



Volume 2 Issue 1
2024

Submission:

19th August, 2024

Acceptance:

25th September,
2024

DOI:10.5281/
zenodo.13891719

Corresponding Author

Dr Nivedita Roychowdhury
Demonstrator, Community
Medicine,
Nil Ratan Sircar Medical
College, Kolkata 14
e-mail:
dr.niveditare@gmail.com

Indexed in:

Google Scholar



Citation: Islam MS, Salam MA, Purkait MH, Dey N, Murmu N, Haque N, et al. A Study on Unmet need for Family Planning among Mothers having under five children attending Routine Immunization Clinic and Paediatric Out Patient Department of NRS Medical College and Hospital, Kolkata. RJUMS 2024; 2 (1):3-10.

Available from: <https://esrfjums.co.in/index.php/main/article/view/39>

Published by: Eureka Scientech Research Foundation, Kolkata.

Online access: <https://esrfjums.co.in>

A Study on Unmet need for Family Planning among Mothers having under five children attending Routine Immunization Clinic and Pediatric Out Patient Department of NRS Medical College and Hospital, Kolkata

Md. Saidul Islam,¹ Megha Chakraborty,¹ Meherun Nahar,¹ Mehetab Alam Molla,¹ Milan Kumar Das,¹ Minhazul Alam Laskar,¹ Miraj Eftekar,¹ Mithu Kumar,¹ Mithun Mazumdar,¹ Mojahiddin Chowdhury,¹ Momitul Mondal,¹ Moumita Panda,¹ Mousumi Hembram,¹ Mrittika Chakraborty,¹ Munshi Abdus Salam,¹ Muskan Saraogi,¹ Nalak Dey,¹ Narottam Murmu,¹ Naurin Haque,¹ Nazim Midhya,¹ Oindrila Das,¹ Padmashree Banik,¹ Pappu Yadav,¹ Parikshit Ghosh,¹ Payel Bag,¹ Payel Rahaman,¹ Piyush Mondal,¹ Pragati Das,¹ Pravan Benedict Sitling,¹ Prerana Rana,¹ Priyadarshini Mandal,¹ Priyadarshini Saha,¹ Priyansu Roy,¹ Puja Halder,¹ Rachit Ray,¹ Radhika Shah,¹ Nivedita Roychowdhury,² Abhijit Mukherjee,³ Jhuma Sarkar⁴

¹MBBS Students (Session 2020- 21), Nilratan Sircar Medical College, Kolkata

²Assistant Professor, Department of Community Medicine, Rampurhat Government Medical College, Birbhum

³Associate Professor, Department of Community Medicine, Nilratan Sircar Medical College, Kolkata

⁴Professor, Department of Community Medicine, Nilratan Sircar Medical College, Kolkata

Abstract

Introduction: Addressing unmet needs in pregnancy is crucial for reducing unintended births, unsafe abortions, and maternal deaths, and for improving maternal and child health. Understanding the extent and addressing the reasons behind it is essential for improving maternal and child health, reducing unintended pregnancies, and supporting women's reproductive rights

Objective: The present study was undertaken to estimate the extent of unmet needs among reproductive age group mothers with under five children and the reasons for the same.

Materials and methods: A descriptive, observational, hospital based cross-sectional study was conducted among 258 consecutive mothers in reproductive age group having less than five years old children, attending the Pediatrics OPD and Routine immunization Clinic of NRS Medical College and Hospital, between October and November 2022. A predesigned semi structured interview schedule was used to collect data. Collected data were entered into Microsoft Excel and analyzed using SPSS (Version 20).

Results: Among socio-demographic characteristics, more than one-third (11.6%) of the study population had unmet need for family planning. Unmet needs were more common in the age group of 15-19 years (24%), had children in the 49- 56-month aged children (23.1%), from rural areas (12.7%), lived in joint families (13.2%), belonged to Hindu religion (11.7%), belonged to the scheduled tribe (25%), were educated above HS levels (14.7%), in service (14.3%), belonged to SES (Class IV) and had no autonomy (13.5%).

Among obstetric characteristics patients with age at marriage between 26-30 years (37.5%), age at first pregnancy of 26-30 years (23.1%), duration of marriage < 2 years (15.6%), parity of the mother ≥ 4 (23.1%) and having only female child (23.1%) were more likely to have unmet needs of pregnancy.

Overall, the most common reason for unmet needs of contraception were distance from local center (11.6%). Among client related reasons the most common cause was fear of side effects (10.5%) and among health facility related reasons, distance from local center (11.6%) and among opposition. The most common source of opposition towards contraceptive use was from family members other than partner (8.1%).

Conclusion: Unmet need for family planning was seen in 11.6% of the study population. The significant reasons for the unmet needs were Hindu religion, age at marriage between 26-30 years, age at first pregnancy of 26-30 years and having only female child. Overall, the most common reason for unmet needs of contraception were distance from local center.

Keywords: Unmet need, unintended birth, unsafe abortion, reproductive right



Articles in The ESRF Research Journal for Undergraduate Medical Students are Open Access articles published under a Creative Commons Attribution-Non Commercial 4.0 International License (CC BY-NC). This license permits use, distribution, and reproduction in any medium, provided the original work is properly cited, but it cannot be used for commercial purposes and it cannot be changed in any way.



INTRODUCTION

Unmet needs in pregnancy refer to the challenges women face in realizing their reproductive intentions and accessing necessary support. Specifically, unmet need for family planning is a critical aspect, defined as the percentage of women of reproductive age who wish to avoid a pregnancy but are not using a contraceptive method.^{1,2} Women who indicate they do not want another child or would like to postpone the next birth for at least 2 years but are not using any method of contraceptive are classified as having an unmet need for family. While numerous women across the developing world would like to space or limit the number of their children, non-use of contraceptives is substantially high among them despite their sexual exposure and an expressed intention to avoid pregnancy.

High unmet need can lead to high rates of unintended pregnancies, unsafe abortions, and adverse maternal outcomes.² The consequences of unmet needs in pregnancy are significant and encompass various health and social implications. Unintended pregnancies resulting from unmet needs can lead to delayed or inadequate antenatal care, posing risks to the health of both mothers and infants.³ Additionally, they are associated with a higher incidence of unsafe abortions, which can lead to maternal mortality and morbidity.³ Addressing unmet needs in pregnancy is crucial for reducing unintended births, unsafe abortions, and maternal deaths, and for improving maternal and child health.³ It is evident that unmet needs in pregnancy have far-reaching effects on women, their families, and society as a whole, emphasizing the importance of comprehensive reproductive health care and family planning services.⁴

Unmet need reveals the lack of accessible family planning services or knowledge available to women with a need for contraceptives. Unmet need can also be related to other barriers of contraception, such as, fear of side effects or health concerns, social acceptance or cultural restrictions. Affordability and dissatisfaction with previously used methods also lead to unmet need. Unmet need for family planning can also be attributed to the Health facility with regard to behavior of staff, timing and distance of the local center, availability of wide basket choice and waiting time at the center.⁵

Understanding and addressing the reasons behind unmet need is essential for improving maternal and child health, reducing unintended pregnancies, and supporting women's reproductive rights.⁶ It is important to consider this measure in the context of national health systems and social conditions to develop effective programs and policies to meet the needs of women during pregnancy and childbirth.⁷ The present study was undertaken to estimate the unmet needs among reproductive age group mothers with under five children and the reasons for the same.

MATERIALS AND METHODS

Study type and design: The study was an observational, hospital based, descriptive and cross-sectional study.

Study population: The study population were mothers in the reproductive age (15-49 years age) having less than five years old children and willing to participate in the study in Pediatrics OPD and Routine

immunization Clinic of NRS Medical College and Hospital.

Exclusion Criteria:

- Mothers not willing to participate
- Any other care giver other than mother
- Mother with seriously ill children
- Currently pregnant mothers

Study duration: The duration of study was three weeks between October 2022- November 2022.

Study technique: During our data collection period, all eligible mothers were included in this study consecutively. Total 258 mothers were interviewed. A predesigned semi structured interview schedule was prepared from literature survey and opinion of experts in the field and used for data entry.

Study Variables:

Dependent variables: Unmet need for family planning

Independent variables

- Sociodemographic variables: Age of the mother & child, Residence, Family type, Education and Occupation of mother, SE Scale (Modified B G Prasad Scale, 2021)⁵, Mothers role in decision making regarding family matters (autonomy)
- Reproductive characteristics: Age of the mothers at marriage and at 1st pregnancy, duration of marriage, Parity, spacing of children, H/O Abortion, Number male and female children

Reasons for not using contraceptive methods-Client related and health facility related reasons, opposition from client herself, husband and family members.

Data Compilation & Analysis: Data were entered into Microsoft Excel (Microsoft Corp., USA) and analysed using SPSS (Version 20). Data were presented using mean, standard deviation and percentages. Pie- Charts, Bar Diagrams were used for graphical presentation of the data.

RESULT

Unmet need for family planning were seen in 11.6% of the study population (Figure 1). Among socio-demographic characteristics, more than one-third (11.6%) of the study population had unmet need for family planning. Unmet needs were more common in the age group of 15-19 years (24%), had children in the 49- 56-month aged children (23.1%), from rural areas (12.7%), lived in joint families (13.2%), belonged to Hindu religion (11.7%), belonged to the scheduled tribe (25%), were educated above HS levels (14.7%), in service (14.3%), belonged to SES (Class IV) and had no autonomy (13.5%). (Table 1)

Among obstetric characteristics patients with age at marriage between 26-30 years (37.5%), age at first pregnancy of 26-30 years (23.1%), duration of marriage < 2 years (15.6%), parity of the mother \geq 4





(23.1%), duration of marriage < 2 years (15.6%), parity of the mother ≥ 4 (23.1%) and having female child (23.1%) were more likely to have unmet needs of pregnancy. (Table 2)

The most common reasons for unmet need as stated by mothers, were having no faith and fear of side effects of contraceptives (10.9% each). About 11.6% mothers were not practicing contraception due to long distance of the health center. About 6.6% mothers did not know the proper use of contraceptives while 4.7% of mothers did not practice due to health concern and wrong ideas on contraindications of methods. (Table 3).

DISCUSSION

Unmet needs can be of two types. Unmet needs of spacing and unmet needs of limiting. Unmet need for family planning refers to fecund women who are not using contraception but who wish to postpone the next birth (spacing) or stop childbearing altogether (limiting). Specifically, women are considered to have unmet need for spacing if they are at risk of becoming pregnant, not using contraception, and either do not want to become pregnant within the next two years, or are unsure if or when they want to become pregnant, pregnant with a mistimed pregnancy or postpartum amenorrhoeic for up to two years following a mistimed birth and not using contraception. Women are considered to have unmet need for limiting if they are at risk of becoming pregnant, not using contraception, and want no (more) children, pregnant with an unwanted pregnancy or postpartum amenorrhoeic for up to two years following an unwanted birth and not using contraception.

In the present study, the combined unmet needs of mothers with under 5 children was calculated to be 38.7%. In a clinic-based descriptive study conducted among 104 married women of reproductive age group (15–49 years) attending the outpatient Department of a Primary Health Center, unmet need was found to be 34.6%.⁸ Similar findings were also reported from a cross sectional study among young married women (YMW) in the slums of Lucknow, where the authors found that the unmet need for family planning services was 55.3%. About 40.9% of the unmet need was for spacing methods and 14.4% for limiting methods.⁹ A study by Singh S. et al, from Haryana among 500 currently married women aged between 18-49 years reported that the total unmet need for family planning was 19.2% comprising of 4.8% and 14.4% as unmet need for spacing and limiting respectively.¹⁰ Studies from the northern and north-eastern states of India have reported significantly higher unmet needs among the studies populations compared to the South Indian states reflecting a higher literacy and more reproductive rights among women from the south Indian states.^{10,11,12,13}

The NFHS 5 (2019-2020) has estimated the total unmet needs to be 7%, 5.2% for urban and 7.8% for rural areas of West Bengal, while at the national level 9 percent of currently married women have an unmet need for family planning, including 4 percent who have an unmet need for spacing births and 5 percent who have an unmet need for limiting births.¹⁴ In another study from West Bengal, 13.6% of currently married women of reproductive age group (15–49 yrs.) experienced unmet need for contraception.¹⁵ Regional differences and a

smaller sample size in all these studies may be the reason for the differences with the data reported in the NFHS.

The present study reveals that the demand for spacing and limiting was highest in the 15-19 year age group (24%), followed by women > 35 age group (20%) and 20-24 year age groups (12.2%). Reports of unmet need for spacing and limiting among married women in India from the NFHS-5 (2019–2021) by Singh SK et al,¹⁶ shows that the highest among the women in the age categories 15–19 (17.8%) and 20–24 (17.3%), similar to the present study. A community-based study from rural Haryana among currently married women in the reproductive age group (18-49 years), reported that unmet need for family planning was highest in 35-44 years age group (20.7%),¹⁰ while a study among mothers in the 15-49 year age groups in both rural and urban areas showed the highest levels of unmet needs among mothers in the age group of 25-29 years (29.8%) and 30-34 years ((28.7%).¹¹

Most studies observed that as the educational status improved, the unmet need for family planning decreased.^{10,17} Relwani et al, in their community-based cross-sectional study, among urban married women in the age group of 15–49 years, reported that those who were educated below senior secondary level had 27% unmet need for family planning while those educated above senior secondary had 11%. Women's education and empowerment, especially reproductive rights, appear to significantly lessen the burden of unmet family planning needs. In the present study women with no autonomy defined as their inability to participate in household decision making was associated with a higher level of unmet need. However, the traditional contributors of women empowerment/ autonomy like education and occupation were not related to the levels of unmet needs in the present cohort. More detailed research into the reasons for these need to be undertaken to identify possible social causes that might contribute to women autonomy.¹⁸

The present study cohort reveals that mothers from joint families (13.2%) had a higher proportion of unmet needs compared to those from nuclear families (9.6%). Relwani NR et al,¹⁸ also reported that unmet need was significantly higher in joint and three-generation families (30.1%) when compared with women from nuclear family (18.2%). That unmet need was higher in joint families was also observed by Indu,¹⁹ in their study among married women in urban slums of Thiruvananthapuram Corporation. The absence of extra hands to take care of more children at home and privacy to discuss family planning with their partners can be the reasons for the decreased level of unmet needs in mothers from nuclear families.¹⁸

The present study shows that an increase in the number of births a married woman has ever had was associated with an increase in unmet needs of contraception. As parity increased by one birth, the chance of having unmet need for family planning has been reported to be twice as much.^{20,21,22} Another related study from Burkina Faso, reported that women with 5 or more living children, were approximately eight times likely to have an unmet need for contraception than those who did not have living children.²³





There was a significant connection between unmet need and the absence of a male child. It has been noticed that unmet need was higher among women who did not have a male child in their home and limited their fertility by using contraception. Couples having girl child only, were confused whether to take one more chance or not because they needed at least one male child to carry the name of family.²⁴ Singh S et al, also reported that unmet need for family planning was high among those who had more daughters.¹⁰

Both age of marriage and age of first childbirth was significantly associated with unmet needs of the population. In their cross-sectional study on 188 ever married women in the reproductive age group selected by simple random sampling, Sabat S et al,²⁵ found that among women married before the legal age of marriage, 60.9% had unmet need for family planning. It was lower for those who had married after 18 years of age and this association was found to be significant.²⁵ Bhattachary et al,²⁶ also reported that unmet needs decreased as the age at marriage rose. In a community-based study in Chunambad panchayat, Tamil Nadu, India, among 505 women 15–49 years old, however, there was no significant association between age of marriage and unmet needs.²⁷ In the present study, the findings were significantly on the contrary with increased levels of unmet needs in mothers with higher age at marriage and first pregnancy. The reasons for the same needs to be looked into through further research. No significant relation was seen among the mothers based on their duration of marriage.

According to a report by the United Nations Population Fund, globally, around 257 million women who want to avoid pregnancy are not using safe, modern methods of contraception. Among them, 172 million are using no method at all.²⁸ The report states that the biggest issue by far is people not being able to get the contraception that they need, when they need it. The reasons for not using modern contraception include fear and experience of side effects, infrequent sex or none at all, opposition to contraception, and breastfeeding or postpartum and not menstruating.²⁸

Unmet needs can stem from fertility, method-related issues, opposition from partner and family, or a lack of information or access to services. Research indicates that a woman's unmet demand is influenced by her background, including income, autonomy, childbearing experiences, education, and program elements.¹¹ Sulthana B et al,²⁹ from Puducherry, divided the reasons for not accepting contraceptive by mothers into provider related (facility, staff), client related (personality, knowledge, health concerns, Fertility related), contraceptive related (availability, accessibility, affordability, side effects and environ related (family, cultural, religious) factors and found that among mothers with unmet need, approximately 50 per cent reported client related factors (lack of knowledge, shyness, etc.) as a cause for unmet need; and 37 per cent reported contraception related factors: availability, accessibility, affordability and side effects. In the present study the reasons for not using contraceptives were divided into three groups namely client related reasons, health facility related reasons, and opposition towards contraceptive use. Situation of the local health center delivering contraceptive being too far from the client's residence (11.6%), considered under health facility related factors, was the number -one reported cause of non-

use, followed by fear of side effects (10.5%) and no-faith in contraception (10.5%), which were classified under the client related for unmet needs. Opposition of partner (7.8%), Other family members (8.1%) and the client herself (5.4%) were other significant reasons for non-use of contraceptives in mothers included in the present study. Ram et al,³⁰ reported 12% of women from Kolkata had suggested the reasons for unmet need to be opposition from family members, 26% mothers had no information regarding the different methods and 20% women found methods available to be inconvenient.

CONCLUSION

In conclusion, addressing unmet needs for family planning requires a multifaceted approach that considers educational initiatives, empowerment of women, and improved access to contraceptive services. The analysis reveals that unmet needs are categorized into spacing and limiting, with significant variations across age groups and educational levels. Younger women, particularly those aged 15–19, exhibit the highest levels of unmet needs, highlighting the importance of targeted interventions. Educational attainment is crucial; as women's education increases, their unmet needs tend to decrease. Additionally, family structure plays a significant role, with women from joint families experiencing higher unmet needs compared to those from nuclear families. The study also indicates that cultural factors, such as the desire for male children and traditional family dynamics, further complicate the landscape of family planning.

Ultimately, tailored interventions that acknowledge regional differences and cultural contexts will be essential in reducing these unmet needs and enhancing reproductive health outcomes for women. By focusing on women's autonomy and decision-making power, as well as addressing logistical barriers to accessing contraception, stakeholders can make meaningful progress in this critical area of public health.

CONFLICT OF INTEREST

Not Declared

FUNDING

Not declared



Table 1: Association of unmet needs of contraception with the socio-demographic characteristics of the study population (n= 258)

Socio-demographic variable	Total N (%)	Unmet need present (n=30) N (%)	Unmet need absent (n=228) N (%)	Chi square	p value
Age of mother (in completed years)					
15 – 19	25 (100)	6 (24)	19 (76)	6.050	0.195
20 – 24	107 (100)	13 (12.2)	94 (87.8)		
25 – 29	95 (100)	9 (9.5)	86 (90.5)		
30 – 34	26 (100)	1 (3.8)	25 (96.2)		
≥ 35	5 (100)	1 (20)	4 (80)		
Age of children (in completed months)					
Upto 12 months	130 (100)	18 (13.8)	112 (86.2)	5.790	0.215
13-24	56 (100)	3 (5.4)	53 (94.6)		
25-36	36 (100)	5 (13.8)	31 (86.2)		
37-48	23 (100)	1 (4.3)	22 (95.6)		
49-56	13 (100)	3 (23.1)	10 (76.9)		
Place of residence					
Urban	85 (100)	8 (9.4)	77 (90.6)	0.610	0.436
Rural	173 (100)	22 (12.7)	151 (87.3)		
Type of family					
Joint	144 (100)	19 (13.2)	125 (86.8)	0.780	0.378
Nuclear	114 (100)	11 (9.6)	103 (90.4)		
Religion					
Hindu	145 (100)	17 (11.7)	128 (88.3)	7.35	0.030*
Muslim	112 (100)	13 (11.6)	99 (88.4)		
Christian	1 (100)	0	1 (100)		
Caste					
General	95 (100)	9 (9.5)	86 (90.5)	1.930	0.586
Scheduled Caste	69 (100)	8 (11.6)	61 (88.4)		
Scheduled tribe	8 (100)	2 (25)	6 (75)		
OBC [#]	86 (100)	11 (12.8)	75 (87.2)		
Level of education of mother					
Illiterate	6 (100)	0	6 (100)	4.030	0.545
Below primary	13 (100)	1 (7.7)	12 (92.3)		
Primary	36 (100)	5 (13.9)	31 (86.1)		
Middle	54 (100)	3 (5.5)	51 (94.4)		
Secondary	88 (100)	12 (13.6)	76 (86.4)		
HS ^{##} & above	61 (100)	9 (14.7)	52 (85.3)		
Occupation of mother					
Home maker	244 (100)	28 (11.5)	216 (88.5)	0.100	0.750
Service	14 (100)	2 (14.3)	12 (85.7)		
Socio-economic status^S					
Class I	19 (100)	1 (5.3)	18 (94.7)	8.900	0.064
Class II	42 (100)	0	42 (100)		
Class III	74 (100)	10 (13.5)	64 (86.5)		
Class IV	89 (100)	15 (16.8)	74 (83.2)		
Class V	34 (100)	4 (11.8)	30 (88.2)		
Autonomy of the mother					
Has autonomy	102 (100)	9 (8.8)	93 (91.2)	1.290	0.256
No autonomy	156 (100)	21 (13.5)	135 (86.5)		

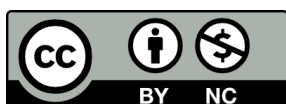


Table 2: Association of unmet needs of contraception with the obstetric characteristics of the mothers (n=258)

Socio-demographic variable	Total N (%)	Unmet need present (n=30) N (%)	Unmet need absent (n=228) N (%)	Chi square	p value
Age at marriage (in completed years)					
<18	95 (100)	15 (15.8)	80 (84.2)	10.41	0.015*
18-20	101 (100)	10 (9.9)	91 (90.1)		
21-25	54 (100)	2 (3.7)	52 (96.3)		
26-30	8 (100)	3 (37.5)	5 (62.5)		
Age at first pregnancy (in completed years)					
<18	45 (100)	9 (20)	36 (80)	8.440	0.038*
18-20	84 (100)	11 (13.1)	73 (86.9)		
21-25	116 (100)	7 (6.3)	109 (93.7)		
26-30	13 (100)	3 (23.1)	10 (76.9)		
Duration of marriage					
<2 years	45 (100)	7 (15.6)	38 (84.4)	0.950	0.623
2-4 years	85 (100)	10 (11.8)	75 (88.2)		
≥ 5 years	128 (100)	13 (10.2)	115 (89.8)		
Parity of the mother					
1	143 (100)	15 (10.5)	128 (89.5)	6.93	0.741
2	87 (100)	5 (5.7)	82 (94.3)		
3	37 (100)	7 (18.9)	30 (81.1)		
≥4	13 (100)	3 (23.1)	10 (86.9)		
Gender of the child					
Only female	65 (100)	15 (23.1)	50 (76.9)	21.055	<0.01*
Only male	68 (100)	12 (17.6)	56 (82.4)		
Both male and female	125 (100)	3 (2.4)	122 (97.6)		

*Statistically significant

Figure 1: Distribution of study participants according to their need of use of family planning methods (n=258)

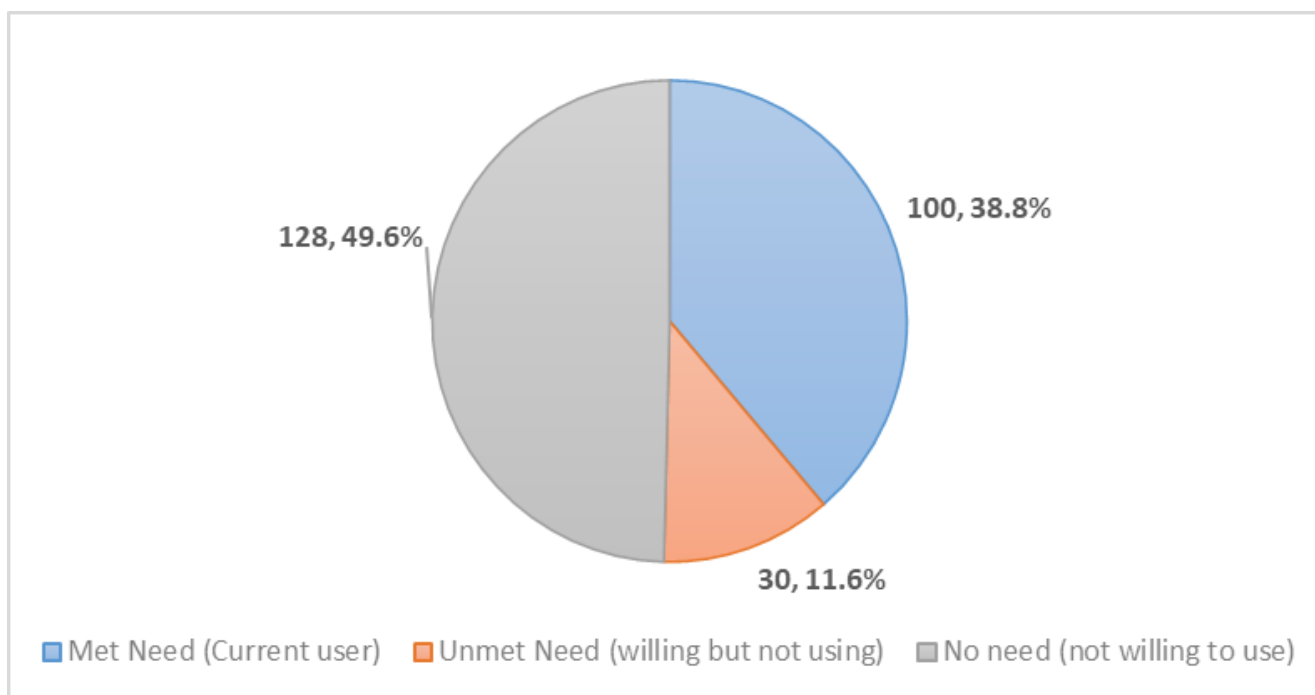




Table 3: Distribution of study participants according to, reasons for not using contraceptive methods (n=30)

Reasons for not using contraceptives	Frequency	Percentage (%)
Client related reasons		
Knows no method	10	3.9
Does not know how to use	17	6.6
Fear of side-effects	27	10.5
Wrong ideas about contraindications of methods	12	4.7
Willing to have birth of son Lack of motivation – no need	7	2.7
No faith	27	10.5
Health concerns	12	4.7
Affordability	7	2.7
Unsatisfied with the previously used methods	11	4.3
Health facility related reasons		
Availability of wide basket of choice	4	1.6
Behaviour of staff	3	1.2
Timing of local centre	10	3.9
Distance of local centre	30	11.6
Waiting time	16	6.2
Source of opposition towards contraceptive use		
Client herself	20	7.8
Partner	14	5.4
Other family members	21	8.1

*Multiple responses

REFERENCES

- United Nations, Department of Economic and Social Affairs, Population Division (2014). World Contraceptive Use 2014 (POP/DB/CP/Rev2014)
- Coulson J, Sharma V, Wen H. Understanding the global dynamics of continuing unmet need for family planning and unintended pregnancy. *China Population and Development Studies*. 2023 Mar;7(1):1-4.
- PRB Resource Library. Unmet need for contraception: Fact Sheet. Available from <https://www.prb.org/resources/unmet-need-for-contraception-fact-sheet/>. Last accessed Jnuary 2024.
- Wulifan JK, Jahn A, Hien H, Ilboudo PC, Meda N, Robyn PJ, Saidou Hamadou T, Haidara O, De Allegri M. Determinants of unmet need for family planning in rural Burkina Faso: a multi-level logistic regression analysis. *BMC pregnancy and child-birth*. 2017 Dec;17:1-1.
- Girma Garo M, Garoma Abe S, Dugasa Girsha W, Daka DW. Unmet need for family planning and associated factors among currently married women of reproductive age in Bishoftu town, Eastern Ethiopia. *PloS one*. 2021 Dec 6;16(12):e0260972.
- Sedgh G, Ashford LS, Hussain R. Unmet need for contraception in developing countries: examining women’s reasons for not using a method.
- World Health Organisation. The Global Health Observatory. Unmet need of family planning. Available from <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3414>. Last accessed January 2024.
- Mallick N, Paul B, Garg S, Dasgupta A, Ghosh A, Biswas B. Unmet need of family planning among married women of reproductive age: A clinic-based study in rural Bengal. *Int J Med Sci Public Health*. 2018 Feb 1;1.
- Yadav K, Agarwal M, Shukla M, Singh JV, Singh VK. Unmet need for family planning services among young married women (15–24 years) living in urban slums of India. *BMC women's health*. 2020 Dec;20:1-7.



Articles in The ESRF Research Journal for Undergraduate Medical Students are Open Access articles published under a Creative Commons Attribution-Non Commercial 4.0 International License (CC BY-NC). This license permits use, distribution, and reproduction in any medium, provided the original work is properly cited, but it cannot be used for commercial purposes and it cannot be changed in any way.



10. Singh S, Kalhan M, Malik JS, Jangra A, Sharma N, Singh S. Assessment of unmet need for family planning and its determinants in a rural block of Haryana. *International Journal of Community Medicine and Public Health*. 2018 May;5(5):1968-73.
11. Rasheed N, Khan Z, Khalique N, Siddiqui AR, Hakim S. Unmet need of contraception among married women of reproductive age group in Uttar Pradesh, India. *Int J Med Health Sci*. 2016;5(1):14-9.
12. Rajkumari B, Nula P, Longjam U. Contraceptive uptake and its determinants and unmet need for contraception amongst women in an urban Muslim community: A cross-sectional study. *J Med Soc*. 2013;27:181-6.
13. Mathew AA, Saju CR, Catherin N. Family planning practices among married women of reproductive age group in a rural area in Thrissur district, Kerala, India. *Int J Curr Res Aca Rev*. 2015;3(11):36-41.
14. National Family Health Survey 5. Fact Sheet West Bengal. Government of India. Available from: <http://www.rchiips.org/nfhs/>. Last accessed on January 2024.
15. Halder A, Bai BB, Saha TK, Mundle M, Dasgupta U and Chattopadhyay S. The Level of Unmet Need & Social Correlates: An Experience from a District in West Bengal. *International Journal of Medicine and Public Health* 2012; 2 Suppl 3:29-33.
16. Singh SK, Kashyap GC, Sharma H, Mondal S, Legare CH. Changes in discourse on unmet need for family planning among married women in India: evidence from NFHS-5 (2019–2021). *Scientific Reports*. 2023 Nov 22;13(1):20464.
17. Vohra R, Vohra A, Sharma S, Rathore MS, Sharma BN, Sharma MP. Determinants of the unmet need for family planning among women of Jaipur, Rajasthan. *Int J Adv Med Res*. 2014;1:20-5.
18. Relwani NR, Saoji AV, Kulkarni M, Kasturwar N, Zade R, Wadke R. Revealing unmet need for contraception among married women in an urban slum of Nagpur. *Int J Med Sci Public Health*. 2015;4(8):1136-40.
19. Indu D. Unmet needs for family planning in urban slums of Trivandrum corporation area — a cross sectional study. *Calicut Med J* 2011;9(2):1–5.
20. Gahungu J, Vahdaninia M, Regmi PR. The unmet needs for modern family planning methods among postpartum women in Sub-Saharan Africa: a systematic review of the literature. *Reprod Health*. 2021;18(1):35
21. Ahinkorah BO, Ameyaw EK, Seidu A-A. Socio-economic and demographic predictors of unmet need for contraception among young women in sub-Saharan Africa: evidence from cross-sectional surveys. *Reprod Health*. 2020;17(1):163
22. Tadele A, Abebaw D, Ali R. Predictors of unmet need for family planning among all women of reproductive age in Ethiopia. *Contracept Reprod Med*. 2019;4(1):6.
23. Adebawale SA, Palamuleni ME. Determinants of unmet need for modern contraception and reasons for non-use among married women in rural areas of Burkina Faso. *Afr Popul Stud*. 2014;29:499–514
24. Sahasrabuddhe A, Kori S, Arora VK, Bute J. A study to assess unmet need for family planning and contraceptive choices among married women of reproductive age in rural Madhya Pradesh. *International Journal of community Medicine and Public Health*. 2018 Nov;5(11):4725.
25. Sabat S, Jena D, Satapathy DM, Patro S, Tripathy R. Profile of unmet needs of family planning in an urban slum of Ganjam district, Odisha, India: a cross-sectional study. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*. 2019 Mar 1;8(3):961-7.
26. Bhattathiry MM, Ethirajan N. Unmet need for family planning among married women of reproductive age group in urban Tamil Nadu. *J Fam Community Med*. 2014;21(1):53.
27. Vishnu Prasad R, Venkatachalam J, Singh Z. Unmet needs of family planning among women: a cross-sectional study in a rural area of Kanchipuram District, Tamil Nadu, South India. *The Journal of Obstetrics and Gynecology of India*. 2016 Oct;66:488-93.
28. United Nations Population Fund. Challenges to Choice. Available from <https://www.unfpa.org/swp2022/challenges>. Last accessed January 2024.
29. Sulthana B, Shewade HD, Sunderamurthy B, Manoharan K, Subramanian M. Unmet need for contraception among married women in an urban area of Puducherry, India. *The Indian journal of medical research*. 2015 Jan;141(1):115.
30. Ram R, Ghosh M N, Bhattacharya S, Haider A, Chatterjee C, Naskar N. Study of unmet need for family planning among married women of reproductive age attending Immunisation clinic in a Medical College of Calcutta. *Indian J. of Community Medicine*, 2000; 25: 22-25

