

Research Article

Socio-demographic and Cultural Factors Associated with Decision of Married Women on Use Contraceptive Methods in the DRC

**Kasangye Kangoy Aurelie^{1,*} , Avevor Patrick Mawupemor² ,
Mutangala Muloye Guy³ **

¹School of Public Health, University of Lubumbashi, Lubumbashi, DR Congo

²Country Office, World Health Organization, Accra, Ghana

³Department of Gynecology and Obstetrics, University of Lubumbashi, Lubumbashi, DR Congo

Abstract

While the prevalence of using of modern contraceptive is 55% worldwide, the prevalence is barely 22% in Africa, and less than 10% in Central. In sub-Saharan Africa, the use of contraceptives is associated to a number of socio-demographic, economic and cultural factors which affect women's decision regarding their use of contraceptives. This study aims to explore socio-demographics factors and cultural factors that influence decision of married women to use the different contraceptive methods in Lubumbashi. A descriptive cross-sectional survey was conducted from June to September 2025 in Lubumbashi in the Democratic Republic of Congo (DRC). We interviewed a stratified random sample of 423 of married women in Kassapa I and II health areas. The data were encoded and analyzed using Excel 2016 and SPSS version 23. Both bi-variable and multivariable multivariate logistic regressions were used to determine the associated socio demographics and cultural factors of decision of married women on use of contraceptive methods in sub-Saharan countries. This study reveals that 83% of respondents have decision on use of contraceptive methods; the majority of women, 70.23%, used natural methods, including the calendar. A significant association was found between religion, education level, the spouse attitude toward to the use of contraception and the decision on use of contraceptive methods. The main reason for not using contraceptive methods is the desire for motherhood (81.2% of respondents). Contraceptive use among couples remains much influenced by level of education, religion and the attitude of the spouse.

Keywords

Socio-demographics, Contraceptive Methods, Couples, Lubumbashi, DRC

*Correspondence: Kasangye Kangoy Aurelie (kasangye.Kangoy@Unilu.ac.cd)

Received: 3 September 2026; **Accepted:** 23 September 2026; **Published:** 23 October 2026



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1. Introduction

Sub-Saharan Africa (SSA) accounted for 70% of the maternal deaths globally in 2023 and had the highest Maternal Mortality Ratio (MMR) at 546 maternal deaths per 100,000 live births [1]. Unplanned pregnancy and short inter-pregnancy spacing are the leading causes of maternal and child death in this region. In developing countries, more than 222 million pregnancies are unplanned [2].

Globally, contraceptive use has increased from 54% in 1990 to 57.4% in 2014. Despite this, modern contraceptive use is barely 22% in Africa, while being less than 10% in Central Africa [3]. In the DRC, contraceptive prevalence was found to be 29% among women aged 15 to 49 [4]. Katanga province has a contraceptive prevalence of 9% [5].

Correct usage of contraceptive methods is a problem in SSA countries: Prevalence on use of Modern contraceptive among women of reproductive age remains among the lowest in the world (below the 20% in the DRC [6]. The opposition that women face from their spouses is probably synonymous with their inability to convince their partners to use modern contraceptive methods. This can be attributed to insufficient contraception information provided to women through healthcare channels or the over-concentration of such messaging on women; the latter having to play the intermediary of the health personnel in the household [7]. Refusing to use contraceptive methods because of the desire for motherhood, prohibition by the church, opposition of the spouse or fear of side effects, generally brings back the question of the sufficiency of information on family planning. This question also calls into question the power that women have to make decisions about their health and contraceptive methods in Africa [1]. Women's decision on use of contraceptive methods has a big impact on health care services utilization including family planning service. A Study conducted in Ghana [8] and Pakistan [9], showed that those women's decision plays an important role in determining uptake of maternal health services. One of the reasons for not using contraceptives is the lack of power to decide on the use of these services [10].

Furthermore, previous studies showed that decision of women to use family planning was associated with education [11-14], age [11, 14-17], knowledge about family planning [15, 18, 19], working status of women [16, 17, 20], gender equality attitude [18], number of living children [12, 16, 17], socio-economic status [13, 14, 20-22], residence [16, 17], husbands desire in terms of number of children and attitude towards family planning [19].

This study aims to determine the factors influencing the decision-making power on the use of contraceptive methods by married women in couples in Lubumbashi.

Specific objectives

- 1) Determine the prevalence of decision of married women in Kassapa I and II Health areas
- 2) Determine the type of contraceptives methods used by married women in the in Lubumbashi (especially case of

Kassapa I and II health areas):

- 3) To identify socio-demographics and cultural factors associated with decision of married women to use contraceptive methods in the DRC.

2. Methodology

The study population was constituted of married women in the Kassapa I and II health areas in Lubumbashi in the DRC.

2.1. Sample

We used a stratified random sample for the selection of our respondents.

2.1.1. Sample Size

The sample size for the study was, obtained by using this statistical formula below:

$$n = \frac{Z\alpha 2.P (1-P)}{d^2}$$

With n= the sample size

Z = the reduced deviation which corresponds to 1.96 when α is 0.05

P= this is the calculated or estimated proportion or prevalence.

In the context of our work we estimated P= 50%, i.e. 0.5.

d² = It indicates the desired level of precision or error. In the case of our study we set it at 5, i.e. d= 0.05

$$n = \frac{Z\alpha 2.P (1-P)}{d^2} = \frac{1,962.0,5 (1-0,5)}{0,0052} = \frac{3,841.0,25}{0,0025}$$

That is, n = 384.16 + 10% (38,416) = 422,576 to correct the sample size and avoid non-response bias (according to the Schwartz formula). Thus our sample size was of 423 married women.

2.1.2. Sampling Technique

Our study was conducted only in two health district of Kassapa I and Kassapa II.

Our population is defined has married women from these two health district, and the strata are all the streets of the two health areas. Then we randomly selected 5 participants from each of the 85 streets of the two health areas.

2.1.3. Type of Study

A cross-sectional descriptive study involving 423 married women encountered in the Kassapa I and II health areas was conducted between June to September 2025.

2.1.4. Variables of the Study

Dependent variable

Decision on use of contraceptives methods by married women. This is a dichotomized variable:

Yes (if the women independently or together with their partner use contraceptive methods).

No (if neither the women decide independently or jointly with their partner to use contraceptive methods).

Independent variables

Age, type of marital status, level of education, religion and husbands position toward use of contraceptive methods.

2.2. Data Management and Analysis

Questionnaires were administered during interpersonal interview with the respond. Data were analyzed using Epi Info version 7.0.2.1 and SPSS 23 software.

3. Result

3.1. Univariate Analysis

Socio-demographic characteristics of married women

Table 1. Distribution of respondents by age group.

Age group of woman (years)	Frequency	%
[15-17]	12	2.84
[18-22]	120	28.37
[23-27]	81	19.15
[28-32]	70	16.55
[33-37]	47	11.11
[38-42]	77	18.20
[43-47]	6	1.42
≥ 47	10	2.36
Total	423	100

Table 2. Distribution of women by type of marital status.

Marital status	Frequency	%
Monogamous	372	87.94
Polygamous	51	12.06
Total	423	100

It emerges from this table that 372 or 87.94% of women were monogamous wives, against polygamous wives with 51 or 12.06%.

Table 3. Distribution of women by religion.

Religion	Frequency	%
Catholic	140	33.10
Kimbanguist	21	4.96
Muslim	6	1.42
Protestant	164	38.77
Other to be specified	92	21.75

This table shows that the majority of our respondents were from Protestant church with 164 or 38.77% of cases, followed by Catholics with 140 or 33.10% of total cases.

Table 4. Distribution of respondents according to the level of education of the women.

Women's level of education	Frequency	%
Primary	17	4.02
Secondary	217	51.30
University	189	44.68
Total	423	100

This table informs us that the majority of women had a secondary education level with 217 or 51.30% and the university education level was the most represented with 222 or 52.48% among men.

Table 5. Distribution of women according to knowledge of contraceptive methods.

Knowledge of contraceptive methods	Number of people (n= 350)	Percentage
Condom	194	55.43
Pill	112	32.00
IUD / Coil	17	4.86
Spermicide	15	4.29
Breastfeeding (MAMA)	27	7.71
Sterilization (vasectomy, hysterectomy)	16	4.57
Prove Depo	23	6.57
Noristera	10	2.86
Implant	67	19.14
Tubal ligation	10	2.86
Calendar	247	70.57
Abstinence	32	9.14

Knowledge of contraceptive methods	Number of people (n= 350)	Percentage
Coitus interrupts	94	26.86

This table shows that 70.57% of our respondents are most familiar with the calendar as a contraceptive method, followed by the condom (55.43%), and the pill (32%).

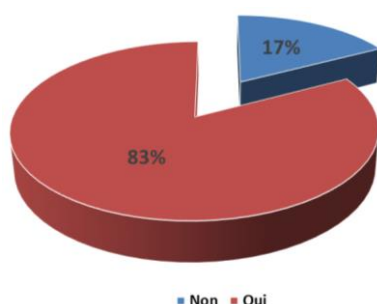


Figure 1. Distribution of married women according to decision on use of contraceptive methods.

3.2. Bivariate Analysis

Table 6. The Association between the Education Level and the Use of Contraceptive Methods (Using Logistic regression).

Level of education	Use of contraceptive methods		OR (95%)	P
	Yes	No		
Primary	7 (1.65%)	10 (2.36%)	1	
Secondary	175 (41.37%)	42 (9.93%)	2.97 [1.034-4.38]	0.002
University	169 (39.95%)	20 (4.72%)	9.11 [4.74-15.54]	0.001
Total	351 (82.97%)	72 (17.03%)		

Table 6 shows that the level of education was associated with the decision on use of contraceptive methods. Women with a secondary level of education were 2.97 more time to use contraceptives than women with the primary level of education. And women with University level were 9.11 more time to use contraceptive methods than those with primary level.

Table 7. The association between the decision on use of contraceptive methods and religion.

Religion	Use of contraceptive methods		OR (95%)	P<0.05
	Yes	No		
Catholic	123 (29.01%)	17 (4.01%)	5.04 [1.1-8.38]	P=0.008
Protestant	132 (31.2%)	32 (7.56%)	6.08 [1.3-9.45]	P=0.003
Kimbanguist	18 (4.25%)	3 (0.70%)	4.07 [1.7-9.5]	P=0.058
Muslim	5 (1.18%)	1 (0.23%)	1	

This Figure 1 shows us that the majority of married women have the decision on use of Contraceptive with 83%, against 17% of respondents who did not have it.

This figure reveals that the majority of spouses were not favor of contraceptive methods with 59, 81% against 40, 19%.

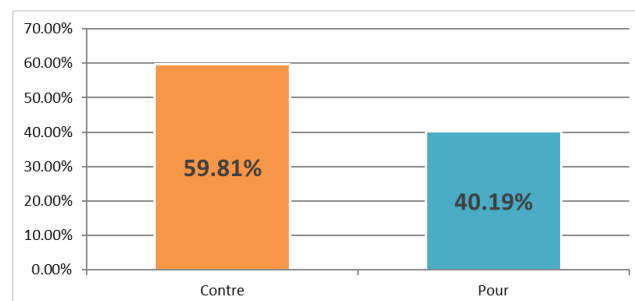


Figure 2. Presumed attitude of the spouse towards the use of contraceptive methods.

Use of contraceptive methods				
Other to be specified	73 (17.25%)	19 (4.49%)	0.20 [0.06-0.027]	P=0.09
Total	351 (82.97%)	72 (17.03%)		

Table 7 shows that married women from Catholic Church are 5.04 more time to have decision to use contraceptives methods than Muslim women, and women from protestant church are also 6.08 more time to use contraceptives methods than Muslim women.

Table 8. The Association between the Spouses's Opinion and the decision on use of Contraceptive Methods.

Use of contraceptive methods				
Spouse's attitude towards the use of contraceptive methods	Yes	No	OR (95%)	P
Yes	136 (32.15%)	33 (7.81%)	1.48 [1.2-2.38]	0.002
No	215 (50.82%)	39 (9.22%)	1	
Total	351 (82.97%)	72 (17.03%)		

Table 8 shows that the spouse's attitude toward the use of contraceptive methods is associated with the decision to use contraceptives methods by married women (OR: 1.48, p=0.002).

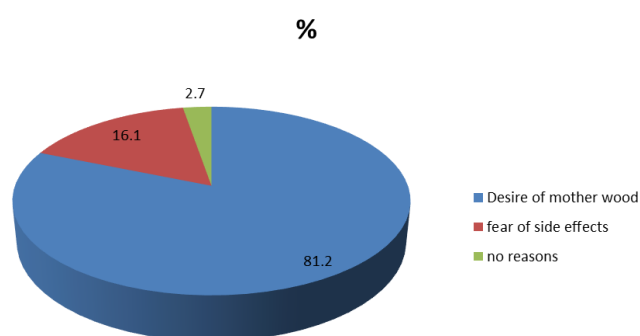


Figure 3. The reasons for refusing to use contraceptive methods were more the desire for motherhood, i.e. 81.2% followed by the fear of side effects 16.1%.

4. Discussion

The use of contraceptive methods in our study was significantly higher than the results of other studies such as the DHS-RDC II, which revealed that 14.6% of the population uses contraceptive methods in urban areas (Ministry of Planning and Monitoring of the Implementation of Modernity et al, 2014) [23] and those of the study conducted by Matungulu which found the modern contraceptive prevalence was 27.6% among the women surveyed [24]. This difference could be explained

by the fact that our results only concerned two health areas of the Lubumbashi health district, while the DHS took into account all the cities of the DRC and seven health districts of the city of Lubumbashi.

This study shows an association between decision to use of contraceptive methods and religion (Protestant and catholic) and also with the educational level. The present study is correlated to another study that revealed that educational status of women was associated with decision of women to use family planning [6]. Consistently, other studies also showed that educated women had higher odds of decision to use family planning [11, 16, 25, 26]. Education improves women's control over their reproductive choices by increasing their position within the family and educated women are more likely to desire smaller families than others and hence have a stronger motivation to practice contraceptives [27].

The reasons for refusing to use contraceptive methods were more the desire for motherhood, i.e. 81.9% followed by the fear of side effects 19.4%. Our study highlighted the positive attitude of the spouse to the use of contraceptive methods, and the desire of motherhood as a socio-demographic factor that does not favoring the use of contraceptive methods in the couple.

5. Conclusion

This study aims to explore socio-demographics factors that influencing the decision on use of contraceptive methods by married women in Lubumbashi.

In view of the results which reveal a high rate of decision-

making power rate in our respondents. Most of our respondents use Calendar, condom and pill as contraceptive methods.

Also this study shows that Age, Education level, religion and spouse's attitude toward use of contraceptives a method is associated of decision-making power on contraceptives methods in women of Kassapa I and II health areas in Lubumbashi.

Abbreviations

CI	Confidence Interval
DHS	Demographic and Health Survey
DRC	Democratic Republic of Congo
MMR	Maternal Mortality Ratio
OR	Odds Ratio
SSA	Sub-Saharan Africa

Author Contributions

Kasangye Kangoy Aurelie: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology

Avevor Patrick Mawupemor: Writing – original draft, Writing – review & editing

Mutangala Muloye Guy: Resources, Software, Supervision, Validation

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Josephine Aikpitanyi. Access alone is not enough: Rethinking maternal health in sub-Saharan Africa, *Afr J Reprod Health*, 2026 Feb 16; 30(3): 9-12. <https://doi.org/10.29063/ajrh2026/v30i3.1>
- [2] Sohni V Dean, Zohra S Lassi, Ayesha M Imam & Zulfiqar A Bhutta. Preconception care: promoting reproductive planning. *Reproductive Health* 2014, 11 (Suppl 3): S2. <http://www.reproductive-health-journal.com/content/11/S3/S2>
- [3] Tigabu K, Getu D, Zelalem B. Assessment of modern contraceptive practice and associated factors among currently married women age 15-49 years in Farta District, South Gondar Zone, Northwest Ethiopia. *Sci J Public Health*. 2014; 2(6): 507-512. <https://doi.org/10.11648/j.sjph.20140206.11>
- [4] Mosuse MA, Gadeyne S. 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 [Internet]. <https://doi.org/10.1371/journal.pone.0275869>
- [5] Nursing student training as a novel approach to increasing community-based access to contraception in the Democratic Republic of the Congo: evaluation of outcomes | Health Policy and Planning | Oxford Academic [Internet]. [cit  21 avr 2026]. Disponible sur: <https://academic.oup.com/heapol/article/40/10/1040/8256824?guestAccessKey=>
- [6] Roger MLG, Philippe LN, Kintaudi NM, Felix MK, Albert KN, Adrien NK, et al. Family Planning: Choosing Contraceptive Methods in Kongo Central Province, the Democratic Republic of the Congo. *Open J Obstet Gynecol*. 2023; 13(02): 372-82. <https://doi.org/10.4236/ojog.2023.132036>
- [7] Musau A, Schlingemann S, Odeh R, Ndungu L, Bulama A, Momanyi H, et al. Psychosocial determinants of contraceptive desire and use among sexually-active adolescent girls in Kenya and Nigeria: implications for girl-centered contraceptive programs. *Contracept Reprod Med*. 8 d  c 2025; 11(1): 6. <https://doi.org/10.1186/s40834-025-00416-w>
- [8] Edward K, Augustine T, Kwaku K, Joshua A. Women's health decision-making autonomy and skilled birth attendance in Ghana. *Int J Reproduct Med*. 2016; 9.
- [9] Xiaohui H, Ning M. The effect of women's decision-making power on maternal health services uptake: evidence from Pakistan. *Health Policy Plan*. 2013; 28: 176-184. <https://pubmed.ncbi.nlm.nih.gov/22522771/>
- [10] Mboane R, Bhatta M. Influence of a husband's healthcare decision making role on a woman's intention to use contraceptives among Mozambican women. *Reprod Health*. 2015; 12(1): 1-8. <https://doi.org/10.1186/s12978-015-0010-2>
- [11] Belay A, Mengesha Z, Woldegebriel M, Gelaw Y. Married women's decision making power on family planning use and associated factors in Mizan-Aman, South Ethiopia: a cross sectional study. *BMC Womens Health*. 2016; 16(1): 12. <https://doi.org/10.1186/s12905-016-0290-x>
- [12] Mussie A, Kiday H, Gebrezgabihier B, Gebremedhin G, Fitwi Tinsae A, Yemane B. Married Women's autonomy and associated factors on modern contraceptive use in Adwa town, northern Ethiopia. *Sci J Public Health*. 2014; 2(4): 297-304. <https://doi.org/10.11648/j.sjph.20140204.19>
- [13] Mohammad H, Zaina P, Khan MM. Effects of women's autonomy on maternal healthcare utilization in Bangladesh: Evidence from a national survey. *Sex Reprod Healthc*. 2017; 14: 40-47. <https://doi.org/10.1016/j.srhc.2017.09.002>
- [14] Pauline O, Christine G. Women's autonomy in health care decisionmaking in developing countries: a synthesis of the literature. *International journal of Women's. Health*. 2016.
- [15] Dinku D, Daniel B, Zenebe M, Sintayehu M. Decision-making power of married women on family planning use and associated factors in Dinsho Woreda. *South East Ethiop J Contracept*. 2020; 11: 15-23. <https://doi.org/10.2147/OAJC.S225331>
- [16] Acharya D, Bell J, Simkhada P, van Teijlingen E, Regmi P. Women's autonomy in household decision-making: a demographic study in Nepal. *Reprod Health*. 2010; 7(15).

- [17] Edossa Z, Debela T, Mizana B. Women's decision on contraceptive use in Ethiopia: multinomial analysis of evidence from Ethiopian demographic and health survey. *Health Serv Res Managerial Epidemiol.* 2020; 7: 1-7. <https://doi.org/10.1177/2333392820924565>
- [18] Bogale B, Wondafrash M, Tilahun T, Girma E. Married women's decision making power on modern contraceptive use in urban and rural southern Ethiopia. *BMC Public Health.* 2011; 11: 342. <https://doi.org/10.1186/1471-2458-11-342>
- [19] Alemayehu B, Kassa G, Zeleke L, Abajobir A, Alemu A. Married Women's decision-making power in family planning use and its determinants in Basoliben, Northwest Ethiopia. *J Contracept.* 2020; 11: 43-52. <https://doi.org/10.2147/OAJC.S250462>
- [20] Alem S. Cross sectional study on decision-making power of working and nonworking women in family planning and reproductive health and rights in Gombak. Malaysia Article in *J W J Womens Health Issues Care.* 2014; 3(2).
- [21] Becker S, Fonseca-Becker F, Schenck-Yglesias C. Husbands' and wives' reports of women's decision-making power in Western Guatemala and their effects on preventive health behaviors. *Soc Sci Med.* 2006; 62(9): 2313-26.
- [22] Grady W, Klepinger D, Billy J, Cubbins L. The role of relationship power in couple decisions about contraception in the US. *J Biosoc Sci.* 2010; 42(3): 307-23.
- [23] Haider T, Sharma M. Barriers to family planning and contraception uptake in sub-saharan africa: A systematic review. *Int Q Community Health Educ.* 2012; 33: 403-13. <https://doi.org/10.2190/IQ.33.4.g>
- [24] Matungulu, M., Ilunga, K., Ntambue, M., Musau, N., Ilunga, M., Katanga, M., et al. (2015) Determinants of the Use of Contraceptive Methods in the Mumbunda Health Zone in Lubumbashi, Democratic Republic of Congo. *The Pan African Medical Journal*, 22, Article No. 392.
- [25] Patrikar S, Basannar D, Sharma M. Women empowerment and use of contraception. *Med J Armed Forces India.* 2014; 70: 253-6.
- [26] Tilahun T, Coene G, Luchters S, Kassahun W, Leye E, Temmerman M, et al. Family planning knowledge, attitude and practice among married couples in Jimma zone, Ethiopia. *PLoS One.* 2013; 8(4): 61335.
- [27] Beckman L. Communication, power, and the influence of social networks in couple decisions on fertility. *Determinants Fertil Dev Countries.* 1983; 2: 415-43.