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Research Article

Utilization Of Modern Contraceptive Methods and Associated Factors Among Reproductive Age Women in Addis Ababa, Ethiopia, 2025

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Abstract

Background: Modern contraceptives are critical in reducing maternal and child mortality, yet uptake remains sub optimal in many low-income countries.

Objective: To assess the magnitude of modern contraceptive utilization and associated factors among women of reproductive age in Addis Ababa, Ethiopia.

Methods: An institution-based cross-sectional study was conducted in 2021 among 383 women using quota sampling across selected public health centers. Data were collected using structured questionnaires and analyzed in SPSS 23. Bivariate and multivariable logistic regression were applied to identify predictors of contraceptive use at $p < 0.05$.

Results: The prevalence of current modern contraceptive use was 59%. Factors significantly associated with utilization included age (AOR=0.14, 95% CI: 0.03–0.68), education (AOR=0.04, 95% CI: 0.02–0.63), number of children desired (AOR=10.8, 95% CI: 4.02–18.97), and spousal communication (AOR=3.17, 95% CI: 0.89–11.27).

Conclusion: Contraceptive use in Addis Ababa remains lower than national targets. Education, fertility preferences, and partner communication significantly influence uptake. Strengthening family planning education, promoting spousal dialogue, and targeting younger and less-educated women could enhance utilization.

Keywords: Modern contraceptive, Utilization, Women, Addis Ababa, Reproductive health.

Introduction

Family planning is widely recognized as a cornerstone of public health, playing a critical role in reducing maternal and child morbidity and mortality by preventing unintended pregnancies, ensuring safer birth spacing, and improving overall reproductive health outcomes. In Ethiopia, although knowledge and awareness of modern contraceptive methods are generally high, actual utilization remains suboptimal. According to the 2016 Ethiopian Demographic and Health Survey (EDHS), only 35% of married women reported using modern

contraceptives, a figure that falls significantly short of the national reproductive health targets. This gap between awareness and practice highlights persistent challenges in translating knowledge into consistent use. Multiple barriers have been identified, including socio-demographic factors such as age, education, and income; cultural and religious influences that shape attitudes toward fertility and contraception; and service-related issues such as accessibility, quality of counseling, and availability of preferred methods. Understanding

these determinants is essential for designing effective interventions to expand contraceptive uptake. Against this backdrop, the present study was undertaken to assess the utilization of modern contraceptives and to explore the associated factors among women of reproductive age in Addis Ababa, Ethiopia, where urban settings may present both opportunities and unique barriers for family planning service delivery.

objective

General Objective

- To assess the utilization of modern contraceptive methods and associated factors among women of reproductive age in Addis Ababa, Ethiopia, 2025.

Specific Objectives

- To determine the prevalence of modern contraceptive utilization among reproductive-age women in Addis Ababa.
- To identify the types of modern contraceptive methods most commonly used by women of reproductive age.
- To examine the socio-demographic factors (such as age, education, marital status, and income) associated with modern contraceptive utilization.
- To assess the influence of reproductive characteristics (such as parity, desired number of children, and age at first birth) on contraceptive use.
- To evaluate the role of partner/spousal communication and decision-making in contraceptive utilization.
- To explore barriers to modern contraceptive use, including fear of side effects, cultural and religious beliefs, and service-related challenges.

Methods

Study Design and Setting

An institution-based cross-sectional study was carried out in Addis Ababa, Ethiopia, between June and July 2021. The study was conducted across ten randomly selected public health centers that provide family planning services. Addis Ababa, the capital city, has diverse socio-demographic characteristics and better access to health services compared to rural areas, making it an important setting for examining contraceptive utilization.

Study Population and Sample

The study population comprised women of reproductive age (15–49 years) who had been residents of Addis Ababa for at least six months prior to data collection. A total of 397 women were initially approached, of whom 383 completed the survey, yielding a response rate of 96.5%. Women who were critically ill or unable to provide consent during the survey period were excluded.

Data Collection Procedures

Data were collected using a pretested, interviewer-administered structured questionnaire. The tool was initially developed in English, translated into Amharic the local working language and then back-translated to English to ensure accuracy and consistency. The questionnaire included items on socio-demographic characteristics, reproductive history, knowledge, and use of contraceptives. Prior to data collection, training was provided to data collectors and supervisors to ensure uniformity and reduce interviewer bias.

Data Processing and Analysis

Completed questionnaires were checked daily for completeness and consistency, and data were entered into EpiData version 3.2. Statistical analysis was performed using SPSS version 23. Descriptive statistics such as frequencies, proportions, means, and standard deviations were computed to summarize the study variables. Bivariate logistic regression analysis was initially conducted to examine crude associations between independent variables and contraceptive use. Variables with a p-value less than 0.25 in the bivariate analysis were entered into a multivariable logistic regression model to control for potential confounders. Adjusted odds ratios (AORs) with 95% confidence intervals (CIs) were reported. Statistical significance was declared at $p < 0.05$.

Results

A total of 383 women participated in the study, yielding a response rate of 96.5%. The overall prevalence of modern contraceptive utilization among respondents was 59%. Among current users, injectables were the most commonly preferred method (53.1%), followed by oral contraceptive pills (17.3%), implants (15%), and other methods such as intrauterine devices (IUDs) and condoms. Among non-users, the most frequently reported reason for not using contraceptives was fear of side effects (68.8%), followed by religious or cultural beliefs and opposition from partners.

Method Used	Frequency (n)	Percentage (%)
Injectables	120	53.1
Pills	39	17.3
Implants	34	15.0
IUD/Condoms/Other	32	14.6
Total (Modern Method Users)	225	100

Table 1. Prevalence and Types of Modern Contraceptive Use Among Respondents (N=383)

Factors Associated with Modern Contraceptive Utilization

Logistic regression analysis identified several significant predictors of contraceptive use: Age: Women aged 15–19 years were 86% less likely to use modern contraceptives compared to those aged 35–39 years (AOR = 0.14, 95% CI: 0.03–0.68).

Education: Illiterate women were 96% less likely to use modern contraceptives compared to women with secondary edu-

cation or higher (AOR = 0.04, 95% CI: 0.02–0.63).

Desired Number of Children: Women desiring only 1–2 children were 10.8 times more likely to use modern contraceptives compared to those desiring four or more children (AOR = 10.8, 95% CI: 4.02–18.97).

Spousal Communication: Women who discussed contraceptive use with their partners were 3.17 times more likely to utilize modern contraceptives compared to those who did not (AOR = 3.17, 95% CI: 0.89–11.27).

Variable	AOR	95% CI	Interpretation
Age 15–19 vs. 35–39	0.14	0.03–0.68	Much lower likelihood of use
Illiterate vs. Secondary+	0.04	0.02–0.63	Substantially lower likelihood
Desire 1–2 children vs. 4+	10.8	4.02–18.97	Strongly higher likelihood
Spousal discussion vs. none	3.17	0.89–11.27	Moderately higher likelihood

Table 2. Multivariable Logistic Regression Analysis of Factors Associated with Modern Contraceptive Utilization

Discussion

This study revealed that 59% of women attending public health centers in Addis Ababa were using modern contraceptive methods. This prevalence is notably higher than the national average of 35% reported in the 2016 EDHS, suggesting that urban women may have better access to health facilities, more exposure to media campaigns, and improved awareness of family planning services. However, the level observed in this study remains lower than that reported in other regions such as Tigray (80.1%) and Western Ethiopia (71.9%), indicating persistent regional disparities in contraceptive uptake. These differences may be attributed to variations in service availability, health system capacity, cultural acceptance of contraception, and educational attainment of women.

Educational status was found to be a strong predictor of contraceptive utilization. Women with no formal education were significantly less likely to use modern contraceptives compared to those with secondary education or higher. This finding is consistent with studies conducted in Ethiopia and across Sub-Saharan Africa, which have consistently shown that education enhances women’s autonomy, improves knowledge of reproductive health, and increases confidence in accessing health services. Improving female education, therefore, remains a key strategy for enhancing contraceptive uptake.

Spousal communication was another important factor influencing modern contraceptive use. Women who discussed family planning with their partners were more likely to utilize contraceptives, underscoring the critical role of male involvement in reproductive health decision-making. Similar results have been documented in previous Ethiopian and African studies, which highlight that joint decision-making fosters supportive environments and reduces opposition to contra-

ceptive use. Strengthening couple-focused family planning counseling may therefore improve uptake.

Fear of side effects emerged as the most commonly reported barrier to contraceptive use, accounting for nearly 69% of non-users. This is consistent with findings from other Ethiopian studies where misconceptions and concerns about health risks frequently discouraged women from adopting modern methods. This suggests the need for client-centered counseling, effective community education, and myth-dispelling interventions to address misinformation and reassure clients about method safety and management of potential side effects.

In addition, the study highlighted that younger women, particularly those aged 15–19 years, were significantly less likely to use modern contraceptives compared to older age groups. This finding aligns with research from other African contexts showing that adolescents face unique barriers such as limited access to youth-friendly services, fear of stigma, and lack of confidential counseling. Given Ethiopia’s youthful population structure, expanding adolescent- and youth-friendly reproductive health programs is crucial for addressing unmet need and preventing early and unintended pregnancies.

Overall, the findings of this study emphasize the importance of integrated interventions that address educational disparities, strengthen male partner involvement, improve counseling quality, and expand access to youth-friendly services. Such approaches could substantially increase contraceptive utilization and contribute to achieving Ethiopia’s reproductive health and Sustainable Development Goal (SDG) targets.

Conclusion

This study demonstrated that the prevalence of modern con-

traceptive utilization among women of reproductive age in Addis Ababa was 59%, which is higher than the national average but still below regional best practices. Utilization was significantly associated with age, level of education, desired family size, and spousal communication. The findings underscore the influence of socio-demographic and relational factors on contraceptive use, and highlight persistent barriers such as misconceptions and fear of side effects.

Recommendations

- **Health Education:** Strengthen targeted awareness campaigns to dispel myths, address fear of side effects, and promote accurate information about contraceptive options.
- **Male Involvement:** Encourage and integrate spousal and partner participation in family planning programs to foster joint decision-making.
- **Adolescent-Friendly Services:** Develop and expand youth-friendly reproductive health services to reach adolescents and young women who are less likely to use modern contraceptives.
- **Educational Empowerment:** Promote female education as a long-term strategy to improve reproductive health literacy and increase contraceptive utilization.
- **Service Quality:** Enhance counseling services at health facilities to ensure client-centered, respectful, and culturally sensitive care that responds to women's concerns and preferences.

Conflict of Interest

The authors declare that they have no competing interests related to this study.

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