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Married Women's Decision-Making Regarding Modern Contraceptive Use and Influencing Factors in Girawa District, Eastern Ethiopia: Findings from a Community-Based Cross-Sectional Study, 2024

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Abstract

Women's decision-making power concerning modern contraceptive use plays a pivotal role in enhancing its adoption. Nonetheless, in Ethiopia, the available data on this subject remains sparse and inconsistent. This study aimed to determine the prevalence and identify the factors influencing women's decision-making power on modern contraceptive use in Girawa district, Eastern Ethiopia, between January 1–30, 2024. A community-based cross-sectional survey was carried out among 510 married women using contraceptives, selected through a multistage sampling approach in Girawa district. Both descriptive statistics and logistic regression analyses were utilized. The data collection tool was developed based on a review of relevant literature and underwent pretesting. Trained data collectors administered the questionnaire via face-to-face interviews. Data were cleaned and entered using Epidata and analyzed using SPSS version 20. Descriptive statistics, including frequencies, tables, and percentages, were used to summarize the data. Binary logistic regression was first conducted to identify variables for multivariable analysis using a p-value threshold of <0.25. Variables meeting this criterion were then included in the multivariable model to adjust for confounding factors. Associations were reported using adjusted odds ratios (AORs) with 95% confidence intervals (CIs), and statistical significance was declared at p-values below 0.05. The prevalence of women's decision-making power on modern contraceptive use was found to be 78% (95% CI: 74.4–81.6). Factors positively associated with greater decision-making power included: women's educational status (primary: AOR = 10.51 [5.37, 20.56]; secondary or higher: AOR = 2.58 [1.35, 4.93]), husband's education level (primary: AOR = 2.53 [1.33, 4.81]; secondary or above: AOR = 2.25 [1.08, 4.68]), being employed by the government (AOR = 5.29 [1.44, 19.57]), number of ANC visits (1–3: AOR = 2.16 [1.18, 3.95]; ≥4: AOR = 1.86 [1.85, 4.05]), having a positive attitude (AOR = 2.83 [1.28, 6.25]), and good knowledge about modern contraceptive methods (AOR = 3.67 [1.78, 7.56]). In Girawa district, about three out of four married women reported having decision-making power on modern contraceptive use. This empowerment was significantly linked to factors such as educational attainment, employment status, utilization of Antenatal Care (ANC) services, positive attitudes toward contraception, and adequate knowledge of modern contraceptive methods. Efforts focusing on these areas may further enhance women's autonomy in making informed contraceptive choices.

Keywords: Girawa, Women, Modern contraceptive use, Decision-making

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Introduction

Sub-Saharan Africa (SSA) accounts for 66% of global maternal deaths, with a Maternal Mortality Ratio (MMR) of 546 per 100,000 live births—the highest worldwide. Unplanned pregnancies and short intervals between births are major contributors to both maternal and child mortality in the region. In developing countries, it is estimated that over 222 million pregnancies are unintended, posing a significant public health issue. Such pregnancies are associated with serious outcomes, including mortality, health complications, and social and economic burdens for women, their families, and communities. Consequently, promoting the effective use of modern contraceptive methods has become a vital public health intervention, with women's empowerment being a central component [1].

Decision-making power regarding modern contraceptive use is defined as a woman's ability to make informed and voluntary choices about contraceptive methods, free from undue influence or pressure from others in her environment [2].

Globally, the topic of women's empowerment in contraceptive decisions, debates around modern contraceptive use, ethical considerations, and the broader uptake of reproductive health services has gained increased focus in policy formulation, program development, and monitoring. Research has largely concentrated on the determinants influencing contraceptive utilization among women [3–5]. However, until recently, the specific aspect of decision-making power in contraceptive use had not received sufficient attention. Health policies and programs have predominantly emphasized improving access and availability by supplying contraceptive services at the community level through health posts [2].

In Ethiopia, although national strategies such as the 20-year health sector transformation plan and family planning guidelines underscore women's autonomy in reproductive decisions, modern contraceptive use—especially in rural areas—remains relatively low. Moreover, there is a lack of comprehensive national data on women's decision-making power regarding contraceptives. Studies conducted across various regions of the country have yielded inconsistent findings, with reported decision-making rates ranging between 17% and 98% [6–9].

The Ethiopian government has reaffirmed its commitment to women's empowerment in the Health Sector Transformation Plan II (HSTP II) and launched a standalone Sexual and Reproductive Health (SRH) strategy for 2021–2025 [6]. This highlights the importance of not only improving service access and availability but also understanding the underlying factors that affect women's decision-making, as these can hinder service utilization. Nevertheless, past studies have not sufficiently explored these influencing factors. Thus, there is a need to investigate additional potential determinants.

The present study aimed to assess the extent of married women's decision-making power regarding modern contraceptive use and to identify associated factors in the high-fertility setting of Girawa district, Eastern Ethiopia.

Materials and Methods

Study design, area, and period

A community-based cross-sectional study was carried out among married women in Girawa district, Eastern Ethiopia, between January 1 and 30, 2024. The district is situated 75 kilometers from the zonal capital, Harar, and 520 kilometers from Addis Ababa, Ethiopia's capital. Girawa district comprises 45 rural kebeles—the smallest administrative units in the country—and two urban areas. The total population is 357,441, with 35,120 married women. The district is served by one general hospital, nine health centers, 47 health posts, two private clinics, and three drug vendors.

Population

The source population for this study included married women in Girawa district who had either previously used or were currently using contraceptive methods. The study population specifically referred to married women aged 15–49 years, residing in kebeles selected through random sampling, who were using or had a history of using modern contraceptive methods during the study timeframe.

Inclusion and exclusion criteria

Eligible participants were legally married women of reproductive age who had resided in the selected kebeles for six months or longer, were not currently pregnant, and had experience using contraceptive methods, either presently or in the past. Women were excluded from the study if they were medically ill, diagnosed with mental health conditions, infertile, or had undergone female sterilization.

Sample size determination

The sample size was determined using the single population proportion formula, based on a prior estimate of 71.0% for married women's decision-making power on contraceptive use [10]. Calculations incorporated a 5% margin of error (d), a 95% confidence level, a design effect of 1.5 to account for multistage sampling, and an additional 10% to compensate for potential non-response.

$$Ni = \frac{Z^2P(1-P)}{d^2} = \frac{(1.96)^2 0.71(1-0.71)}{(0.05)^2} = \frac{3.8416 \times 0.71(0.29)}{0.0025} = \frac{0.79098}{0.0025} = 316 \quad (1)$$

By incorporating a 10% non-response rate and applying a design effect (DE) of 1.5, the final sample size (n) was calculated as (316 + 31) × 1.5 = 521.

Additionally, the sample size was estimated using the double population proportion formula with EPI INFO version 7, taking into account several variables significantly associated with married women's decision-making power on modern contraceptive use **(Table 1)**. Nevertheless, the largest sample size—521—was obtained using the single population proportion formula.

Table 1. Showing sample size for second objective of married women decision-making power on modern contraceptive use in Girawa district, 2024

Variables		Decision making on modern contraceptive use	Sample size computed	Computed sample size +(10%) NR x DE 1.5	Reference
Educational Level	Exposed	46	60	99	[11]
	Unexposed	14			
Occupation	Exposed	128	179	295	[5]
	Unexposed	26			
Media Exposure	Exposed	118	282	465	[4]
	Unexposed	164			

Abbreviations: NR, non-response rate; DE, design effect

Sampling procedure

A multistage sampling method was employed to select the study participants. Initially, nine kebeles were chosen through simple random sampling. Subsequently, the total sample of 521 married women of reproductive age who are currently using or have ever used modern contraceptive methods was allocated proportionally according to the number of women of child-bearing age in each selected kebele.

The list of eligible women was obtained from the family folders maintained by health extension workers—these are the frontline health professionals operating at health posts—which contain detailed information about married women of reproductive age within each kebele in the study area.

A sampling frame was then created by assigning numbers to the women who currently use or had ever used contraceptives based on the registration records (family folders). Finally, simple random sampling was applied to select the individual study participants included in the research **(Figure 1)**.

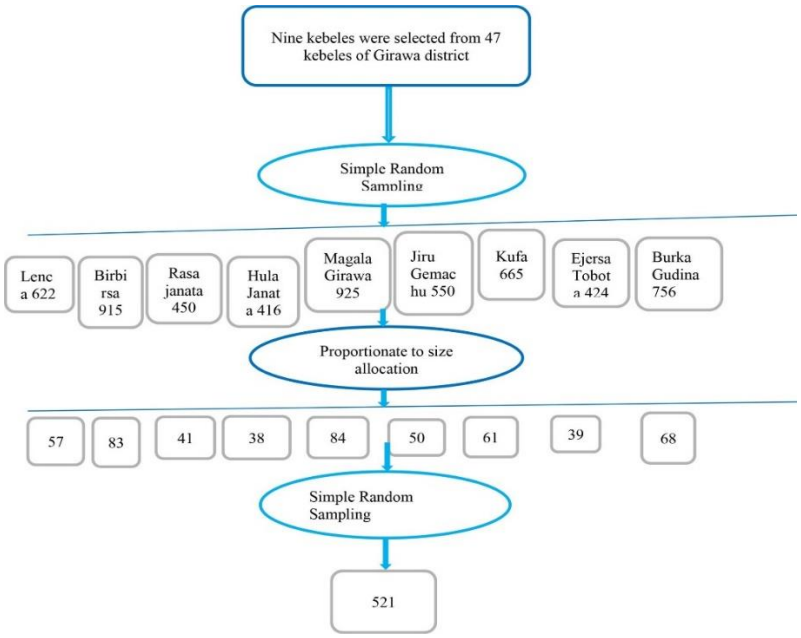

Figure 1. Schematic presentation of sampling procedure for married women decision-making power on modern contraceptive use and its associated factors among women of child-bearing age in Girawa district, eastern Ethiopia, 2024

Study variables

Dependent variable

Decision-making power of married women regarding modern contraceptive use (Yes/No).

Independent variables

Socio-demographic factors: Age groups of women (15–24, 25–34, and 35–49 years), place of residence (Rural or Urban), religious affiliation (Muslim or Christian), level of education (No formal education, primary education, secondary or higher), media exposure status (Yes or No), occupation categories (Farmer/Unemployed, Self-employed, Government-employed), ethnicity, and household income grouped into poor, middle, and rich by combining the poorest (first quintile) with poorer (second quintile) and richer (fourth quintile) with richest (fifth quintile) [7].

Husband-related variables: Desired number of children by the husband, husband's preferred timing for having another child (within 2 years, between 2 and 3 years, or after 3 years), husband's occupation, and his education level (no formal education, primary education, secondary or higher).

Individual factors: Knowledge about modern contraceptives (Yes or No) and attitude towards them (Yes or No).

Reproductive and contraceptive factors: Age at first marriage (<18 or ≥18 years), antenatal care (ANC) visits categorized as none, 1–3 visits, or 4 and above, number of living children (<3, 3–5, >5), and status as current contraceptive user (Yes or No) or ever user (Yes or No).

Operational definition

Women's decision-making power concerning contraceptive use is defined as their capacity to make choices about contraceptive needs and selections either independently or jointly with their husband during the previous 12 months. This was measured by a set of six questions, with separate scoring for two groups: current contraceptive users and those who have ever used contraceptives. Current users refer to women actively using modern contraceptives at the time of data collection, while ever users include those who have used modern contraceptives at least once in their lifetime regardless of current usage.

The six decision-related questions asked who makes the decisions about: (1) the number of children for the family, (2) the selection of contraceptive methods, (3) timing of childbirth, (4) location for obtaining contraceptive services, (5) how to access contraceptive services, and (6) whether to continue or discontinue contraceptive use. Response options were whether decisions were made by the woman alone, jointly with her husband, or by the husband alone [8].

A score of '1' was assigned if the woman made decisions independently or together with her husband after discussion; otherwise, a score of '0' was given if the husband made the decision alone. Women with scores below the mean were classified as lacking decision-making power on contraceptive use, while those with scores equal to or above the mean were regarded as possessing good decision-making power [8].

Knowledge about modern contraceptives

Participants' knowledge of modern contraceptives was evaluated through ten specific questions about various contraceptive methods. Those who correctly responded to at least 70% of these questions were classified as having good knowledge, while those scoring below 70% were considered to have poor knowledge [10].

Media exposure

Media exposure was determined based on whether women watched television, listened to the radio, or read newspapers. Women who engaged with any of these media sources at least once per week were categorized as having media exposure ("1"), whereas those who did not participate in any of these activities were classified as not exposed ("0") [9].

Attitudes toward modern contraceptives

Attitudes were measured using three statements rated on a Likert scale with options to agree, disagree, or remain neutral. Responses were then dichotomized, with scores equal to or exceeding 70% indicating a positive attitude toward modern contraceptive methods, and those below 70% representing a negative attitude [10].

Data collection and quality assurance

The questionnaire was adapted from the Ethiopian Demographic and Health Survey (EDHS) and related studies [12, 13]. It gathered data on socio-demographic and economic status, reproductive history, contraceptive use, and women's decision-making power related to modern contraceptive methods. Structured face-to-face interviews were conducted to collect quantitative data. To ensure validity and reliability, the questionnaire was first prepared in English, translated into Afan Oromo, and then back-translated into English by two independent language and reproductive health experts to verify accuracy. A pretest was performed on 5% of the sample (26 married women) in Kurfa Chele district, located 18 kilometers north of the study area, two weeks prior to the main data collection. Data quality was closely monitored daily by the supervisors and principal investigator, who checked for completeness, clarity, and consistency.

Data entry and cleaning were done using EpiData version 3.7.2, followed by export to SPSS version 20 for analysis.

Descriptive statistics such as frequencies, tables, and percentages were generated for all variables. Because the outcome variable was binary, both bivariate and multivariable binary logistic regression analyses were conducted to identify factors associated with decision-making power. Variables with p-values below 0.2 in bivariate analysis were included in the multivariable model to control for confounders [10]. Model fitness was confirmed with the Hosmer-Lemeshow test (p = 0.59), and multicollinearity was not detected among independent variables (VIF = 1). Associations were presented using crude odds ratios (COR) and adjusted odds ratios (AOR) with 95% confidence intervals. Statistical significance was determined at $p < 0.05$.

Results and Discussion

Socio-demographic profile of participants

Out of the 521 women approached, 510 married women participated, resulting in a 97.9% response rate. More than half (57.1%) were aged between 25 and 34 years, with nearly 70% living in rural areas. The majority (92.9%) belonged to the Oromo ethnic group, and 90% practiced Islam. Regarding education, 41% of women and 30.8% of their husbands had attained primary education. Most women (68.4%) were housewives, while 55.9% of their husbands worked as farmers. In terms of household wealth, 29% of respondents fell into the poor category, and 45.5% into the middle-income bracket. Media exposure was reported by 53.7% of participants, with 23.9% watching television, 43.5% listening to the radio, and 13.1% reading newspapers **(Table 2)**.

Table 2. Socio-demographic characteristics of study participants in Girawa District, Eastern Ethiopia, 2024 (n = 510)

Variables	Response category	Frequency	Percent
Age groups (Years)	15–24	127	24.9
	25–34	291	57.1
	35–49	92	18.0
Residence	Urban	155	30.4
	Rural	355	69.6
Religion	Orthodox	44	8.6
	Muslim	459	90.0
	Protestant	7	1.4
Ethnicity	Oromo	474	92.9
	Amhara	36	7.1
Education (women)	No formal education	136	26.7
	Primary (1–8 grade)	209	41.0
	Secondary	92	18.0
	Technical	20	3.9
	Higher education	53	10.4
Education (Partner)	No formal education	111	21.08
	Primary (1–8 grade)	157	30.8
	Secondary	102	20.0
	Technical	33	6.5
	Higher education	107	21.0
Household income	Poor	148	29.0
	Middle	232	45.5
	Rich	130	25.5
Media exposure (Women)	No	236	46.3
	Yes	274	53.7
Occupation (Women)	Housewife	349	68.4
	Farmer	26	5.1
	Merchant	51	10.0

Government employee	47	9.2
Private or NGO employ	20	3.9
Daily Labor	17	3.3

Abbreviation: NGO, Non-Governmental Organization

Reproductive characteristics of study participants

Almost half (47.3%) of the women were current users of modern contraceptives, while a slightly higher proportion (52.7%) had used modern contraceptives at some point in their lives. Among the participants, 59.2% had attended one to three antenatal care (ANC) visits, and 57.0% were married at the age of 18 years or older. Nearly half (47.5%) had between three and five living children. Regarding fertility preferences, 78.2% of husbands wished to have five or more children, with 55.7% of these husbands expressing a desire to have additional children within 2 to 3 years **(Table 3)**.

Table 3. Reproductive Characteristics of Study Participants in Girawa District, Eastern Ethiopia, 2024 (n = 510)

Variables	Response Category	Frequency	Percentage (%)
Age at First Marriage (Women)	Under 18 years	220	43.0
	18 years and above	290	57.0
ANC Visits	No antenatal care visits	70	14.5
	1 to 3 antenatal visits	285	59.2
	4 or more antenatal visits	127	26.3
Number of Living Children	Fewer than 3 children	210	41.2
	Between 3 and 5 children	242	47.5
	More than 5 children	58	11.4
Modern Contraceptive Use	Currently using	239	47.0
	Ever used	271	53.0
Husband's Desired Number of Children	Less than 3 children	8	1.6
	3 to 4 children	103	20.2
	5 or more children	399	78.2
Husband's Desired Timing for Additional Child	Within 2 years	34	6.7
	Between 2 and 3 years	284	55.7
	More than 3 years	192	37.6

Abbreviation: ANC = Antenatal Care

Attitude towards modern contraceptives

A large majority (90.8%) of the participants demonstrated a positive attitude toward the use of modern contraceptives. Nearly all respondents (97.8%) agreed that contraceptive use improves opportunities for children, and 96.9% believed it contributes to a better quality of life. Around 90.4% agreed that women with many children tend to look fatigued, while 77.3% disagreed with the notion that modern contraceptives undermine trust between partners. Furthermore, 89.6% rejected the idea that women who use contraceptives are abandoned by their husbands, although 87.5% felt that women require their husband's permission to use contraceptives **(Table 4)**.

Table 4. Attitude towards modern contraceptive use of study participants in Girawa district, eastern, Ethiopia, 2024 (n = 510)

Variable	Response Category	Frequency	Percentage (%)
Children's opportunities improve if parents use contraceptives	Agree	499	97.8
	Disagree	10	2.0
	Neutral	1	0.2
Using contraceptives enhances one's living standards	Agree	494	96.9
	Disagree	16	3.1
	Neutral	0	0.0
	Agree	466	91.4

Contraceptive use assists mothers in regaining strength for next pregnancy	Disagree	44	8.6
	Neutral	0	0.0
	Agree	480	94.1
Child spacing safeguards health of mother and child	Disagree	29	5.7
	Neutral	1	0.2
	Agree	461	90.4
Women with many children appear fatigued and exhausted	Disagree	49	9.6
	Neutral	0	0.0
	Agree	116	22.7
Contraceptive use causes loss of trust between partners	Disagree	394	77.3
	Neutral	0	0.0
	Agree	52	10.2
Wives who use contraceptives are abandoned by their husbands	Disagree	457	89.6
	Neutral	1	0.2
	Agree	306	60.0
Couples using modern contraceptives experience marital conflict	Disagree	200	39.2
	Neutral	4	0.8
	Agree	446	87.5
Women need their husband's permission to use contraceptives	Disagree	64	12.5
	Neutral	0	0.0
	Agree	488	95.7
Couples practicing modern contraceptives have happy families	Disagree	22	4.3
	Neutral	0	0.0
	Agree	178	34.9
Modern contraceptive use may result in infertility for women	Disagree	327	64.1
	Neutral	5	1.0
Overall attitude of married women toward modern contraceptive use	Poor Attitude	47	9.2
	Good Attitude	463	90.8

Knowledge of modern contraceptives

A large majority (about 89.2%) of the participants showed a strong understanding of modern contraceptive methods. All participants had heard about these methods, and 96.7% recognized their importance. Awareness of potential side effects was reported by over 86.9%, with headaches (60.0 percent) and irregular menstruation (68.6 percent) being the most commonly identified. Additionally, nearly 80% of women had conversations with their husbands about contraception, and 74.3% actively sought their husband's support regarding contraceptive use **(Table 5)**.

Table 5. Knowledge of Modern Contraceptive Use Among Study Participants in Girawa District, Eastern Ethiopia, 2024 (n = 510)

Variable	Response Category	Frequency	Percentage (%)
Awareness of modern contraceptive methods (n = 510)	Yes	510	100
	No	0	0.0
Types of modern contraceptive methods mentioned (n = 495)	Pills	393	79.4
	Intrauterine Contraceptive Device (IUCD)	45	8.8
	Injectable	447	87.6
	Implants/Norplant	336	65.9
	Condom	63	12.3
	Female Sterilization	18	3.5
	Male Sterilization	11	2.1

	Emergency Contraception	51	10.0
Recognition of contraceptive importance (n = 510)	Yes	493	96.7
	No	17	3.3
Reasons for using modern contraceptives (n = 493)	Prevention of unwanted pregnancy	87	17.1
	Child spacing	490	96.1
	Medication	20	3.9
	Prevention of sexually transmitted diseases (STD)	25	4.9
Awareness of contraceptive side effects	Yes	443	86.9
	No	67	13.1
Side effects reported by participants (n = 443)	Weight gain	67	13.1
	Headache	306	60.0
	Irregular menstruation	350	68.6
	Vomiting	20	3.9
	Nausea	58	11.4
Discussed contraceptive use with husband	Yes	404	79.2
	No	106	20.8
Sought husband's support regarding contraceptive use	Yes	379	74.3
	No	131	25.7
Sought support from relatives about contraceptive use	Yes	38	7.5
	No	472	92.5
Awareness of emergency contraceptives	Yes	51	10.0
	No	459	90.0
Overall knowledge level on modern contraceptives	Poor knowledge	55	10.8
	Good knowledge	455	89.2

Decision-making power of married women on modern contraceptive use

Among married women, 78% (95% CI: 74.4%, 81.6%) reported having decision-making power regarding the use of modern contraceptives. Decisions were made solely by their partners in about 22% of cases. Almost 90% of couples made collaborative decisions about the number of children to have, while approximately 66.9% jointly selected the contraceptive method. Joint decisions on the timing of childbirth and where to access contraceptive services were reported by 59% and 65.9% of women, respectively. Furthermore, more than two-thirds (68%) shared decisions on seeking reproductive health care, and 78.4% participated together in decisions to either continue or stop contraceptive use **(Table 6)**.

Table 6. Decision-Making Power of Married Women on Modern Contraceptive Use in Girawa District, Eastern Ethiopia, 2024 (n = 510).

Variables	Decision Maker	Frequency	Percentage (%)
Decision on the total number of children in the family	Woman alone	35	6.9
	Joint decision (woman & husband)	449	88.0
	Husband alone	26	5.1
Decision on selecting the type of modern contraceptive	Woman alone	136	26.7
	Joint decision	341	66.9
	Husband alone	33	6.5
Decision on timing of childbirth	Woman alone	190	37.3
	Joint decision	301	59.0

Decision on location to obtain modern contraceptive services	Husband alone	19	3.7
	Woman alone	136	26.7
	Joint decision	336	65.9
Decision on how to access contraceptive services	Husband alone	38	7.5
	Woman alone	135	26.7
	Joint decision	347	68.0
Decision on continuing or stopping use of modern contraceptives	Husband alone	28	5.5
	Woman alone	81	15.9
	Joint decision	400	78.4
Overall decision-making power on modern contraceptive use	No decision power	112	22.0
	Has decision power	398	78.0

Factors linked to married women's decision-making power on modern contraceptive use

A range of variables were analyzed in the bivariate stage, including women's age, residential location, religion, educational attainment of both women and their husbands, household income, media exposure, occupations of women and their husbands, ethnicity, husbands' preferred number of children and timing for subsequent births, age at first marriage, antenatal care (ANC) visits, number of living children, and women's knowledge and attitude toward modern contraceptive methods. However, after controlling for confounders in the multivariable analysis, only women's education, husbands' education, women's employment status, ANC attendance, and women's knowledge and attitude regarding modern contraceptive use showed significant associations with women's decision-making power on contraceptive use.

Women who completed primary education were found to be approximately 11 times more likely to have decision-making authority over contraceptive use compared to women without formal schooling (AOR = 10.51; 95% CI: 5.37–20.56). Those with secondary education or higher had about threefold increased odds relative to women with no formal education (AOR = 2.58; 95% CI: 1.35–4.93).

Concerning husbands' education, women whose partners attained primary education had 2.53 times higher odds of having decision-making power compared to those whose husbands lacked formal education (AOR = 2.53; 95% CI: 1.33–4.81). Moreover, husbands with secondary or higher education levels were more than twice as likely to enable their wives' participation in contraceptive decision-making compared to husbands without formal education (AOR = 2.25; 95% CI: 1.08–4.68).

Employment in government sectors increased women's likelihood of having contraceptive decision-making power by over five times compared to housewives (AOR = 5.29; 95% CI: 1.44–19.57).

Women who attended between one and three ANC visits had roughly double the odds of exercising decision-making power over contraceptive use than those who did not attend any ANC visits (AOR = 2.16; 95% CI: 1.18–3.95). Similarly, those with four or more ANC visits had 1.86 times higher odds of decision-making power relative to those with no ANC attendance (AOR = 1.86; 95% CI: 1.85–4.05).

Participants demonstrating good knowledge of modern contraceptives were nearly four times as likely to have decision-making authority compared to women with poor knowledge (AOR = 3.67; 95% CI: 1.78–7.56).

Additionally, women expressing a positive attitude towards modern contraceptive use were approximately 2.8 times more likely to hold decision-making power than those with negative attitudes (AOR = 2.83; 95% CI: 1.29–6.25) **(Table 7)**.

Conversely, no significant associations were found between decision-making power and women's age, place of residence, household income, husbands' desired number of children, media exposure, husbands' occupation, number of living children, or age at first marriage once other variables were controlled.

Table 7. Multivariable logistic regression on factors associated with married women decision-making power on moder contraceptive use in Girawa District, Eastern Ethiopia 2024 (n = 510)

Variable	Response Categories	Women Decision-making on modern contraceptive		COR(95%CI)	AOR(95%CI)	PV
		No (%)	Yes (%)			
Residence	Rural	92(25.9)	263(74.1)	1	1	

	Urban	20(12.9)	135(87.1)	2.36(1.39–3.99)	1.25(0.57–2.76)	
	15–24	15(11.8)	112(88.2)	1	1	
Age of women (years)	25–34	68(23.4)	223(76.6)	0.44(0.24–0.80)	0.50(0.25–1.03)	
	35–49	29(31.5)	63(68.5)	0.29(0.15–0.58)	0.54(0.23–1.25)	
Media Exposure	No	62(26.3)	174(73.7)	1	1	
	Yes	50(18.2)	224(81.8)	1.59(1.05–2.43)	0.84(0.48–1.47)	
	Poor	35(23.6)	113(76.4)	1	1	
Family earnings	Middle	61(26.3)	171(73.7)	0.87(0.54–1.40)	0.62(0.34–1.16)	
	Rich	16(12.3)	114(87.7)	2.21(1.16–4.21)	0.92(0.40–2.09)	
Number of children preferred by the husband	≥ 5	99(24.8)	300(75.2)	1	1	
	3–4	12(11.7)	91(88.3)	2.50(1.32–4.76)	1.33(0.60–2.93)	
	< 3	1(12.5)	7(87.5)	2.31(0.28–19.01)	0.28(0.03–2.77)	
Number of children currently alive	> 5	20(34.5)	38(65.5)	1	1	
	3–5	59(24.4)	183(75.6)	1.63(0.88–3.02)	0.99(0.44–2.29)	
	< 3	33(15.7)	177(84.3)	2.82(1.46–5.44)	0.87(0.33–2.30)	
	No education	47(42.3)	64(57.7)	1	1	
Education (partner)	Primary	31(19.7)	126(80.3)	2.98(1.73–5.14)	2.53(1.33–4.81)*	0.005
	Secondary and above	34(14.0)	208(86.0)	4.49(2.66–7.58)	2.25(1.08–4.68) *	0.030
	No ANC visit	30(43.0)	40(57.0)	1	1	
Antenatal care visit (ANC)	1–3 ANC visit	55(19.3)	230(80.7)	2.76(1.68–4.56)	2.16(1.18–3.95) *	0.012
	≥ 4 ANC visit	18(14.2)	109(85.8)	4.00(2.11–7.61)	1.86(1.85–4.05) *	0.040
Age at first marriage	≥ 18	57(19.7)	233(80.3)	1	1	
	< 18	55(25.0)	165(75.0)	0.73(0.48–1.12)	0.75(0.44–1.29)	
	Housewife	91(26.1)	258(73.9)	1	1	
Occupation (women)	Self-employ	18(19.1)	76(80.9)	1.49(0.85–2.62)	1.46(0.74–2.89)	
	Government employee	3(4.5)	64(95.5)	7.52(2.31–24.54)	5.29(1.44–19.57)*	0.012
	No education	65(47.8)	71(52.2)	1	1	
Education (women)	Primary	18(8.6)	191(91.4)	9.71(5.39–17.50)	10.51(5.37–20.56)*	0.000
	Secondary and above	29(17.6)	136(82.4)	4.29(2.54–7.25)	2.58(1.35–4.93)*	0.004
Attitude towards modern contraceptive	Poor	23(48.9)	24(51.1)	1	1	
	Good	89(19.2)	374(80.8)	4.03(2.17–7.46)	2.83(1.28–6.25)*	0.010
	Farmer	77(27.0)	208(73.0)	1	1	
Occupation (Partner)	Self-employee	20(24.7)	61(75.3)	1.13(0.64–1.99)	0.39(0.19–1.85)	
	Government employee	15(10.4)	129(89.6)	3.18(1.76–5.77)	1.13(0.49–2.61)	
Knowledge about contraceptive	Poor	31(56.4)	24(43.6)	1	1	
	Good	81(17.8)	374(82.2)	5.96(3.32–10.70)	3.67(1.78–7.56)*	0.000

Notes: Self employee include farmer for women only, merchant, student, and daily labor
* Significantly associated variables at multivariable analysis
Abbreviations: AOR, Adjusted Odd Ratio; COR, Crude Odd Ratio; 1, Reference value; CI, Confidence Interval; PV, P-value

This research was designed to explore the extent of married women's decision-making power regarding modern contraceptive use and to identify factors influencing it. Findings from the Girawa district showed that 78.0% of married women had autonomy in making decisions about modern contraceptives. Variables such as

women's education, their husbands' educational background, women's employment status, attending one or more ANC visits, and both a favorable attitude toward and sufficient knowledge about modern contraceptive methods were all positively linked with decision-making power in this context.

Comparable outcomes have been observed in previous studies conducted in the Metekel zone (71.0%), Basoliben district (80%), and Tanzania (79.0%) [10, 11, 14], which may be attributable to similarities in demographic or cultural settings. However, the proportion found in the present study is lower than those reported in Indonesia (93.9%), India (92.2%), and Nigeria (90%) [15–17]. The variation in results could stem from methodological discrepancies, differences in data collection tools, and the unique socio-cultural environments of each study area. Girawa, being a semi-rural district, may reflect traditional values and societal norms that differ considerably from more urbanized settings, potentially influencing women's reproductive autonomy. In contrast, the prevalence observed here was higher than in studies from Dinsho district (52.0%), Mizan-Aman (67.2%), South Africa (66%), and another study in Nigeria (67.3%) [8, 18–20].

Education emerged as a powerful enabler in this study. Women with formal education demonstrated significantly greater control over decisions involving modern contraceptive use compared to those without any formal schooling. Similar patterns have been reported in studies from Mizan-Aman, Metekel zone, and Nigeria [9, 18]. Education is often seen as a foundational factor that fosters women's empowerment by improving their access to information, enhancing communication skills, and increasing participation in decision-making processes at both household and community levels [10, 21].

The educational attainment of husbands also played a notable role. Women whose spouses had received formal education were more likely to report involvement in contraceptive decision-making. This aligns with findings from Ethiopia and various sub-Saharan countries, including Burkina Faso, Mali, Niger, and Chad [1, 10, 18]. Educated men are often more receptive to discussions surrounding family planning and may support shared decisions, reflecting the influence of policies promoting gender equity and educational access.

Occupational status was another key factor. Women employed in government positions were found to have higher levels of independence in making contraceptive choices. This trend mirrors findings from studies in Mizan-Aman city, where employment was shown to significantly affect women's ability to make informed reproductive decisions [18]. Employment is often associated with financial autonomy and increased self-efficacy, both of which can empower women to take greater control over personal and reproductive health matters.

Additionally, ANC attendance was linked to higher decision-making power regarding modern contraceptives. Women who attended antenatal care visits were more likely to participate actively in contraceptive choices than those who did not. Similar associations have been noted in studies across sub-Saharan Africa [1]. ANC services often serve as a crucial point of contact where women receive reproductive health education, including guidance on contraceptive options, thereby reinforcing their capacity to make informed decisions.

Married women who had good knowledge of modern contraceptives were found to have four times greater odds of possessing decision-making power regarding their use compared to those with poor knowledge. This finding is consistent with previous studies conducted in Basoliben and the Metekel zone, Ethiopia [10, 11]. When women lack adequate knowledge about modern contraceptive methods, they are less likely to be empowered in making informed reproductive choices, and their ability to influence their husbands' decisions also diminishes. For this reason, strengthening women's knowledge about modern contraceptives is essential to improving both adoption and continued use.

Likewise, women who demonstrated a positive attitude toward modern contraceptive use were three times more likely to report decision-making power in this area than those who held negative attitudes. This result aligns with cross-sectional studies carried out in Ethiopia [8, 10]. Attitude is a vital determinant in the adoption of modern contraceptives and is also linked to the intention to use these methods in the future. It plays a central role not only in the actual use but also in shaping women's decision-making power over time [10].

Strengths and limitations of the study

One of the strengths of this study is its representativeness; participants were selected from all kebeles within the Girawa district, which enhances the generalizability of the findings to the entire district. Moreover, the relatively large sample size contributes to the robustness and statistical credibility of the observed associations.

However, certain limitations should be noted. Due to the cross-sectional design, it is not possible to infer temporal or causal relationships between the dependent and independent variables. Additionally, the study may be affected by information bias, as it does not include input from husbands and relies exclusively on the women's reports about their spouses. There is also potential for social desirability bias, especially given the sensitive nature of some of the survey questions. Nonetheless, efforts were made to reduce this by maintaining anonymity and confidentiality during data collection. Future studies would benefit from involving men/husbands and

employing qualitative research methods to validate and deepen understanding of the responses.

Conclusion

In the Girawa district, approximately three out of every four married women were found to have decision-making power regarding modern contraceptive use. The study identified several modifiable factors that significantly influence this autonomy, including educational attainment of both men and women, women's employment status, better utilization of antenatal care services, and enhanced attitudes and knowledge toward modern contraceptive methods. Strengthening these specific areas through targeted interventions may further enhance women's capacity to independently make informed decisions related to contraceptive use.

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Ethics statement: Ethical approval for this study was obtained from the ethical review committee of the College of Health and Medical Sciences (Reference: IHRERC/172/2023). A formal cooperation letter was issued by the School of Graduate Studies and submitted to the Girawa District Health Office. Prior to data collection, data collectors provided participants with detailed information about the study's aims, procedures, risks, and benefits. Written, informed, and voluntary consent was obtained from all adult participants. For participants under the age of 18, assent was collected along with written consent from a parent, husband, or guardian. Participation was entirely voluntary, and individuals were free to decline or withdraw at any stage. Confidentiality was strictly upheld by omitting names and any personal identifiers from the questionnaire.

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