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Research Paper

Perceptions of Family Planning Integration across Health Service Units among Women Attending Antenatal Care in Gurage Zones, Ethiopia

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Abstract

Unintended pregnancy is a significant public health concern, particularly in Sub-Saharan African countries. Notably, positive perception towards family planning integration among women is impactful in decreasing maternal morbidity and mortality, which also helps to normalize family planning services in the general health care system. This study assessed women's perceptions of family planning integration across health service units among antenatal care attendees in Gurage Zones, Ethiopia. A facility-based study nested within a quasi-experimental study was conducted from December 2023 to October 2024 in two hospitals and six health centers in the two Gurage Zones. A consecutive sampling method was used to recruit 388 third-trimester pregnant women. Structured, interviewer-administered questionnaires using kobo toolbox were used to gather data, and descriptive statistics and logistic regression were used for the analysis. This study revealed that 76.03% of participants held negative perceptions toward the integration of family planning, whereas 23.97% expressed positive perceptions. Age, religious affiliation, education, and occupation were significant socio-demographic determinants. Women aged 25–34 and ≥35 years, those from certain religious backgrounds, and participants with primary or no formal education were more likely to report positive perceptions, while housewives were less likely to report positive perceptions compared to government employees. This study revealed that perceptions toward family planning integration into the general health care system remain low. Targeted interventions are very important to address the negative perception in the community. Tailoring health education and counseling strategies, like decisional aids, can contribute to improved maternal health outcomes.

1. Introduction

Maternal morbidity and mortality can be significantly reduced by family planning with a low cost for health care (Erim et al., 2012; Kasahun et al., 2021). Women's and couples' quality of life through family planning allows the

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couple to manage their family, which provides for an empowered couple in managing their reproductive health (Diamond-Smith et al., 2025; Rana et al., 2019). As stated by both the WHO and the Sustainable Development Goals (SDGs), universal access to sexual and reproductive health services provides basic support for the development of more robust and resilient health systems (WHO, 2016, 2022). Integrating family planning into the overall health system is one avenue through which continuity of care can be established, and the use of contraceptive counseling can become a routine service offered in primary care settings (Mruts et al., 2023; Roro et al., 2024; Titiyos et al., 2023).

There are many commitments and agreements made globally regarding debugging pregnancies, but unintended pregnancies are still a significant public health concern (Khan & Islam, 2022). Approximately 45% of all pregnancies around the world are thought to be unplanned, which means there are about 120 million accidental pregnancies each year around the world (Bearak et al., 2020; UNFPA, 2022). In Sub-Saharan African countries, unplanned pregnancies are far more common than in other parts of the world, making up approximately 26%-54% of pregnancies (Ameyaw et al., 2019; Bain et al., 2020). Unplanned pregnancies result in bad health outcomes for both mothers and babies. Research shows that delayed birth spacing (or first birth spacing) less than 24 months after delivery is associated with low birth weight, premature birth, and a higher rate of infant mortality (Beyene et al., 2025; Jena et al., 2022). Adding access to family planning programs like Long-Acting Reversible Contraceptives (LARCs) can help resolve these problems (Arero et al., 2022).

Ethiopia has prioritized family planning within its national health strategies via the Health Sector Transformation Plan II (HSTP II) and the National Guideline for Family Planning Services. The Ethiopian Government aims to achieve the 2030 family planning target of expanding the use of family planning in order to decrease maternal deaths (UNFPA). Post-Partum Family Planning (PPFP) functionality has been established within antenatal and postnatal care services, and all women should have received family planning counselling prior to being discharged from the hospital after giving birth (Titiyos et al., 2023; Vaishya et al., 2019). However, there remain a number of implementation and operational gaps that continue to hinder access to and use of postpartum family planning. Inconsistency shows in that, on average, women in Ethiopia want to delay their next pregnancy, the number of women accessing and using family planning remains low (ICF, 2019; Khan & Islam, 2022).

Understanding how women perceive the incorporation of family planning services into the overall health care system helps demonstrate the acceptability, usability, and trustworthiness of family planning services (Titiyos et al., 2023). If women view family planning in a positive light, family planning services will become more used and routinely delivered as part of the overall health care system, whereas if the perception of family planning is negative, women may avoid access to family planning services, leading to increased rates of unintended pregnancies among women who require family planning services (Getaneh et al., 2020; Shumet et al., 2024). Therefore, determining how women perceive family planning will help guide appropriate culturally relevant interventions to effectively provide these services.

Previous studies have examined the extent of family planning use among Ethiopian women by primarily documenting levels of family planning use and access to family planning services as well as documenting and improving the health status of women who utilize family planning services through improved access to family planning

services. However, studies examining women's perspectives regarding incorporating family planning into the overall health care system are limited in number in Ethiopia.

The Gurage Zones present a unique socio-cultural context characterized by diverse religious and ethnic communities, where traditional norms and varying levels of health literacy may influence acceptance of integrated health services. Despite national policies promoting family planning integration, no prior study in this region has examined women's perceptions of such integration within routine health services. Therefore, this study aimed to assess women's perceptions towards the integration of family planning into the general health system in Gurage Zones, Ethiopia. The findings are intended to inform locally relevant strategies to enhance family planning counseling, service delivery, and alignment with national reproductive health goals.

2. Method and Materials

2.1. Study Period and Area

A quasi-experimental study was conducted from December 15, 2023, to October 10, 2024, in the Gurage Zones. Recently, the former Gurage administrative area was reorganized into two zones: Gurage Zone and East Gurage Zone. Gurage Zone comprises 13 woredas (districts), whereas East Gurage Zone comprises six woredas. Wolkite serves as the capital of Gurage Zone, while Butajira serves as the capital of East Gurage Zone. The combined population of the two zones is approximately 1,279,646, of whom 657,568 are women (Geda et al., 2021). According to the Gurage Zone Health Office, there are about 70 health centers, 414 health posts, and several public hospitals across the two zones. This study was conducted in two public hospitals and six health centers located in both Gurage and East Gurage Zones.

2.2. Study Design

This study employed a cross-sectional analysis nested within a larger quasi-experimental (pre-post intervention) study. The study aimed to evaluate the effect of an integrated family planning counseling intervention on postpartum contraceptive uptake among women attending antenatal care in Gurage Zones. The present analysis utilizes the baseline data collected from participants before any intervention was implemented. This nested cross-sectional design was chosen to efficiently assess the pre-existing perceptions of family planning integration among the study population, providing a snapshot of attitudes and determinants independent of the subsequent intervention. The analysis focuses exclusively on the outcome of perception and its associated factors at a single point in time (baseline).

2.3. Study Population, Inclusion and Exclusion Criteria

The study population consisted of pregnant women attending antenatal care services at selected health facilities in Gurage Zones. Women in the third trimester were included. Pregnant women who had received specialized family planning education outside routine antenatal care were excluded.

2.4. Sample Size Determination

This study employed a cross-sectional analysis of participants enrolled in a nested quasi-experimental cohort across selected health facilities. The sample size for the present analysis was fixed by the parent study design and operational constraints; all eligible participants with complete data were included, resulting in an analytic sample of 388. The parent trial's sampling accounted for clustering at the facility level via design effect; the current analysis maintains the clustered structure and applies appropriate variance adjustments. For descriptive outcomes, this sample provides approximately

±5–6% precision around 70% prevalence at 95% confidence level. For subgroup comparisons, the achieved per-group sample affords adequate power to detect moderate differences (≈18–20 percentage points) in proportions at α=0.05 under modest intracluster correlation.

2.5. Sampling Procedure and Technique

Five health centers and two hospitals were randomly selected for the study. The selected health facilities, encompassing Agena Health Center (AHC), Arekit Health Center (ArHC), Darcha Health Center (DHC), Wolkite Health Center (WHC), and Wolkite University Specialized Hospital (WUSH), were assigned as the intervention groups. Butajira General Hospital (BGH) and Enseno Health Center (EHC) were assigned as the control groups to prevent information contamination. Participants were recruited at the ANC unit. All women attending ANC services were invited to participate, and those who accepted were screened according to the inclusion criteria. Eligible women were assigned a unique identification number for follow-up throughout the study, and a consecutive sampling technique was used (Figure 1).

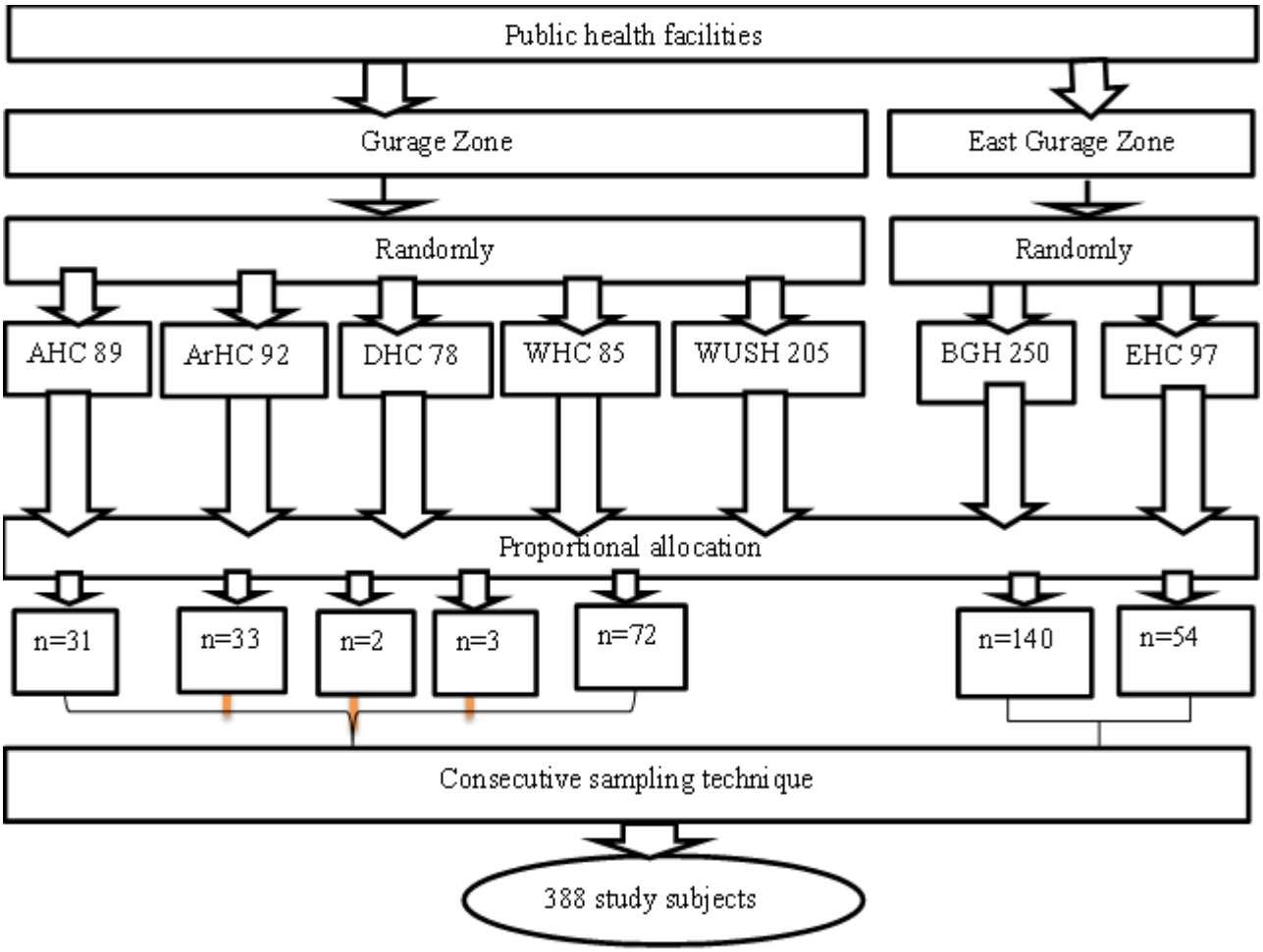

Figure 1: Sampling procedure for perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024

2.6. Collection Procedures

2.6.1. Data Collection Tools

Data was collected using a structured, interviewer-administered questionnaire developed after reviewing relevant literature on family planning integration and maternal health service utilization. The data collection tool was initially prepared in English, translated into

Amharic and Guragigna, and back-translated to English to ensure consistency. Kobo toolbox was used to collect the data through electronic devices like mobile, tablet, or laptop, based on the data collectors' convenience.

2.6.2. Data Collection Procedure

Data was collected using interviewer-administered questionnaires when the clients were on antenatal care contacts in the health facilities. Baseline data on socio-demographic and women's perceptions of family planning integration were collected at approximately 28 weeks of gestation. Perception items included awareness of family planning services, agreement with integration into routine health services, satisfaction with counseling and accessibility, perceived importance of discussing family planning during ANC/PNC visits, and barriers to service utilization.

Data collection was conducted by midwives who were working in the respective health facilities. At the beginning, all the data collectors received intensive training on the objectives of the study, ethical considerations, and standardized interviewing techniques to minimize interviewer bias. Four lecturers from the College of Medicine and Health Sciences, Wolkite University, supervised the process to ensure adherence to protocol and quality standards.

To obtain an accurate response, the interview was conducted privately, which also helped in taking care of the client's confidentiality. All participants had a unique identification number to verify data completeness and to manage any errors, if diagnosed. The principal investigator checked all questionnaires daily electronically for completeness and consistency.

2.7. Study Variables

Women's perception of family planning integration (positive vs. negative) has been the dependent variable. Whereas socio-demography (age, residence, marital status, education status, religion, occupation, and male partner support) and integration (access to health care service, awareness and knowledge of family planning, and integration of family planning to the health care system) have been the independent variables.

2.8. Measurement of Perception and Scoring

The dependent variable (perception toward family planning integration) was measured using a seven-item instrument based on prior literature concerning integrated health services and maternal care utilization. The instrument assessed multiple dimensions of integration perception, including awareness of available family planning services, agreement with integrating family planning into routine health appointments, satisfaction with family planning counseling received, perceived accessibility of integrated services, belief that integration improves continuity of maternal care, comfort in discussing family planning with providers outside dedicated family planning units, and trust in the quality of family planning services delivered through integrated channels.

Each item was rated on a five-point Likert scale ranging from strongly disagree to strongly agree. For analysis, responses were dichotomized: agree and strongly agree were coded as 1 (positive response), while neutral, disagree, and strongly disagree were coded as 0 (non-positive response). A composite perception score was calculated by summing the binary values across all seven items, yielding a total score between 0 and 7.

Participants who scored 4 or higher, indicating positive responses on more than half of the items, were classified as having a positive perception of family planning integration. Those scoring below 4 were classified as having a negative perception. This threshold was selected to reflect a generally favorable orientation toward integration across the majority of the measured domains.

2.9. Data Quality Management

To identify potential issues and make necessary modifications, the questionnaire was pre-tested on 5% of the total study participants, randomly selected from Woliso Hospital, which shares similar population characteristics but is outside the study area. The prepared questionnaire was thoroughly reviewed for completeness, relevance to objectives, and alignment with variables before being distributed to respondents. Data collection was conducted by trained professionals. At the end of each data collection day, the principal investigator reviewed the completed questionnaires for accuracy and completeness. Any errors, ambiguities, or incomplete responses were promptly addressed after supervisors received the filled questionnaires from the data collectors.

2.10. Data Analysis

Only the baseline data of the quasi-experimental study were exported from kobo toolbox into excel file, checked for clerical errors, and exported to Stata for Windows version 17 for analysis. Variables were summarized using numbers, percentages, and cumulative percentages. Bivariate and multivariate analyses were used to see the effect of the independent variable on predictors of positive family planning integration perception. Variables that are significant on bivariate analysis at a P-value less than 0.25 were taken to the multivariate analysis. The fitness of the model has been checked by the Hosmer-Lemeshow test with the value 0.11. In multivariate analysis, a P-value of less than 0.05 and 95% confidence level was used as a cut-off point for the presence of association. Finally, results were compiled and presented using tables, graphs, charts, and texts.

2.11. Ethical Consideration

Ethical clearance was obtained from the Institutional Review Board (IRB) of the College of Medicine and Health Sciences. Written cooperation letters were secured from the Zonal Health Office. All study participants were informed about the purpose of the study, and the confidentiality of the information provided was ensured. Written consent was obtained from each participant before the interview. Participants were given the right to refuse participation or withdraw from the study at any point during the interview. Additionally, the final report did not reference any specific respondent with identifiable information.

3. Results

3.1. Socio-Demographic Characteristics

In this study, 388 client participants were recruited and provided their consent to participate, who were included in the final analysis (Table 1).

The mean age of participants was 27.26 with a standard deviation (SD) of 6.11 years, indicating a relatively narrow age distribution. In addition, participants' minimum age was 17, and the maximum age was 48 (Table 1).

3.2. Awareness of Family Planning

Among the participants, 151 (38.92%) were moderately familiar with family planning. Additionally, 24 (6.19%) of the participants reported that they were not familiar, while 173 (44.59%) of them indicated they were somewhat familiar. Furthermore, 40 (10.31%) of the intervention group were very familiar with family planning. Similarly, 199(51.29%) of the participants showed their agreement to integrate family planning into each health service unit (Figure 2).

3.3. Contraceptive Preference

Among all types of family planning methods, the participants' best contraceptive to use was the implant at 209(53.87%) (Figure 3).

Table 1: Socio-demographic characteristics of participants for perceptions of women towards family planning integration in the general health system in Gurage Zones, 2024 (N=388)

Variable	Category	Frequency	Percentage	Cumulative percentage
Age group	15-19	14	3.61	3.61
	20-24	112	28.87	32.47
	25-29	148	38.14	70.62
	30-34	73	18.81	89.43
	35-39	14	3.61	93.04
	40-44	18	4.64	97.68
	45-49	9	2.32	100.00
Residence	Rural	44	44.59	44.59
	Urban	215	55.41	100
Marital Status	Married	386	99.48	99.48
	Single	2	0.52	100.00
Religion	Muslim	140	36.08	36.08
	Orthodox	198	51.03	87.11
	Other	15	3.87	90.98
	Protestant	35	9.02	100.00
Educational status	College/University	39	10.05	10.05
	No formal education	107	27.58	37.63
	Primary (1-8)	175	45.10	82.73
	Secondary (9-12)	67	17.27	100.00
Occupation	Government employee	56	14.43	14.43
	Housewife	281	72.42	86.86
	Other	9	2.32	89.18
	Private employee	42	10.82	100.00

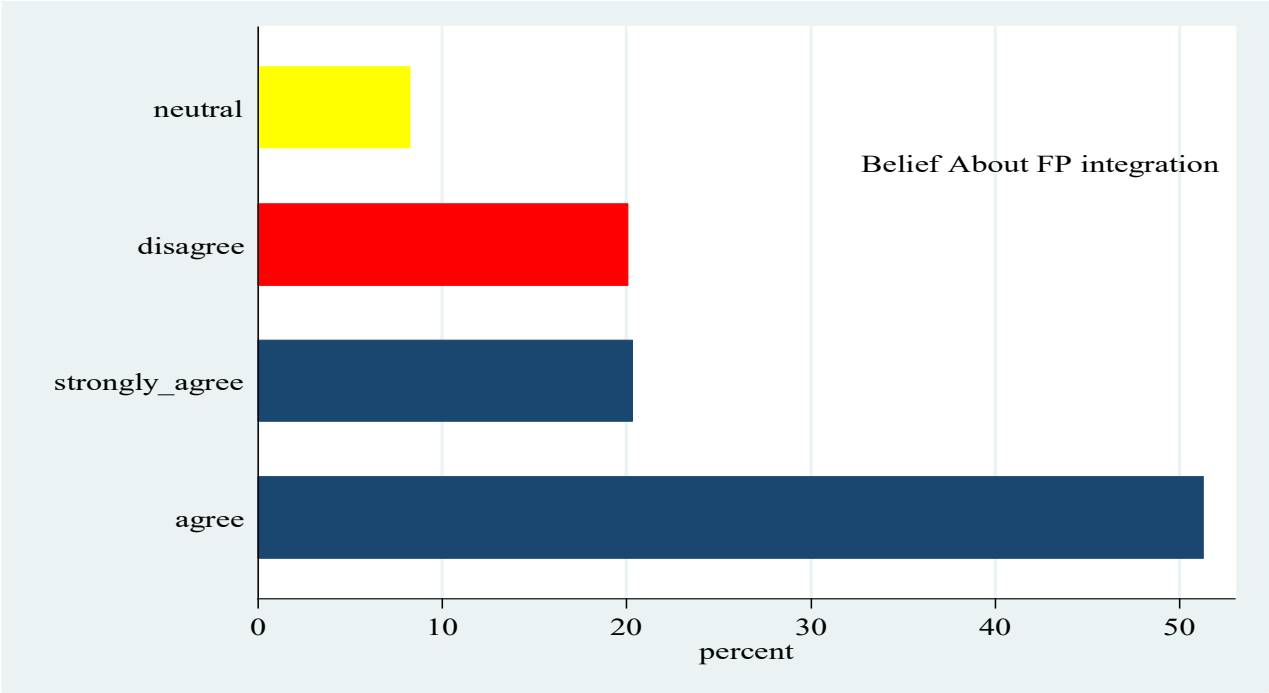

Figure 2: Belief about family planning integration for perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024

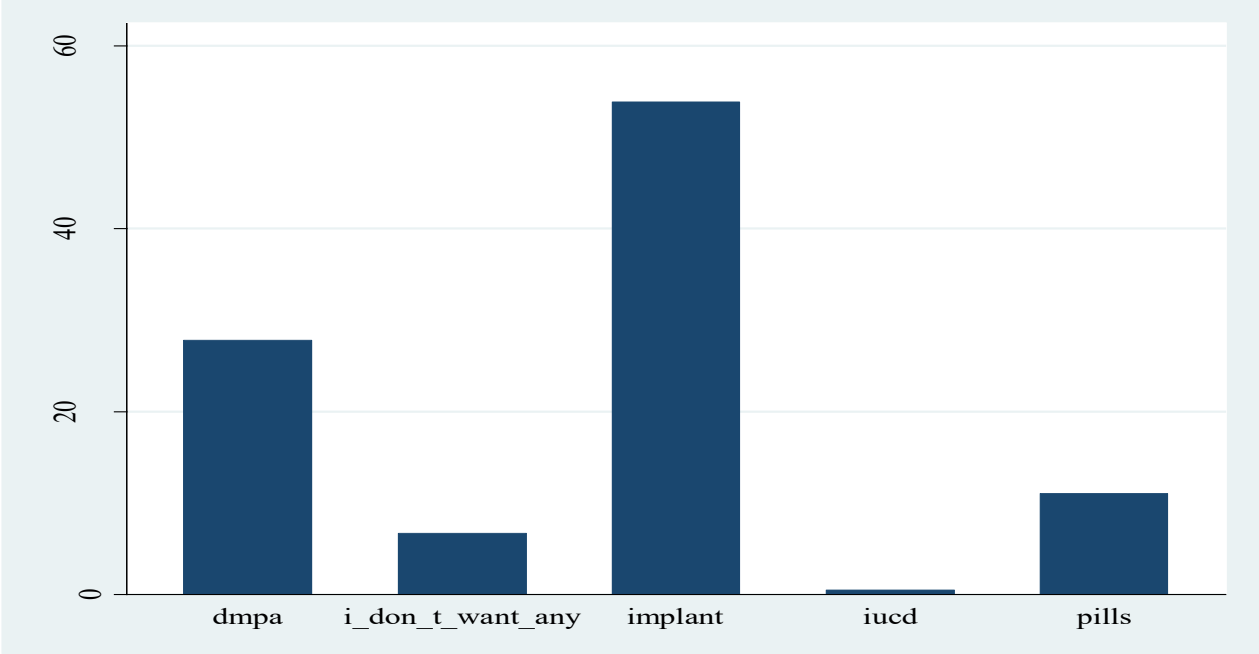

Figure 3: Participants' current family planning preference for perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024

3.4. Perception to Integrate Family Planning into Comprehensive Healthcare Systems

Among the total participants, 127 (32.73%) reported regularly visiting health facilities for care. In contrast, 14 (3.61%) of the participants indicated that they never visited a healthcare facility apart from their current antenatal care contact (Table 2).

Table 2: Health care services related perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024 (N=388)

Variables	Categories	Frequency	Percentage	Cumulative percentage
Visit health facilities	Never	14	3.61	3.61
	Occasionally	143	36.86	40.46
	Rarely	104	26.80	67.27
	Regularly	127	32.73	100.00
Client satisfaction	Very dissatisfied	41	10.96	10.96
	Dissatisfied	28	7.49	18.45
	Neutral	24	6.42	24.87
	Satisfied	120	32.09	56.95
	Very satisfied	161	43.05	100.00
Ever received RH services	No	56	14.43	14.43
	Yes	332	85.57	100.00
Familiarity with FP methods	Moderately familiar	151	38.92	38.92
	Not familiar	24	6.19	45.10
	Somewhat familiar	173	44.59	89.69
	Very familiar	40	10.31	100.00
Integration of FP	Agree	199	51.29	51.29
	Disagree	78	20.10	71.39
	Neutral	32	8.25	79.64
	Strongly agree	79	20.36	100.00
Discussing FP in each unit	Extremely important	20	5.15	5.15
	Moderately important	77	19.85	25.00
	Not important	14	3.61	28.61
	Somewhat important	105	27.06	55.67
	Very important	172	44.33	100.00
Encounter barrier to FP services	No	241	62.11	62.11
	Yes	147	37.89	100.00

The above perception variables displayed in Table 2 were merged to obtain the overall perception by recoding each variable into binary variables. From the total participants, more than two-thirds of them have a negative perception towards the integration of family planning services into each healthcare unit (Figure 4).

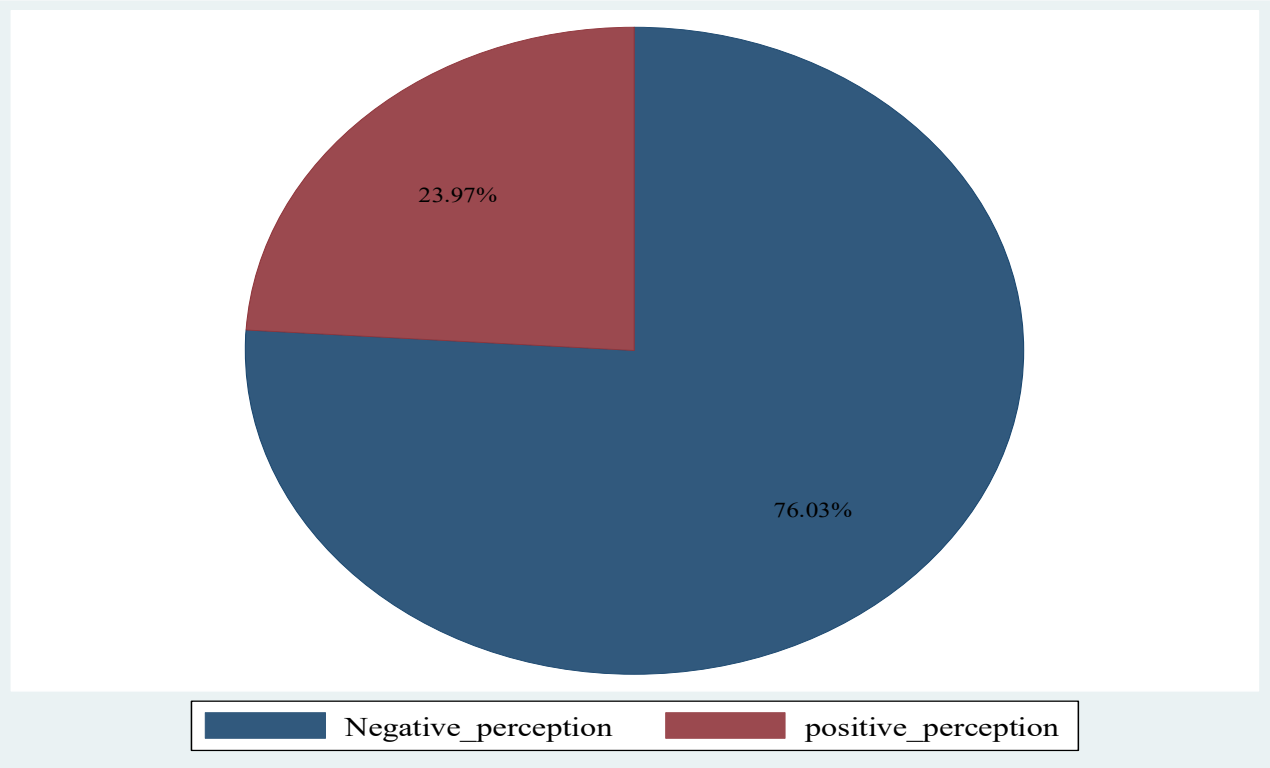

Figure 4: Participants' perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024

3.5. Socio-demographic Determinants of Family Planning Integration

On bivariate analysis, age, place of residence, religion, educational status, and occupation were candidates for multivariate analysis. On multivariate analysis, age, religion, educational status, and occupation were statistically significant (Table 3).

Being aged 25 to 34 (AOR=4.19, 95% CI=1.86-9.42), and above 35 (AOR=26.17, 95% CI=8.48-80.73) were more likely to have a positive perception towards the integration of family planning service into the comprehensive health system compared to participants aged 15 to 24. Similarly, analysis revealed significant variation in perceptions across religious groups. The adjusted odds for a positive perception among Orthodox followers (AOR=2.12, 95% CI=1.16-4.12) and followers of other religions (AOR=5.01, 95% CI=1.98-12.67) were significantly higher than the odds observed among Muslim followers. In addition, participants who have no formal education (AOR=8.53, 95% CI=1.82-40.03) and participants who have primary (1-8) educational status (AOR=7.58, 95% CI=1.96- 29.37) were more likely to have positive perception towards integration of family planning service into comprehensive health system compared to participants who have university or college level educational status (Table 3). On the other hand, participants, who were housewives (AOR=0.27, 95% CI=0.08-0.86), were less likely to have a positive perception towards the integration of family planning service into the comprehensive health system compared to participants, who were government employees (Table 3).

Table 3: Socio-demographic determinants of perceptions of family planning integration across health service units among women attending antenatal care in Gurage Zones, Ethiopia, 2024 (N=388)

Variables	Category	Negative Perception N (%)	Positive perception N (%)	COR(95%CI)	AOR(95%CI)
Age	15-24	117(30.15)	9(2.32)	1	1
	25-34	164(42.27)	57(14.69)	4.51(2.15-9.48)	**4.19(1.86-9.42)****
	35+	14(3.61)	27(6.96)	25.07(9.83-63.93)	**26.17(8.48-80.73)****
Residence	Rural	123(31.7)	50(12.89)	1	1
	Urban	172(44.33)	43(11.08)	0.62	0.82(0.41-1.65)
Religion	Muslim	116(29.90)	24(6.19)	1	1
	Orthodox	148(38.14)	50(12.89)	1.63(0.94-2.81)	**2.12(1.16-4.12)***
	Other	31(7.99)	19(4.90)	2.96(1.44-6.08)	**5.01(1.98-12.67)****
Educational status	College/University	35(9.02)	4(1.03)	1	1
	No formal education	64(16.49)	43(11.08)	5.87(1.94-17.73)	**8.53(1.82- 40.03)***
	Primary (1-8)	135(34.79)	40(10.31)	2.59(0 .86-7.73)	**7.58(1.96- 29.37)**
	Secondary (9-12)	61(15.72)	6(1.55)	0.86(0 .22-3.25)	1.13(0.24- 5.19)
Occupation	Government	46(11.86)	10(2.58)	1	1
	Housewife	215(55.41)	66(17.01)	1.41(0.67-2.95)	**0 .27(0.08-0.86)***
	Private employee	34(8.76)	17(4.38)	2.30(0.93-5.64)	0 .68(0.21-2.15)

Note: * →P<0.05; **→P≤0.0001

4. Discussion

This study was analyzed from nested data from a quasi-experimental study on a related outcome variable in the study area. The current study focused on the integration of family planning services into each health service units as unintended pregnancy is a vital burden on women in the zones where the study was conducted and the country at large (Geda et al., 2020; Kebede et al., 2021). The finding revealed a substantial portion (76.03%) of the participants in the study has negative perception towards the integration of family planning service across health services units, while 23.97 % of the participants have a positive perception towards the integration.

The low level of positive perception towards the integration of family planning into the routine appointments was concerning, which shows women may not fully understand its benefit without support. Similarly, studies in Ethiopia and other Sub-Saharan countries reported varied perception levels; the higher perception level was likely due to better community awareness and a stronger health communication line (Hamon et al., 2022; Hoyt et al., 2021; Titiyos et al., 2023). In settings where family planning utilization remains low with higher unintended pregnancy, integration of the service with other reproductive health and outpatient departments is essential. However, the surge of negative perception may hinder its goal. Therefore, the community needs attention through different media to enhance their knowledge and attitude.

Participants' age demonstrated a strong association with the outcome variable. Women aged 25 to 34 and ≥35 were more likely to have a positive perception towards the integration of

family planning service to each health care unit. In the same manner, a study conducted in Ethiopia reported that older women were more likely to use family planning and other maternal and child health services (Tiruneh et al., 2025). This might be because older women may have more experience in using reproductive health services, and they may also be more autonomous in deciding on the service they want to use. Contrarily, younger women may be denied by socio-cultural restrictions, which make them think the services could not be used at their age.

Religious affiliation showed a strong and statistically significant association with perception. The prevalence of a positive perception was not uniformly distributed, with significant differences observed across all religious groups. This aligns with other studies conducted in Ethiopia, depending on doctrinal interpretation and the stances of religious leaders in each religious organization (Gebrerufael & Hagos, 2024; Hailegebreal et al., 2023; Hailegebreal et al., 2021; Tigabu et al., 2018). This shows that working with a religious organization can boost perception towards family planning service integration.

Concerning education, this variable proved to be a major factor of influence in this study. Compared with women with a college/university education, women who had no formal education (primary or otherwise) had much greater odds of having a positive attitude toward family planning integrated service. In contrast, a national survey (conducted in Ethiopia) found a direct relationship between women's educational attainment and contraceptive usage (Woldeamanuel et al., 2023). Educated women probably have a better understanding of what is included in family planning integrated services, since, through education, they gain a greater degree of knowledge, and/or communication skills and/or self-esteem. The inverse association between education level and perception of family planning identified in this study could be because women with a high level of education may have a higher degree of dissatisfaction than do women with a lower level of education due to having a greater expectation for services and also having more trust in health care providers (Sarker et al., 2016). Alternatively, women with higher education may have a greater critical eye for service quality and/or greater awareness of shortcomings in service delivery than do women with less education.

Occupation type impacts how women perceive things. Women who are employed as government employees report a more favorable view of family planning as opposed to housewives, which research done in Ethiopia supports through showing that housewives have lower odds of using contraception than women working in government jobs (Adde et al., 2022; Fenta & Gebremichael, 2021; Negash et al., 2023). It seems that because women working in the government have more access to education and health-related resources, they are likely to feel empowered to make informed choices about family planning than their counterparts who are housewives.

4.1. Limitations of the Study

There were constraints in the study that need to be taken into consideration while evaluating its findings. To start with, this was a cross-sectional study, so it cannot show causal relationships between the identified factors and women's perceptions of family planning ease of integration. Besides, data were obtained from a set of questions asked of the women (through an interviewer-administered questionnaire), which is a method that may be influenced by response bias, particularly as it pertains to family planning issues. Finally, the participants in the study were all women who were in their third trimester of pregnancy and were attending antenatal care, so the results of this study cannot necessarily be generalized to women who are not pregnant, women who are in an earlier stage of pregnancy, or women who do not attend antenatal care.

In spite of the limitations of this study, many strengths exist, including a relatively large sample size from multiple health facilities across two different geographic zones, thus broadening the diversity and representation of the sample participants. The use of standard assessment instruments, thorough training of interviewers, and allowance for cluster effect when completing data analyses contribute to the internal credibility and reliability of the findings.

5. Conclusion and Recommendation

This research concludes with a key finding: perceptions toward family planning service integration into routine healthcare facilities are, for the most part, negative among individuals utilizing antenatal care services within Gurage Zones. Even though there is a documented benefit to integrating family planning services into routine healthcare facilities with regard to the health and well-being of women and children, there continues to be a large gap between the national policy objectives found within the national policies and community acceptance at the local level. A significant factor contributing to this gap is the perception of the women surveyed. The analysis of women's demographics provided key information on how age, religion, level of education, and occupation affect women's perceptions toward the integration of family planning services into routine healthcare. In general, the results showed that one of the biggest discrepancies between perceived values is that women with lower educational attainment had a more positive perception of family planning service integration than women with higher educational attainment. Additionally, housewives were reported to be less likely to have a favorable perception of the integration of family planning services compared to formally employed women.

In response to our findings, we recommend interventions designed to meet the needs of specific beneficiary groups. With younger women and housewife beneficiaries showing lower levels of positive perception, antenatal counseling and postnatal counseling for these beneficiaries should include conversations that promote empowerment, along with decision-making support tools that can help increase self-confidence and overcome personal or societal barriers preventing access to family planning. With educated women being more likely to have negative views on the quality of service provided, health systems should deliver integrated services competently and respectfully, as well as provide appropriate information regarding the advantages and protections. In addition, working with religious leaders and community representatives is critical for gaining normative support for the use of contraceptives, particularly among Muslim women and other groups that reported higher rates of negative perceptions.

In addition, program managers/policymakers need to integrate culturally appropriate family planning messages into existing maternal and child health and immunization programs/platforms via culturally credible community-based resources that will support building trust within families in order to promote bringing families into the health care system. Healthcare workers should receive training on how to use client-centered counseling techniques that support women to engage in discussion about family planning and provide live information tailored to their life situations. Finally, additional longitudinal/qualitative studies are needed to better understand how socio-demographic factors affect these perceptions as well as to evaluate how using integrated service models affect families' contraceptive behavior and health status.

Ultimately, improving family planning integration perceptions will facilitate the development of more effective reproductive health services, reduce the unmet need for family planning services, and improve maternal and

newborn health within the Gurage Zone or similar settings in Ethiopia.

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Statement of Competing Interests

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