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Original Article

Public Health Section

Assessment of Perception of Family Planning among Mothers in an Urban Slum Area in Kolkata, India

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ABSTRACT

Introduction: Women in India are not fully educated on contraception usage. In 2017, a central family planning initiative called *Mission Pariwar Vikas* was launched by the Ministry of Health and Family Welfare (MoHFW).

Aim: This study was conducted among mothers in an urban slum in Kolkata to establish their unmet family planning needs, as well as different factors associated with it.

Materials and Methods: A cross-sectional community-based study was conducted from February 2019 to May 2019 among mothers residing at an urban field practice area (Dhapa UHTC, Kolkata). All mothers of under-five children present in the slum were included in the study (n=246). Pre-designed, pre-tested, semi-structured schedule with both open and closed-ended questions were used.

Results: The majority of the mothers were Muslim, of whom 37.8% were below 18 years of age. Among the mothers, 46.3% were adolescent mothers (<18 years). Around 78% mothers desired two children. Around 70.7% mothers were using some form of contraceptives at the time of the study. Out of 246 subjects, unmet family planning needs were found in 72 (29.3%) subjects. Significant association was found between unmet family planning needs and age, education level, socio-economic status, knowledge of the ideal age of marriage, and the number of children desired.

Conclusion: The study revealed the unmet needs for contraception in an urban slum. However, the practice assessed by the study was actually reported practice and therefore, recall bias might be present. Further studies are recommended in other areas and different settings in order to extrapolate the study findings.

Keywords: Contraception, Socio-economic status, Unmet need

INTRODUCTION

Kolkata, the capital of West Bengal has a population of more than 14 million which makes it India's third most populous metropolitan city according to the 2011 census [1]. At least one-third of the population lives in around 5,500 registered and unregistered slums. Majority of them have minimal access to essential services. The messages about family planning practices do not reach all of the urban slums. Many of them have not even heard about the available modern contraceptives or spacing methods in spite of the fact that the majority of them desire a small family and have a positive attitude towards contraception. The acceptance level of different contraceptive methods also varies with religion, caste, culture, socio-economic status, and literacy level.

The World Health Organisation (WHO) has indicated that desired number of children, spacing and timing of birth can be attained by worthy family planning practices. This can be achieved through the use of family planning methods and the treatment of involuntary infertility. The ability of a mother to limit and space her pregnancies has a direct impact on her health, well-being, and outcome of each pregnancy [2].

In India, according to the National Family Health Survey-4 (NFHS-4) data, unmet family planning needs in urban populations of India was 12.1% and unmet need for spacing was 5.1% [3]. In 2017, a central family planning initiative called *Mission Pariwar Vikas* was launched by the Ministry of Health and Family Welfare (MoHFW), Government of India. Recent data suggests that 145 High Focus Districts (HFDs) in seven states (Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand and Assam) were identified based on Total Fertility Rate (TFR). HFDs exhibiting a TFR ≥3.0 were included in the survey. These HFDs constitute 44% of the Indian population. Only 22% and 40% of India's protected couples and those with unmet family planning needs, reside in these HFDs, respectively. These HFDs have substantial impact on maternal and child health indicators accounting for 25-30% of maternal deaths, 50% of infant deaths, and a high percentage of adolescent mothers [4].

From this perspective, the study was conducted among mothers residing in an urban slum in Kolkata with the objective of elucidating their unmet family planning needs, as well as different factors associated with it.

MATERIALS AND METHODS

A cross-sectional community-based study was conducted from February 2019 to May 2019 among mothers residing at an urban field practice area (Dhapa UHTC, Kolkata).

Inclusion criteria: All mothers of under-five children residing in the slum were included in the study.

Exclusion criteria: Those who did not agree to participate in the study and those couples who were not available during visit were excluded.

From the eligible couple register maintained at the UHTC, only those eligible couples who had at least one child less than 5 years were short listed for the study. Among them those who did not agree to participate in the study and those couples who was not available during visit were excluded. So, the final sample size were 246. Among the eligible couples only the wives were interviewed for the study. Total 246 mothers were interviewed in their local language with pre-designed, pre-tested, semi-structured schedule with both open and closed-ended questions. Confidentiality was assured to all the mothers and they were given a brief description of the study. The study was approved (IEC approval no: CNMC/6) by the Institutional Ethics Committee (IEC) and informed consent was taken from all the mothers prior to initiating the study. In the present study, 18 years age was taken as the ideal age of marriage as per the Honourable Supreme Court.

STATISTICAL ANALYSIS

All the data were coded, entered in MS Excel and analysed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, Version 16.0 for Windows). Descriptive statistics were calculated as frequency and percentage. Association between different variables with unmet family planning needs was established using Pearson's Chi-square test with a $p<0.05$ and 95% CI. Results have been presented in tabular form.

RESULTS

Out of 246 mothers, 62.2% were above 18 years and 37.8% were under 18 years of age. Around 46.3% of them got married at less than 18 years of age. About 58.5% mothers were Muslim, 39% were Hindu, and 2.4% were Christian. Among 246 mothers, 20 (8.1%) were illiterate, 121 (49.2%) were educated up to primary level, 96 (39%) were educated up to high school level, while only 9 (3.7%) were graduates or above. Around 18% mothers were from lower socio-economic status and 59% were from middle class or above, according to the Modified Kuppuswamy Scale, 2019 [Table/Fig-1].

Around 16% and 10% of the study subjects believed that the ideal age of marriage and first pregnancy was less than 18 years, respectively. Around 91% mothers opined for 2 years or more interval between two children and 78% mothers desired for two children. Around 63% mothers desired for a male child [Table/Fig-2].

Variables		Frequency	Percentage (%)
Age group (years) (n=246)	<18	93	37.8
	≥18	153	62.2
Age at marriage (years) (n=246)	<18	114	46.3
	≥18	132	53.7
Religion (n=246)	Christian	6	2.4
	Hindu	96	39.0
	Muslim	144	58.5
Education of mothers (n=246)	Graduation or more	9	3.7
	Up to High school	96	39.0
	Up to Primary school	121	49.2
	Illiterate	20	8.1
Socio-economic status (n=246)	Lower class	45	18.3
	Lower middle class	57	23.2
	Middle class	90	36.6
	Upper middle class	36	14.6
	Upper class	18	7.3

[Table/Fig-1]: Distribution of study population according to socio-demographic variables.

Questions	Distribution	Frequency	Percentage (%)
Knowledge about ideal age of marriage (n=246)	<18 years	39	15.9
	≥18 years	207	84.1
Knowledge about ideal age at first pregnancy (n=246)	<18 years	24	9.8
	≥18 years	222	90.2
Mothers' view on spacing between two children (n=246)	<2 years	21	8.5
	≥2 years	225	91.5
Number of children desired (n=246)	1	21	8.5
	2	192	78.0
	3	27	10.9
	4	6	2.4
Desire for male child (n=246) (opined that male child is essential)	Yes	156	63.4
	No	90	36.6

[Table/Fig-2]: Distribution of study population according to mother's response with respect to desired number of children and spacing.

Around 5% mothers had wrong knowledge regarding reuse of condoms. Only 26% and 18% mothers had correct knowledge regarding regular checking of Intrauterine Contraceptive Device (IUCD) and health check-up during Oral Contraceptive Pill (OCP) use, respectively. About 87% and 63% had no knowledge regarding vasectomy and ligation, respectively. Around 85% mothers were still unaware that one who is still breastfeeding her child can get pregnant [Table/Fig-3].

Questions	Answers	Frequency	Percentage (%)
Reuse of condom	Yes	12	4.9
	No	234	95.1
Regular checking of IUCD during use	Yes	63	25.6
	No	183	74.4
Health check-up among OCP users	Yes	45	18.3
	No	201	81.7
Vasectomy	Yes	33	13.4
	No	213	86.6
Ligation	Yes	90	36.6
	No	156	63.4
A woman who is still breastfeeding her child can get pregnant	Yes	37	15.0
	No	209	85.0

[Table/Fig-3]: Distribution of study population according to the knowledge about various aspects of contraceptive use (n=246).

Around 29% mothers did not use any type of contraceptives or used natural methods of contraception in their lifetime. Different types of contraceptives used by mothers during the study period were condoms (41%), IUCD (15%), OCP (9%), or permanent methods of sterilisation (5%). About 35% and 29% mothers had used modern methods of contraception since marriage and after birth of first child accordingly. Out of 246 subjects, unmet family planning needs were found in 72 (29.3%) subjects [Table/Fig-4].

Variables		Frequency	Percentage (%)
Use of contraceptives at present (n=246)	Condom	102	41.5
	IUCD	37	15.0
	OCP	23	9.3
	Permanent methods	12	4.9
	Not used/natural method	72	29.3
Duration of use of contraceptives (n=246)	Since marriage	87	35.4
	After birth of first child	72	29.3
	After birth of second child	15	6.1
	Not using any contraceptives or natural methods	72	29.3
Unmet family planning needs (n=246)	Present	72	29.3
	Absent	174	70.7

[Table/Fig-4]: Distribution of study population on reported practice regarding contraceptive use.

By bivariate analysis, significant association was found between unmet family planning needs and age, educational level, socio-economic status, knowledge of ideal age of marriage, and number of children desired. It was found that women aged 18 years or less had significantly more unmet family planning needs (OR 3.37), compared to women more than 18 years of age. Unmet family planning needs were also significantly higher among women who had primary education or less (OR 2.48), compared to those with higher level of education. Women who belonged to low or lower middle socioeconomic class also had significantly more unmet family planning needs (OR 2.25). Unmet family planning needs were significantly higher in women who had incorrect knowledge about ideal age of marriage (OR 2.76) and in those who desired three children or more (OR 2.28) [Table/Fig-5].

Variables		Unmet need present n (%)	Unmet need absent n (%)	Odds ratio (95% CI)	p-value
Age of mother	<18 years	42 (45)	51 (55)	3.37 (1.91-5.98)	<0.001
	≥18 years	30 (20)	123 (80)		
Education of mother	Up to primary	52 (37)	89 (63)	2.48 (1.37-4.50)	0.002
	More than primary	20 (19)	85 (81)		
Socio-economic status (Modified Kuppuswamy Scale, 2019)	Up to lower middle class	40 (39)	62 (61)	2.25 (1.29-3.95)	0.004
	Middle class and above	32 (22)	112 (78)		
Age at marriage	<18 years	40 (35)	74 (65)	1.68 (0.97-2.93)	0.062
	≥18 years	32 (24)	100 (76)		
Knowledge of ideal age of marriage	<18 years	19 (49)	20 (51)	2.76 (1.37-5.57)	0.004
	≥18 years	53 (26)	154 (74)		
Knowledge about age of first pregnancy	<18 years	9 (38)	15 (62)	1.51 (0.63-3.63)	0.350
	≥18 years	63 (28)	159 (72)		
Knowledge about spacing between two children	<2 years	10 (48)	11 (51)	2.39 (0.97-5.90)	0.053
	≥2 years	62 (28)	163 (72)		
Number of children desired	≥3	15 (45)	18 (55)	2.28 (1.08-4.82)	0.028
	<3	57 (27)	156 (73)		

[Table/Fig-5]: Association between different variables with unmet family planning needs.
p-value <0.05 significant

However, no significant association was seen between women who had unmet family planning needs and those who married at less than 18 years of age, women who had wrong knowledge about age of first pregnancy, and women who had incorrect knowledge about spacing between two births [Table/Fig-5].

DISCUSSION

This study was conducted among mothers residing in an urban slum in Kolkata with the objective of elucidating their unmet family planning needs, as well as different factors associated with it.

In the present study, out of 246 mothers, the majority of them were above 18 years and 38% of mothers were under 18 years of age. Around 46% of them were married at less than 18 years of age. Around 16% and 10% mothers who had wrong knowledge of the ideal age of marriage and ideal age of first pregnancy, were less than 18 years, respectively. As per NFHS-4 data, 5% of women aged 15-19 years were already mothers at the time of the survey [3]. A study in North India by Qazi M et al., mentioned that the maximum number of respondents (75.6%) belonged to the age group of 21-25 years [5]. In the current study, it was found that 38% of mothers were below 18 years of age. Among the mothers 8% were illiterate and around 49% had literacy level up to primary school. Three-fifth of the study population were Muslim and two-fifth were Hindu. A study by Bhattathiry MM and Ethirajan N, had shown that in Chidambaram, Tamil Nadu, 6% of mothers were illiterate, 29% were educated up to primary level, 42% were educated up to middle school, while 4% were graduates or had a higher degree [6]. A similar study by Jahan U et al., found that 40% of the study subjects had primary level of education [7]. The study by Qazi M et al., found that the majority of the subjects were Hindu (70.37%) and studied up to secondary level (84.61%) [5]. In this study, socio-economic status was measured according to the Modified Kuppuswamy Scale, 2019. It was found that about 18% were from lower class, 23% were from lower middle class, and 37% were from middle class. In North India, Qazi M et al., found that approximately half of the subjects (56.58%) were from a middle class background [5]. In another study from Burundi, 93.7% of study subjects had primary education or no education, while 61.2% belonged to a poor and middle class family [8].

In the present study, 91% mothers opined for 2 years or more interval between two children and 78% mothers desired for two children. A study from Burundi by Nzokirishaka A and Itua I found that desired number of children for majority of women (52.4%) was 4-5 [8]. In the present study, around 63% mothers desired for a male child. Around 5% mothers had wrong knowledge regarding reuse of condoms. Only 26% and 18% mothers had knowledge regarding regular checking of IUCD and health check-up during OCP use, respectively. About 87% and 63% had no knowledge regarding vasectomy and ligation, respectively. Around 85% mothers were unaware that during breastfeeding, they can get pregnant. The study by Qazi M et al., found that 68% of women had knowledge about female sterilisation and 80% women had a positive attitude towards family planning practices [5]. In another study from Burundi, all women (99.2%) knew at least one modern contraceptive method [8].

In the present study, around 29% mothers did not use any type of contraceptives or used natural methods of contraception in their lifetime. About 35% and 29% mothers had used some type of modern contraceptives since marriage and after birth of first child accordingly. At present, different types of contraceptives used include condoms (41%), followed by IUCD (15%), OCP (9%), and permanent methods of sterilisation (5%). A study conducted in an urban slum of Western Gujarat by Khan MF and Kotecha IS found that prevalence of modern contraceptive practices was only 24.6%. The most preferred choices were barrier methods (35.5%), followed by sterilisation (27.1%), IUCD (25%), and OCP (12%) [9]. As per the NFHS-4 data, unmet family planning needs in the urban Indian population was 12.1% and unmet need for spacing was 5.1%. Other unmet contraceptive needs included the use of condoms (9.1%), IUCD (2.4%), OCP (3.5%), and permanent methods (36%) [3]. According to Population Reference Bureau's *2019 Family Planning Data Sheet*, the current use of family planning practices in India include condoms (5.6%), IUCD (1.5%), OCP (4.1%), permanent methods (36.3%), injectable methods (0.2%), periodic abstinence (3.5%), and withdrawal (2.3%) [10]. A study conducted by Ali AAA and Okud A, in eastern Sudan showed that 25.4% of study subjects had ever used contraception, while 26.2% were currently using contraception [11].

It was seen in the present study that out of 246 subjects, unmet family planning needs were found in 72 (29%) subjects. A similar study by Sabat S et al., conducted in an urban slum of Ganjam district, Odisha showed that out of 188 women, prevalence of unmet family planning needs was 36.7%, consisting of 12.8% spacing need and 23.9% limiting need [12]. Another study by George N et al., showed that 11.3% had unmet family planning needs [13]. Another study in an urban slum of Kolkata by Laskar K et al., showed that the prevalence of unmet family planning needs was 20% [14]. Bhattathiry MM and Ethirajan N, had shown in a study in Chidambaram, Tamil Nadu, that the prevalence of unmet family planning needs was 39% [12]. A study conducted in Burundi revealed that unmet family planning

needs was 32.4% [8]. In this study, bivariate analysis showed that unmet family planning needs were significantly associated with age, education level, socio-economic status, knowledge of ideal age of marriage, and number of children desired. It was found that, women aged 18 years or less had significantly higher unmet family planning needs (OR 3.37), compared to women above the age of 18 years. A study by Bhattathiry MM and Ethirajan N had shown that in Chidambaram, Tamil Nadu, unmet family planning needs were highest (29%) among the 25-29 year age group and these unmet needs decreased with advancing age (p<0.001) [6]. Husband and wife's educational level was found to influence family planning practices. In most populations, unmet family planning needs declined with increase in the women's educational level. A study in Uganda indicated that unmet family planning needs were lower among mothers with secondary or higher education [15]. In another study conducted in Kenya, women with less than secondary education were twice as likely to experience unmet family planning needs in comparison to those with secondary education [16]. In the present study, unmet family planning needs were also significantly higher among women who had primary education or less (OR 2.48), compared to those with higher level of education. A study by Ali AAA and Okud A, in couples from eastern Sudan showed that education lower than secondary level, age, age at marriage, and parity were significantly associated with unmet family planning needs [11]. Women who belonged to lower or lower middle socio-economic class also had significantly higher unmet family planning needs (OR 2.25). Unmet family planning needs were significantly higher in women who had incorrect knowledge about ideal age of marriage (OR 2.76), as well as those who desired three children or more (OR 2.28). However, there was no significant association between women who had unmet family planning needs with those who married at less than 18 years of age, those who had wrong knowledge of age of first pregnancy and those who had incorrect knowledge about spacing between two births [Table/Fig-5]. But the study by Bhattathiry MM and Ethirajan N, had shown a significant association between age at marriage and unmet family planning needs, where the unmet needs decreased with the rise in the age at marriage [6].

Limitation(s)

This study had a few limitations. As the male partners were not included in the study, so their perception towards unmet family planning needs could not be evaluated. Also, unmarried and divorced women with under-five children were not included in the study.

CONCLUSION(S)

The study revealed the unmet family planning needs among women in an urban slum. Further studies are recommended in other areas and different settings to extrapolate the study findings. Pamphlets and posters need to be made to spread awareness about family planning. Electronic and print media can also be utilised in spreading awareness. People should be made aware about the hazards of overpopulation. More condom vending sites should be made available. Campaign should be done at various places where people can be made aware about using various contraceptives. Myths such as contraceptives cause harm to the body, IUCDs lead to permanent contraception and that only females are responsible for the sex of the child, should be broken.

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