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Orapuh Journal

ORIGINAL ARTICLE

Journal of Oral & Public Health

Determinants of the use of family planning services among sexually active adolescents and young women in the Mweka Health Zone, Democratic Republic of the Congo

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ARTICLE INFO

Received: *30 September 2024*
Accepted: *08 November 2024*
Published: *20 November 2024*

Keywords:
Contraceptive use, reproductive health, barriers, determinants, service accessibility

Peer-Review: *Externally peer-reviewed*

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To cite:
Woto, L. S., Manenga, M. J., Ngalula, K. R., Nkongolo, K. M., Ngbolua, K. N., Mukandu, B. B. L., & Omanyondo, M.O. (2024). Determinants of the use of family planning services among sexually active adolescents and young women in the Mweka Health Zone, Democratic Republic of the Congo. *Orapuh Journal*, *5*(6), e1158
https://dx.doi.org/10.4314/orapj.v5i6.58

ISSN: *2644-3740*

Published by Orapuh, Inc. (info@orapuh.org)

Editor-in-Chief: Prof. V. E. Adamu
Orapuh, Inc., UMTG PMB 405, Serrekunda, The Gambia, editor@orapuh.org.

ABSTRACT

Introduction

The low utilization of family planning services among sexually active adolescents and young women is a pressing public health issue, particularly in the Mweka Health Zone of the Democratic Republic of Congo. Understanding the factors influencing this utilization is crucial for improving access and outcomes.

Purpose

This study aims to identify the determinants associated with the use of family planning services among sexually active adolescents and young women in the Mweka Health Zone.

Methods

This cross-sectional study surveyed 422 randomly selected adolescents and young women using a prospective survey method supported by a closed-ended, self-administered questionnaire.

Results

Key findings indicate that spousal involvement ($\chi^2 = 4.175$, $p = 0.041$), interpregnancy spacing ($\chi^2 = 16.364$, $p = 0.000$), and health area affiliation ($\chi^2 = 12.396$, $p = 0.030$) significantly influenced the use of family planning services. Stigmatization also negatively impacted service utilization ($\chi^2 = 5.05$, $p < 0.05$). Additionally, the duration of walking to access services ($\chi^2 = 10.987$, $p = 0.01$) and the alignment of contraceptive methods with expressed needs ($\chi^2 = 6.132$, $p < 0.05$) were identified as significant factors.

Conclusion

Barriers such as limited spousal support, community stigma, inadequate knowledge, and fear of side effects significantly hinder access to family planning services among sexually active adolescents and young women in the Mweka Health Zone. Addressing these barriers is crucial to enhancing service utilization and improving reproductive health outcomes. Potential interventions include increasing community education to reduce stigma, engaging male partners through targeted awareness programs, and improving access to youth-friendly counselling. These strategies could support informed family planning choices, thereby reducing unintended pregnancies and advancing health equity among young women. Further research and policy initiatives are recommended to tailor family planning services to the needs of this demographic.

INTRODUCTION

Unmet needs for family planning among sexually active adolescents and young women represent a significant public health issue (Bhatt et al., 2021). In the Democratic Republic of Congo (DRC), low utilization of family planning services among this population is a pressing national concern (Chamdimba et al., 2023). Evidence demonstrates that family planning improves health outcomes, reduces poverty, and empowers women and girls (Prata et al., 2017). Access to family planning services protects adolescents from unintended pregnancies, unsafe abortions, early marriages, school dropouts, and maternal mortality due to early pregnancies, along with complications such as eclampsia and systemic infections. It also alleviates the financial burden associated with pregnancy, childbirth, and related health issues (Utomo et al., 2021).

Family planning enables adolescents to remain in school longer, enhancing their education levels and contributing to overall societal development. Complications from pregnancy, abortion, and childbirth are among the leading causes of maternal mortality for adolescents and young women worldwide (Akonor et al., 2021). Adolescents make up a substantial portion of the population in many low-income countries, representing 23% in the least developed regions, where numerous humanitarian crises occur (Kakota, 2017). Yet, the sexual and reproductive health needs of adolescents and young women often remain unmet (Chimatino, 2022).

Celand et al. (2022) report that the infant mortality rate for children born to adolescent mothers is significantly higher than for those born to older mothers, with rates of 9.8 and 6.75 deaths per 1,000 live births, respectively. Globally, evidence indicates that contraceptive use could prevent approximately 2.7 million infant deaths and 60 million healthy life-years annually (Cleland et al., 2012). However, in Ghana, the contraceptive prevalence rate among adolescents aged 15 to 19 is only 19% (Akonor et al., 2021). Mahouli et al. (2023) found that 70% of adolescents have unmet family planning needs, with a modern contraceptive prevalence of just 11%. In Guinea, only 9% of sexually active adolescents use modern contraceptive methods (Donatus, 2023). In West Africa, 13 countries report an adolescent modern contraceptive prevalence of 23%, with Nigeria at 11% (Ganle et al., 2021).

In the DRC, maternal, neonatal, post-neonatal, and infant mortality rates remain high—846 per 100,000 live births and 28, 30, and 58 deaths per 1,000 live births, respectively. The total fertility rate is also notably high at 6.6, with an overall contraceptive prevalence estimated at 8% (5% in rural areas) (Yadav et al., 2020). In the DRC, and specifically in the Kasaï province where Mweka is located, family planning service utilization is notably low (Mosuse et al., 2022). The province's rural-urban setting, coupled with sociocultural norms that discourage contraceptive use, significantly impacts young women's health outcomes. Mweka, as part of this region, represents a unique population with distinct sociocultural and economic challenges that limit family planning access. These include pervasive stigma against contraceptive use, gender-related barriers, and limited spousal involvement, all of which contribute to unmet family planning needs. Given that no specific data exists on contraceptive prevalence among sexually active adolescents in Mweka, understanding the factors influencing family planning utilization in this zone is crucial.

Thus, our research focuses on addressing the following question: *What are the determinants of family planning service utilization among sexually active adolescents and young women in the Mweka health zone?* We hypothesize that the factors influencing family planning service use in this population may be sociodemographic, personal, psychosocial, and organizational.

This study aims to determine the proportion of family planning service utilization and the associated factors among sexually active adolescents and young women in Mweka. Findings will contribute to understanding local barriers and guide region-specific interventions to improve access to family planning services.

METHODS

Study Area

This study was conducted in the urbano-rural Mweka Health Zone, one of the 18 health zones in Kasaï Province, Democratic Republic of Congo. The health zone covers a total population of 327,323 inhabitants in 2023 and spans

an area of 4,000 km². It includes 50,357 households and 29 health areas. The health zone has 41 health facilities, of which 25 offer family planning services.

Study Design

This was a quantitative, cross-sectional, analytical study. Data were collected using a prospective survey method supported by a closed-ended, self-administered questionnaire.

Sampling Method

A stratified random sampling method was employed to ensure representative recruitment across key demographic characteristics, such as age and educational background. The target population—sexually active adolescents and young women in the Mweka health zone—was first divided into age groups (15–19 and 20–24 years) to accurately reflect the study's demographic focus. Within each age group, participants were randomly selected from lists provided by local health facilities, using inclusion criteria to identify those who met the study requirements. Recruitment was facilitated by community health workers, who connected with eligible participants and provided study information, thus supporting an accessible and representative sample.

The sample size was calculated using Fischer's formula:

$$n = Z^2 \times p\,(1-p)/d^2$$

where p represents the estimated proportion of the population using family planning services, d is the desired precision (5%), and Z is the confidence coefficient for a 95% confidence level (1.96). Accounting for a 10% non-response rate, the final sample size was set at 422 sexually active adolescents and young women.

Survey Instrument Development and Validation

A closed-ended, self-administered questionnaire was used to collect data on family planning service utilization and its influencing factors. The questionnaire was developed based on existing literature and validated instruments from similar studies on family planning and reproductive health among adolescents.

To ensure validity and reliability within the local context, a pilot test was conducted with a sample of 30 adolescents from a neighboring health zone. This pilot test assessed the clarity, cultural relevance, and consistency of responses. Feedback from the pilot informed refinements in item wording and response options. Internal consistency was evaluated using Cronbach's alpha, yielding a reliability score of 0.78, which indicates acceptable reliability. After these adjustments, the finalized questionnaire was administered to study participants.

Data Collection

Data were collected through a self-administered, closed-ended questionnaire. The survey focused on sociodemographic, psychosocial, personal, and organizational factors affecting the use of family planning services.

Data Analysis

Data were entered into Excel and analyzed using SPSS version 20 (IBM Corp., 2011). The chi-square test (Pearson's chi-square) at a significance level of 0.05 was used to test statistical hypotheses.

Ethical Considerations

This study received ethical approval from the Ethics Committee of the Higher Institute of Medical Techniques of Kinshasa, Democratic Republic of the Congo (Decision reference number: 055/ESU/ISTM/DG/2022), ensuring compliance with ethical standards for research involving human subjects.

Given that the study population included adolescents, specific measures were implemented to protect their rights and well-being. For participants under 18 years of age, parental or guardian consent was obtained prior to participation, along with assent from the adolescents themselves, in alignment with ethical guidelines for research with minors.

All participants were informed of the study's purpose, their right to withdraw at any time, and the measures in place to safeguard their privacy. Anonymity and confidentiality were maintained by assigning unique codes to each participant's data, securely storing identifying information, and ensuring that no personal identifiers were included in the study's findings or reports. These steps were taken to protect participant identities and foster an environment of trust and openness.

RESULTS

Tables 1 to 5 present the findings of the descriptive analyses.

Table 1:
Sociodemographic Factors (n = 422)

Variable	Category	Frequency	%
Age (years)	15-19	240	56,9
	20-24	182	43,1
Education level	Primary	90	21,3
	Secondary	284	67,3
	High/University	48	11,4
Marital status	Single	156	37,0
	Married	236	55,9
	Divorced	30	7,1
Husband's involvement	Yes	236	55,9
	No	186	44,1
Household size	1-2 children	278	65,9
	3-4 children	126	29,9
	5 or more	18	4,3
Birth spacing	≤12	284	65,9
	13-21	120	29,9
	24 or more	18	4,3
Occupational activity	Farmer	205	48,6
	Civil servant	48	11,4
	Student	114	27,0
	Other	18	4,3
	None	37	8,8
Religion	Catholic	103	24,4
	Protestant	168	39,8
	Revival Church	108	25,6
	Other	43	10,2
Affiliated health area	Mweka 1	70	16,6
	Mweka 2	70	16,6
	Mweka 3	70	16,6
	Ikit	70	16,6
	Congo	70	16,6
	Pilote	72	17,1

Demographic Profile

The sociodemographic data of adolescents utilizing family planning services in the Mweka Health Zone reveal several key insights. Among the participants, the majority (56.9%) fall within the 15–19 age group, while 43.1% are aged 20–24. Regarding educational attainment, secondary education is the most prevalent (67.3%), followed by primary education (21.3%) and higher education (11.4%). In terms of marital status, 55.9% of adolescents are married, 37.0% are single, and 7.1% are divorced.

Household and Birth Spacing

Most households comprise 1–2 children (65.9%), followed by 3–4 children (29.9%) and 5 or more children (4.3%). Birth spacing preferences show a strong inclination towards shorter intervals, with 65.9% of respondents preferring spacing of 12 months or less.

Occupational and Religious Distribution

In terms of occupation, 48.6% are farmers, while smaller proportions are civil servants (11.4%), students (27.0%), or others (4.3%). Regarding religion, Protestants form the largest group (39.8%), followed by Catholics (24.4%), Revival Church members (25.6%), and other affiliations (10.2%).

This demographic profile highlights characteristics of the adolescent population engaging with family planning services, providing critical data for targeted interventions and public health strategies (see Table 1).

Table 2:
Age of First Sexual Intercourse and Related Motivations (n = 422)

First sexual intercourse	Category	Frequency	%
Age at first sexual intercourse	15 to 16	169	40,0
	17 to 18	157	37,2
	19 and older	96	22,7
Motivation for first sexual intercourse	Desire to experiment	133	31,5
	Financial need	133	31,5
	Partner influence	84	19,9
	Peer/social pressure	72	17,1

First Sexual Experience

The majority of respondents reported their first sexual encounter between ages 15–16 (40.0%), followed by 17–18 (37.2%), and 19 or older (22.7%).

Motivations for Sexual Activity

Key motivations include a desire to experiment (31.5%) and financial need (31.5%), followed by partner influence (19.9%) and peer/social pressure (17.1%).

These findings underscore the importance of addressing both the behavioural and socioeconomic factors influencing adolescent sexual activity (see Table 2).

Table 3:
Psychosocial Factors (n = 422)

Variable	Category	Frequency	%
Stigmatization	Yes	223	52,8
	No	199	47,2
Shame in using condoms	Yes	205	48,6
	No	217	51,4
Fear of parents	Yes	168	39,8
	No	254	60,2
Fear of contraceptive side effects	Yes	192	45,5
	No	230	54,5
Interaction with sexual pleasure	Yes	175	41,5
	No	247	58,5

Perceptions and Fears

A majority (52.8%) of respondents reported experiencing stigmatization regarding family planning use, while 48.6% expressed shame in using condoms. Additionally, fear of parental reactions (39.8%) and concerns about contraceptive side effects (45.5%) are notable barriers.

These insights emphasize the need for supportive environments that reduce stigma and address fears, enabling adolescents to make informed reproductive health decisions (see **Table 3)**.

Table 4:
Personal Factors (n = 422)

Explanatory factor	Category	Frequency	%
Heard about family planning	Yes	294	69,7
	No	128	30,3
Source of information	Family	126	29,9
	Friends	109	25,8
	School	36	8,5
	Church	18	4,3
	Familial planning service	108	25,6
	Other	25	5,9
Use of family planning services	Yes	57	13,5
	No	365	86,5
Heard about modern contraceptive methods nes	Yes	289	68,5
	No	133	31,5
Modern contraceptive method used	Condom	30	7,1
	Pill	15	3,6
	Depo-provera	5	1,2
	Implants	7	1,6
	None	365	86,5

Awareness and Use of Family Planning

While 69.7% of respondents have heard of family planning, only 13.5% reported using these services. Family (29.9%) and friends (25.8%) are the primary sources of information. Awareness of modern contraceptive methods is relatively high (68.5%), but usage is limited, with only 7.1% using condoms and smaller percentages using other methods.

This highlights a gap between awareness and practical application, necessitating educational interventions and accessible family planning resources (see **Table 4**).

Table 5:
Organisational Factors (n = 422)

Explanatory factor	Category	Frequency	%
Existence of nearby family planning service	Yes	284	67,3
	No	138	32,7
Walking time (in minutes)	5-10	126	29,9
	11 -16	187	44,3
	17 and more	109	25,8
Financial accessibility	Yes	248	58,8
	No	174	41,2
Suitability between method and expressed need	Yes	314	74,4
	No	108	25,6
Availability of family planning methods	Yes	157	37,2
	No	265	62,8
Quality of service	Very good	169	40,0
	Good	97	23,0
	Fair	102	24,2
	Poor	54	12,8

Accessibility and Service Quality

While 67.3% of respondents reported access to nearby family planning services, only 37.2% found methods available to meet their needs. Financial accessibility was noted by 58.8%, and 74.4% reported a good fit between available methods and their needs. However, service quality varied, with 40% rating it as very good and 12.8% rating it as poor.

These findings indicate the need for improving service delivery and ensuring consistent availability of contraceptive methods to better serve adolescents (see **Table 5**).

https://dx.doi.org/10.4314/orapj.v5i6.58

Tables 6 to 10 present the results of the bivariate analyses.

Table 6:
Relationship Between Sociodemographic Factors and the use of Family Planning Services in the Mweka Health Zone (n = 422)

Variable	Category	Use of Family Planning Service			χ^2	p	Significance
		Yes	No	Sum			
Age of the adolescent	15-19	33	207	240	0,028	0,867	DNS
	20-24	24	158	182			
	Total	57	365	422			
Education level	Primary	9	81	90	1,205	0,547	DNS
	Secondary	41	243	284			
	Higher	7	41	48			
	Total	57	365	422			
Marital status	Single	18	138	156	0,937	0,626	DNS
	Married	34	202	236			
	Divorced	5	25	30			
	Total	57	365	422			
Husband's involvement	Yes	39	197	236	4,175	0,041	DS (S*)
	No	18	168	186			
	Total	57	365	422			
Household size	1-2 children	34	244	278	1,145	0,564	DNS
	3-4 children	20	106	126			
	5 and more	3	15	18			
	Total	57	365	422			
Birth spacing	≤12	26	258	284	16,364	0,000	DTS (***)
	13-21	29	91	120			
	24 and more	2	16	18			
	Total	57	365	422			
Occupational activity	Farmer	30	175	205	5,583	0,233	DNS
	Civil servant	7	41	48			
	Student	9	105	114			
	Other	3	15	18			
	None	8	29	37			
	Total	57	365	422			
Religion	Catholic	9	94	103	5,405	0,144	DNS
	Protestant	30	138	168			
	Revival Church	14	94	108			
	Other	4	39	43			
	Total	57	365	422			
Affiliated health area	Mweka 1	5	65	70	12,396	0,030	DS (*)
	Mweka 2	9	61	70			
	Mweka 3	11	59	70			
	Ikit	10	60	70			
	Congo	17	53	70			
	Pilote	5	67	72			
	Total	57	365	422			

The analysis of the data reveals various factors related to the utilization of family planning services among adolescents in the Mweka Health Zone, with significant and non-significant associations across different variables. The age of the adolescent showed a chi-square value of $\chi^2 = 0.028$ with a p-value of 0.867, indicating no significant association ($p > 0.05$) between age and service utilization. Similarly, the education level yielded a chi-square value of $\chi^2 = 1.205$ with a p-value of 0.547, demonstrating no significant correlation ($p > 0.05$) between education level and family planning usage. Marital status also exhibited no significant association, with $\chi^2 = 0.937$ and $p = 0.626$ ($p > 0.05$).

In contrast, husband's involvement showed a significant relationship with service utilization ($\chi^2 = 4.175$, $p = 0.041$), suggesting that active involvement of husbands positively influences the use of family planning services ($p < 0.05$). Birth spacing was highly significant, with a chi-square value of $\chi^2 = 16.364$ and a p-value of 0.000 ($p < 0.001$), indicating that proper birth spacing is critically associated with increased service utilization. Lastly, the affiliated health area revealed a significant association ($\chi^2 = 12.396$, $p = 0.030$), suggesting that the specific health area can impact the likelihood of adolescents using family planning services ($p < 0.05$).

These findings underscore the importance of addressing factors such as husband involvement and birth spacing in public health initiatives to enhance family planning service utilization among adolescents in this region.

Table 7:
Responses of Respondents on Age at First Sexual Intercourse and Related Motivations (n = 422)

Variable	Category	Use of Family Planning Services			χ^2	p	Significance
		Yes	No	Sum			
Age at First Sexual Intercourse	15 to 16 y	23	146	169	2,416	0,299	DNS
	17 to 18 y	17	140	157			
	19 y and more	17	79	96			
	Total	57	365	422			
Motivation for First Sexual Intercourse	Desire to Experiment	14	119	133	4,611	0,203	DNS
	Financial Need	16	117	133			
	Influence of Partner	12	72	84			
	Peer Pressure	15	57	72			
	Total	57	365	422			

The analysis of the data concerning the age at first sexual intercourse and the motivation for first sexual intercourse reveals no significant associations with the utilization of family planning services among adolescents in the Mweka Health Zone. For age at first sexual intercourse, the chi-square value is $\chi^2 = 2.416$, and the p-value is 0.299, indicating that there is no significant relationship ($p > 0.05$) between the age at which adolescents first engage in sexual activity and their subsequent use of family planning services.

Similarly, when examining the motivation for first sexual intercourse, the chi-square value is $\chi^2 = 4.611$, with a p-value of 0.203, again reflecting no significant correlation ($p > 0.05$) with the use of family planning services. These findings suggest that factors related to the timing of first sexual intercourse and the motivations behind it do not appear to directly influence the likelihood of adolescents utilizing family planning services, indicating that other factors may play a more critical role in determining service usage in this demographic.

Table 8:
Relationship Between Personal Factors and the Use of Family Planning Services in the Mweka Health Zone (n = 422)

Variable	Category	Use of Family Planning Service			χ^2	p	Significance
		Yes	No	Sum			
Stigmatization	Yes	38	185	223	5,053	0,025	DS (*)
	No	19	180	199			
	Total	57	365	422			
Shame in Using Condoms	Yes	26	179	205	0,232	0,630	DNS
	No	31	186	217			
	Total	57	365	422			
Fear of Parents	Yes	21	147	168	0,242	0,623	DNS
	No	36	218	254			
	Total	57	365	422			
Fear of Side Effects of Contraceptives	Yes	26	166	192	0,00	0,985	DNS
	No	31	199	230			
	Total	57	365	422			
Interaction with Sexual Pleasure	Yes	26	149	175	0,466	0,495	DNS
	No	31	216	247			
	Total	57	365	422			

The data analysis concerning factors related to stigmatization, shame in using condoms, fear of parents, fear of side effects of contraceptives, and interaction with sexual pleasure provides insights into their impact on the utilization of family planning services among adolescents in the Mweka Health Zone. Stigmatization is significantly associated with the use of family planning services, as indicated by a chi-square value of $\chi^2 = 5.053$ and a p-value of 0.025 ($p < 0.05$), suggesting that adolescents who experience stigmatization are less likely to utilize family planning services.

In contrast, other factors, including shame in using condoms ($\chi^2 = 0.232$, $p = 0.630$), fear of parents ($\chi^2 = 0.242$, $p = 0.623$), fear of side effects of contraceptives ($\chi^2 = 0.000$, $p = 0.985$), and interaction with sexual pleasure ($\chi^2 = 0.466$, $p = 0.495$), did not show significant associations with service utilization ($p > 0.05$).

These findings highlight that while stigmatization presents a barrier to family planning service usage, other perceived fears and feelings of shame do not appear to significantly influence adolescents' decisions to access these services. Addressing stigmatization may therefore be a crucial step in enhancing family planning service utilization among adolescents in this region.

Table 9:
Relationship Between Personal Factors and the Use of Family Planning Services in the Mweka Health Zone (n=422)

Variable	Category	Use of Family Planning Service			χ^2	p	Signification
		Yes	No	Sum			
Heard of Family Planning	Yes	39	255	294	0,049	0,826	DNS
	No	18	110	128			
	Total	57	365	422			
Source of information	Family	13	113	126	6,513	0,259	DNS
	Friends	15	94	109			
	School	2	34	36			
	Church	3	15	18			
	Familial PS	21	87	108			
	Other	3	22	25			
	Total	57	365	422			
Heard of Modern Contraceptive Methods	Yes	34	255	289	2,383	0,123	DNS
	No	23	110	133			
	Total	57	365	422			

DNS: No significant difference if $p > 0.05$.

The findings highlight associations between knowledge, information sources, and the use of family planning services. For having heard of family planning, the chi-square statistic is $\chi^2=0.049$, $p=0.826$, indicating no significant relationship ($p > 0.05$). Awareness alone does not appear to increase service utilization, suggesting the influence of factors such as access, sociocultural norms, and individual circumstances. Similarly, sources of information yielded $\chi^2=6.513$, $p=0.259$, and awareness of modern contraceptive methods showed $\chi^2=2.383$, $p=0.123$, both not significant ($p > 0.05$). These findings emphasize the necessity of addressing deeper systemic and cultural barriers.

Table 10:
Relationship Between Organizational Characteristics and the Use of Family Planning Services in the Mweka Health Zone (n=422)

Variable	Category	Use of Family Planning Service			χ^2	p	Significance
		Yes	No	Sum			
Existence of FP services nearby	Yes	41	243	284	0,642	0,423	DNS
	No	16	122	138			
	Total	57	365	422			
Duration of walking (min)	5-10	18	108	126	10,987	0,004	DTS (***)
	11 -16	34	153	187			
	17and more	5	104	109			
	Total	57	365	422			
Financial accessibility	Yes	37	211	248	1,027	0,311	DNS
	No	20	154	174			
	Total	57	365	422			
Suitability between methods and expressed needs	Yes	50	264	314	6,132	0,013	DS (*)
	No	7	101	108			
	Total	57	365	422			
Availability of FP methods	Yes	24	133	157	0,678	0,410	DNS
	No	33	232	265			
	Total	57	365	422			
Service quality	Very good	24	145	169	13,676	0,003	DTS
	Good	21	76	97			
	Fair	4	98	102			
	Poor	8	46	54			
	Total	57	365	422			

DNS: No significant difference if $p>0.05$; ***: very significant difference at $p<0.01$; *: significant difference at $p<0.05$; **DTS**: very significant difference if $p<0.01$.

https://dx.doi.org/10.4314/orapj.v5i6.58

Proximity of services showed no significant correlation with utilization (χ^2=0.642, p=0.423), underscoring that physical location alone does not address cultural or behavioural barriers. However, shorter walking durations were significantly associated with higher service use (χ^2=10.987, p=0.004). Financial accessibility (χ^2=1.027, p=0.311) and contraceptive availability (χ^2=0.678, p=0.410) were not significant (p > 0.05), indicating that these factors, while important, must align with user needs. In contrast, suitability of methods (χ^2=6.132, p=0.013) and service quality (χ^2=13.676, p=0.003) were significantly associated with utilization, emphasizing the need for tailored and quality-focused interventions.

DISCUSSION

Analysis of Socio-Demographic Factors

The study reveals critical insights into the socio-demographic landscape of adolescents in the Mweka health zone. Notably, a majority (56.9%) of participants were aged 15 to 19, indicating a young population that may be particularly vulnerable to issues related to sexual health. Educational attainment appears to influence contraceptive awareness, with 67.3% having at least a high school diploma, yet only 11.4% possessing a university degree. This suggests potential gaps in comprehensive sexual education at higher levels.

A study conducted in the Berekum Municipality, Ghana, shares similarities and differences with the findings from the Mweka health zone regarding contraceptive use among young women and adolescents (Amoah et al., 2023). Both studies highlight critical socio-demographic factors influencing contraceptive use, including age and education. In Berekum, factors such as marital status, religion, and knowledge about contraceptives significantly influenced usage rates, demonstrating how socio-demographic elements shape contraceptive practices.

Similarly, the Mweka health zone study underscores the vulnerability of younger adolescents (ages 15–19) to sexual health challenges, pointing to the need for targeted interventions within this age range. While educational attainment plays a role in both studies, the outcomes differ. In Berekum, access to family planning counselling and awareness programs was significantly associated with higher contraceptive use. In contrast, although the Mweka study indicated that most adolescents had at least a high school diploma, there was a noticeable gap in university-level education, which may limit more comprehensive sexual education. Both studies recommend enhancing educational and counselling efforts to address misconceptions and barriers to contraceptive use.

Berekum's results emphasize partner involvement and detailed counselling to mitigate partner opposition and concerns about side effects, paralleling Mweka's findings regarding an unmet need for effective sexual education to improve contraceptive uptake among young people (Amoah et al., 2023).

Marital Status and Household Dynamics

The marital status of respondents indicates that a significant portion (55.9%) were married, and a notable 65.9% had one to two children. This demographic highlights the need for tailored family planning (FP) services that address the specific needs of married adolescents, particularly given societal norms that often stigmatize discussions about contraception.

This study, along with research conducted in Kongo Central, Democratic Republic of the Congo, reveals similarities and differences in findings on contraceptive use among adolescent girls (Mpunga et al., 2022). In both studies, socio-demographic characteristics—such as marital status, household income, and knowledge of FP—significantly influence contraceptive use. Adolescents from low-income households with limited knowledge of contraceptive methods were less likely to use any contraceptive method.

The findings align with other studies where marital status emerged as a significant factor, as most respondents were married and had children, suggesting specific family planning needs that are often overlooked (Hellwig et al., 2023). Both studies emphasize the importance of targeted interventions to address socio-demographic barriers. Improving access to and knowledge of contraceptive methods for teenagers in low-income, rural areas like Kongo Central could enhance uptake rates. Moreover, FP programs tailored to the unique circumstances of married adolescents could help mitigate social stigma and provide tailored counselling services.

Knowledge and Usage of Contraceptives

The data reveal concerning trends in sexual activity and contraceptive use among adolescents, with 67.7% reporting sexual activity but only 24.4% utilizing modern contraceptives (Dramé et al., 2023). This disparity highlights significant barriers in accessing and understanding contraceptive methods, exacerbated by limited sexual and reproductive health knowledge. Notably, while 40% of respondents experienced their first sexual encounter between ages 15 and 16, only 69.1% could identify at least one modern contraceptive method.

In a parallel analysis, Donkoh et al. (2024) investigated contraceptive use among women of reproductive age in sub-Saharan Africa, revealing similar concerns about knowledge and utilization rates. Both studies emphasize that increased knowledge significantly enhances the likelihood of contraceptive uptake. While the SSA study calls for sensitization programs tailored to women's needs, the Mweka study underscores the importance of comprehensive sexual education. Donkoh et al. (2024) also recommend implementing specific subregional strategies to address disparities in contraceptive uptake, a recommendation applicable to the unique challenges faced by adolescents in different contexts.

Societal Influences and Barriers

Cultural factors significantly influence adolescents' attitudes toward family planning. A notable 52.8% of adolescents avoided using FP services due to fears of marginalization or parental disapproval, while 41.5% expressed concerns about potential side effects of contraceptives. These findings underscore the need for improved counselling and educational outreach.

Additionally, they resonate with Sidibé's (2014) observations about the inadequacy of youth-tailored FP services. Involving young people in policymaking could enhance service relevance and accessibility. Efforts to engage adolescents, parents, and community leaders while enhancing the quality of sexual and reproductive health services are crucial for overcoming these barriers (Dioubaté et al., 2021).

Psychosocial Factors and Educational Gaps

Psychosocial barriers to contraceptive use, such as shame associated with condom use and societal stigma surrounding sexual health discussions, highlight the need for community-based interventions. In the Volta Region of Ghana, 29.9% of adolescents identified family as a critical source of information (Akonor et al., 2021). Empowering parents to discuss sexuality openly is essential for combating misinformation and fostering healthy attitudes.

Both the study by Akonor et al. (2021) on adolescent mothers in Ghana and the research in Mweka highlight psychosocial factors influencing contraceptive use. While the Ghana study focuses on individual perceptions and self-efficacy as primary behaviour drivers, the Mweka study underscores familial support as critical. Together, these findings indicate that strategies to promote contraceptive use among adolescents must address both individual and familial dimensions, incorporating community-based interventions that enhance awareness and support.

Accessibility and Quality of Services

Despite the availability of FP services in proximity to most adolescents (67.3%), disparities in accessibility remain concerning. Only 31.5% of adolescents had heard of modern contraceptive methods, and 25.6% perceived a mismatch between needs and available services, pointing to a disconnect that must be addressed through targeted outreach efforts and quality improvements in FP service delivery.

The findings from Avocè et al. (2022) on unmet needs further underscore the pressing demand for adolescent-friendly services. Enhanced accessibility and targeted interventions can improve contraceptive uptake and address gaps in knowledge and service provision.

CONCLUSION AND RECOMMENDATIONS

The study examining factors influencing the use of family planning services among sexually active adolescent girls in the Mweka Health Zone identified several critical determinants affecting service utilization among 422 girls aged 15 to 24. Key findings indicated that sociodemographic characteristics, such as spousal involvement, birth spacing, and health area of residence, significantly impacted family planning service use. Additionally, psychosocial factors, including stigma, as well as organizational factors such as the distance to

services and the alignment between contraceptive methods and expressed needs, played significant roles.

To translate these findings into actionable interventions, several targeted recommendations emerge. First, the development of community-based programs is essential to raise awareness and combat stigma surrounding contraceptive use, emphasizing the importance of family planning in improving health outcomes. Partnerships with local leaders and community organizations can facilitate these initiatives, ensuring they resonate with the specific cultural context of the community. Moreover, the promotion of male involvement in reproductive health discussions is crucial for creating a supportive environment for young women. Educational initiatives focused on birth spacing and the benefits of family planning can empower adolescents to make informed choices.

Accessibility should be enhanced by reducing geographical barriers, potentially through the establishment of mobile clinics or outreach programs that bring services directly to underserved areas. Furthermore, health services must be tailored to meet the unique needs of adolescents, ensuring confidentiality and integrating psychosocial support into family planning services. These adaptations are likely to foster a more welcoming atmosphere for young women seeking reproductive health resources.

In terms of health policy implications, the findings of this study highlight the necessity for policymakers to prioritize the development of youth-centered reproductive health programs. Addressing these determinants through comprehensive, community-driven strategies will contribute to improved family planning service utilization, thereby enhancing the overall health and well-being of adolescents in the Mweka Health Zone and similar contexts (Amoah et al., 2023; Donkoh et al., 2024; Dramé et al., 2023).

Ethics Approval: This study received ethical approval from the Ethics Committee of the Higher Institute of Medical Techniques of Kinshasa, Democratic Republic of the Congo (Decision reference number: 055/ESU/ISTM/DG/2022).

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REFERENCES

Akanor, P. Y., Ayanore, M. A., Anaman-Torgbor, J. A., & Tarkang, E. E. (2021). Psychosocial factors influencing contraceptive use among adolescent mothers in the Volta Region of Ghana: Application of the Health Belief Model. *African Health Sciences, 21*(4), 1849–1859. https://doi.org/10.4314/ahs.v21i4.43

Amoah, E. J., Hinneh, T., & Aklie, R. (2023). Determinants and prevalence of modern contraceptive use among sexually active female youth in the Berekum East Municipality, Ghana. *PLOS ONE, 18*(6), e0286585. https://doi.org/10.1371/journal.pone.0286585

Avocè, J., Houngnihin, R., & Adisso, L. (2024). Mise en œuvre d'initiatives d'amélioration de la qualité pour améliorer l'utilisation des services de santé adaptés aux adolescents et aux jeunes à Zou, Bénin. *Glob Health Sci Pract, 12*(Suppl. 2), e2200223. https://doi.org/10.9745/GHSP-D-22-00223

Bhatt, N., Bhatt, B., Neupane, B., Karki, A., Bhatta, T., Thapa, J., Basnet, L. B., & Budhathoki, S. S. (2021). Perceptions of family planning services and its key barriers among adolescents and young people in Eastern Nepal: A qualitative study. *PLOS ONE, 16*(5), e0252184. https://doi.org/10.1371/journal.pone.0252184

Chamdimba, E., Kabiru, C. W., Ushie, B. A., Munthali, A., Thakwalakwa, C., & Ajayi, A. I. (2023). Naïve, uninformed and sexually abused: Circumstances surrounding adolescent pregnancies in Malawi. *Reproductive Health, 20*(1), 114. https://doi.org/10.1186/s12978-023-01655-3

Chimatiro, C. S., Mpachika-Mfipa, F., Tshotetsi, L., & Hajison, P. L. (2022). School-going adolescent girls'

preferences and views of family planning services in Phalombe district, Malawi: A descriptive, cross-sectional study. *PLOS ONE, 17*(5), e0267603. https://doi.org/10.1371/journal.pone.0267603

Cleland, J., Conde-Agudelo, A., Peterson, H., Ross, J., & Tsui, A. (2012). Contraception and health. *The Lancet, 380*(9837), 149-156. https://doi.org/10.1016/S0140-6736(12)60609-6

Dioubaté, N., Manet, H., Bangoura, C., Sidibé, S., Kouyaté, M., Kolie, D., Ayadi, A. M. E., & Delamou, A. (2021). Barriers to contraceptive use among urban adolescents and youth in Conakry, Guinea, in 2019. *Frontiers in Global Women's Health, 2*, 655929. https://doi.org/10.3389/fgwh.2021.655929

Donatus, L., Nicholas, T., Julius, D. S., & Obinchemti, E. T. (2023). Community perception of the determinants of unmet needs of family planning among married women in Buea Health District, Southwest Region, Cameroon. *Pan African Medical Journal, 45*, 58. https://doi.org/10.11604/pamj.2023.45.58.33949

Donkoh, I. E., Okyere, J., Seidu, A. A., Ahinkorah, B. O., Aboagye, R. G., & Yaya, S. (2024). Association between knowledge and use of contraceptive among women of reproductive age in sub-Saharan Africa. *Health Science Reports, 7*(5), e2028. https://doi.org/10.1002/hsr2.2028

Dramé, L., Kolié, D., Sidibé, S., Yombouno, J. F., & Delamou, A. (2024). Facteurs associés à l'utilisation des méthodes contraceptives chez les jeunes filles élèves en milieu rural guinéen [The factors associated with contraceptive use among young female students in rural Guinea]. *Santé Publique, 35*(6), 129-140. https://doi.org/10.3917/spub.236.0129

Erratum in: *BMC Women's Health, 20*(1), 212. https://doi.org/10.1186/s12905-020-01076-5

Ganle, J. K., Baatiema, L., Ayamah, P., Ofori, C. A. E., Ameyaw, E. K., Seidu, A. A., & Ankomah, A. (2021). Family planning for urban slums in low- and middle-income countries: A scoping review of interventions/service delivery models and their impact. *International Journal for Equity in Health, 20*(1), 186. https://doi.org/10.1186/s12939-021-01518-y

Hellwig, F., Saad, G. E., Wendt, A., & Barros, A. J. (2023). Women's marital status and use of family planning services across male- and female-headed households in low- and middle-income countries. *Journal of Global Health, 13*, 04015. https://doi.org/10.7189/jogh.13.04015

Katoka Fuanda, M. J. (2017). Déterminant de la faible utilisation des méthodes contraceptives modernes chez les femmes en âge de procréer: Cas de la zone de santé de Gombe Matadi. Mémoire de master professionnel, École de Santé Publique de l'UNIKIN, RDC [Determinants of the low use of modern contraceptive methods among women of reproductive age: Case of the Gombe Matadi health zone. Master's thesis, School of Public Health of UNIKIN, DRC] (French).

Kawuki, J., Gatasi, G., Sserwanja, Q., Mukunya, D., & Musaba, M. W. (2022). Utilisation of modern contraceptives by sexually active adolescent girls in Rwanda: A nationwide cross-sectional study. *BMC Women's Health, 22*(1), 369. https://doi.org/10.1186/s12905-022-01956-y

Mahouli, M.-M. M., Adje, E., Dougnon, V. T., Ahoussinou, C., Gandji, P., et al. (2023). Prévalence et facteurs explicatifs des grossesses non planifiées chez les adolescentes au Bénin [Prevalence and explanatory factors of unplanned pregnancies among adolescents in Benin] (French) HAL (halshs-04235816).

Mosuse, M. A., & Gadeyne, S. (2022). Prevalence and factors associated with unmet need for family planning among women of reproductive age (15-49) in the Democratic Republic of Congo: A multilevel mixed-effects analysis. *PLOS ONE, 17*(10), e0275869. https://doi.org/10.1371/journal.pone.0275869

Mpunga, D. M., Chenge, F. M., Mambu, T. N., Akilimali, P. Z., Mapatano, M. A., & Wembodinga, G. U. (2022). Determinants of the use of contraceptive methods by adolescents in the Democratic Republic of the Congo: Results of a cross-sectional survey. *BMC Women's Health, 22*(1), 478. https://doi.org/10.1186/s12905-022-02084-3

Prata, N., Fraser, A., Huchko, M. J., Gipson, J. D., Withers, M., Lewis, S., Ciaraldi, E. J., & Upadhyay, U. D.

(2017). Women's empowerment and family planning: A review of the literature. *Journal of Biosocial Science, 49*(6), 713-743. https://doi.org/10.1017/S0021932016000663

Sidibé, S., Traoré, M., & Bah, A. (2020). Fréquence des grossesses en milieu scolaire et profil des adolescentes concernées à Conakry, Guinée. *Santé Publique, 32*(5-6), 571-582. https://doi.org/10.3917/spub.205.0571

Utomo, B., Sucahya, P. K., Romadlona, N. A., Robertson, A. S., Aryanty, R. I., & Magnani, R. J. (2021). The impact of family planning on maternal mortality in Indonesia: What future contribution can be expected? *Population Health Metrics, 19*(1), 2. https://doi.org/10.1186/s12963

Yadav, K., Agarwal, M., Shukla, M., Singh, J. V., & Singh, V. K. (2020). Unmet need for family planning services among young married women (15-24 years) living in urban slums of India. *BMC Women's Health, 20*(1), 187. https://doi.org/10.1186/s12905-020-01010-9