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ORIGINAL ARTICLE

Unlocking the Silent Struggle: Addressing Unmet Family Planning Needs in Saurashtra's Health Centres

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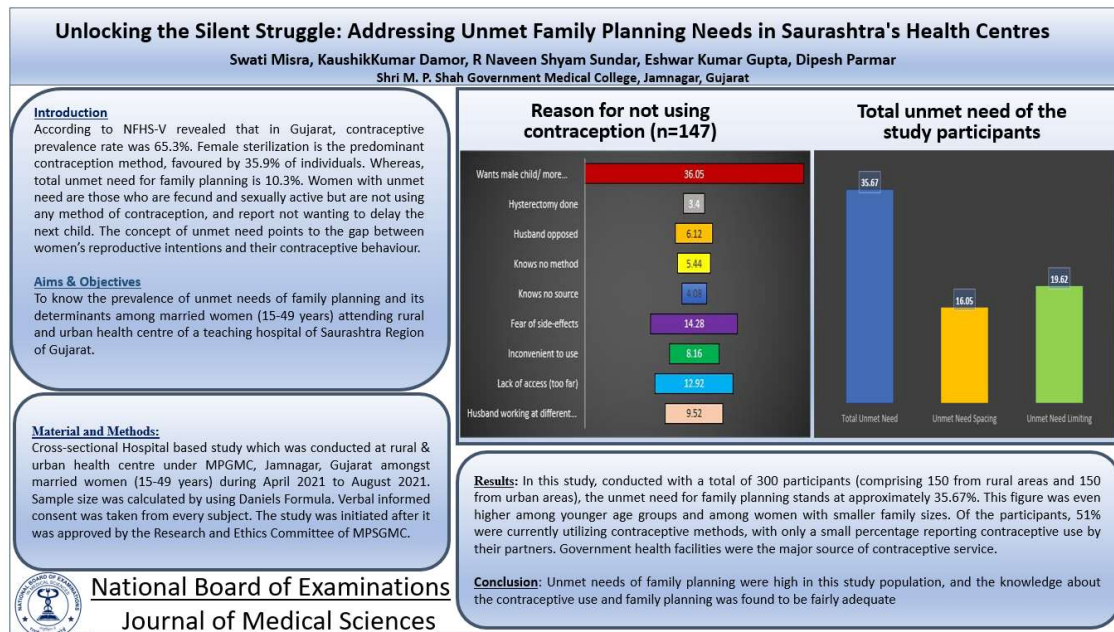
Abstract

Introduction: According to NFHS-V revealed that in Gujarat, contraceptive prevalence rate was 65.3%. Female sterilization is the predominant contraception method, favored by 35.9% of individuals. Whereas, total unmet need for family planning is 10.3%. Women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting to delay the next child. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behaviour. Aims & Objectives of study is the prevalence of unmet needs of family planning and its determinants among married women (15-49 yrs) attending rural and urban health centre of a teaching hospital of Saurashtra Region of Gujarat. **Methodology:** Cross-sectional Hospital based study which was conducted at rural & urban health centre under MPGMC, Jamnagar, Gujarat amongst married women (15-49 yrs) during April 2021 to August 2021. Sample size was calculated by using Daniels Formula. Verbal informed consent was taken from every subject. The study was initiated after it was approved by the Research and Ethics Committee of MPSGMC. **Results:** In this study, conducted with a total of 300 participants (comprising 150 from rural areas and 150 from urban areas), the unmet need for family planning stands at approximately 35.67%. This figure was even higher among younger age groups and among women with smaller family sizes. Of the participants, 51% were currently utilizing contraceptive methods, with only a small percentage reporting contraceptive use by their partners. Government health facilities were the major source of contraceptive service. **Conclusion:** Unmet needs of family planning were high in this study population, and the knowledge about the contraceptive use and family planning was found to be fairly adequate.

Keywords: Unmet needs, Family Planning, Contraception, Practices

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Graphical Abstract



Introduction

Unmet needs of family planning persist as a critical global health challenge, particularly affecting women in low-resource settings. These needs denote the gap between women's reproductive intentions and their contraceptive use. Factors contributing to this disparity include limited access to contraceptive services, cultural barriers, inadequate education, and socioeconomic inequalities. Addressing unmet family planning needs is imperative for promoting maternal and child health, reducing unintended pregnancies, and empowering women to make informed choices about their reproductive health. Comprehensive strategies involving improved healthcare infrastructure, education, community outreach, and access to a wide range of contraceptive options are essential to bridging this gap and ensuring reproductive rights for all individuals. In 2010, worldwide contraceptive usage reached

63.3%, marking a 9% increase from the rate in 1990. Over the past two decades, the global unmet need for family planning declined from 15.4% to 12.3%. These shifts were observed across nearly all global regions, except those where family planning services were already well-established. Nevertheless, the extent of change varied across different regions [1]. Even though India pioneered an official National Family Planning program as early as 1952, the primary focus was on women's health rather than population control. However, the 1971 census uncovered a concerning trend of rapid population growth, prompting the adoption of population control strategies in India [2].

The NFHS-V (National Family Health Survey) conducted in Gujarat indicated a contraceptive prevalence rate of 65.3%. Female sterilization is the predominant contraception method, favored by 35.9% of individuals. Whereas, total unmet need for family planning is

10.3%. In that unmet need for spacing and unmet need for limiting is 4.5% and 5.8% respectively [3]. Offering comprehensive family planning services universally is a crucial strategy for diminishing maternal morbidity and managing population growth. In India, 10% of all pregnancies are mistimed, while 11% are unwanted [3]. Effective utilization of family planning services can significantly reduce the incidence of unintended pregnancies. Although the unmet need for family planning has decreased globally over the past two decades, the absolute number of women with unmet needs has remained constant due to population growth. In Gujarat, female sterilization is the leading choice of contraception, comprising 35.9% of all contraceptive methods used [3]. Alternatively, male sterilization, IUD/PPIUD, oral contraceptive pills (OCP), condoms, and injectables constitute other methods of contraception, representing 0.2%, 3.1%, 2.3%, 11.4%, and 0.1% of usage, respectively [3]. Hence, the utilization of temporary contraception methods remains minimal, primarily attributed to social stigma, cultural misconceptions [4-6], inadequate awareness [7,8], and apprehensions regarding potential side effects [5,8-10].

Women classified with unmet need are those who are fecund, married or in a union, not currently using any form of contraception, and have expressed a desire to either cease childbearing altogether or delay pregnancy for at least two years. Additionally, unmet need encompasses pregnant or amenorrhoeic women who have experienced unwanted or mistimed pregnancies/births and were not using contraception at the time of their last conception. This category also includes women who are employing ineffective,

incorrect, unsafe, or unsuitable contraceptive methods [11]. Women's decisions regarding contraceptive methods are often influenced by various social constraints and circumstances, including family sex composition and gender preferences [3]. Globally, when contraception is utilized properly and effectively to prevent unwanted pregnancies, it has the potential to decrease maternal deaths by 25-35% [12-13]. Therefore, the aims and objectives of this study are to investigate the prevalence of unmet needs for family planning and identify its determinants among married women aged 15-49 years attending rural and urban health centers affiliated with a teaching hospital in the Saurashtra Region of Gujarat.

Materials and Methods

The initiation of the study followed approval by the Research and Ethics Committee of MPSGMC. Conducted between April 2021 and August 2021, this hospital-based cross-sectional study took place in both rural and urban health centers affiliated with Shri MP Shah Government Medical College, Jamnagar, Gujarat. The study determined a minimum sample size of 410, calculated using the Daniel Formula. This calculation was based on the prevalence of unmet family planning needs, estimated at 10.3% from NFHS-V, with a desired precision of 3%. Within this framework, 300 married women aged 15-49 years, with 150 from rural and 150 from urban health centers, were included. Verbal informed consent was obtained from each participant prior to their involvement. A self-structured questionnaire, which had been pilot-tested, was administered in the local language. This questionnaire covered various variables including

sociodemographic profiles, personal details, knowledge about contraceptives, perceptions on family planning, and desired family size. The sampling technique employed was purposive, excluding participants unwilling to undergo interviews. Prior to data collection, participants were briefed in their native language about the study's benefits and implications, and their voluntary written consent was obtained. Female interviewers, trained by the authors, conducted interviews with participants in isolated hospital settings to ensure a conducive environment for open responses.

Operational definitions were established, defining unmet need for family planning as the percentage of fecund, sexually active women not currently using contraception who either do not desire more children or wish to delay their next childbirth [14]. Data entry utilized Epidata version 3.1, while statistical analysis employed SPSS version 21. Chi-square tests were applied to ascertain differences in proportions, with a significance level set at $p < 0.05$. Through meticulous planning, rigorous methodology, and adherence to ethical standards, this study aimed to comprehensively address the unmet family planning needs among women attending health centers in the Saurashtra region of Gujarat.

Results

Table 1 outlines participant demographics: the largest age group is 26-35 (48%), followed by 15-25 (27%), and 36-49 (25%). Parity analysis shows most have two children (44.33%), followed by one child (26%), three children (19%), and over three (2.67%). Educational attainment is significant, with 36.67% of participants and 45% of spouses having completed high

school or higher. Homemakers comprise 46.33%, agricultural workers 30.67%, and others 23%. Socio-economic class distribution favors Class I (43%), followed by Classes II & III (35.33%), and IV & V (21.67%). Residentially, participants are evenly split between urban and rural areas. Family type is predominantly joint (67%), with strong family support (77.33%). Contraceptive usage is prevalent, with 65.67% ever using and 51% currently. Information primarily comes from Doctors & health workers (62.67%), and services are often accessed from government facilities (83.67%). Partner awareness is high (88.33%), with joint decision-making (65.33%) regarding contraception.

Table 2 explores participants' perceptions and knowledge regarding unmet family planning needs. The optimal age for female marriage is mostly seen as between 20-23 years (49%) and 24-28 years (48%), with few advocating for ages 16-19 years (3%). Regarding the recommended family size, there is a strong preference for two children (63%), followed by one child (31.33%), and a small fraction advocating for three children (5.67%). Participants' beliefs Regarding Maternal Health Risks with Increased Childbearing, especially with more children (58%). Spacing between children is deemed important, with preferences for 1-2 years spacing (38.33%), and concerns about inadequate spacing leading to maternal health issues (67.67%). However, there is limited knowledge about STD prevention through contraceptives (7.67%). Gender preference leans towards male children (52.33%) over female (26.33%), with some expressing no preference (21.34%). A minority report experiencing unwanted pregnancies (9.67%), highlighting the need for targeted

interventions to address these perceptions and knowledge gaps.

Table 3 displays associations between socio-demographic factors and unmet family planning needs among participants. Each row represents a specific variable such as age group, parity, educational status, occupation, and family support, among others. The table presents percentages for the presence and absence of unmet family planning needs within each variable category, along with chi-square statistics (X^2) and p-values indicating association strength and significance. Notable associations include age groups ($X^2 = 7.99$, $p = 0.02$), parity ($X^2 = 74.66$, $p < 0.0001$), educational status of participant ($X^2 = 13.48$, $p = 0.001$) and spouse ($X^2 = 13.95$, $p =$

0.0009), among others. These associations offer insights into factors influencing unmet family planning needs, emphasizing the necessity of addressing socio-demographic determinants in interventions. Further research and targeted efforts based on these findings can enhance family planning services and reproductive health outcomes.

Figure 1 shows the reasons for not using contraception among 147 participants, most of them wanted male child and fear of side effects of using contraception. While, the total prevalence of unmet family planning needs stood at 35.67%, with 19.62% aimed at limiting pregnancies and 16.05% for spacing between them (Figure 2).

Table 1. Socio-Demographic Variables of Participants

Socio Demographic Variables		%	N
Age Groups	15-25	27	81
	26-35	48	144
	36-49	25	75
Parity	0	8	24
	1	26	78
	2	44.33	133
	3	19	57
	>3	2.67	8
Educational Status	Illiterate	27	81
	< High School	36.33	109
	>= High School	36.67	110
Educational Status of Spouse	Illiterate	22.67	68
	< High School	32.33	97
	>= High School	45	135
Occupation	Home-maker	46.33	139
	Agricultural Worker	30.67	92
	Working	23	69

Socio-Economic Class	I	43	129
	II & III	35.33	106
	IV & V	21.67	65
Residential Area	Urban	50	150
	Rural	50	150
Family Type	Nuclear	33	99
	Joint	67	201
Family Support	Present	77.33	232
	Absent	22.67	68
Contraceptive Usage (Past)	Ever used	65.67	197
	Never used	34.33	103
Current Contraceptive Usage	Yes	51	153
	No	49	147
Sources of Contraceptive Information	Doctor/ Health Worker	62.67	188
	Media/ Relatives/ Friends	37.33	112
Contraceptive Service Provider	Government health facility	83.67	251
	Private health facility	16.33	49
Partner's Awareness of Contraceptive Use	Yes	88.33	265
	No	11.67	35
Contraceptive Method Decision-Making	Self	15.67	47
	Husband	6	18
	Both Self & Husband	65.33	196
	Suggested by Family/Friends	5.67	17
	Suggested by Doctor/ Health Worker	7.33	22

Table 2. Perception and knowledge of participants regarding unmet need of family planning

Perception & Knowledge		%	N
Optimal Age for Female Marriage (in years)	16-19	3	9
	20-23	49	147
	24-28	48	144
Recommended Family Size	1	31.33	94
	2	63	189
	3	5.67	17
	Yes	58	174

Beliefs Regarding Maternal Health Risks with Increased Childbearing	No	20.33	61
	Don't Know	21.67	65
Preferred Interbirth Interval (in years)	1-2	38.33	115
	3-4	34.67	104
	5-6	17.67	53
	Don't Know	9.33	28
Concerns Regarding Short Interbirth Intervals and Maternal Health	Yes	67.67	203
	No	12.67	38
	Don't Know	19.66	59
Understanding of STD Prevention through Contraceptive Use	Yes	7.67	23
	No	27.67	83
	Don't Know	64.66	194
Gender Preference Distribution among Participants	Male	52.33	157
	Female	26.33	79
	No Preference	21.34	64
Incidence of Unplanned Pregnancies in Personal History	Yes	9.67	29
	No	90.33	271

Table 3. Association between Socio-Demographic variables and unmet need of family planning

Variables		Present	Absent	X² (p value)
Age Groups	15-25	36.45	21.76	7.99 (0.02)
	26-35	43.93	50.26	
	36-49	19.63	27.98	
Parity	0	7.48	8.29	74.66 (0.0001)
	1	54.21	25.64	
	2	19.62	58.03	
	3	16.82	20.21	
	>3	1.87	3.11	
Educational Status	Illiterate	15.89	33.16	13.48

	< High School	47.66	30.05	(0.001)
	>= High School	36.45	36.79	
Educational Status of Spouse	Illiterate	12.15	28.50	13.95 (0.0009)
	< High School	42.99	26.42	
	>= High School	44.86	45.08	
Occupation	Home-maker	48.60	45.08	14.78 (0.0006)
	Agricultural Worker	18.69	37.31	
	Working	32.71	17.62	
Socio-Economic Class	I	49.53	39.38	4.24 (0.12)
	II & III	34.58	35.75	
	IV & V	15.89	24.87	
Residential Area	Urban	60.75	44.04	5.9 (0.015)
	Rural	39.25	55.96	
Family Type	Nuclear	54.21	21.76	33.83 (0.00001)
	Joint	45.79	78.76	
Family Support	Present	61.68	86.01	23.24 (0.00001)
	Absent	38.32	13.99	
Sources of Contraceptive Information	Doctor/Health Worker	72.90	56.99	7.44 (0.0064)
	Media/Relatives/friends	27.10	43.01	
Contraceptive Service Provider	Government health facility	90.65	79.79	5.94 (0.015)
	Private health facility	9.35	20.21	
Partner's Awareness of Contraceptive Use	Yes	93.46	85.49	4.24 (0.0395)
	No	6.54	14.51	
Contraceptive Method Decision-Making	Self	12.15	17.62	11.46 (0.022)
	Husband	5.61	6.22	
	Both Self & Husband	67.29	64.25	
	Suggested by Family/Friends	4.67	6.22	
	Suggested by Doctor/Health Worker	14.02	3.63	

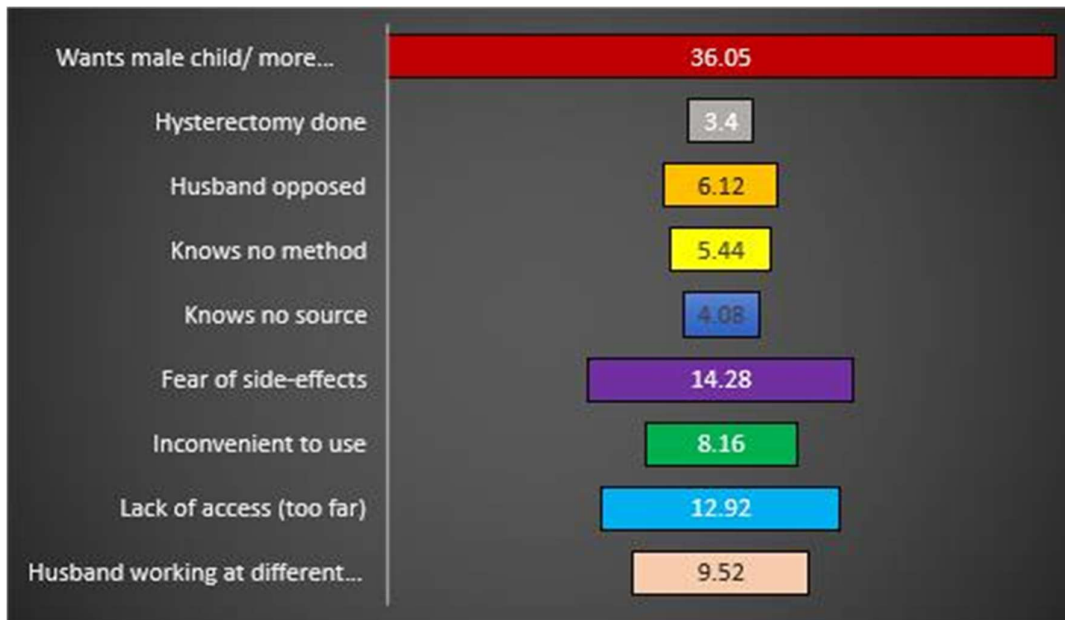


Figure 1. Reason for not using contraception (n=147)

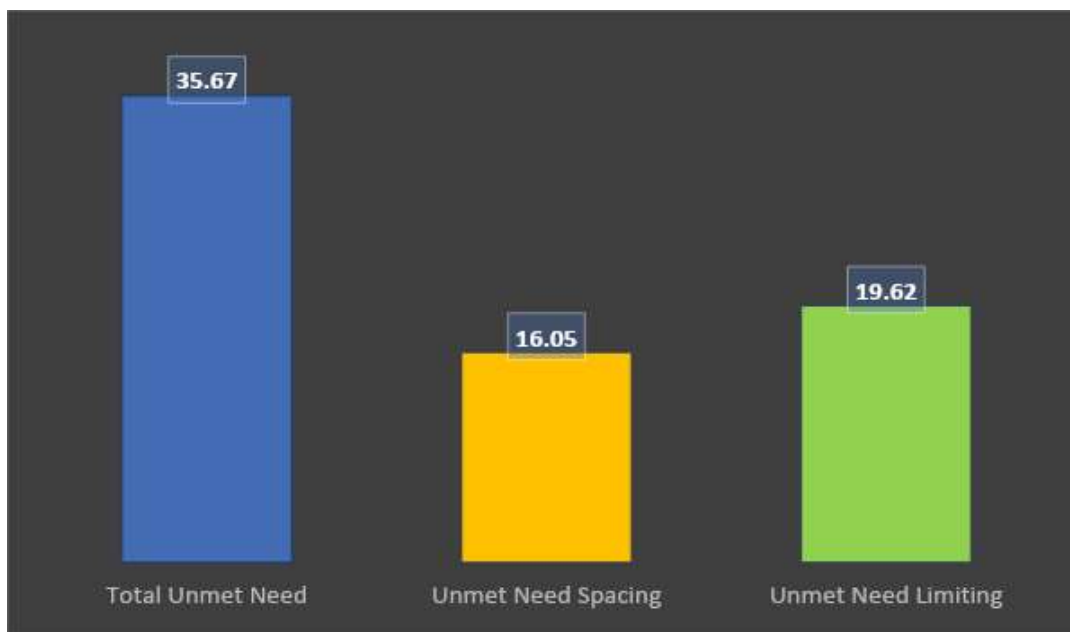


Figure 2. Total unmet need of the study participants

Discussion

Our research was conducted at both rural and urban health facilities affiliated with Shri MP Shah Government Medical College in Jamnagar, Gujarat, a state known for its notable achievements in

various health indicators, particularly in the provision of adequate family planning services. Despite commendable coverage in certain regions, there persists a significant unmet need for family planning in several parts of the state. Considering the shifting

population patterns in the country, with more women entering the reproductive age group, ensuring the provision of sufficient family planning services, especially in rural and urban areas, becomes imperative.

The findings of our study reveal that among married women aged 15-49 years in our study population, the prevalence of unmet family planning needs is notably high at 35.67%. This figure surpasses the reported prevalence rates by Speizer et al. [15] in six cities of Uttar Pradesh, which ranged between 12% and 20% across different regions. Similarly, Yadav et al. [16] found a prevalence rate of 17.5% in North India, Haryana. In contrast, the National Family Health Survey (NFHS-V) data for Gujarat [3] reported a lower prevalence of 10.3%. Conversely, Prateek et al. [17] reported a much higher prevalence of 51% among women of reproductive age in Kancheepuram district [18], Tamil Nadu, albeit in an urban health center setting. The disparity in prevalence rates between our study and national data could potentially be attributed to a lack of sustained emphasis on family welfare services nationwide. Our study also highlights that 65.67% of participants have ever used contraception, indicating a considerable level of awareness and uptake. This aligns with findings from Sharma et al. [19] in Lucknow, where over 90% of women were aware of various contraceptive methods. Additionally, Makade et al. [20] reported high awareness levels in a Mumbai slum, with 87% of married women aware of oral contraceptive pills and Copper-T, and 80% aware of female sterilization. Furthermore, our study indicates that among those aware of contraception, 61% prefer female sterilization, while 39% prefer intrauterine contraceptive devices. These preferences

are lower than the NFHS-V data, which reported a prevalence of female sterilization at 35.9% in Gujarat. Additionally, the contraceptive prevalence rate in our study population was found to be 51%, lower than the NFHS-V data, which reported a rate of 65.3% [3].

Regarding contraceptive access, 83.67% of participants who used contraception obtained it from government facilities, comparable to the coverage reported for Gujarat government services at 84%. In terms of family structure and composition, 63% of participants believed the ideal number of children for a couple is two, while 38.33% preferred a spacing of 1-2 years between children. A preference for male children was evident among 36.4% of participants, consistent with the broader trend observed in Indian families according to NFHS-V data. Only 7.67% of participants believed that contraceptive methods can prevent sexually transmitted diseases (STDs), with condoms being identified as the most effective method for STD prevention by nearly half of them. Knowledge acquisition primarily occurred through doctors or health workers, with the media also contributing to improving awareness of contraceptive services. Importantly, the decision-making process regarding contraception was predominantly mutual between husbands and wives, consistent with NFHS-V data [3].

In conclusion, our study underscores the importance of addressing the unmet need for family planning and improving access to contraceptive services, particularly in rural and urban areas. It also emphasizes the necessity of targeted interventions to enhance awareness and knowledge regarding contraceptive methods and their benefits. By addressing these gaps, we can strive towards achieving

better reproductive health outcomes for women in Gujarat and beyond.

The strength of this study lies in its thorough exploration of women's perspectives on contraceptive usage, facilitated by trained female interviewers. Unmet family planning needs result in unwanted pregnancies, posing potential risks to the mother, family, and society. Consequences of such pregnancies include unsafe abortions and impacts on children's health and well-being, potentially exacerbating rapid population growth, particularly in developing nations like India. Assessing unmet needs remains crucial as an analytical tool and serves as a policy-making benchmark. In our study population, unmet family planning needs were notably high, yet there was a reasonably good level of knowledge regarding contraceptive use and family planning. This underscores the importance of addressing these needs effectively to improve reproductive health outcomes.

Recommendations

Efforts should focus on expanding access to a diverse range of contraceptive methods, especially temporary methods, through comprehensive family planning services. Targeted educational campaigns aimed at dispelling cultural stigma and addressing misconceptions surrounding contraception are crucial. Additionally, interventions promoting gender equality and women's empowerment are necessary to enhance decision-making autonomy in family planning. Collaboration between healthcare providers, community leaders, and policymakers is essential to tailor interventions to local needs and facilitate sustainable change.

Limitations

While this study provides valuable insights into the prevalence and determinants of unmet family planning needs, several limitations should be acknowledged. The cross-sectional design restricts our ability to establish causality or assess changes over time. Sampling bias may have occurred due to the purposive sampling technique and reliance on self-reported data, potentially impacting the generalizability of findings. Furthermore, social desirability bias could influence participants' responses, particularly regarding sensitive topics such as contraceptive use. Future research should employ longitudinal designs and employ diverse sampling methods to mitigate these limitations and provide more nuanced insights into family planning dynamics in low-resource settings.

Author Contributions

The manuscript has been read and approved by all authors and we believe that the manuscript represents honest work.

Conflict of Interest

The authors declare that they do not have conflict of interest.

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