



Determinants of unmet need for family planning among women of reproductive age in developing countries

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ABSTRACT

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Unmet need for family planning remains a major reproductive health challenge in developing countries, contributing to unintended pregnancies and adverse maternal and child health outcomes. This review aimed to identify and synthesize determinants of unmet need for family planning among women of reproductive age in developing countries. A literature review was conducted using articles retrieved from the PubMed database published between 2022 and 2026. Eligible studies were original, freely accessible, full-text articles investigating determinants of unmet need for family planning among women of reproductive age in developing countries. Nine studies met the inclusion criteria and were analyzed using a narrative synthesis approach. The review identified several determinants consistently associated with unmet need, including low educational attainment, poor socioeconomic status, younger age, high parity, rural residence, limited access to family planning services, inadequate reproductive health information, and insufficient partner support. Community characteristics and geographical disparities also influenced the occurrence of unmet need. Unmet need for family planning is shaped by multiple interacting individual, socioeconomic, family, and health service factors. Comprehensive strategies focusing on reproductive health education, equitable access to quality family planning services, women's empowerment, and partner involvement are essential to reduce unmet need in developing countries.

INTRODUCTION

Family planning is one of the most important public health interventions for improving reproductive health, reducing maternal and infant mortality, and supporting the achievement of the Sustainable Development Goals (SDGs). Effective contraceptive use enables couples of reproductive age to plan pregnancies, thereby preventing unintended pregnancies and reducing associated health risks. Although many countries have achieved improvements in family planning service coverage, a considerable number of women of reproductive age in low- and middle-income countries are still unable to access or use contraception according to their needs. This condition, known as unmet need for family planning, remains a significant reproductive health problem, particularly in developing countries¹.

Globally, unmet need for family planning continues to be a major challenge to achieving optimal reproductive health. Millions of women of reproductive age in developing countries still have unmet contraceptive needs. This condition contributes to increased rates of unintended pregnancies,



unsafe abortions, pregnancy-related complications, and maternal and infant deaths that are largely preventable. In addition to its health consequences, unmet need for family planning also has social and economic implications for families and national development².

Previous studies have demonstrated that unmet need for family planning is influenced by multiple interrelated factors. These factors include individual characteristics such as age, educational attainment, and parity; socioeconomic factors such as employment status reported to influence contraceptive use³. However, findings from different countries remain inconsistent due to variations in sociocultural contexts and healthcare systems.

Despite numerous studies on this topic, there is still a gap in the synthesis of evidence regarding the determinants most consistently associated with unmet need for family planning among women of reproductive age in developing countries. Most existing studies are region-specific and population-specific, limiting the availability of comprehensive evidence. Moreover, changes in reproductive health policies, socioeconomic dynamics, and increased access to information in recent years may have influenced the patterns of determinants⁴.

Therefore, this literature review aimed to identify, synthesize, and analyze factors associated with unmet need for family planning among women of reproductive age in developing countries. This review is expected to provide a more comprehensive understanding of individual, socioeconomic, family, and healthcare-related factors and to serve as evidence for the development of policies and strategies aimed at strengthening family planning programs.

METHODS

This study employed a narrative literature review design to identify, summarize, and synthesize the available evidence regarding the determinants of unmet need for family planning among women of reproductive age in developing countries. Although a structured and systematic search strategy was applied to identify relevant studies, this review did not follow all methodological requirements of a systematic review, such as protocol registration, formal quality appraisal, or risk-of-bias assessment. Therefore, the findings were synthesized using a narrative approach.

A structured literature search was conducted in the PubMed database to identify relevant studies published between January 2022 and May 2026. PubMed was selected because it is one of the world's most comprehensive and authoritative biomedical databases, providing extensive peer-reviewed literature in reproductive health, maternal health, and family planning. The search strategy combined Medical Subject Headings (MeSH) terms and free-text keywords using Boolean operators as follows: ("unmet need for family planning") AND ("women of reproductive age") AND ("factor" OR "determinants") AND ("developing countries" OR "low-income countries" OR "lower-middle-income countries" OR "upper-middle-income countries"). Reference lists of eligible articles were also reviewed manually to ensure that no relevant studies were overlooked.

Although only PubMed was used, this database was considered appropriate because of its extensive coverage of reproductive health research. Nevertheless, restricting the search to a single database may have resulted in the omission of relevant studies indexed elsewhere, and this limitation is acknowledged in the discussion. Studies were included if they met all of the following criteria: original quantitative observational studies; investigated determinants or factors associated with unmet need for family planning; involved women of reproductive age (15-49 years); were conducted in developing countries; published between January 2022 and May 2026; available as free full-text articles; published in English; indexed in PubMed. For this review, developing countries were defined according to the World Bank country income classification, which categorizes countries as low-income, lower-middle-income, and upper-middle-income economies based on Gross National Income (GNI) per capita. Only studies conducted in countries classified within these categories during the study period were included. The exclusion criteria were review articles, editorials, conference abstracts, case reports, commentaries, and letters to the editor; studies not specifically examining determinants of unmet need for family planning; duplicate publications; articles without full-text access; studies conducted in high-income countries.

The study selection process consisted of four stages: identification, screening, eligibility assessment, and final inclusion. Initially, 20 articles were identified through the PubMed search. After

removing duplicate and irrelevant records based on title and abstract screening, the remaining articles underwent full-text assessment. Studies that did not satisfy the inclusion criteria were excluded. Finally, 9 studies met all eligibility criteria and were included in the narrative synthesis. The study selection process followed the general principles of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to ensure transparency in article identification and selection.

Relevant information was extracted independently from each included study using a standardized data extraction form. The extracted information included the author and year of publication, country of study, study design, study population and sample size determinants investigated; major findings related to unmet need for family planning. These extracted data were summarized descriptively in Table 1.

Data Synthesis

The included studies were synthesized using a narrative synthesis approach. The identified determinants were grouped into six thematic categories: sociodemographic factors; socioeconomic factors; health service access and utilization; information and reproductive health knowledge; partner involvement and decision-making; community and environmental factors.

The findings were compared across studies to identify consistent determinants as well as contextual differences among developing countries.

Ethical Considerations

This study was based exclusively on published literature and did not involve direct participation of human subjects or access to identifiable personal data. Therefore, ethical approval was not required.

RESULT AND DISCUSSION

The initial search of the PubMed database using the predefined keywords yielded 20 relevant articles. After screening based on the inclusion and exclusion criteria, 9 articles met the eligibility requirements and were selected for further analysis. The selected studies specifically examined the determinants of unmet need for family planning among women of reproductive age in developing countries. The synthesized findings from these 9 studies are presented in Table 1.

Table 1. Summary of findings from the 9 reviewed articles

Author & Year	Country	Study Design	Determinants	Sample	Key Findings
Azanaw et al. (2022) ⁶	Ethiopia	Multilevel logistic regression (EDHS 2016)	Age, education, region, marital status, parity	15,683 women aged 15–49 years	Unmet need prevalence was 15.2%; associated with age, low education, residence, and geographic variation
Asmamaw & Negash (2022) ¹¹	Ethiopia	Cross-sectional (EDHS)	Education, wealth, parity, service access	4,312 reproductive-age women	Poverty, low education, and high number of children increased unmet need risk
Harzif (2022) ⁷	Indonesia	Cross-sectional (IDHS 2012 & 2017)	Age, education, residence, media exposure, economic status, knowledge	Women of reproductive age (IDHS data)	Knowledge influenced by education, economic status, and information access, improving family planning utilization
Larasanti (2022) ⁸	Indonesia	GSEM (IDHS Indonesia)	Socioeconomic status, women's autonomy, service	Reproductive-age women	Socioeconomic status had the strongest effect; autonomy and service quality also

Author & Year	Country	Study Design	Determinants	Sample	Key Findings
			quality, access, utilization		influenced unmet need
Mosuse & Gadeyne (2022) ⁹	DR Congo	Multilevel analysis	Education, economic status, residence, number of children	Women aged 15–49 years	Low education and poverty were key determinants of unmet need
Phiri et al. (2023) ⁵	Sub-Saharan Africa	DHS meta-analysis	Education, service access, partner support	Married women	Consistent factors: low education, limited access, and weak partner support
Teshale (2022) ³	Sub-Saharan Africa	Multilevel multinomial logistic regression	Age, education, wealth index, parity, media exposure, residence	257,282 women	Low education, poor socioeconomic status, high parity, and limited media exposure increased unmet need.
Teferi & Schröders (2023) ¹⁰	Ethiopia	Blinder–Oaxaca decomposition analysis	Urban–rural residence, education, wealth index, access to health services	Women of reproductive age	Urban–rural inequalities were largely explained by education, wealth, and health service access.
Belay et al. (2024) ⁴	Uganda	Spatial analysis and multilevel logistic regression	Religion, education, household wealth, parity, residence	Women aged 15–49 years	Geographical variation in unmet need was associated with socioeconomic status, religion, and place of residence.

Synthesis of research findings

The synthesis of the nine included studies demonstrated that determinants of unmet need for family planning can be grouped into six major domains: sociodemographic characteristics, socioeconomic status, health service access and utilization, reproductive health information and knowledge, partner involvement and decision-making, and community or geographical factors. Although the studies were conducted in different developing countries, a high degree of consistency was observed across the findings.

Low educational attainment was the most consistently reported determinant, identified in eight of the nine reviewed studies. Women with lower educational attainment were consistently more likely to experience unmet need because limited education reduced contraceptive knowledge, decision-making capacity, and access to reproductive health information^{1,5}.

Similarly, poor socioeconomic status was reported in seven studies as an important predictor of unmet need. Women from poorer households consistently experienced greater barriers to obtaining contraceptive services due to financial constraints, lower healthcare utilization, and reduced access to health information^{3,5}.

Limited access to family planning **services** was identified in five studies, particularly among women living in rural or underserved areas. These studies consistently reported that geographical barriers, inadequate healthcare infrastructure, and unequal service availability contributed substantially to unmet need^{1,2,3,4,6}.

Partner support and women's autonomy were identified in three studies as important interpersonal determinants. These studies showed that women who lacked partner support or had limited participation in reproductive decision-making were more likely to have unmet need. Although fewer studies examined this factor, the findings were highly consistent across different sociocultural settings.

Community and geographical characteristics were also consistently associated with unmet need. Four studies reported that women residing in rural communities experienced significantly higher unmet need than urban women because of poorer access to reproductive health services and information.

Overall, only minor discrepancies were identified across the reviewed studies. While most determinants were consistently reported, the relative importance of individual factors varied according to the country context. For example, studies conducted in Ethiopia and the Democratic Republic of the Congo emphasized educational attainment and household wealth as the dominant determinants, whereas studies from Indonesia highlighted women's autonomy, family planning service quality, and reproductive health knowledge. These variations likely reflect differences in health system performance, socioeconomic development, and cultural norms across developing countries rather than contradictory evidence.

Taken together, the reviewed evidence indicates that unmet need for family planning is a multifactorial phenomenon influenced by interacting individual, household, health system, and contextual factors. Across all studies, low education, poverty, limited health service access, and inadequate reproductive health information emerged as the most consistently reported determinants, suggesting that interventions should simultaneously address these multiple dimensions.

Relationship between sociodemographic factors and unmet need

The synthesis shows that sociodemographic characteristics such as age, education level, parity, and marital status are significantly associated with unmet need for family planning. Younger women and women with a higher number of children are more likely to experience unmet need^{1,2}.

This association may be explained by the fact that younger women may have less experience in reproductive decision-making and may be more likely to have limited knowledge of contraceptive methods and reproductive health than older women. In addition, younger women may face greater social, cultural, or economic barriers that limit their autonomy in accessing family planning services. These circumstances may increase the likelihood of experiencing unmet need for family planning. However, these characteristics are not universal and may vary according to educational attainment, socioeconomic status, and local sociocultural contexts. Similar findings have been reported in studies conducted in Ethiopia, the Democratic Republic of the Congo, Indonesia, and Sub-Saharan Africa, where younger age was consistently associated with higher unmet need for family planning^{7,8}.

Relationship between socioeconomic factors and unmet need

Socioeconomic factors such as economic status, poverty, and women's employment are strongly associated with unmet need for family planning. Women from lower socioeconomic groups are more likely to experience unmet need than those with better economic conditions⁵.

This association may be explained by the fact that women with limited financial resources may face greater barriers to accessing family planning services, including transportation costs, indirect healthcare expenses, time constraints, and limited opportunities to visit health facilities. Financial hardship is also frequently accompanied by lower educational attainment, reduced exposure to reproductive health information, and limited autonomy in healthcare decision-making, all of which may reduce contraceptive utilization. These findings are consistent with studies conducted in Ethiopia, the Democratic Republic of the Congo, and Indonesia, which consistently identified household wealth and socioeconomic status as important determinants of unmet need for family planning^{5,6}. Therefore, unmet need for family planning should not be viewed solely as a reproductive health issue but also as a manifestation of broader social and economic inequalities that influence women's ability to access and utilize family planning services.

Relationship between health service access and unmet need

Access to and utilization of health services are critical factor consistently associated with unmet need. Women living in areas with limited access to health facilities may be more likely to experience unmet need⁸.

These findings may be explained by the presence of geographical barriers, limited transportation, and unequal distribution of healthcare facilities and trained health personnel, all of which

reduce women's opportunities to access family planning counseling and contraceptive services. Inadequate availability and quality of family planning services may also discourage women from utilizing contraception because they receive insufficient counseling, limited information on contraceptive options, and inadequate follow-up care. Consequently, access to high-quality reproductive health services plays an essential role in meeting women's contraceptive needs. These findings are consistent with studies conducted in Indonesia and Ethiopia, which demonstrated that both the accessibility and quality of family planning services significantly influence contraceptive utilization and unmet need^{9,10}. Therefore, strengthening family planning programs requires not only ensuring the availability of contraceptive methods but also improving the accessibility, quality, and continuity of reproductive health services.

Relationship between information, knowledge, and unmet need

Information and knowledge play an important role in determining contraceptive use. Women with limited knowledge of family planning may be more likely to experience unmet need than those with better knowledge, as inadequate understanding of contraceptive methods may reduce women's ability to make informed reproductive health decisions and increase misconceptions regarding contraceptive use^{11,12}.

Limited access to reproductive health information may reduce women's understanding of modern contraceptive methods and their ability to make informed reproductive health decisions. Women who receive insufficient information through health education programs or mass media are less likely to understand the benefits of family planning and the importance of pregnancy planning. Consequently, inadequate knowledge may discourage contraceptive utilization and contribute to unmet need. Similar findings were reported in Indonesia and across Sub-Saharan Africa, where women's educational attainment, exposure to family planning information through mass media, and knowledge of contraceptive methods were positively associated with contraceptive utilization and lower unmet need^{7,10}. Therefore, the evidence synthesized in this review suggests that improving women's access to reproductive health education, family planning counseling, and reliable contraceptive information through both healthcare providers and mass media is essential to enhance contraceptive utilization and reduce unmet need for family planning^{4,13}.

Relationship between partner involvement and unmet need

Partner support and involvement in reproductive decision-making are important determinants of contraceptive utilization. Women who do not receive support from their partners may be more likely to experience unmet need for family planning because reproductive decisions are often made jointly within households. Limited partner involvement may reduce women's ability to discuss contraceptive options, seek family planning services, and make informed reproductive health decisions. Evidence from Indonesia and Sub-Saharan Africa indicates that women's autonomy in reproductive decision-making and partner support are significantly associated with contraceptive utilization and unmet need^{4,5,14}.

These findings suggest that family planning decisions are influenced not only by individual preferences but also by interpersonal and household dynamics. In many developing countries, sociocultural norms continue to assign men a central role in decisions regarding fertility and contraceptive use. Consequently, inadequate communication between partners and limited male involvement may reduce women's access to contraception and increase the likelihood of unmet need. Strengthening male engagement and promoting shared decision-making through family planning counseling may therefore improve contraceptive uptake and reduce unmet need¹⁵.

Relationship between community and environmental factors and unmet need

Community and environmental factors also play an important role in influencing unmet need for family planning. Women living in rural areas were consistently reported to have a higher prevalence of unmet need than those residing in urban areas because they often face greater barriers to accessing reproductive health services and family planning information⁷. This disparity may be explained by the unequal distribution of health facilities, limited transportation infrastructure, shortages of trained

healthcare providers, and lower exposure to reproductive health information in rural communities. In addition, social and cultural norms, community beliefs, and local practices may influence women's reproductive decision-making and acceptance of contraceptive use. These contextual factors often interact with individual and household characteristics, thereby increasing the likelihood of unmet need among women living in disadvantaged communities^{7,5}.

The reviewed evidence consistently demonstrated substantial geographical variation in unmet need across Ethiopia, Uganda, the Democratic Republic of the Congo, and other Sub-Saharan African countries, indicating that community and environmental characteristics are important determinants of family planning utilization. These findings suggest that strategies to reduce unmet need should extend beyond individual-level interventions by addressing contextual barriers through equitable distribution of health services, community-based health promotion, and culturally appropriate family planning programs^{8,9}.

General discussion

Overall, this literature review demonstrates that unmet need for family planning is a complex issue influenced by multiple interacting factors. Individual characteristics, socioeconomic conditions, health service access, knowledge, partner support, and environmental context all simultaneously affect contraceptive behavior.

Although findings vary across countries due to differences in culture, health systems, and social conditions, the most consistent determinants are low education, poverty, limited access to health services, and lack of partner support^{5,11}. These results suggest that reducing unmet need cannot be achieved solely through the provision of contraceptive methods but requires a multisectoral approach, including improved reproductive health education, women's empowerment, strengthened family planning services, and community-based interventions that consider sociocultural contexts. Such comprehensive strategies are expected to improve contraceptive coverage and support better reproductive health outcomes among women of reproductive age in developing countries^{4,10}.

CONCLUSION

This literature review demonstrates that unmet need for family planning among women of reproductive age in developing countries is a complex and multifactorial issue influenced by the interaction of sociodemographic, socioeconomic, health service, informational, interpersonal, and community-level factors. Across the reviewed studies, the most consistently identified determinants were low educational attainment, poverty, limited access to quality family planning services, inadequate reproductive health knowledge, insufficient partner support, and geographical disparities in healthcare access.

These findings indicate that reducing unmet need requires comprehensive strategies that extend beyond increasing contraceptive availability. Efforts should focus on improving women's access to reproductive health information, strengthening the quality and accessibility of family planning services, promoting women's empowerment and shared decision-making with partners, and addressing socioeconomic and geographical inequalities through context-specific interventions. Such integrated approaches are expected to increase contraceptive utilization and contribute to improved reproductive health outcomes among women of reproductive age in developing countries.

Future research should examine the effectiveness of community-based and culturally appropriate interventions in reducing unmet need for family planning, particularly in low and middle-income countries where disparities in access to reproductive health services remain substantial.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest in the conduct and preparation of this article.

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DECLARATION OF ARTIFICIAL INTELLIGENCE USE

The authors used ChatGPT (OpenAI, GPT-6) to assist with language editing, grammar improvement, and refinement of academic wording during the preparation of this manuscript. The AI tool was not used to generate research data or perform the literature search and data analysis. The authors reviewed and verified the manuscript to ensure the accuracy of the content, the appropriateness of the interpretation of the reviewed studies, and the integrity of the final publication. The authors take full responsibility for the content of this manuscript.

AUTHOR CONTRIBUTIONS

NMA contributed to the conceptualization of the study, literature search and selection, data extraction, synthesis and interpretation of the findings, and drafting of the manuscript. NPW contributed to the supervision of the study, critical review of the manuscript, and refinement of the academic content. Both authors reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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