1 Prevalence and Determinants of male modern

contraceptive use in Togo: a quantitative study in the maritime region

4 Essi E. Kpegba-Fiaboe^{a,b,*}, Agnes M. Kotoh^a

⁵ ^a Department of Population, Family and Reproductive Health, School of Public Health (SPH),

6 University of Ghana, P. O. Box LG 13, Legon, Accra, Ghana.

^b Regional Institute for Population Studies, University of Ghana, P. O. Box LG 96, Legon, Accra,
Ghana.

9 *Corresponding author: <u>eekpegba@st.ug.edu.gh</u> (Essi E. Kpegba-Fiaboe)

10

11 Abstract

12 Objective: In recent years, the importance of involving men in family planning initiatives and 13 understanding their perspectives on contraception has gained recognition. This study aimed to 14 investigate modern contraceptive use among men in Togo, focusing on factors that determine their 15 contraceptive use.

Methods: The study employed a cross-sectional quantitative data collection approach to conduct a primary data analysis in two communities in Togo. Participants were selected using a two-stage cluster sampling technique. Data were gathered through self-administered questionnaires and then analyzed using Stata software version 15.0. The analysis encompassed descriptive statistics and logistic regression to ascertain prevalence rates and identify factors that influence male contraceptive use.

Results: Half of the participants (50.6%) were using modern contraceptive which was condoms.
The multivariate logistic regression showed that residents of Tabligbo (AOR = 0.45; 95% CI: 0.240.86), Muslims (AOR = 0.08; 95% CI: 0.02-0.38), cohabiting with someone (AOR=7.11; 95% CI:

3.24-15.62), belief that contraception is useful for men and participant whose partner (AOR = 0.12;
95 % CI: 0.04-0.36); (AOR = 0.43; 95 % CI: 0.24-0.77) were found to be significantly associated
with current male modern contraceptive use.

Conclusion: This study highlights the importance of promoting modern contraceptive knowledge and usage among men in Togo. While condom use is prevalent, there is a need to enhance awareness of other male contraceptive methods. Targeted interventions should consider factors such as residence, religion, contraceptive behavior of men to improve male contraceptive use and reproductive health outcomes in Togo.

Introduction

Contraceptive use in Africa holds significant importance due to several key factors 34 (Palamuleni, 2013; Melesse et al., 2020; Boadu, 2022). One such reason is its role in addressing 35 36 the challenge of rapid population growth that many African countries are currently grappling with (Wulifan & Bagah, 2015; Ouedraogo et al., 2021; Boadu, 2022). According to the United Nations, 37 the African population is projected to double by 2050, reaching 2.5 billion people (Chapman et 38 39 al., 2022). This is a problem due to its strain on resources, environmental impact, pressure on infrastructure, exacerbation of poverty and inequality, impact on health, urbanization, and pressure 40 on ecosystems (Hasan et al., 2019; Osakede, 2022; Tuholske et al., 2019; Vearey et al., 2019). 41 Addressing these challenges requires sustainable practices, access to education, healthcare, and 42 family planning (Tuholske et al., 2019). Contraception plays a crucial role in curbing population 43 growth, promoting sustainable development, and empowering women (Silumbwe et al., 2018; 44 Boadu, 2022). It reduces strain on healthcare and social services, enables women to pursue 45 education and employment, and prevents unsafe abortions and maternal mortality (Aliyu, 2018; 46 47 Yaya et al., 2018; Haakenstad et al., 2022). Modern contraceptive method such as condom use also contributes to HIV/AIDS prevention in sub-Saharan Africa (Ruiseñor-Escudero et al., 2019). 48 In sub-Saharan African nations, including Ghana, Mali, Tanzania, Togo, and Uganda, there 49 50 are significant disparities in the utilization of contraceptives compared to Western countries (Williamson et al., 2009; Boadu, 2022; Haakenstad et al., 2022). The prevalence of modern 51 contraceptive use in sub-Saharan Africa remains consistently low, typically below 34% (Biney et 52 al., 2021; Boadu, 2022; Febon et al., 2015; GSS et al., 2018). This is in stark contrast to the United 53 States, where 54% of females aged 15 to 19 reported condom use during their most recent sexual 54 activity (Williamson et al., 2009). The low usage of contraceptives in sub-Saharan Africa countries 55

56 contributes to high rates of unintended pregnancies, unsafe abortions, and maternal deaths (Beson et al., 2018; Bishwajit et al., 2017; Kiene et al., 2013). Several factors contribute to the low 57 utilization of contraceptives in these countries. Socio-cultural norms play a significant role, 58 shaping attitudes towards contraception and influencing decision-making around its use (Schuler 59 et al., 2011; Ohn Mar et al., 2019). Limited knowledge about contraceptive methods and where to 60 61 access them also hinders uptake (Ochako et al., 2017; Ahinkorah et al., 2020; Asiedu et al., 2020; Boadu, 2022). Economic constraints and financial barriers pose challenges for individuals in 62 obtaining contraceptives (Palamuleni, 2013; Butame, 2019). Additionally, negative experiences 63 64 with health services, including issues such as stigma or disrespectful treatment, can deter individuals from seeking contraception (Bishwajit et al., 2017). 65

Engaging communities and stakeholders is essential to foster positive attitudes towards 66 contraception (Yee & Simon, 2010; Hailu et al., 2022; Mbachu et al., 2023). Despite global efforts 67 to address these challenges, contraceptive use remain low, mostly in African countries, leading to 68 rapid population growth (Thummalachetty et al., 2017; Boadu, 2022). The latest Togo 69 Demographic and Health Survey indicated that modern contraceptive prevalence rate among all 70 women in Togo is 23%, indicating a low uptake of contraception (Febon et al., 2015). Unmet need 71 72 for contraceptives in Togo is high at 33%, and socio-cultural norms, low levels of knowledge about where to access services, economic constraints, long travel distances, and negative experiences 73 with health services contribute to the low contraceptive use (Bellow *et al.*, 2023). Additionally, 74 75 there are taboos related to culture and religious affiliation that hinder the use of contraceptive methods in Togo (Adama-Hondegla et al., 2015). 76

Factors influencing contraceptive use in Togo include the impact of youth-friendly projects
on contraceptive use by young people and the positive influence of spousal communication on

79 contraceptive use (Arnold et al., 2016). Meanwhile one study conducted in Uganda explored the perceptions of men and women regarding barriers to involvement of men in positive reproductive 80 health behaviors (Kabagenyi et al., 2014). The study identified five themes as rationale for limited 81 82 contraceptive uptake in men, including perceived side effects of female contraceptive methods that disrupt sexual activity, limited choices of available male contraceptives, gender norms and 83 traditional family planning communication, and fear and concerns relating to vasectomy 84 (Kabagenyi et al., 2014). These findings suggest that concerns about side effects and limited 85 options for male contraceptives can hinder male involvement in contraceptive use (Koffi et al., 86 87 2018).

Men reported concerns about adverse side effects of contraceptives, including changes in 88 weight, vaginal lubrication, hypertension, and the development of infections or fibroids in the 89 reproductive organs of women (Thummalachetty et al., 2017; Koffi et al., 2018). These concerns 90 may contribute to hesitancy or reluctance among men to use modern contraceptives. False beliefs 91 and fears about side effects of modern contraceptive methods were also observed in studies study 92 conducted in Malaysia and rural Uganda (Dougherty et al., 2018; Ohn Mar et al., 2019). Men 93 expressed concerns about excessive menstrual bleeding, weight changes, and the potential for 94 95 abnormalities and deformities in children of women who use contraception (Dougherty et al., 2018). These findings highlight the importance of addressing misconceptions and providing 96 accurate information about contraceptive methods to men. 97

Here, we assessed male knowledge and perception towards modern male contraceptive use.
This is crucial for promoting informed decision-making, addressing misconceptions, involving
men in family planning discussions, and developing male-centered contraceptive options. By

understanding and addressing the factors that influence male contraceptive use, healthcareproviders can contribute to improved reproductive health outcomes for both men and women.

103 Methods

The study employed a quantitative cross-sectional design conducted between April and May 2019 within the communities of Lomé (6° 8' 11.86" N and 1° 13' 19.86" E), an urban area, and Tabligbo (6° 34' 59.99" N and 1° 30' 0.00" E), a semi-urban area, both located in Togo. The selection of Lomé and Tabligbo as study locations aimed to capture diverse sociodemographic and economic contexts, ensuring a comprehensive analysis.

This cross-sectional study was conducted among sexually active males, aged between 15 and 59 years, residing in the selected locations. Females and males who were not sexually active and below age of 15 and above 59 were excluded from the study. A minimum sample size of 272 was determined using the Cochran formula (Cochran, 1997):

- $n = Z^2 p q / d^2$
- 114

where *n* is the desired sample size, Z (Z-score) = 1.96; *p* (given that the prevalence of male 115 contraceptive use in Togo is unknown, we made an estimation based on the contraceptive use rate 116 117 among women in the country), which stood at 0.23 as per the 2016-17 FP2020 annual report; q =0.77; and d (margin of error) = 0.05. Considering a 15% non-response rate, a final sample size of 118 119 313 was considered in the study. A convenience sampling was employed to solicit participation 120 from sexually active males. Potential participants were identified and approached in various public 121 spaces and workplaces and informed about the study objectives. Eligibility was confirmed based on age and sexual activity criteria, after which participants were presented with an informed 122 consent form. The form was read and its terms thoroughly explained to the potential participants 123

to ensure full understanding before signing, thereby formalizing their voluntary involvement in theresearch.

Data was gathered from participants through a carefully pretested, structured self-126 127 administered questionnaire. This questionnaire was developed after studying related literature and previously used questionnaires (Schuler et al., 2011; Kabagenyi et al., 2014). Initially designed in 128 English, it was translated into French for administration. The questions were further translated into 129 local dialects, primarily Ewe for participants who were not fluent in French. The preliminary test 130 of the questionnaire was conducted with a sample of 20 sexually active men from Kpalime, who 131 132 had characteristics similar to the main study group. This pilot allowed the research team to refine the questionnaire, ensuring it was relevant and comprehensible for the study participants. 133

The questionnaire was structured into three parts: the first delved into socio-demographic 134 characteristics; the second explored the knowledge of participants concerning male modern 135 contraceptives; while the third section focused on their use of contraceptives and the influencing 136 factors. Given the nature of the study topic and to ensure participants felt comfortable, only male 137 138 data collectors were engaged. They underwent a two-day training session to familiarize themselves with the research objectives and the proper way to use the research tools. Even though the study 139 140 relied on convenience sampling with participants approached in public areas, their privacy was prioritized, and they were identified solely by numbers to maintain anonymity. 141

142 *Ethical considerations*

The study obtained ethical approval from the Ethical Review Committee of the Togolese MoH, denoted by the Protocol ID Number: 119/19. This clearance ensured the rights and privacy of the participants were maintained. Additionally, verbal permissions were procured from the chiefs and elders of the community, underscoring the regard for the local governance systems. Prior to their participation, individuals gave their informed consent in writing, confirming theirvoluntary participation.

149 Data analysis

The collected data was entered into Microsoft Excel and subsequently analyzed using Stata software version 13 with descriptive statistics presented in tables, graphs, and charts. Additionally, Pearson Chi-Square test and multiple logistic regression analysis has been performed to investigate the correlation between modern contraceptive use and predictors.

154

155 **Results**

156 Participant sociodemographic characteristics

The study had a response rate of 99%, with a total of 308 participants (N = 311; Table 1). 157 Among the participants, 49.4% resided in the urban area of Lomé, while 50.6% lived in the semi-158 urban area of Tabligbo (N = 308; Table 1). The age of the respondents ranged from 15 to 50 years, 159 with a mean age of 29.3 (N = 308; Table 1). The largest proportion of participants, 44.5%, were 160 married, and the majority, 79.2%, identified as belonging to the southern ethnicity (N = 308; Table 161 1). In terms of religion, 63% of the participants identified as Christian, and 40.3% had completed 162 163 secondary school education (N = 308; Table 1). Among the respondents, 54.3% reported being single, 61.4% reported not having any children, and 38.6% were self-employed (N = 308; Table 164 1). 165

Table 1 Background characteristics of participants.

Variables	Frequency (N)	Percentage (%)
Age		

15-24	81	26.3
25-34	146	47.4
35-44	62	20.1
45-50	19	6.2
Marital status		
Single	76	24.7
Married	137	44.5
Cohabiting	95	30.8
Ethnicity		
Southern ethnicity ^a	244	79.2
Northern ethnicity ^b	56	18.2
Other ethnicities ^c	8	2.6
Religion		
Animism	50	16.2
Christian	194	63.0
Islam	22	7.1
No religion	42	13.6
Educational level		
No education	28	9.1
Primary	56	18.2
Secondary	124	40.3
University	100	32.5
Number of children		
0	189	61.4
1	33	10.7
2	44	14.3
3+	42	13.6
Employment status		
Public sector	40	13.0
Private sector	34	11.0
Self-employed	119	38.6

Students	109	35.4
Unemployed	6	2.0
Place of residence		
Lomé	152	49.4
Tabligbo	156	50.6

^a includes Ewe, Mina, Ouatchi, Akposso, Guin, and Ife; ^b includes Kabyés, Mobas, Lambas, les
 Haoussa, les Peuhls, les Mossis, Tamberma, and Tchokossi; ^c includes Bassar, Kotokoli, Watchi,
 and Fon.

171

172 *Prevalence of modern contraceptive use among participants*

In this study, male modern contraceptive use was assessed by determining the current utilization of modern contraceptives based on participants' responses to the question, "Are you using any male modern contraceptive to avoid pregnancy?" The findings revealed that the prevalence of male modern contraceptive use among the study participants was 50.6% (N = 308; Figure 1). Specifically, in the urban area of Lomé, the prevalence of modern contraceptive use among participants was 58.5% (N = 152; Figure 1). In comparison, the prevalence in the semiurban area of Tabligbo was found to be 42.9.6% (N = 156; Figure 1).

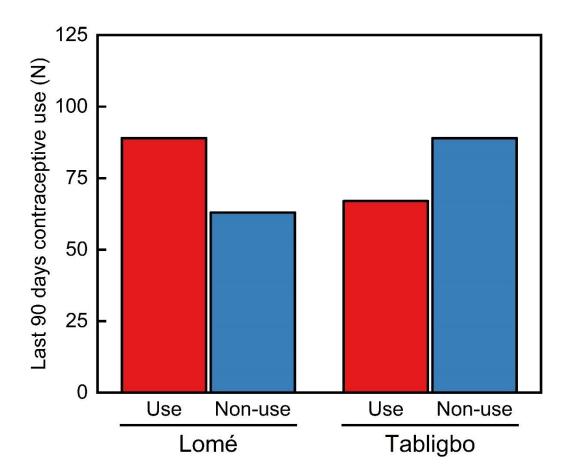
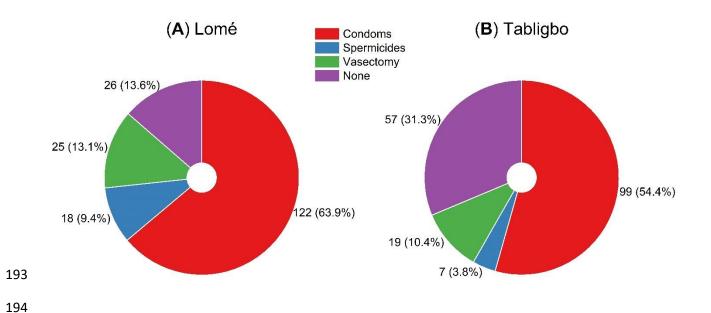


Figure 1: Prevalence of modern contraceptive use among men in Lomé and Tabligbo counties in
Togo.

183

184 Knowledge of male modern contraceptives

The three contraceptive methods that were mentioned by the respondents were condoms, vasectomy, and spermicides, as indicated in Figure 2. Among these methods, condoms were the most commonly mentioned, accounting for 71.7% of the total mentions (N = 308; Figure 2). Vasectomy was mentioned by 14.29% of the respondents, while spermicides were mentioned by 8.12% (N = 308; Figure 2). Notably, in the specific location of Lomé, 13.6% of the participants were unable to name any male modern contraceptives (N = 152; Figure 2A), whereas in Tabligbo, the percentage was higher at 31.3% (N = 156; Figure 2B).



195 **Figure 2** Knowledge of male modern contraceptives among men in Lomé (A) and Tabligbo (B)

197 Attitudes towards male modern contraceptives

In Lomé, the results indicated that 38% of the respondents reported that their partners were 198 using contraceptives (N = 152, Figure 3A). Furthermore, 84% of participants had heard of 199 contraceptives, and 86% acknowledged their usefulness to men (N = 152, Figure 3A). However, 200 only 53% reported having discussions with their partners about contraceptives, while 28% stated 201 that they have visited a family planning facility (N = 152, Figure 3A). In Tabligbo, 40% of the 202 203 respondents (N = 156, Figure 3B) reported their partners were using contraceptives. The majority of participants (81%, N = 156, Figure 3B) were aware of male contraceptives, while a small 204 percentage (11%) had doubts about their utility. Moreover, a majority of respondents (53%, N =205 206 156, Figure 3B) engaged in contraceptive discussions with their partners. Notably, a considerable 207 number of respondents (63%) reported that they have never visited a family planning facility.

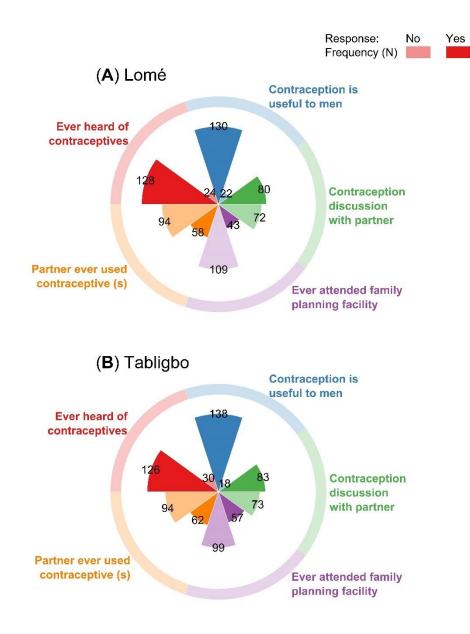


Figure 3 Attitudes of participants towards male modern contraceptive use in Lomé (A) and Tabligbo (B).

212 Factors influencing modern contraceptive use among the study participants

Bivariate analysis via Pearson Chi-square test has been performed to test any association between current male modern contraceptive use and the independent variables. Thus, variables which has been shown to be associated to the dependent variable were: place of residence, religion, education level, marital status, contraceptive knowledge, belief that contraception is useful from

217	men, contraceptive discussion between partners, and participants whose partners were using
218	contraceptives (P-value < 0.05 ; Table 2). After controlling for confounders through multivariate
219	logistic regression, the analysis showed that place of residence, religion affiliation, belief that
220	contraception is useful for men, and contraceptive use of partner (s) of participant were found to
221	be significantly associated with current male modern contraceptive use with (P-value <0.05 ; Table
222	3). The odds of using male modern contraceptives were low among residents of Tabligbo (AOR =
223	0.45; 95% CI: 0.24-0.86) compared with residents in Lomé. Muslims were less likely to use male
224	modern contraceptives (AOR = 0.08; 95% CI: 0.02-0.38) compared with participants with no
225	religion. Cohabiting with someone increased the odds of using male modern contraceptives by
226	seven (AOR=7.11; 95% CI: 3.24-15.62). However, the odds of using male modern contraceptives
227	were low for participants who believed that contraception is not useful for men, and participants
228	whose partners were using any form of contraceptives (AOR = 0.12 ; 95 % CI: 0.04-0.36); (AOR
229	= 0.43; 95 % CI: 0.24-0.77).

231 Table 2: Bivariate analysis of associated factors of male contraceptive use in Togo

	Contraceptive use				
Variables	N= 308	Yes	No	X^{2} (P-value)	
		n (%)	n (%)		
Age					
15-24	81	34 (42%)	47(58%)	3.8 (0.285)	
25-34	146	76 (52.1%)	70 (47.9%)		
35-44	62	35 (56.4%)	27 (43.6%)		
45-54	19	11 (57.9%)	8 (42.1%)		
Place of residence					
Lomé	152	89 (58.5%)	63 (41.5%)	7.5 (0.006)**	
Tabligbo	156	67 (42.9%)	89 (57.1%)	· · ·	
Ethnicity type					
Southern ethnicity	244	125 (51.2%)	119 (48.8%)	3.4 (0.338)	
Northern ethnicity	56	29 (51.8%)	27 (48.2%)		
Central ethnicity	3	0 (0.0%)	3 (100%)		

Other ethnicity	5	2 (40%)	3 (60%)	
Religion		· /		
Animism Christian Islam No religion	50 194 22 42	27 (54%) 98 (50.5%) 4 (18.2%) 27 (64.3%)	23 (46%) 96 (49.5%) 18 (81.8%) 15 (35.7%)	12.6 (0.006)**
Education level				
No education Primary Secondary University	28 56 124 100	11 (39.3%) 23 (41.1%) 59 (47.6%) 63 (63%)	17 (60.7%) 33 (58.9%) 65 (52.4%) 37 (37%)	10.1 (0.018)**
Marital status				
Single Married Cohabiting	76 137 95	20 (26.3%) 66 (48.2%) 70 (73.7%)	56 (73.7%) 71 (51.8%) 25 (26.3%)	38.5 (0.000)**
Number of children				
0 1 2 3+*	189 33 44 42	95 (50.3%) 16 (48.5%) 23 (52.3%) 22 (52.4%)	94 (49.7%) 17 (51.5%) 21 (47.7%) 20 (47.6%)	0.2 (0.982)
Employment status		(•)		
Private sector Public sector Self-employed Student Unemployed	34 40 119 109 6	18 (52.9%) 24 (60.0%) 56 (47.1%) 55 (50.5%) 3 (50.0%)	16 (47.1%) 16 (40.0%) 63 (52.9%) 54 (49.5%) 3 (50.0%)	2.1 (0.720)
Ever heard of contraceptives				
Yes No	254 54	138 (54.3%) 18 (33.3%)	116 (45.8%) 36 (66.7%)	7.8 (0.005)**
Contraception is useful to men				
Yes No	268 40	150 (56.0%) 6 (15.0%)	118 (44.0%) 34 (85.0%)	23.4 (0.000)**
Contraception discussion with partner				
Yes No	157 139	97 (61.8%) 57 (41.0%)	60 (38.2%) 82 (59.0%)	12.7 (0.000)**
Partner contraceptive use		× -/	×/	
Yes No	120 188	78 (65.0%) 78 (41.5%)	42 (35.0%) 110 (58.5%)	16.2 (0.000)**
Ever attended FP facilities				
Yes No	100 208	58 (58.0%) 98 (47.1%)	42 (42.0%) 110 (52.9%)	3.2 (0.074)

*participants with 3, 4 and 5 children; **P-value< 0.05

Current male contraceptive use					
Variables	Users	COR (95%CI)	P-value	AOR (95%CI)	P-value
	N (%)				
Place of residence					
Lomé (Urban)	89 (58.5)				
Tabligbo (Semi-urban)	67 (42.9)	0.53 (0.34-0.84)	0.006	0.45 (0.24-0.86)	0.015
Religion					
Animism	27 (54.0)				
Christian	98 (50.5)	0.87 (0.46-1.62)	0.660	0.42 (0.19-0.93)	0.032
Islam	4 (18.2)	0.19 (0.06-0.64)	0.007	0.08 (0.02-0.38)	0.002
No religion	27 (64.3)	1.53 (0.66-3.56)	0.319	1.08 (0.39-2.96)	0.877
Education level					
No education	11 (39.3)				
Primary	23 (41.1)	1.07 (0.43-2.72)	0.875	0.98 (0.33-2.88)	0.975
Secondary	59 (47.6)	1.40 (0.61-3.24)	0.428	1.74 (0.65-4.68)	0.267
University	63 (63)	2.63 (1.11-6.22)	0.027	1.84 (0.64-5.26)	0.254
Marital status					
Single	20 (26.3)				
Married	66 (48.2)	2.60 (1.41-4.79)	0.002	1.67 (0.78-3.53)	0.181
Cohabiting	70 (73.7)	7.84 (3.95-5.55)	0.000	7.11 (3.24-15.62)	0.000
Ever heard of male cont	raceptives				
Heard of MMC	138 (54.3)				
Never heard of MMC	18 (33.3)	0.42 (0.23-0.77)	0.006	0.71 (0.33-1.49)	0.365
Contraception is useful	to men				
Useful	150 (56.0)				
Not useful	6 (15.0)	0.13 (0.05-0.34)	0.000	0.12 (0.04-0.36)	0.000
Contraception discussio	n with partner				
Discussion	97 (61.8)				
No discussion	57 (41.0)	0.47 (0.29-0.74)	0.001	0.72 (0.38-1.33)	0.295
Partner is using contrac	eptive (s)				
Yes	78 (65.0)				

Table 3: Predictors of male modern contraceptive use in Togo (N = 308).

 No	78 (41.5)	0.38 (0.24- 0.61)	0.000	0.43 (0.24-0.77)	0.005

COR: Crude Odds Ratio; AOR: Adjusted Odds Ratio; CI: Confidence Interval; N: Sample size MMC: Male
 Modern Contraceptives

237

238 **Discussion**

This study examined the prevalence of male contraceptive and identifying factors influencing male use of modern contraceptives. There was a disparity in the male modern contraceptive use among the participants, with a higher rate in the urban area of Lomé County than semi-urban area of Tabligbo County. The study identified place of residence, religious affiliation, belief in the usefulness of contraception for men, and the contraceptive use by the partner(s) as influential factors for modern contraceptive use among men in the study areas.

245 The study revealed a significant difference in contraceptive use between urban and semiurban areas. Urban areas, such as Lomé, offer better access to healthcare facilities, including 246 reproductive health services, family planning clinics, and contraceptive supplies. Lomé, being a 247 major city in Togo, benefits from a higher density of healthcare providers and better information 248 249 sources, making contraceptives more readily available to the population. According to previous studies, urban environment may foster greater education and awareness about contraceptive 250 251 methods due to increased exposure to information and resources (Gourbin et al., 2017; Ochako et 252 al., 2017; Asiedu et al., 2020; Seidu et al., 2022)(Gourbin <i>et al.</i>, 2017; Ochako <i>et al.</i>, 2017; Seidu <i>et al.</i>, 2022)[23], [36], [37](Gourbin et al., 2017; Ochako et al., 2017; 253 Seidu et al., 2022). Consequently, the higher prevalence of modern contraceptive use in Lomé 254 compared to semi-urban areas like Tabligbo county, can be explained by the fact that healthcare 255 256 facilities and information may be more limited in the later county.

257 Consistent with previous research, our study also revealed that respondents with no religion
258 had higher odds of using modern contraceptives compared to those who declared their religious

259 affiliation. Meanwhile, the impact of religious affiliation on decision-making processes regarding 260 contraception has been well-documented (Agadjanian, 2013; Beson et al., 2018; Thakuri et al., 2022). For instance, a study conducted in Ghana found that participants who considered their 261 religious beliefs when making decisions about modern contraceptives had lower odds of using 262 them compared to those who did not consider their religious beliefs (Beson et al., 2018). The 263 influence of different religious teachings and doctrines on the beliefs and behaviors of individuals 264 regarding contraception is evident, with certain religions discouraging or imposing restrictions on 265 contraceptive use based on moral or religious grounds (Ochako et al., 2017; Aragaw et al., 2023; 266 Sarfraz et al., 2023). These religious barriers can present obstacles to the adoption of 267 contraceptives among individuals who adhere strictly to these teachings (Agadjanian, 2013; 268 Thakuri et al., 2022; Sarfraz et al., 2023). Understanding the role of religion in shaping 269 270 contraceptive beliefs and behaviors is crucial for developing effective interventions and programs that respect the religious value of individuals while promoting access to comprehensive sexual and 271 reproductive healthcare. Indeed, our study found that the participants' belief in the usefulness of 272 273 contraception for men is another important factor.

Respondents who perceived male contraceptives as effective and beneficial were more 274 275 likely to use them. Our finding is supported by similar studies that have shown that positive attitudes and beliefs towards contraceptives are associated with higher usage rates among men 276 while negative thoughts or misconceptions lead to less contraceptive uptake (Asiedu et al., 2020; 277 278 Mishra et al., 2014). Education and awareness campaigns that emphasize the benefits of male contraception can contribute to changing attitudes and promoting its uptake. We did not see any 279 significant association between age, ethnicity, number of children and contraceptive use. This 280 281 could be due to the homogeneity of the study sample in term of gender.

282 The contraceptive use of the participant's partner(s) also emerged as a significant factor while contraceptive discussion was significant at only bivariate analysis. This could be due to the 283 effect of other confounders. However, this showed that couples' dynamics and communication 284 play a crucial role in contraceptive decision-making and uptake (Butame, 2019). Our finding is 285 supported by other studies that found that partner support and joint decision-making contribute to 286 higher contraceptive use among women and men (Mishra et al. 2014, Butame, 2019). When 287 partners mutually discuss and agree upon contraceptive use, it can positively influence male 288 involvement and adoption of contraception. Thus awareness towards contraceptive discussion 289 290 among couples is very essential to improve contraceptive uptake in men.

291 **Study strength and limitation**

Our study comes with both strengths and limitations. One notable strength is the innovative 292 focus of the study on male contraceptive use, an area largely neglected in similar research, which 293 generally targets women. This is particularly significant given that men often hold the primary 294 decision-making role in African households. Also, our study addresses the dearth of information 295 296 concerning the behaviors of men in Africa, specifically in Togo, when it comes to contraceptive use. By doing so, we shed light on the modern contraceptive prevalence and factors influencing its 297 use among males. Additionally, the determinants identified in our study could assist policymakers 298 299 and stakeholders in devising effective strategies to address the contraceptive needs of the population. 300

Regarding the limitations, there might be instances of participants over reporting their use of contraceptives. The utilization of a convenience sample might skew the results, making them less applicable to a broader population. Additionally, there is a possibility that biases from the researchers could have swayed the participants to give responses they believe were desired by theresearchers.

306 Conclusion

307 The findings indicated that the overall current contraceptive use in this study was average, nevertheless, a notable disparity emerges in the utilization of modern contraceptive methods 308 between inhabitants of Tabligbo and Lomé. Various factors, such as religious affiliation, 309 310 geographical residence, the contraceptive use of the partners of participants, and awareness of contraceptive options, are identified to have significant influence on modern contraceptive use 311 among Togolese men. Furthermore, the perception of men towards the usefulness of modern 312 contraceptives and their attitude in having contraceptive discussion with their partners emerged as 313 crucial determinants in their contraceptive usage. In light of these findings, it is very important to 314 focus family planning and behavioral change interventions on men in both semi-urban and urban 315 areas to amplify the uptake of modern contraceptive methods. 316

317 Authors' contributions

EEKF participated in the overall conceptualization and inception of the idea of this manuscript, with lead roles in writing the background, methodology, data analysis, writing the results and discussion sections. AMK provided overall guidance in writing the background, methodology, analysis, and review of the manuscript with attention on how it fit with other literature.

Ethics approval

Ethical approval has been sought from the Research Ethics Committee of the Ministry of Health, Togo (N^O 119/19). All participant provided written and signed informed consent.

326 Funding

Funding for the data collection was provided through the Africa Regional International Staff/Student Exchange II (ARISE II): Food Security and Sustainable Human Wellbeing grant. The funder played no role in the design, collection, analysis and the interpretation of data and in the preparation of the manuscript.

Declaration of competing interests

The authors declare that they have no known competing financial interests or personal relationships that could influence the work reported in this paper.

334 Acknowledgements

The first author would like to give thanks to the Africa Regional International Staff/Student Exchange II (ARISE II): Food Security and Sustainable Human Wellbeing partners for funding the data collection. Acknowledgments to all the study participants for making free their time to respond to the research questions; to all communities' chiefs and key informants for their support in the selection of participants and the conduct of the research in their communities.

340 **References**

Agadjanian V. 2013. Religious denomination, religious involvement, and modern contraceptive
use in southern Mozambique. *Studies in Family Planning* 44: 259–274.

- Ahinkorah BO, Seidu A-A, Appiah F, Budu E, Adu C, Aderoju YBG, Adoboi F, Ajayi AI.
- 2020. Individual and community-level factors associated with modern contraceptive use among
 adolescent girls and young women in Mali: a mixed effects multilevel analysis of the 2018 Mali
- demographic and health survey. *Contraception and Reproductive Medicine* **5**: 1–12.
- Aliyu AA. 2018. Family Planning Services in Africa: The Successes and Challenges. *Family Planning*.
- 349 Aragaw FM, Chilot D, Belay DG, Merid MW, Kibret AA, Alem AZ, Asratie MH. 2023.
- Spatial distribution and determinants of high-risk fertility behavior among reproductive-age women in Ethiopia. *Tropical Medicine and Health* **51**.
- 351 women in Europia. *Tropical Medicine and Health* 51.
- 352 Arnold J, Samson M, Schechter J, Goodwin AS, Braganza S, Sesso GC, Lopez A, Fiori K.
- **2016**. Getting There: Overcoming Barriers to Reproductive and Maternal Health Services Access
- in Northern Togo—A Qualitative Study. *World Medical and Health Policy* **8**: 223–244.
- Asiedu A, Asare BYA, Dwumfour-Asare B, Baafi D, Adam AR, Aryee SE, Ganle JK. 2020.
- 356 Determinants of modern contraceptive use: A cross-sectional study among market women in the
- Ashiaman Municipality of Ghana. *International Journal of Africa Nursing Sciences* **12**: 100184.
- Bellow N, Dougherty L, Nai D, Kassegne S, Nagbe RHY, Babogou L, Guede KM, Silva M.
- **2023**. Improving provider and client communication around family planning in Togo: Results
- from a cross-sectional survey (MDJ Medina Arellano, Ed.). *PLOS Global Public Health* **3**:
- 361 e0001923.
- Beson P, Appiah R, Adomah-Afari A. 2018. Modern contraceptive use among reproductive aged women in Ghana: Prevalence, predictors, and policy implications. *BMC Women's Health* 18: 1–8.
- 365 Biney AAE, Wright KJ, Kushitor MK, Jackson EF, Phillips JF, Awoonor-Williams JK,
- Bawah AA. 2021. Being ready, willing and able: understanding the dynamics of family planning
 decision-making through community-based group discussions in the Northern Region, Ghana. *Genus* 77: 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: 1–11.
- **Butame SA. 2019.** The prevalence of modern contraceptive use and its associated socio-
- economic factors in Ghana: evidence from a demographic and health survey of Ghanaian men. *Public Health* 168: 128–136.
- 374 Chapman CA, Abernathy K, Chapman LJ, Downs C, Effiom EO, Gogarten JF, Golooba
- 375 M, Kalbitzer U, Lawes MJ, Mekonnen A, et al. 2022. The future of sub-Saharan Africa's
- biodiversity in the face of climate and societal change. *Frontiers in Ecology and Evolution* 10:
 1–18.
- **Cochran WG. 1997.** Cochran_1977_Sampling_Techniques_Third_E.pdf. : 76–78.
- 379 Dougherty A, Kayongo A, Deans S, Mundaka J, Nassali F, Sewanyana J, Migadde E,
- 380 Kiyemba R, Katali E, Holcombe SJ, et al. 2018. Knowledge and use of family planning among
- 381 men in rural Uganda. *BMC Public Health* **18**.

- 382 Febon KAA, Koupogbe ES, Djibom KA, Lamboni M, Tete KG, Badohoun KY, Duyiboe A,
- Hevi KD, Fankeba S, Abdoulaye N, et al. 2015. Enquête Démographique et de Santé au Togo
 2013-2014. Rockville, Maryland, USA.
- Ghana Statistical Service (GSS), Ghana Health Service (GHS) & I. 2018. 2018. Ghana
 Maternal Health Survey 2017. Accra, Ghana: GSS, GHS, and ICF. Accra.
- **Gourbin C, Wunsch G, Moreau L, Guillaume A**. **2017**. Direct and indirect paths leading to contraceptive use in urban Africa. *Quetelet Journal* **5**: 33–71.
- 389 Haakenstad A, Angelino O, Irvine CMS, Bhutta ZA, Bienhoff K, Bintz C, Causey K, Dirac
- 390 MA, Fullman N, Gakidou E, et al. 2022. Measuring contraceptive method mix, prevalence, and
- demand satisfied by age and marital status in 204 countries and territories, 1970–2019: a
- systematic analysis for the Global Burden of Disease Study 2019. *The Lancet* **400**: 295–327.
- Hailu S, Assefa N, Dingeta T, Abdurahman C, Adem M. 2022. Unmet need for contraception
 among married adolescent girls and young women in Haramaya Health and demographic
- 395 surveillance system, Eastern Ethiopia. *Frontiers in Global Women's Health* **3**.
- Hasan E, Tarhule A, Hong Y, Moore B. 2019. Assessment of physical water scarcity in Africa
 using GRACE and TRMM satellite data. *Remote Sensing* 11.
- Kabagenyi A, Jennings L, Reid A, Nalwadda G, Ntozi J, Atuyambe L. 2014. Barriers to male
 involvement in contraceptive uptake and reproductive health services: A qualitative study of men
- and women's perceptions in two rural districts in Uganda. *Reproductive Health* 11: 1–9.
- 401 Koffi TB, Weidert K, Ouro Bitasse E, Mensah MAE, Emina J, Mensah S, Bongiovanni A,
- 402 Prata N. 2018. Engaging Men in Family Planning: Perspectives From Married Men in Lomé,
 403 Togo. *Global health, science and practice* 6: 316–327.
- 404 Mbachu CO, Agu IC, Ekwueme CN, Ndu A, Onwujekwe O. 2023. A narrative review of
- 405 evidence to support increased domestic resource mobilization for family planning in Nigeria.
- 406 *BMC women's health* **23**: 235.
- 407 Melesse DY, Mutua MK, Choudhury A, Wado YD, Faye CM, Neal S, Boerma T. 2020.
- Adolescent sexual and reproductive health in sub-Saharan Africa: who is left behind? *BMJ Global Health* 5: 9.
- 410 Mishra, A., Nanda, P., Speizer, I. S., Calhoun, L. M., Zimmerman, A., & Bhardwaj R.
- **2014**. Men's Attitudes on Gender Equality and Their Contraceptive Use in India: A Significant
 Association. *Reproductive Health* **11**: 1–13.
- 413 Ochako R, Temmerman M, Mbondo M, Askew I. 2017. Determinants of modern
- 414 contraceptive use among sexually active men in Kenya. *Reproductive Health* **14**: 1–15.
- 415 Ohn Mar S, Ali O, Sandheep S, Husayni Z, Zuhri M. 2019. Attitudes towards vasectomy and
- 416 its acceptance as a method of contraception among clinical-year medical students in a malaysian
- 417 private medical college. *Singapore Medical Journal* **60**: 97–103.
- 418 **Osakede U. 2022.** Infrastructure and Health System Performance in Africa. *Managing Global* 419 *Transitions* **20**: 375–400
- 419 *Transitions* **20**: 375–400.

- 420 Ouedraogo L, Habonimana D, Nkurunziza T, Chilanga A, Hayfa E, Fatim T, Kidula N,
- 421 Conombo G, Muriithi A, Onyiah P. 2021. Towards achieving the family planning targets in the
- 422 African region: a rapid review of task sharing policies. *Reproductive Health* **18**: 1–12.
- Palamuleni ME. 2013. Socio-economic and demographic factors affecting contraceptive use in
 Malawi. *African journal of reproductive health* 17: 91–104.
- 425 Ruiseñor-Escudero H, Lyons C, Ketende S, Pitche V, Anato S, Tcshalla J, Dometo S, Baral
- 426 SD. 2019. Consistent Condom Use Among Men Who Have Sex With Men in Lomé and Kara,
- **427** Togo. *AIDS Research and Human Retroviruses*: 1–32.
- 428 Sarfraz M, Hamid S, Kulane A, Jayasuriya R. 2023. 'The wife should do as her husband
- 429 advises': Understanding factors influencing contraceptive use decision making among married
- 430 Pakistani couples—Qualitative study (H Tappis, Ed.). *PLOS ONE* **18**: e0277173.
- 431 Schuler SR, Rottach E, Mukiri P. 2011. Gender norms and family planning decision-making in
 432 Tanzania: A qualitative study. *Journal of Public Health in Africa* 2: 102–107.
- 433 Seidu AA, Ameyaw EK, Ahinkorah BO, Baatiema L, Dery S, Ankomah A, Ganle JK. 2022.
- 434 Sexual and reproductive health education and its association with ever use of contraception: a
- 435 cross-sectional study among women in urban slums, Accra. *Reproductive Health* **19**: 1–10.
- 436 Silumbwe A, Nkole T, Munakampe MN, Milford C, Cordero JP, Kriel Y, Zulu JM, Steyn
- **PS. 2018.** Community and health systems barriers and enablers to family planning and
- 438 contraceptive services provision and use in Kabwe District, Zambia. *BMC Health Services*439 *Research* 18: 1–11.
- 440 **Thakuri DS, Singh YKC, Karkee R, Khatri RB**. **2022**. Knowledge and practices of modern
- 441 contraceptives among religious minority (Muslim) women: A cross-sectional study from
- 442 Southern Nepal. *PLoS ONE* **17**: 1–15.
- 443 Thummalachetty N, Mathur S, Mullinax M, Decosta K, Nakyanjo N, Lutalo T,
- Brahmbhatt H, Santelli JS. 2017. Contraceptive knowledge, perceptions, and concerns among
 men in Uganda. *BMC Public Health* 17: 1–9.
- Tuholske C, Caylor K, Evans T, Avery R. 2019. Variability in urban population distributions
 across Africa. *Environmental Research Letters* 14.
- Vearey J, Luginaah I, Magitta NF, Shilla DJ, Oni T. 2019. Urban health in Africa: A critical
 global public health priority. *BMC Public Health* 19: 1–4.
- 450 Williamson LM, Parkes A, Wight D, Petticrew M, Hart GJ. 2009. Limits to modern
- 451 contraceptive use among young women in developing countries: A systematic review of
- 452 qualitative research. *Reproductive Health* **6**: 1–12.
- 453 **Wulifan JK, Bagah DA**. **2015**. Male Involvement in Family Planning in Muslem Communities 454 in Wa Municipality, Ghana. *Journal of Humanities and Social Sciences* **5**: 2225–484.
- 455 Yaya S, Uthman OA, Ekholuenetale M, Bishwajit G. 2018. Women empowerment as an
- 456 enabling factor of contraceptive use in sub-Saharan Africa: A multilevel analysis of cross-
- 457 sectional surveys of 32 countries. *Reproductive Health* **15**: 1–12.

- **Yee L, Simon M. 2010**. The role of the social network in contraceptive decision-making among young, African American and Latina Women. *Journal of Adolescent Health* **47**: 374–380.