP method ($p<0.002$), and instances could not got FP method of choice ($p<0.001$) were individually associated with FP uptake ($p<0.05$).

Among those who indicated their religion, 80% endorsed the use of family planning compared to those who reported religion did not support FP use ($p<0.001$, OR=1.80, 95% CI: 1.31- 2.46). The odds of culture support were OR=1.54, 95% CI: 1.02-2.32, p=0.039. The odds of discussing FP use were 2.46 times higher among those who reported discussing FP methods with their husbands compared to those who did not (OR=2.46, 95% CI: 1.80-3.37, $p<0.001$).

Controlling for other variables in the model, the odds of FP use were 2.91 times higher among those who sought FP services at Faith-Based health facilities compared to those who sought services from GOK facilities (OR=2.91, 95% CI: 1.26–6.72, $p = 0.012$). At the bivariable level, community-level factors (religion, culture, joint decisions, FP discussion with the husband, and community approval) were significantly ($p<0.05$) associated with FP uptake. Where religion support use of FP, culture support use of FP, FP method discussion with husband $p<0.001$, OR=2.46, 95% CI 1.80-3.37 and health facility type were associated with higher proportion of participants who reported uptake of family planning and the odds of FP use were 2.91 times higher among those who sought services from at Faith-Based health facilities compared to those who sought services from government facilities.

Table (1): Frequency and percentage distribution of respondents' socio-demographics (n=578).

Variables	Frequency	Percentage (%)
Age		
14-29	328	56.7
30-49	250	43.3
Mean age and SD	29.3±8.9	
Marital status		
Married	514	88.9
Single	33	5.7
widow	16	2.8
Divorced/separated	15	2.6
Religion		
No religion	33	5.7
Christian- Catholic	151	26.1
Christian- Protestant	323	55.9
Muslim	16	2.8
Others- Specify	55	9.5
Education		
None/primary not complete	429	74.2
Primary complete	82	14.2
Secondary/Tertiary	67	11.6
Occupation		
None	187	32.4
Formal employment	17	2.9
farmer(pastoralist)	291	50.3
Business	81	14.0
Others (specify)	2	0.3

Table (2): Frequency and percentage distribution of cultural and social norms factors influencing use of family planning methods (n=578).

Cultural and social norms factors	Frequency	Percentage (%)
Does your religion support the use of family planning?		
Yes	242	41.9
No	336	58.1
Does your culture support the use of family planning?		
Yes	78	14.5
No	500	86.5
Do you discuss family planning use with your husband/spouse?		
Yes	193	33.4
No	385	66.6
Who decides on the number of children?		
Self	84	14.5
Husband	387	67
Jointly	93	16.1
Mother in-law	14	2.4
How will individuals in your community evaluate FP use?		
Approve	141	24.4
Disapprove	437	75.6
For me, using FP is…		
Religiously prohibited	50	8.7
Depends on my husband’s decision	328	56.7
Up to my decision	187	32.4
Depends on the community leaders' decision	13	2.2

Table (3): Frequency and percentage of health system factors influencing family planning use (n=578).

Health system-related factors influencing family planning	Frequency	Percentage (%)
Type of facility seeking Family Planning services from;		
Private clinic	25	4.3
GOK facility	537	92.9
Faith-Based facility	16	2.8
Distance to the facility		
Less than 5 kilometers	113	19.6
5-10 kilometers	385	66.6
More than 10 kilometers	80	13.8
Instances could not get FP services due to a lack of a healthcare provider		
Yes	338	58.5
No	240	41.5
Instances could not get the FP method of your choice		
Yes	297	51.4
No	281	48.6

Table (4): Summary of themes and subthemes with relevant quotes from qualitative data on community-level factors influencing family planning use in the pastoral community.

Theme	Subthemes	Relevant quotes
Cultural and social norms	Cultural resistance to family planning	*"The community's culture does not accept the usage of family planning; In Pokot culture, it is expected that women should have many children, which goes against family planning use. Therefore, in this community, it is hard to talk about family planning openly" (FGD 7, Participant 12)*
	Strong preference for a large family	*"The culture does not accept it. There is a strong belief in having many children for cultural reasons, and many people believe that family planning contradicts this belief. In the Pokot culture, there is a strong expectation for women to have many children. When a daughter-in-law is brought into a family, she is expected to procreate. Family planning is often viewed as contrary to this expectation, which leads to resistance, particularly from mothers-in-law and parents " (FGD 5, participant 11).*
	Men's resistance to family planning use	*Women are more willing to use family planning. However, there is resistance from the men. They do not allow their women to use it; if a woman is found to be using it, she will be beaten. This behavior makes it difficult for women in this community to seek family planning services. Men often have control over our reproductive health issues." (FGD 4, Participant 10)*
		"Men are the biggest obstacle to family planning uptake in this community. They think family planning is for people who are not faithful to their partners, and therefore, they do not like women to use it. Therefore, women fear their husbands will beat them if they find that they are on contraception. Their husbands palpate their arms to confirm if they have been implanted with anything, for example, an implant." (KII 4)
Services access	▪ Distance to health facility ▪ Cost of transportation	*"You can get family planning services at government hospitals, but it is not always easy to get there because it is far. It takes around 2 to 5 hours to walk to the hospital. When you take a motor bike, the cost is about Ksh 400, which is expensive for many people in this area." (FGD 5, participant 9)*
	▪ Lack of family planning commodities ▪ Few health care workers	*"Major barriers to accessing family planning services in these pastoral settings include the distance to health facilities, lack of enough trained staff, and sometimes a commodity stock-out. Many facilities are located far apart, making them hard to reach, especially in areas like Miskwong and Chimoekut, which hinders women from accessing family planning services," (KII 5)*

Table (5): Community-level factors associated with family planning uptake at multivariate logistic regression.

Variables	OR	95% CI	p-value
Religion supports the use of family planning			
Yes	1.80	1.31–2.46	<0.001
No	Ref		
If culture supports the use of family planning			
Yes	1.54	1.02–2.32	0.039
No	Ref		
If you ever discuss the family planning method with your husband			
Yes	2.46	1.80–3.37	<0.001
No	ref		
Who decides on # of children?			
Self	1.49	1.05–2.27	0.067
Husband	Ref		
Jointly	1.48	1.00-2.17	0.043
Mother-in-law	2.80	0.87–9.03	0.084
How do you think other individuals in your community will evaluate FP?			
Approve	1.41	1.01-1.98	0.044
Disapprove	Ref		
For me, using FP is…			
Religiously prohibited	Ref		
Depends on my husband's decision	1.31	0.68-2.53	0.425
Up to my decision	1.59	0.81-3.10	0.175
Depends on the community leaders' decision	1.46	0.47-4.53	0.508
Type of facility seeking Family Planning services from			
Private clinic	1.99	0.99–3.97	0.051
GOK facility	Ref		
Faith-Based facility	2.91	1.26–6.72	0.012
Distance to the facility			
Less than 5 kilometers	1.11	0.64–1.94	0.712
5-10 kilometers	0.92	0.57–1.51	0.754
More than 10 kilometers	ref		
Waiting time at the health facility			
Less than 30 Minutes	1.22	0.76–1.94	0.408
30 Min- 1 Hour	1.04	0.68–1.59	0.863
More than 2 Hours	Ref		
2 or more Hours	1.39	0.52–3.77	0.511
Instances could not obtain FP services due to a lack of healthcare providers.			
Yes	1.66	1.19–2.30	0.002
No	ref		
Instances could not select the preferred FP method.			
Yes	2.14	1.56–2.92	<0.001
No	Ref		

6. Discussion

The limited use of family planning in pastoralist communities is a result of multiple causes. These include inadequate access, low awareness level regarding contraception, and societal and religious approval. Therefore, this study assessed community-level determinants influencing contraceptive use among pastoralist women in West Pokot County, Kenya.

The results indicated that community factors, such as religious support, spousal approval, cultural norms, and distance to health facilities, were associated with family planning uptake. Religion was found to be a significant factor in FP utilization; those who reported religious support were 80% more likely to utilize FP compared to their counterparts. This finding underlines the role that religion; societal norms play in shaping decision-making regarding contraception in the pastoral settings.

The current study findings agree with other studies in the sub-Saharan region, which revealed the odds of contemporary contraceptive use decreased amongst Muslims women *(Ahinkorah et al., 2021)*. These results also rhyme with preceding studies that showed higher contraceptive usage among Christians *(Hellwig et al., 2024)*. Additional, religious perspectives regarding family planning use have been found to shape women's attitudes towards FP and eventually its utilization *(Glazer et al., 2023)*.

Participants reported cultural resistance as a significant barrier to the use of family planning. This finding highlights the complex interplay of deep-rooted traditional values that influence perceptions and FP acceptance, which need to be addressed to improve utilization in underserved populations. The study findings corroborate with a study carried out in Lamu and Wajir counties of Kenya *(Abdi et al., 2024)*. Similar findings were reported in an Ethiopian

study, which showed that cultural customs, convictions, and factors related to the health system significantly impacted the utilization of family planning services *(Jebena et al., 2022).* Additionally, many African cultures place a woman's responsibility to expand the size of the family through having many children; thus, these responsibilities are directly a hindrance to the use of modern contraceptives *(Shaibu et al., 2024).*

Culture puts men in fore forefront regarding reproductive health decision making over women. This dominance highlights the significance of engaging males in FP services to encourage their buy-in. This deep-rooted culture, which ranks men higher in decision-making and social approval, negatively impacts access to family planning services *(Rahayu et al., 2023)*. Additionally, misconceptions surrounding contraception led men to disapprove of its use. Similarly, *Mahuro and Kimani's (2021)* study revealed that misconceptions are the major factors that hinder men from supporting their spouses in using family planning methods. Similar findings were reported by Asmamaw and others in their study *(Asmamaw et al., 2022).* The study findings revealed that male dominance has adversely affected the adoption of family planning, since men are the ones making decisions regarding the number of children and whether to use contraception or not. In the study area, when a woman is found to be using a family planning method without her husband's approval, she faces severe consequences.

In contrast, Mulatu's study showed that husbands' involvement in family planning was a positive predictor; women whose husbands supported contraception were found to be eight times more inclined to utilize family planning than individuals who did not *(Mulatu et al., 2022). Anbesu et al. (2022)* in their study observed that the minimal participation of males in family planning contributes to the poor contraceptive usage in Ethiopia.

In this study, therefore, cultural factors were established to be a negative predictor of family planning usage. The Pokot culture advocates for women to have many children, and family planning is seen as a departure from this belief. Moreover, a mother-in-law expects her daughter-in-law to procreate extensively to enlarge the family, which therefore goes against the principle of contraception that advocates for a sizeable and manageable family. Consequently, the current study's researchers claim that culture is a factor influencing the use of family planning services in the pastoralist communities of West Pokot. The findings underscore the significance of having culturally sensitive initiatives tailored to the unique needs of pastoralists.

The decision-making power of a woman in family planning matters has a great influence on contraceptive use. This study's finding identified men to have many reproductive issues in this community. This finding emphasizes women's autonomy in making reproductive health decisions, particularly in this male-dominated community. When a woman is allowed to make informed family planning choices, she is more likely to use the available methods, thereby significantly enhancing uptake. This finding aligns with a Cameroon study, which revealed that women are disadvantaged in decision-making regarding child spacing matters in pastoral communities *(Zegeye et al., 2022).* Similar findings were found by the Waswa study in Uganda, which found low utilization of family planning as a result of male dominance and power to make decisions regarding contraceptive use single-handedly *(Wasswa et al., 2021).* Strengthening women's voices on family planning requires attitudinal change and empowering women to make decisions regarding family planning use, thereby realizing an impact on modern family planning practices.

The qualitative data of this study showed that distance to the health centers constitutes a substantial obstacle to accessing FP services. Participants reported traveling for five hours to and from the hospital, coupled with the high cost of transportation, which is unattainable considering the socio-economic status of the nomads. A study conducted by the *UN (2022)* found that pastoralists in West Pokot often walk long distances to access health services, which is a significant barrier to the use of family planning among young women. Additionally, according to *Hussain et al. (2023)*, those pastoralists were located in hard-to-reach and underserved areas, and the distance to the next facility was far away. Similar findings from Ethiopia stated that access to healthcare facilities was a major obstacle to accessing family planning and its use. Despite the education programs, there is little impact in regions where gender inequality persists. Another study revealed that the main challenge to family planning access is distance to health facilities; most facilities are situated in remote settings, which are practically hard-to-reach areas *(Babazadeh et al., 2021; Khan et al., 2022).*

A shortage of healthcare workers has been identified as influencing family planning uptake; in some instances, women come to a health facility and may not find a worker or wait for a long time before receiving service. The reason for the long waiting hours was that a few health workers at the facility were attending to other duties outside the facility. The results were in tandem with Levinson's study, which highlighted the shortage of service providers in health facilities as a hindrance to the adoption of family planning *(Newton-Levinson et al., 2022).*

A stock-out of family planning commodities was found to influence uptake; there are instances when a client misses picking up a method of her choice because the preferred method is not available at the facility. This finding highlights a vital supply-side barrier to FP use, even when there is a demand and willingness to use, inconsistency in availability interrupts continuity of use. The current study's finding aligns with a study conducted in Kajiado, Kenya, which attributed stock-outs (33%) to be a barrier to FP service provision and ultimately underutilization *(Githinji et al., 2022).* It also corroborates findings from the synthesis of systematic reviews globally, which revealed that the use of family planning depended on the availability in hospitals *(D'Souza et al., 2022).* Pastoral settings may have sparse health facilities that are distant. However, challenges related to do with commodity availability hinder

FP service provision and eventually contribute to low uptake of modern contraceptives. A consistent supply of these commodities is essential in improving family planning usage in remote and underserved areas. Owing to these findings, the null hypothesis that community-level factors cannot significantly influence family planning uptake is rejected.

7. Conclusion

The findings from the current study demonstrated that community-level factors, including religious, cultural beliefs and norms, gender roles, and male dominance in reproductive health issues, have a significant influence on family planning uptake in the pastoral communities of West Pokot. Furthermore, the type of health facility, distance to the health facility, and commodity stock-outs limited access to family planning services for women.

8. Recommendations

Given the significant influence of men in family planning and reproductive decisions, the government should have targeted male-focused education programs embedded in the community dialogues. County governments should enhance access to healthcare services within isolated pastoralist communities to address this need. Further research is needed to explore the effectiveness of male-targeted interventions in promoting the adoption of family planning services within the pastoralist economy.

9. References

Abdi, B., Okal, J., Serour, G., Were, V., Temmerman, M., & Gichangi, P. (2024). Pattern and determinants of contraceptive use among the muslim women in Wajir and Lamu counties in Kenya: A cross-sectional study. *BMC Women's Health*, *24*(1). https://doi.org/10.1186/s12905-024-02892-9

Ahinkorah, B. O., Budu, E., Aboagye, R. G., Agbaglo, E., Arthur-Holmes, F., Adu, C., Archer, A. G., Aderoju, Y. B. G., & Seidu, A. A. (2021). Factors associated with modern contraceptive use among women with no fertility intention in sub-Saharan Africa: Evidence from cross-sectional surveys of 29 countries. *Contraception and Reproductive Medicine*, *6*(1), 22. https://doi.org/10.1186/s40834-021-00165-6

Alemayehu, M., Medhanyie, A. A., Reed, E., & Bezabih, A. M. (2021). Use of community-based interventions to promote family planning use among pastoralist women in Ethiopia: Cluster randomized controlled trial. *BMC Women's Health*, *21*(1), 1–28. https://doi.org/10.1186/s12905-021-01434-x

Alemayehu, M., Medhanyie, A. A., Reed, E., & Mulugeta, A. (2020). Individual-level and community-level factors associated with the family planning use among pastoralist community of Ethiopia: A community-based cross-sectional study. *BMJ Open*, *10*(9), e036519. https://doi.org/10.1136/bmjopen-2019-036519

Anbesu, E. W., Aychiluhm, S. B., & Kahsay, Z. H. (2022). Male involvement in family planning use and its determinants in Ethiopia: A systematic review and meta-analysis protocol. *Systematic Reviews*, *11*(1), 1–5. https://doi.org/10.1186/s13643-022-01891-x

Askew, I., Raney, L., Kerrigan, M., & Sridhar, A. (2024). Family planning saves maternal and newborn lives: Why universal access to contraception must be prioritized in national maternal and newborn health policies, financing, and programs. *International Journal of Gynaecology and Obstetrics: The Official Organ of the International Federation of Gynaecology and Obstetrics*, *164*(2), 536–540. https://doi.org/10.1002/ijgo.15127

Asmamaw, D. B., Eshetu, H. B., & Negash, W. D. (2022). Individual and community-level factors associated with intention to use contraceptives among reproductive age women in Sub-Saharan Africa. *International Journal of Public Health*, *67*(1), 1–8. https://doi.org/10.3389/ijph.2022.1604905

Babazadeh, S., Hernandez, J., Anglewicz, P., & Bertrand, J. (2021). The relationship between spatial access and modern contraceptive use: Is proximity to a healthcare facility a determinant of use among women in Kinshasa, DRC? *Gates Open Research*, *5*, 80. https://doi.org/10.12688/gatesopenres.13229.1

Boadu, I. (2022). Coverage and determinants of modern contraceptive use in sub-Saharan Africa: Further analysis of demographic and health surveys. *Reproductive Health*, *19*(1), 1–11. https://doi.org/10.1186/s12978-022-01332-x

Calhoun, L. M., Mirzoyants, A., Thuku, S., Benova, L., Delvaux, T., van den Akker, T., McGuire, C., Onyango, B., & Speizer, I. S. (2022). Perceptions of peer contraceptive use and its influence on contraceptive method use and choice among young women and men in Kenya: A quantitative cross-sectional study. *Reproductive Health*, *19*(1), 16. https://doi.org/10.1186/s12978-022-01331-y

D'Souza, P., Bailey, J. V., Stephenson, J., & Oliver, S. (2022). Factors influencing contraception choice and use globally: A synthesis of systematic reviews. *The European Journal of Contraception and Reproductive Health Care: The Official Journal of the European Society of Contraception*, *27*(5), 364–372. https://doi.org/10.1080/13625187.2022.2096215

Gichangi, P., Waithaka, M., Thiongo, M., Agwanda, A., Radloff, S., Tsui, A., Zimmerman, L., & Temmerman, M. (2021). Demand satisfied by modern contraceptive among married women of reproductive age in Kenya. *PLoS ONE*, *16*(4), e0248393. https://doi.org/10.1371/JOURNAL.PONE.0248393

Githinji, F., Maru, S. M., Karimi, P. N., Rutungwa, E., & Kayitare, E. (2022). Factors affecting provision of female family planning commodities in public health facilities in Kajiado county, Kenya. *Journal of Pharmaceutical Policy and Practice*, *15*(1), 1–6. https://doi.org/10.1186/s40545-022-00488-y

Glazer, E., Valdez, E., DeBlauw, J. A., & Ives, S. J. (2023). An analysis of the impact of religious affiliation

and strength of religiosity on sexual health practices of sexually active female college students. *International Journal of Environmental Research and Public Health*, *20*(22), 7075. https://doi.org/10.3390/ijerph20227075

Gujo, A. B., & Kare, A. P. (2021). Utilization of long-acting reversible contraceptives and associated factors among reproductive age women attending governmental health institutions for family planning services in Wondo Genet District, Sidama, National Regional State, Southern Ethiopia. *Health Services Research and Managerial Epidemiology*, *8*, 23333928211002401. https://doi.org/10.1177/23333928211002401

Hailemariam, S., Mulugeta, S., & Asnake, M. (2024). Unmet need for family planning among pastoralist community of West Omo zone, Ethiopia: A community based cross-sectional study. *SAGE Open Medicine*, *12*. https://doi.org/10.1177/20503121241285657

Hellwig, F., Wado, Y., & Barros, A. J. D. (2024). Association between women's empowerment and demand for family planning satisfied among Christians and Muslims in multireligious African countries. *BMJ Global Health*, *9*(5), e013651. https://doi.org/10.1136/bmjgh-2023-013651

Hussain, I., Nausheen, S., Rizvi, A., Ansari, U., Baz, M., Zehra, K., Yameen, S., Hackett, K., Lassi, Z., Canning, D., Shah, I., & Soofi, S. B. (2023). Distance-quality trade-off and choice of family planning provider in urban Pakistan. *International Health*, *15*(4), 428–434. https://doi.org/10.1093/inthealth/ihac063

Ibikunle, O. O., Ipinnimo, T. M., Bakare, C. A., Ibirongbe, D. O., Akinwumi, A. F., Ibikunle, A. I., Ajidagba, E. B., Olowoselu, O. O., Abioye, O. O., Alabi, A. K., Seluwa, G. A., Alabi, O. O., Filani, O., & Adelekan, B. (2024). Community perceptions, beliefs and factors determining family planning uptake among men and women in Ekiti State, Nigeria: Finding from a descriptive exploratory study. *BMJ Open*, *14*(4), 1–8. https://doi.org/10.1136/bmjopen-2023-077932

Idris, I. B., Dahlan, S. A., Abd Rahman, R., & Nawi, A. M. (2025). Beyond individual-level factors that influence family planning uptake among women with diabetes mellitus: A systematic literature review. *BMC Public Health*, *25*(1), 317. https://doi.org/10.1186/s12889-024-20784-3

Jebena, M. G., Tesfaye, M., Abashula, G., Balina, S., Jackson, R., Assefa, Y., Kifle, Y., Tesfaye, C., Yilma, M., Hiruy, A., Teklu, A., Bahru, B. A., Assefa, E., Demissie, M., Mitike, G., & Tushune, K. (2022). Barriers and facilitators of maternal health care services use among pastoralist women in Ethiopia: Systems thinking perspective. *Pastoralism*, *12*(1), 27. https://doi.org/10.1186/s13570-022-00236-6.

Kamuyango, A., Arora, S. K., Raney, L., Ali, A. K., & Chandra-Mouli, V. (2024). FP2020 and FP2030 country commitments: A mixed method study of adolescent and youth sexual and reproductive health components. *Global Health: Science and Practice, 12*(5), e2400223. https://doi.org/10.9745/GHSP-D-24-00223

Kananura, R. M., Birabwa, C., Wasswa, R., Ssanyu, J. N., Muluya, K. M., Namutamba, S., Kyangwa, M., Kizito, F., Kakaire, O., Mugahi, R., & Waiswa, P. (2023). Intra-urban inequalities in modern family planning use in Uganda's urban settings: The role of place of residence, socio-economic, family, and individual factors. *MedRxiv*, 2004–2023. https://doi.org/10.1101/2023.04.11.23288416

Kantorová, V., Wheldon, M. C., Ueffing, P., & Dasgupta, A. N. Z. (2020). Estimating progress towards meeting women's contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. *PLoS Medicine*, *17*(2). https://doi.org/10.1371/JOURNAL.PMED.1003026

Khan, M. N., Akter, S., & Islam, M. M. (2022). Availability and readiness of healthcare facilities and their effects on long-acting modern contraceptive use in Bangladesh: Analysis of linked data. *BMC Health Services Research*, *22*(1), 1180. https://doi.org/10.1186/s12913-022-08565-3

Kenyan National Bureau of Statistics (KNBS). (2022). Kenya Demographic and Health Survey 2022. *MoH*, *5*(3), 248–253. Available at: https://www.knbs.or.ke/reports/kdhs-2022/

Ko, M. J., & Lim, C. Y. (2021). General considerations for sample size estimation in animal study. *Korean Journal of Anesthesiology*, *74*(1), 23–29. https://doi.org/10.4097/kja.20662

Mahuro, G., & Kimani, M. (2021). Inequities in unmet need for contraception among married women: Evidence from the PMA2020/ Kenya survey. *Cogent Medicine*, *8*(1). https://doi.org/10.1080/2331205x.2021.1943125

Mulatu, T., Sintayehu, Y., Dessie, Y., & Dheresa, M. (2022). Male involvement in family planning use and associated factors among currently married men in rural Eastern Ethiopia. *SAGE Open Medicine*, *10*, 20503121221094178. https://doi.org/10.1177/20503121221094178

Newton-Levinson, A., Higdon, M., & Rochat, R. (2022). Supporting staff in southern family planning clinics: Challenges and opportunities. *Maternal and Child Health Journal*, *26*(2), 319–327. https://doi.org/10.1007/s10995-021-03339-5

Nkole, T., Silumbwe, A., Munakampe, M. N., Cordero, J. P., Milford, C., Zulu, J. M., & Steyn, P. S. (2021). Community and health provider perspectives on the quality of family planning and contraceptive services in Kabwe District, Zambia. *Sexual and Reproductive Health Matters*, *29*(1), 1985945. https://doi.org/10.1080/26410397.2021.1985945

Noormal, A. S., Winkler, V., Eshraqi, A. M., Deckert*, *A., Sadaat, I., & Dambach, P. (2022). Factors influencing the uptake of short-term contraceptives among women in Afghanistan. *Scientific Reports*, *12*(1), 1–9. https://doi.org/10.1038/s41598-022-10535-y

Okezie, P. (2022). Factors influencing attitude and uptake

of family planning services among women of childbearing age in Egbedore Local Government Area Osun state. *Archives of Medicine, 14*(8), 1–12.

Rahayu, S., Romadlona, N. A., Utomo, B., Aryanty, R. I., Liyanto, E., Hidayat, M., & Magnani, R. J. (2023). Reassessing the level and implications of male involvement in family planning in Indonesia. *BMC Women's Health*, *23*(1), 220. https://doi.org/10.1186/s12905-023-02354-8

Shaibu, U., Owoyemi, J. O., Thomas, G., & Yunusa, E. (2024). Socio-cultural factors affecting the use of modern family planning methods by married men in omala local government area, Kogi state, Nigeria. *Journal of Advance Research in Science and Social Science, 4*(1), 1-30. https://doi.org/10.52589/JARMS-CGFIKUT1

Tekakwo, A., Nabirye, R. C., Nantale, R., Oguttu, F., Nambozo, B., Wani, S., Musaba, M. W., Mukunya, D., & Epuitai, J. (2023). Enablers and barriers of male involvement in the use of modern family planning methods in Eastern Uganda: A qualitative study. *Contraception and Reproductive Medicine, 8*(1), 49. https://doi.org/10.1186/s40834-023-00251-x

United Nations. (2022). World Family Planning 2022. Meeting the changing needs for family plannaing: Contraceptive use by age and method. In *the United Nations*. Department of Economic and Social Affairs. Available at: https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2023/Feb/undesa_pd_2022_world-family-planning.pdf

Wasswa, R., Kabagenyi, A., & Ariho, P. (2021). Multilevel mixed effects analysis of individual and community level factors associated with modern contraceptive use among married women in Uganda. *BMC Public Health*, *21*(1), 1–14. https://doi.org/10.1186/s12889-021-11069-0

Zegeye, B., Idriss-Wheeler, D., Ahinkorah, B. O., Ameyaw, E. K., Seidu, A. A., Keetile, M., & Yaya, S. (2022). Individual, household, and community-level predictors of modern contraceptive use among married women in Cameroon: A multilevel analysis. *International Health*, *14*(6), 648-659. https://doi.org/10.1093/inthealth/ihab092