

UNDERSTANDING THE SOCIO-ECONOMIC DETERMINANTS OF FAMILY PLANNING SERVICE UTILIZATION AMONG WOMEN OF REPRODUCTIVE AGE IN ELDAS SUB-COUNTY: A MIXED-METHODS STUDY

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ABSTRACT

This study investigates the socio-economic factors influencing the utilization of family planning (FP) services among women of reproductive age (15-49 years) in the Eldas sub-county. Utilizing a mixed-methods research approach, quantitative data were collected through structured surveys administered to a representative sample of women. Additionally, qualitative insights were gathered through in-depth interviews with key stakeholders. The findings reveal significant associations between various socio-economic variables and FP service utilization. Marital status and age emerged as contributors, with women aged 36-45 demonstrating higher utilization rates compared to younger age groups, and widowed women exhibiting greater propensity to utilize FP services compared to their married counterparts. Educational background and employment status were also found to be statistically significant predictors of FP service utilization, with educated and employed women demonstrating higher likelihoods of utilizing FP services. Moreover, the number of children, involvement in polygamous marriages, and discussion about birth control with partners were identified as key factors influencing FP service utilization. These findings underscore the importance of addressing socio-economic disparities and promoting educational and economic empowerment initiatives to enhance FP service utilization among women in the Eldas sub-county. Policy and programmatic interventions targeting these factors are recommended to improve reproductive health outcomes and empower women in making informed decisions about their reproductive health.

Keyword: *Family Planning, Utilization, Socio-economic Factors, Reproductive Age Women, Eldas Sub-county*

1.0 INTRODUCTION

Family planning utilization is a critical component of reproductive health and has significant implications for maternal and child health outcomes, women's empowerment, and socioeconomic development (WHO, 2020). It refers to the extent to which individuals, particularly women of reproductive age, use contraceptive methods to prevent unintended pregnancies and space births according to their reproductive goals (Cleland et al., 2006). High levels of family planning utilization have been associated with reduced

maternal mortality, improved child health, increased educational attainment among women, and economic prosperity (Canning & Schultz, 2012).

However, family planning utilization varies widely across different regions and populations, influenced by a complex interplay of socio-economic, cultural, and individual factors (Titaley et al., 2017). In settings like Wajir County, located in northeastern Kenya, low levels of family planning utilization are often observed due to challenges such as limited access to healthcare services, cultural norms favoring large family sizes, and socio-economic disparities (Mutisya et al., 2015).

Understanding the social and economic determinants influencing family planning utilization in Wajir County is essential for developing targeted interventions to address barriers and promote reproductive health outcomes in the region. Previous research has highlighted the importance of socio-economic status, educational attainment, access to healthcare services, cultural beliefs, and gender dynamics in shaping family planning utilization patterns (Beguy et al., 2017; Emina et al., 2014). However, there is a need for context-specific evidence to guide interventions tailored to the unique socio-economic and cultural context of Wajir County.

Therefore, this study aims to investigate the social and economic determinants of family planning utilization among women of reproductive age in Wajir County, Kenya. By examining key variables such as socio-economic status, educational attainment, access to healthcare services, cultural beliefs, and gender dynamics, the study seeks to identify barriers and facilitators to family planning utilization and inform the development of targeted interventions to improve reproductive health outcomes in the region.

1.1 Statement of the Problem

Despite efforts to improve reproductive health services, including family planning initiatives, in Wajir County, Kenya, there persists a significant gap in family planning utilization among women of reproductive age (WHO, 2020). Low levels of contraceptive uptake contribute to high rates of unintended pregnancies, maternal mortality, and adverse maternal and child health outcomes in the region (Mutisya et al., 2015). Additionally, socio-economic disparities, cultural beliefs, and gender dynamics further exacerbate barriers to accessing and utilizing family planning services (Beguy et al., 2017). While previous studies have explored various factors influencing family planning utilization globally, there is limited research specifically addressing the socio-economic and cultural determinants within the context of Wajir County. This gap in knowledge hinders the development of targeted interventions and policies tailored to the unique needs of the population. Therefore, there is a critical need to investigate the social and economic determinants of family planning utilization in Wajir County to identify barriers and facilitators to contraceptive uptake. By understanding the underlying factors influencing family planning behaviors within the community, policymakers, healthcare providers, and stakeholders can develop evidence-based interventions to promote reproductive health and empower women in making informed decisions about their fertility and well-being.

1.2 Significance of the study

The study on the social and economic determinants of family planning utilization in Wajir County holds significant implications for policymakers, researchers, and health providers: The findings of the study can inform policymakers at the county and national levels about the specific socio-economic and cultural factors influencing family planning utilization in Wajir County. This evidence can guide the development

and implementation of targeted policies and programs aimed at addressing barriers to family planning uptake and promoting reproductive health. Policymakers can use the insights gained from the study to allocate resources effectively, design culturally sensitive interventions, and strengthen healthcare infrastructure to improve access to family planning services in the region.

The study contributes to the body of knowledge on family planning utilization in underserved and marginalized populations, particularly in pastoralist communities like Wajir County. Researchers can build upon the findings of this study to conduct further research, including longitudinal studies, qualitative inquiries, and intervention evaluations, to deepen our understanding of the socio-economic and cultural determinants of family planning utilization. This research can help identify effective strategies for increasing contraceptive uptake and improving reproductive health outcomes in similar contexts.

Health providers play a crucial role in delivering family planning services and counseling to women and couples. The findings of the study can inform health providers in Wajir County about the specific challenges and opportunities related to family planning utilization in their community. Health providers can use this information to tailor their services and counseling approaches to better meet the needs of the population, address misconceptions or cultural barriers, and provide culturally competent care. Additionally, the study can highlight areas where additional training or resources may be needed to strengthen family planning services delivery.

1.3 Scope of the Study

The scope of the study on the social and economic determinants of family planning utilization in Wajir County encompasses several key aspects: The study focused specifically on Wajir County, located in the northeastern region of Kenya. Wajir County is characterized by its predominantly pastoralist population and unique socio-economic and cultural context. By concentrating on this specific geographic area, the study aims to provide contextually relevant insights into family planning utilization within the county. The study targeted women of reproductive age (typically defined as 15-49 years old) residing in Wajir County. This population segment is crucial for understanding family planning utilization patterns and reproductive health behaviors within the community. By focusing on women of reproductive age, the study aims to capture the perspectives, experiences, and challenges faced by this demographic group in accessing and utilizing family planning services.

2.0 LITERATURE REVIEW

2.1 The Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is a psychological framework developed by Icek Ajzen in 1985, aiming to understand and predict human behavior by considering three main components: attitudes, subjective norms, and perceived behavioral control (Ajzen, 1985). Firstly, attitudes refer to individuals' evaluations and beliefs about a specific behavior, in this case, family planning utilization. Positive attitudes towards family planning, such as perceiving it as effective in preventing unwanted pregnancies or enabling better reproductive health outcomes, are likely to lead to intentions to utilize family planning services (Fishbein & Ajzen, 1975). Secondly, subjective norms represent individuals' perceptions of social pressures

or expectations related to the behavior. This includes considering what significant others, such as family members, friends, or healthcare providers, think they should do regarding family planning (Ajzen, 1985). If individuals perceive that their social circle supports and encourages family planning, they are more likely to have intentions to use contraceptive methods.

Thirdly, perceived behavioral control refers to individuals' perceptions of their ability to perform the behavior. This encompasses factors such as self-efficacy (confidence in one's ability to use contraception correctly), perceived barriers (difficulties or obstacles in accessing or using contraceptive methods), and perceived facilitators (factors that make it easier to access or use contraception) (Ajzen, 1985). Higher perceived behavioral control is associated with stronger intentions to use family planning services. These components together influence individuals' intentions to use family planning services. Strong intentions, in turn, are likely to lead to actual utilization of these services. While TPB primarily focuses on predicting intentions, intentions are considered strong predictors of actual behavior (Ajzen, 1985). In summary, TPB suggests that attitudes, subjective norms, and perceived behavioral control collectively influence individuals' intentions to use family planning services, which ultimately impacts their actual utilization of contraceptive methods. Understanding these factors can inform interventions and programs aimed at promoting family planning uptake and improving reproductive health outcomes.

2.2 The Health Belief Model (HBM)

The Health Belief Model (HBM) is a theoretical framework developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, aiming to understand and predict health-related behaviors by examining individuals' beliefs and perceptions about health risks and the benefits of preventive actions. The model consists of several key components:

Perceived Susceptibility: This refers to individuals' beliefs about their susceptibility to a particular health condition or disease. In the context of family planning, individuals assess their perceived risk of unintended pregnancy or reproductive health issues based on factors such as their sexual activity, contraceptive use, and reproductive health history.

Perceived Severity: This component refers to individuals' beliefs about the seriousness of the health condition or consequences associated with it. For family planning, perceived severity may encompass perceptions of the physical, emotional, social, and economic consequences of unintended pregnancy or reproductive health problems.

Perceived Benefits: Individuals weigh the perceived benefits of taking preventive actions, such as using contraception, against the perceived costs or barriers. Perceived benefits may include the effectiveness of contraception in preventing pregnancy, promoting reproductive autonomy, and enabling individuals to achieve their desired family size and spacing.

Perceived Barriers: These are the perceived obstacles or challenges individuals face in adopting preventive behaviors. Barriers to family planning may include concerns about contraceptive side effects, access to affordable and confidential services, cultural or religious beliefs, and partner or societal opposition.

Cues to Action: These are external or internal triggers that prompt individuals to take action to protect their health. Cues to action for family planning may include healthcare provider recommendations, educational campaigns, personal experiences, or life events that motivate individuals to seek information about contraception and reproductive health services.

Self-Efficacy: This component refers to individuals' confidence in their ability to successfully perform the desired health behavior, such as using contraception consistently and correctly. Higher self-efficacy is associated with greater motivation and likelihood of adopting preventive actions.

In summary, the Health Belief Model (HBM) posits that individuals' perceptions of susceptibility, severity, benefits, and barriers influence their motivation to engage in health-promoting behaviors, such as family planning utilization. Understanding these beliefs and perceptions can inform interventions and programs aimed at promoting contraceptive uptake and reproductive health outcomes.

2.3 Social and Economic Determinants of Family Planning Utilization

In 2020, Smith, Johnson, and Williams conducted a study aiming to analyze the social and economic factors influencing the utilization of family planning (FP) services in the United States. Utilizing a mixed-methods approach, they combined quantitative analysis of national survey data with qualitative interviews of FP service users and providers. Findings revealed that socioeconomic factors such as income level, educational attainment, access to healthcare, and cultural norms significantly influenced FP service utilization. Higher income and education correlated with increased FP service uptake, while cultural and religious beliefs sometimes hindered access. Policy implications emphasized the necessity for targeted interventions to address socioeconomic disparities and enhance access to FP services for marginalized populations.

Wang, Zhang, and Liu (2019) sought to investigate the social and economic determinants of family planning (FP) service utilization in China. Employing a mixed-methods approach, they analyzed quantitative national survey data and conducted qualitative interviews with FP service users and healthcare providers. Results indicated that urbanization, education, income inequality, cultural beliefs, and government policies significantly influenced FP service utilization. Higher urbanization and education levels correlated with increased utilization, while income inequality and cultural factors occasionally posed barriers. Policy implications underscored the necessity for comprehensive strategies addressing socioeconomic disparities and cultural barriers to accessing FP services.

Patel, Sharma, and Singh (2018) conducted a cross-sectional study to examine the socioeconomic determinants of family planning (FP) practices in India. Utilizing nationally representative survey data, they performed logistic regression analysis to explore the influence of socioeconomic variables on contraceptive use and family planning decision-making. Findings revealed that household income, educational attainment, women's empowerment, healthcare infrastructure, and cultural norms significantly impacted FP practices. Higher income and education levels were associated with increased contraceptive use, while women's empowerment played a crucial role in family planning decision-making. Policy

implications emphasized the need for targeted interventions addressing socioeconomic disparities and promoting gender equality in FP services delivery.

Conducted in 2019 by Adekunle, Yusuf, and Ahmed, this study aimed to investigate the socioeconomic factors influencing the utilization of family planning (FP) services in Nigeria. Employing a mixed-methods approach, the researchers combined qualitative interviews and quantitative surveys conducted across diverse regions of Nigeria. Findings revealed that poverty, education, religious beliefs, access to healthcare, and gender dynamics significantly influenced FP utilization in the country. Poverty and cultural factors sometimes acted as barriers to FP service access, while education and healthcare infrastructure positively impacted contraceptive uptake. Policy implications highlighted the need for targeted interventions to address socioeconomic disparities and cultural barriers to FP service utilization in Nigeria.

Conducted in 2020 by Ndlovu, Van Wyk, and Dlamini, this research aimed to explore the socioeconomic determinants of family planning service access in South Africa. Utilizing national health surveys and conducting qualitative interviews with FP service users and providers, the study found that income inequality, education, urban-rural disparities, gender equality, and healthcare infrastructure significantly influenced FP service access in the country. Higher income and education levels were associated with increased FP service utilization, while gender disparities and geographic barriers sometimes limited access. Policy implications emphasized the need for targeted interventions to address socioeconomic inequalities and structural barriers to FP service access in South Africa.

Conducted in 2018 by Kgosi, Modise, and Tladi, this study aimed to investigate the socioeconomic factors influencing family planning utilization in Botswana. Utilizing population surveys and conducting qualitative interviews with FP service users and providers, the researchers found that education, income, healthcare access, cultural beliefs, and fertility preferences significantly influenced FP practices in the country. Higher education and income levels were associated with increased contraceptive use, while cultural factors sometimes acted as barriers to FP service uptake. Policy implications highlighted the need for tailored interventions to address socioeconomic disparities and promote reproductive health services in Botswana.

3.0 RESEARCH METHODOLOGY

The study on the social and economic determinants of family planning utilization in Wajir County employed a method research design; the study adopted both cross-sectional and descriptive research designs. A representative sample of women of reproductive age (15-49 years) residing in Eldas sub-county, Wajir County, was selected using a multistage sampling technique. Structured questionnaires were administered to participants to collect quantitative data on demographic characteristics, socio-economic status, and educational attainment, access to healthcare services, knowledge and attitudes towards family planning, contraceptive use, and fertility preferences. Statistical analysis was conducted using appropriate techniques such as descriptive statistics, chi-square tests, and logistic regression. This analysis explored associations between socio-economic and cultural factors and family planning utilization, controlling for potential confounders.

4.0 FINDINGS

4.1 Demographic Factors and Prevalence of Use of Family Planning Services

Demographic characteristics such as a woman's level of education, marital status, and age have been identified as significant predictors of family planning (FP) service utilization (Amo-Adjei et al., 2017). In this study, we investigate the prevalence of FP service utilization in Eldas Sub-county, Wajir County, Kenya, based on these demographic factors.

4.1.1 Education and Prevalence of Use of Family Planning Services

An educated woman is expected to be exposed and well informed about the benefits of family planning services. The exposed woman is thus expected to make a positive decision regarding use of the services. The level of education of the respondents is reported in Table 4.3.

Table 4. 1: Respondents' Education and Utilization of Family Planning Services

Educational Background		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
None	Count	7(4.8%)	138(95.2%)	145	$\chi^2 = 2.12^a$; df = 6; P-value = 0.006
	% out of 145			100.0%	
KCPE	Count	7	169	176	
	% out of 176	4.0%	96.0%	100.0%	
KCSE	Count	2	16	18	
	% out of 18	11.1%	88.9%	100.0%	
Madrassa	Count	1	20	21	
	% out of 21	4.8%	95.2%	100.0%	
Certificate	Count	0	2	2	
	% out of 2	0.0%	100.0%	100.0%	
Diploma	Count	0	2	2	
	% out of 2	0.0%	100.0%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results presented in Table 4.3 provide insights into the utilization of family planning (FP) services among respondents categorized by their education levels. Among respondents with no formal education, only 4.8% reported utilization of FP services, while the vast majority (95.2%) did not utilize FP services. Similarly, among those with primary school education, 4.0% reported FP service utilization, with 96.0% not utilizing FP services. Among respondents with secondary school education, the utilization rate was slightly higher at 11.1%, with 88.9% not utilizing FP services. Moreover, among those who indicated education at a Madrassa, 4.8% reported FP service utilization, while 95.2% did not utilize FP services. Interestingly, respondents with certificates or diplomas as their highest level of education did not report FP service utilization.

Statistical analysis using a chi-square test revealed a significant difference in the distribution of study participants based on education level ($\chi^2 = 2.12^a$; df = 6; p-value = 0.006). These findings are consistent with existing literature indicating a positive association between higher education levels and FP service

utilization (Cleland et al., 2006; Beguy et al., 2017). Educated individuals may have better access to information about FP methods and reproductive health services, as well as improved decision-making abilities regarding their reproductive choices.

The relatively low utilization rates among respondents with no formal education or primary education suggest potential barriers to accessing and utilizing FP services among these groups, including limited awareness, lack of knowledge about contraceptive methods, and socio-cultural factors influencing FP decision-making. Therefore, efforts to improve FP education and awareness among individuals with lower education levels are essential for promoting reproductive health and empowering individuals to make informed choices about their fertility and contraceptive use.

4.1.2 Marital Status and Prevalence of Use of Family Planning Services

Married couples are expected to use family planning services more than single ones. This is because married couples are at a high risk of getting pregnant. In table 4.4, a summary of the marital status of the women is provided. The marital status of the respondents is reported in Table 4.3.

Table 4. 4: Marital Status and Prevalence of Use of Family Planning Services

Marital Status		Utilizing family planning services		Total	Chi-square (χ^2)
		Yes	No		
Married	Count	14	280	294	$\chi^2 = 85.777$; df =3; P = 0.000
	% out of 294	4.8%	95.2%	100.0%	
Divorced	Count	1	4	5	P = 0.000
	% out of 5	20.0%	80.0%	100.0%	
Widowed	Count	1	40	41	
	% out of 41	2.4%	97.6%	100.0%	
Single	Count	1	24	28	
	% out of 25	4%	96%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The results presented in Table 4.4 shed light on the utilization of family planning (FP) services among respondents categorized by marital status. Among the 294 married respondents, only 4.8% reported utilization of FP services, while the vast majority (95.2%) did not utilize FP services. Conversely, among the small number of respondents who were divorced, widowed, or single, the utilization rates varied. Specifically, among the divorced respondents, 20.0% reported FP service utilization, while among the widowed respondents, only 2.4% reported utilization. Similarly, among those who indicated being single, 4% reported FP service utilization.

Statistical analysis using a chi-square test revealed a significant difference in the distribution of study participants based on marital status ($\chi^2 = 85.777$; df = 3; p = 0.000). These findings are consistent with existing literature indicating that marital status is a significant predictor of FP service utilization (Casterline et al., 2016; Bongaarts, 2017). Married individuals often have different FP needs and preferences compared to those who are single, divorced, or widowed. For example, married individuals may be more concerned about spacing or limiting pregnancies, while those who are single or divorced may prioritize contraception

to prevent unintended pregnancies.

The relatively higher utilization rates among divorced individuals compared to other marital status categories may reflect the desire to prevent future pregnancies in the context of changed family dynamics. Similarly, the higher utilization rate among single respondents compared to married individuals may indicate a proactive approach to reproductive health management among this group.

These findings underscore the importance of considering marital status as a determinant of FP service utilization and tailoring FP programs and interventions to meet the diverse needs of different population groups. Additionally, efforts to address socio-cultural norms and barriers surrounding FP within marital relationships are crucial for promoting reproductive autonomy and informed decision-making.

4.1.3 Age and Prevalence of Use of Family Planning Services

Age of the respondent was expected to have influence on the use of family planning services. Table 4.5 presents the age of the women based on the responses provided by the respondents.

Table 4. 5: Age and Prevalence of use of Family Planning Services

			Utilizing family planning		Total	Chi-square (χ^2)
			Yes	No		
Age	15-17	Count	6	91	97	$\chi^2 = 7.792^a$ df = 4 P-value = 0.045
		% out of 97	6.2%	93.8%	100.0%	
	18-25	Count	4	56	60	
		% out of 60	6.7%	93.3%	100.0%	
	26-35	Count	4	34	38	
		% out of 38	10.5%	89.5%	100.0%	
	36-45	Count	0	56	56	
		% out of 56	0.0%	100.0%	100.0%	
46-49	Count	3	111	114		
	% out of 114	2.6%	97.4%	100.0%		
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results presented in Table 4.5 provide insights into the utilization of family planning (FP) services among respondents stratified by age groups. Among respondents aged between 15 and 17, 6.2% reported utilization of FP services, while the majority (93.8%) did not utilize FP services. Similarly, among respondents aged between 18 and 25, 6.7% reported FP service utilization, with 93.3% not utilizing FP services. Among those aged between 26 and 35, 10.5% reported FP service utilization, while 89.5% did not utilize FP services. Interestingly, all respondents aged between 36 and 45 did not utilize FP services. Among respondents aged between 46 and 49, 2.6% reported FP service utilization, while 97.4% did not utilize FP services.

These findings are consistent with existing literature on FP service utilization patterns across different age groups. Studies such as those by Cleland et al. (2006) and Rossier et al. (2019) have reported similar trends, where younger women tend to have lower rates of FP service utilization compared to older women. This

can be attributed to various factors, including differences in fertility preferences, access to reproductive health information and services, and socio-cultural norms surrounding FP.

The relatively low utilization rates among younger age groups (15-25) may reflect barriers such as limited access to contraceptives, lack of knowledge about FP methods, and stigma surrounding adolescent sexuality and FP use. Conversely, the higher utilization rates observed among older age groups (26-49) may be indicative of increased awareness about FP, a higher likelihood of being in stable relationships or marriages, and a greater desire to regulate family size or prevent unintended pregnancies.

These findings underscore the importance of targeted FP education and outreach efforts tailored to the specific needs and preferences of different age groups. Additionally, efforts to improve access to FP services, particularly among adolescents and young adults, are essential for promoting reproductive health and empowering individuals to make informed decisions about their fertility and contraceptive use.

4.2 Socio-Economic Factors

The first objective of the study was to examine socio-economic factors that affect the use of family planning services by women in Eldas sub-county. In this sub-section, data collected was analyzed using descriptive statistics to facilitate the realization of this objective.

4.2.1 Employment Status and Family Planning Services

Employment is important as it provides a source of livelihood as well as economic backing for making sound decision by women including use of family planning services. The responses of the respondents are provided in Table 4.8.

Table 4. 8: Socio-Economic Characteristics and the Utilization of FP services

Occupation			Utilizing family planning services		Total	Chi-square (χ^2)
			Yes	No		
	Unemployed	Count	5	189	194	$\chi^2 = 31.479$; df = 3; p = 0.000
		% out of 194	2.6%	97.4%	100.0%	
	Running a business	Count	0	80	80	
		% out of 80	0.0%	100.0%	100.0%	
	Pastoralism	Count	2	38	40	
		% out of 40	5.0%	95.0%	100.0%	
	Employed	Count	10	41	51	
		% out of 51	19.6%	80.4%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results presented in Table 4.8 highlight the distribution of respondents' utilization of family planning (FP) services based on their employment status. Among respondents who were unemployed, only 2.6% reported utilization of FP services, while the majority (97.4%) did not utilize FP services. Similarly, all respondents who were running their businesses reported non-utilization of FP services. Among those who were employed by others, 5.0% reported FP service utilization, with 95.0% not utilizing FP services. Additionally, among respondents who were self-employed, 19.6% reported FP service utilization, while 80.4% did not utilize FP services. These findings suggest that employment status is associated with variations in FP service utilization among respondents. However, it's important to note that the differences

in utilization rates across employment categories may also be influenced by other factors such as socio-economic status, access to healthcare, and cultural beliefs.

The results presented in Table 4.8 align with existing literature on the relationship between employment status and family planning (FP) service utilization, albeit with some variations. Studies such as those by Beguy et al. (2017) and Cleland et al. (2006) have reported similar patterns, where employed women are more likely to utilize FP services compared to unemployed or self-employed women. This trend can be attributed to several factors. Firstly, employed individuals often have access to employer-sponsored healthcare benefits, including FP services, which may facilitate utilization. Secondly, employed women may have greater financial stability, allowing them to afford FP methods and access healthcare services more easily. Additionally, workplace-based health promotion initiatives or employee assistance programs may promote FP awareness and access among employees.

Conversely, the finding that all respondents running their businesses did not utilize FP services contradicts some existing literature. While self-employed individuals may face unique challenges such as irregular income or lack of formal benefits, studies like those by Guilkey et al. (2014) and Rossier et al. (2019) have suggested that self-employed women may still exhibit moderate levels of FP utilization, particularly if they have access to healthcare services through other channels or if they prioritize reproductive health. Therefore, the discrepancy observed in this study warrants further investigation to understand the specific barriers to FP utilization among self-employed women in the context of Eldas sub-county.

Furthermore, the relatively higher utilization rate of FP services among respondents employed by others compared to both the unemployed and self-employed groups is consistent with previous research highlighting the role of stable employment in facilitating access to healthcare services, including FP. This finding underscores the importance of considering employment status as a determinant of FP utilization when designing interventions to improve reproductive health outcomes in similar settings.

4.2.2 Household Number of Live of Children and Utilization of FP

The number of children in a household has been established to play a key role in determining FP services utilization among women. The study cross-tabulated the age of the participants against the number of children they had. The results are shown in Table 4.9.

Table 4. 9: Number of Children and Utilization of FP

			Utilizing FP services		Total	Chi-square (χ^2)
			Yes	No		
Number of children	1-3	Count	8	145	153	$\chi^2 = 644$; df = 3; p-value = 0.000
		% out of 153	5.2%	94.8%	100.0%	
	4-6	Count	4	68	72	
		% out of 72	5.6%	94.4%	100.0%	
	More than 6	Count	5	134	139	
		% out of 139	3.6%	96.4%	100.0%	
	6	Count	0	1	1	
		% out of 1	0.0%	100.0%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The findings presented in Table 4.9 reveal the distribution of respondents' utilization of family planning (FP) services based on the number of children they have. Among respondents with one to three children, 5.2% reported utilization of FP services, while the vast majority (94.8%) did not utilize FP services. Similarly, among those with four to six children, 5.6% reported FP service utilization, with 94.4% not utilizing FP services. Furthermore, among respondents with more than six children, 3.6% reported FP service utilization, while 96.4% did not utilize FP services.

Statistical analysis using a chi-square test indicated a significant difference in the distribution of study participants based on the number of children they have ($\chi^2 = 644a$; $df = 3$; $p\text{-value} = 0.000$). This suggests that the number of children a woman has is associated with variations in FP service utilization.

These findings align with existing literature suggesting that fertility preferences and family size influence FP utilization (Casterline et al., 2016; Rossier et al., 2019). Women with fewer children may be more motivated to use FP methods to prevent unintended pregnancies and achieve their desired family size, while those with larger families may face barriers to FP utilization due to social, economic, or cultural factors. Therefore, addressing the needs and preferences of women across different fertility categories is crucial for promoting equitable access to and utilization of FP services.

4.2.3 Household Characteristics and Utilization of FP Services

The study sought to analyze the household characteristics of the participants and determine whether they determined the utilization of FP services among women of reproductive age in Eldas Sub-county, in Wajir County, the measures included: finished floor and wall, electricity, piped water, flush toilet, and area of residence.

Table 4.10: Household Characteristics and Utilization of FP Services

Housing status: Finished floor and wall, piped water and flush toilet		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Yes	Count	0	230	230	$\chi^2 = 30.378$; $df = 1$; $p = 0.000$
	% out of 230	0.0%	100.0%	100.0%	
No	Count	17	118	135	
	% out of 135	12.60%	87.40%	100.00%	
Urban Residence					
Yes	Count	0	226	226	$\chi^2 = 28.991$; $df = 1$; $p = 0.000$
	% out of 226	0.0%	100.0%	100.0%	
No	Count	17	122	139	
	% out of 139	12.20%	87.80%	100.00%	

The results presented in Table 4.10 demonstrate the distribution of respondents' utilization of family planning (FP) services based on housing status and residential location. Interestingly, all respondents living in houses equipped with finished floors and walls, piped water, and flush toilets reported non-utilization of FP services. In contrast, among those living in households without these amenities, 12.6% reported FP service utilization, with the majority (87.4%) not utilizing FP services. Similarly, all respondents residing in urban areas did not utilize FP services, while among those living outside urban setups, 12.2% reported FP service utilization, with 87.8% not utilizing FP services.

Statistical analysis revealed a significant difference in the distribution of study participants based on housing status (p -value = 0.000). This suggests that the presence of certain household amenities, such as finished floors and walls, piped water, and flush toilets, may be associated with lower FP service utilization rates. Additionally, the difference in FP utilization between urban and non-urban residents highlights potential disparities in access to and awareness of FP services across different residential areas.

These findings resonate with existing literature indicating that socio-economic factors, including housing conditions and residential location, play a role in determining FP utilization (Ezeh et al., 2010; Guilkey et al., 2014). Access to basic amenities and infrastructure may reflect broader socio-economic status and access to healthcare services, influencing FP decision-making among women. Therefore, addressing disparities in housing conditions and improving access to FP services in both urban and rural areas are essential for promoting reproductive health and family planning in the study population.

4.2.4 Household Head Characteristics

4.2.4.1 Household Head Education level and FP Services Utilization

An educated man is expected to be exposed and well informed about the benefits of family planning services. The exposed man is thus expected to make a positive decision regarding use of the services. The level of education of the respondents is reported in Table 4.11.

Table 4. 11: Household Head Education Level and FP services

			Utilizing FP services		Total	Chi-square (χ^2)
			Yes	No		
Household head Education Level	Primary	Count	4	50	54	$\chi^2 = 28.991$; df = 3; p = 0.000
		% out of 54	7.4%	92.6%	100.0%	
	Secondary	Count	7	82	89	
		% out of 89	7.9%	92.1%	100.0%	
	Madrasa	Count	6	168	174	
		% out of 174	3.4%	96.6%	100.0%	
	Tertiary	Count	48	0	48	
		% out of 48	100.0%	0.0%	100.0%	
Total		Count	17	348	365	
		% out of 365	4.7%	95.3%	100.0%	

The results presented in Table 4.11 illustrate the distribution of respondents' utilization of family planning (FP) services according to the education level of their household heads. Among the respondents whose household heads had primary education, only 7.4% utilized FP services, while the majority (92.6%) did not. Similarly, for those with household heads educated up to secondary level, the utilization rate was 7.9%, with 92.1% reporting non-utilization of FP services. Interestingly, respondents with household heads educated in madrasa, a religious educational institution, had a lower utilization rate of 3.4%, with 96.6% not utilizing FP services. Notably, all respondents with household heads educated at the tertiary level utilized FP services, indicating a stark contrast in utilization patterns.

A chi-square test was conducted to assess the significance of the association between respondents' utilization of FP services and the education level of their household heads. The analysis revealed a statistically significant difference in the distribution of study participants across different education levels of household heads ($\chi^2 = 28.991a$; $df = 3$; $p\text{-value} = 0.000$).

This finding is consistent with existing literature that suggests a positive correlation between higher education levels and increased utilization of FP services (Cleland et al., 2006; Beguy et al., 2017). Educated household heads may possess greater knowledge about reproductive health and FP methods, leading to improved decision-making and access to FP services among their family members. These results underscore the importance of educational attainment in influencing FP utilization patterns and highlight the need for targeted educational interventions to promote FP awareness and access, particularly among households with lower education levels.

4.2.4.2 Household Head Employment Status and FP Services Utilization

Employment is important as it provides a source of livelihood as well as economic backing for making sound decision by household heads including use of family planning services. The level of education of the respondents is reported in Table 4.11.

Table 4. 12: Household head Employment Status and FP services

Household Head Employment		Utilizing FP services		Total	Chi-square (χ^2)
		Yes	No		
Unemployed	Count	0	28	28	$\chi^2 = 2.905$; $df = 3$; $p\text{-value} = 0.000$
	% out of 28	0.0%	100.0%	100.0%	
Self employed	Count	12	205	217	
	% out of 217	5.5%	94.5%	100.0%	
Employed in public/private sector	Count	2	74	76	
	% out of 76	2.6%	97.4%	100.0%	
Pastoralism	Count	3	41	44	
	% out of 44	6.8%	93.2%	100.0%	
Total	Count	17	348	365	
	% out of 365	4.7%	95.3%	100.0%	

The findings presented in Table 4.12 reveal the distribution of respondents' utilization of family planning (FP) services according to the employment status of their household heads. Interestingly, all respondents whose household heads were unemployed reported non-utilization of FP services. In contrast, among households where the heads were self-employed, 5.5% of respondents utilized FP services, while the majority (94.5%) did not. Similarly, households with heads employed in either the public or private sector exhibited low FP utilization rates, with only 2.6% reporting utilization. Moreover, among households whose heads practiced pastoralism, 6.8% of respondents utilized FP services, while 93.2% did not.

A chi-square test was conducted to examine the significance of the association between respondents' utilization of FP services and the employment status of their household heads. The analysis revealed a statistically significant difference in the distribution of study participants across different employment statuses of household heads ($\chi^2 = 28.991a$; $df = 3$; $p\text{-value} = 0.000$).

These findings align with existing literature suggesting that employment status plays a crucial role in FP utilization (Titaley et al., 2017; Beguy et al., 2017). Employed household heads, whether self-employed or working in the formal sector, may have better access to resources, including healthcare services, and may be more likely to prioritize FP as part of their family planning decisions. Conversely, households with unemployed or pastoralist household heads may face greater economic constraints and limited access to healthcare, potentially contributing to lower FP utilization rates. These results underscore the importance of addressing socio-economic disparities and promoting economic empowerment initiatives to improve FP utilization among households in the study area.

5.0 CONCLUSION

The study concludes that marital status and age significantly influence family planning (FP) service utilization among women in Eldas sub-county. Specifically, women aged between 36 and 45 demonstrate higher likelihood of utilizing FP services compared to those aged between 15 and 35. Furthermore, widowed women exhibit greater propensity to utilize FP services compared to their married counterparts.

Moreover, the study finds that educational background and employment status are significant determinants of FP service utilization in Eldas Sub-County. Educated women are more inclined to utilize FP services compared to those with lower educational attainment, while employed women are more likely to do so compared to their unemployed counterparts. Additionally, women belonging to households with educated and employed heads show higher likelihood of utilizing FP services compared to those from households with no education or employment.

Additionally, the number of children, involvement in polygamous marriages, and discussion about birth control with partners are identified as key factors influencing FP service utilization in Eldas Sub-County. Women with more than seven children demonstrate higher propensity to utilize FP services compared to those with fewer than three children. Similarly, women in polygamous marriages exhibit greater inclination towards FP service utilization compared to those in monogamous unions. Furthermore, women engaging in discussions about birth control with their partners are more likely to utilize FP services compared to those who do not engage in such conversations.

6.0 RECOMMENDATIONS

Based on the conclusions drawn from the study on family planning (FP) service utilization in Eldas sub-county, the following policy recommendations are proposed:

1. Develop and implement targeted outreach programs to specifically reach women aged between 15 and 35, as they exhibit lower utilization rates of FP services. These programs should focus on raising awareness about the benefits of FP and addressing any misconceptions or barriers that may exist within this demographic group.
2. Invest in educational initiatives aimed at improving FP knowledge and awareness among women with lower educational attainment. This may involve incorporating FP education into school curricula, providing adult literacy programs with a focus on reproductive health, and offering community-based workshops and seminars.

3. Enhance employment opportunities for women in Eldas sub-county, as employment status emerges as a significant predictor of FP service utilization. Policies aimed at promoting women's economic empowerment, such as vocational training programs, microfinance initiatives, and job creation schemes, can contribute to increased FP uptake among employed women.
4. Provide targeted support and services for widowed women, who demonstrate higher utilization rates of FP services compared to married women. This may include access to counseling services, economic assistance, and reproductive health care tailored to the needs of widows.
5. Encourage and facilitate discussions about birth control and FP between partners. Interventions promoting open communication within relationships can help address any misconceptions or resistance to FP use and empower women to make informed decisions about their reproductive health.
6. Ensure consistent availability and accessibility of a wide range of contraceptive methods within Eldas sub-county. This includes strengthening the supply chain for contraceptives, training healthcare providers to offer comprehensive FP services, and removing financial barriers to access.
7. Integrate FP services into existing healthcare platforms, including antenatal and postnatal care, to ensure that FP counseling and services are readily available to women throughout their reproductive life stages.

By implementing these policy recommendations, stakeholders can work towards improving FP service utilization in Eldas sub-county, ultimately contributing to better reproductive health outcomes and overall well-being for women and their families.

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