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## Original Research Article

# Unmet need for contraception among married women of reproductive age in the slums of Burdwan municipality, West Bengal

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## ABSTRACT

**Background:** Use of inappropriate family planning (FP) methods is one of the major reasons for population growth in India. If the determinants of FP methods were understood, it would help to improve the acceptance of the FP methods among the users and thus contribute to a stable population. The study was conducted to assess the unmet need for contraception and its determinants among married women of reproductive age (WRA) group in the slums of Burdwan municipality.

**Methods:** A community based descriptive and cross-sectional study conducted among 330 married WRA in the slums of Burdwan municipality, West Bengal, from November, 2022 to January, 2023. Fifteen slums were selected from 144 slums in the municipality, by simple random sampling (SRS) and from each slum, study subjects were selected by SRS, from a list of married WRA. A pre-designed, pre-tested, semi-structured schedule was used for data collection and data analyse using SPSS-23.

**Results:** Around 51% couples used some methods of FP and 49% did not use any methods. Among non-users, the unmet need was 18.2% for spacing and 15.1% for limiting births. Significant association ( $p < 0.05$ ) among the determinants of FP, was observed with educational status of respondents and age at marriage.

**Conclusions:** Age, education, socio-economic status, age at marriage, age at 1st pregnancy, types and adverse effects of contraception are important determinants both FP methods and unmet need. So proper counselling and assessment of WRA is essential.

**Keywords:** WRA, FP, Contraception, Unmet need

## INTRODUCTION

Unmet need for FP is defined as the percentage of WRA (15-49 years), either married or in a relationship, who want to stop or delay childbearing but are not using any method of contraception.<sup>1</sup> The concept of unmet need for FP targets the gap between women's reproductive intentions and their contraceptive behaviour.<sup>2</sup> It comprises all women who are married and sexually active, who are not using any contraception and do not want to have more children or want to postpone their next child by at least two more years.<sup>3</sup> About 120 million unwanted pregnancies are

estimated to occur worldwide annually. In developing countries more than one-third of all pregnancies are considered unwanted and about half, end up in abortion. These are most often unsafe, accounting for 30% of all maternal deaths globally.<sup>4,5</sup> Approximately two-thirds of unwanted pregnancies in developing countries occur among women who are not using any method of contraception due to inability to take necessary decisions to prevent and avoid unwanted pregnancies.<sup>6</sup> Globally, 73 million women chose induced abortion, resulting in high maternal morbidity and mortality.<sup>7</sup> Unwanted pregnancy is a worldwide problem that affects women and their

families and societies. FP could help improve health, reduce poverty, and empower women.<sup>8-11</sup> It could also prevent one in every three maternal deaths by allowing women to delay motherhood, space births, avoid unwanted pregnancies and abortions, and stop childbearing when they have reached their desired family size.<sup>12,13</sup> There are millions of sexually active women worldwide, do not want to become pregnant for various reasons, but are not using any types of contraception methods. These women have an “unmet need” for FP leading to unwanted pregnancies which has its adverse effects on the health and well-being of the women and babies too.<sup>14</sup> The United Nations estimated that world population grew at an annual rate of 1.23% during 2011-2020, whereas India’s population grew at 1.38% per annum during 2011-2020.<sup>15</sup> Uncontrolled population growth is one of the important causes of mass explosion in India. India is the most populous country in the world and West Bengal is the fourth most populous state in India. To overcome this problem, the govt. of India launched the national FP program in 1952, and became the first country in the world to attempt to stabilize the population at a level consistent with sustainable development. Despite spending a huge number of resources during the last five decades, the program failed to achieve desired results. The national population policy (NPP) 2000 stated that the immediate objective was to address the unmet need for contraceptive services.<sup>16</sup>

### Objectives

Hence the present study was aimed to estimate the unmet need for contraception and its determinants among married women in reproductive age group (15-49 years) living in slums of Burdwan municipality, West Bengal.

### METHODS

This community based cross-sectional study was conducted in selected slums of Burdwan municipality, West Bengal, from November, 2022-January, 2023. The study subjects were married WRA (15-49 years), who were permanent residents of the slum at least for last 6 months. Assuming a prevalence (P) of 26.4%, a sample size of 330 was calculated using the formula:  $n = (Z^2 \times P \times Q) / d^2$ , where Q is the complement of P, Z=1.96, and absolute precision (d)=5%.<sup>2</sup> Fifteen slums were selected from 144 slums in Burdwan municipality, by simple random sampling (SRS) and from each slum, study subjects were selected again by SRS, from a list of married WRA, obtained from the urban social health workers (USHAs). Operational definition of unmet need for spacing and limiting was defined as in NFHS-5.<sup>16</sup> Written, informed consent was obtained from the respondents. Data collection was done after ethical approval from institutional ethics committee of Burdwan medical college (BMC/CM/2022-23/567, dated: 05.01.2023) using a pre-designed and pre-tested, semi structured schedule. All the women were interviewed and information were collected regarding socio-demographic characteristics like age, religion, education, occupation, socio-economic status

(Modified B.G. Prasad Scale, May, 2022), age at marriage and first pregnancy, contraceptive use, type of contraceptive, unmet need and its reasons. The data was collected and tabulated, analysed using statistical software SPSS 23. Proportions and Chi-square test were used for analysis. Odds ratio and its 95% CI was calculated by using logistic regression. P<0.05 was considered as significant.

### Operational definition

*Unmet need of FP:* Women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child.

*Reproductive age group:* Women aged 15-49 years.

*Contraceptive prevalence rate:* Proportion of WRA (age 15-49 years) who have their need for FP satisfied with modern methods.

### RESULTS

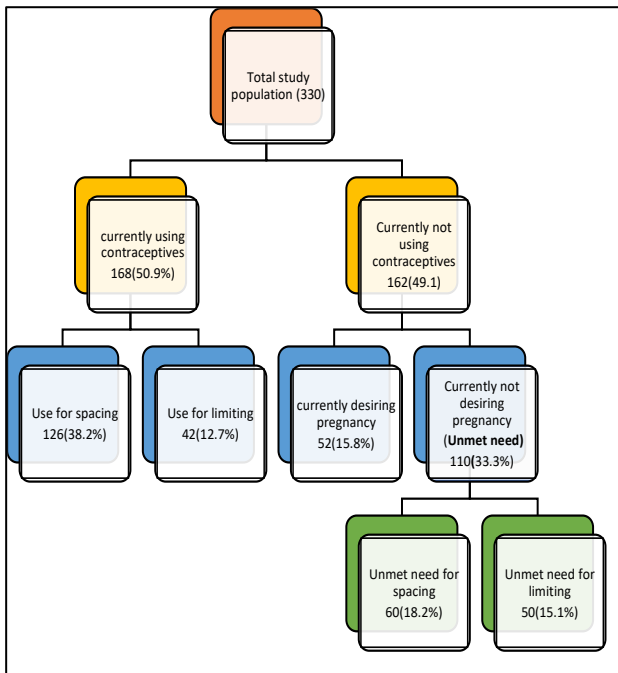
Around three fourth (74.2%) of the women were in the age group of 21-29 years, most were Hindus (78.8%) followed by Muslims (21.2%). Just less than half (44.9%) of the participants belonged to other backward castes (OBC), followed by scheduled castes (33.9%), unreserved (10.9%), scheduled tribes (10.3%). The educational background of the participants revealed that almost one fifth (23.9%) women were illiterate, and one third (33.0%) were educated up to middle school, and more than one fourth (29.9%) were had secondary and above education. Similarly, it was found that 21.8% of the husbands were illiterate, 15.7% had completed primary education, 36.9% had completed middle school, and one fourth (24.9%) had completed secondary education or above. Three fourth of the participants were homemakers (76.1%) followed by labourer (20.3%) and owners of small business (3.6%). Similarly, it was found that around half (48.2%) of the husbands were labourers followed by business (45.7%) and service (6.1%). Two fifth of the respondents belonged to class III (40.6%) socio-economic status, followed by class IV (39.7%), and class II (19.7%) according to modified B. G. Prasad scale (May, 2022). More than half (57.2%) of women got married before 20 years of age, and 37.9% women were married between 21-24 years and 4.9% of women, after 25 years. Regarding the age at first pregnancy, two third (66.5%) of the women were pregnant between 21-24 years of age, followed by 20.0% of women below 20 years of age, 8.4% of women between 25-30 years of age, 5.1% of women got pregnant above 30 years of age.

Out of 330 respondents, the overall contraceptive prevalence rate was 50.9%. Almost half (49.1%) women currently did not use any method of contraception. Among them 110 (33.3%) had an unmet need for FP methods, and the rest 52 (15.7%) women wanted children. So, the

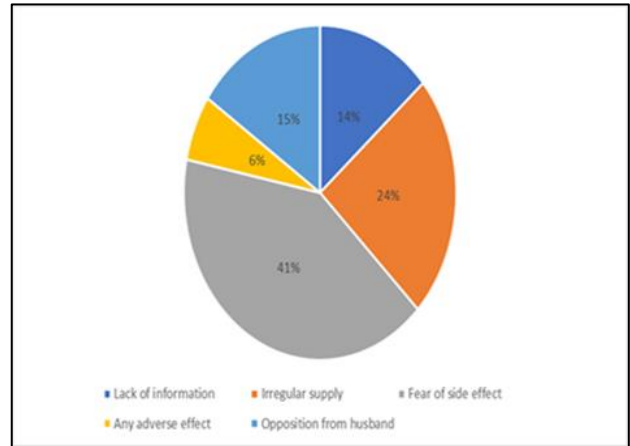
prevalence of unmet need was 33.3% in the study area of Burdwan municipality. The need for spacing and limiting were 18.2% and 15.1% respectively (Figure 1).

The reasons for unmet need were fear of side effects 41%, irregular supply 24%, 15% had opposition from husband, 14% had lack of information, and 6% had other adverse effect (Figure 2).

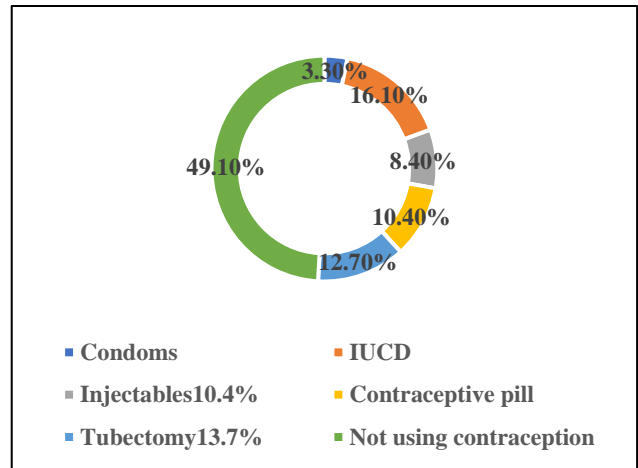
In the present study, more than two third of women (38.2%) were using spacing methods where 16.1% were using Injectables, 10.4% were using OCP, 8.4% were using IUCD 3.3% were using condoms, and limiting methods like tubectomy were 12.7% (Figure 3).



**Figure 1: Schematic diagram showing unmet need for contraception (n=330).**



**Figure 2: Reasons for unmet contraception needs (n=110).**



**Figure 3: Types of contraception, (n=330).**

**Table 1: Socio-demographic profile of the study subject, (n=330).**

Variables	N	Percentage (%)
<b>Age (in years)</b>		
<20	11	3.3
20-24	130	39.5
25-29	115	34.8
>30	74	22.4
Total	330	100
<b>Religion</b>		
Hindu	260	78.8
Muslim	70	21.2
Total	330	100
<b>Caste</b>		
General	36	10.9
SC	112	33.9
ST	34	10.3
OBC	148	44.9
Total	330	100

Continued.

Variables	N	Percentage (%)
<b>Types of family</b>		
Nuclear	156	47.3
Joint	174	52.7
Total	330	100
<b>Educational status of respondents</b>		
Illiterate	79	23.9
Literate	251	76.1
Total	330	100
<b>Educational status of husbands</b>		
Illiterate	72	21.8
Literate	258	78.2
Total	330	100
<b>Occupation of respondents</b>		
Homemaker	251	76.1
Working	79	23.9
Total	330	100
<b>Occupation of husbands</b>		
Labour	159	48.2
Service or self employed	171	51.8
Total	330	100
<b>SES</b>		
Upper middle class	65	19.7
Middle class	134	40.6
Lower middle class	131	39.7
Total	330	100

**Table 2: Relationship between FP and socio-demographic characteristics of the participants, (n=330).**

Characteristics	Unmet need, N (%)		Total, N (%)	Chi-square test		
	Yes	No		$\chi^2$	Df	P value
<b>Age (in years)</b>						
<20	0 (0)	11 (100)	11 (100)	5.690	1	0.017
>20	110 (34.5)	209 (65.5)	319 (100)			
Total	110 (33.3)	220 (67.7)	330 (100)			
<b>Type of family</b>						
Nuclear	44(28.2)	112(71.8)	156(100)	3.501	1	0.061
Joint	66 (37.9)	108 (62.1)	174 (100)			
Total	197 (59.69)	133 (40.31)	330 (100)			
<b>Education of respondents</b>						
Illiterate	44 (52.4)	40 (47.6)	84 (100)	8.930	5	0.000
Literate	66 (26.8)	180 (73.2)	246 (100)			
Total	110 (33.3)	220 (66.7)	330 (100)			
<b>Occupation of respondents</b>						
Home maker	79 (31.5)	172 (68.5)	251 (100)	1.6311	1	0.202
Working	31 (39.2)	48 (60.8)	79 (100)			
Total	110 (33.3)	220 (66.7)	330 (100)			
<b>Occupation of husband</b>						
Labour	66 (41.5)	93 (58.5)	159 (100)	9.230	1	0.002
Service and self employed	44 (25.7)	127 (74.3)	151 (100)			
Total	110 (33.3)	220 (66.7)	330 (100)			
<b>SES</b>						
Middle class and above	45 (22.6)	154 (77.4)	199 (100)	25.925	1	0.000
Lower class and below	65 (49.6)	66 (50.4)	131 (100)			
Total	110 (33.33)	220 (66.67)	330 (100)			

Continued.

Characteristics	Unmet need, N (%)		Total, N (%)	Chi-square test		
	Yes	No		$\chi^2$	Df	P value
Age at marriage (in years)						
<20	51 (27.0)	138 (73.0)	189 (100)	8.024	1	0.005
>20	59 (41.8)	82 (58.2)	141 (100)			
Total	110 (33.33)	220 (66.67)	330 (100)			
Age at 1 <sup>st</sup> pregnancy (in years)						
<20	16 (24.2)	50 (75.8)	66 (100)	3.068	1	0.080
>20	94 (35.6)	170 (64.4)	264 (100)			
Total	110 (33.33)	220 (66.67)	330 (100)			

\*Fisher exact test, Consider  $p < 0.05$ .

**Table 3: Relationship of socio-demographic characteristics between unmet need for contraception, (n=110).**

Characteristics	Total participants, (n=330)	Unmet need for contraception, (n=110) (%)	AOR, (at 95% CI)	P value
Education of respondents				
literate	84	44 (52.4)	0.991 (0.984-0.998)	0.001
Illiterate	246	66 (26.8)	Ref	
Socio-economic status				
Middle class and above	199	45 (22.6)	1.012 (1.005-1.018)	0.001
Lower middle class and below	131	65 (49.6)	Ref	
Age at marriage (in years)				
<20	189	51 (27)	1.001 (1.000-1.003)	0.041
>20	141	59 (41.8)	Ref	

Nagelkerke  $R^2=0.168$ , Hosmer and Leme-Show test value=0.008, socio-demographic status as per modified B.G. Prasad scale (May 2022).

## DISCUSSION

In the present study contraceptive methods were adopted by 50.9% of respondents, which was much lower than the finding of NFHS-5 (74.4%) among urban WRA women of west Bengal. In this present study unmet need of contraception was found 33.3%, it is very much higher according to NFHS-5, in West Bengal among WRA which is only 7%. A study by Chakraborty et al unmet need of contraception was found 26.4% among married women in reproductive age group.<sup>2</sup> In this present study use of FP methods was found higher among aged 20-24 years (23.6%) and women aged 25-29 years (21.8%). According to NFHS-5 India, women of higher age group used FP methods more than that of lower age group.<sup>16</sup> FP methods were more commonly used among women belonging to class 2 and class 3 socio-economic status. In the study of Chakraborty et al also found that income had a significant influence on adoption of FP methods.<sup>2</sup> The increase prevalence of use of contraception among the Hindus as compared to Muslim community as found in the present study as similar to the study by Chakraborty et al.<sup>2</sup> In the present study, more than two third of women (38.2%) were using spacing methods for contraception where 16.1% were using Injectables, 10.4% were using OCP, 8.4% were using IUCD 3.3% were using condoms, and limiting methods like tubectomy were 12.7%. According to NFHS-5, West Bengal, prevalence of spacing was 33%, where OCP use 20.1%, condoms use 10.1%, IUCD use 2.0%,

injectables 0.8%, and limiting methods like tubectomy was 26.8% and vasectomy was 0.1%.<sup>16</sup>

It was found from the present study that unmet need for contraception was higher among illiterate women and also their husband who were illiterate, joint families, lower age group (<20 years), and also women who were married at an early age. These observations were similar to the findings of earlier studies of Sachdeva et al, Chakraborty et al and Bhattacharya et al.<sup>2,13,17</sup>

The reasons for unmet need as per present study that fear of side effect 41%, irregular supply 24%, opposition from husband 15%, lack of information 14%, any adverse effect 6%. These findings also similar to the findings of earlier.<sup>2,13</sup>

Thus, proper information, education, communication and counselling may help to bring down the problem of unmet need of contraception. Improving the literacy rate and rising the age of marriage is anticipated to yield better results in future.

## CONCLUSION

The present study revealed a high prevalence of unmet need contradictory to the findings of NFHS-5. The reasons for unmet need from the present study were mainly fear of side effects, irregular supply, opposition from husband, lack of information and also socio demographic factors



like education, socio economic status, age at marriage. Thus, proper counselling of the couples, awareness regarding the basket of choice available, and encouraging shared decision making, will address the problem of unmet need.

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*Ethical approval: The study was approved by the Institutional Ethics Committee of Burdwan medical college (BMC/CM/2022-23/567, dated: 05.01.2023).*

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