Mushrooming of urban slums - A challenge toward population stabilization: A cross-sectional study in urban slums of Ahmedabad city

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ABSTRACT

Background: Being first in the world to launch nationwide family planning program, population stabilization is still a major concern for India and now with rapid expansion of urban slums with poor service delivery and limited research, it could transform into a formidable public health challenge. **Objectives:** (1) To find out unmet need for family planning in urban slum community. (2) To study birth spacing practices in urban slums. **Materials and Methods:** The cross-sectional study was conducted during October-November 2015 in urban slum pockets of Ahmedabad city. A total of 195 women and child pair were interviewed using a pretested questionnaire. Data collected was entered in Microsoft Office 2007, and Epi info 7 was utilized for applying statistical tests. $P < 0.05$ was considered to be significant. **Results:** Unmet need for family planning was found out to be 46.2% with that for spacing is 11.6% and for limiting is 34.6%. The contraceptive prevalence rate of any method was found to be 49.4%. Contraceptive usage was high among literate subjects (63.5%) as compared to among illiterate subjects (32%) (Chi-square value 17 at $P < 0.01$). Median birth spacing interval was found to be 27 months with 44% of literate couples practicing adequate birth spacing of >36 months while only 16.9% of illiterate couples follow the same (Chi-square value 16.16 at $P < 0.01$). **Conclusion:** The study showed a high unmet need for contraception despite high knowledge of places of procurement in the study area indicative of a huge gap between service delivery and utilization in urban slums. Educated couples were found to be more vigilant in practicing family planning and adequate birth spacing.

KEY WORDS: Birth Spacing; Contraception; Family Planning; Unmet Need

INTRODUCTION

India, being the second most populous country and having one of the most complex societal structure-multilingual, multireligious, multiethnic, etc., has focused on the issue of family planning since its independence. Despite governmental Family Welfare programs, schemes and other various interventions since 1950's, the success achieved so far has only been marginal. One of the major reasons behind this abysmal scenario is the differential level of awareness, literacy, and education in the society, with the majority of population still lying in the lower stratum on these parameters. The power asymmetric issues, viz., gender inequality and patriarchal structure of the society, which ensures that the family planning still remains the prerogative of the few, have also resulted into the poor birth spacing pattern and has thus ensured that issues such as neonatal/child mortality, maternal mortality, and poor nutrition persists in the society.

The urban slum population of the world is expected to increase by more than two-thirds by 2050 with almost doubling of the population of the urban areas in India by the year 2050 indicating mushrooming in the urban slum population and their needs for health-care services.[1]

This study was conducted to find out unmet need for family planning and analyze birth spacing pattern in the urban slum community of Ahmedabad city.

Operational definitions (as recommended by the WHO and other international agencies) used in the study are as follows:

- Adequate birth spacing: Of at least 36 months for infants and children under 5 years of age.
- Unmet need for family planning: Those women 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.
- Literate: Based on census 2011 definition, any individual above 7 years of age who can both read and write with understanding in any language.

MATERIALS AND METHODS

This community-based cross-sectional descriptive study was conducted between October-November 2015 in urban slums of Girdharnagar ward of Ahmedabad city. The minimum sample size required was calculated using 5% absolute precision and 95% confidence interval and using the prevalence of unmet need for family planning services[2] as 12.8% which came out to be 172. A total of 195 married women in the reproductive age group of 15-45 years and having at least one child under 5 years of age were interviewed using Knowledge Practice and Coverage module 6 questionnaire which was pretested and modified accordingly.[3] Data regarding sociodemographic variables, spacing of children, and unmet need of contraception were collected.

A purposive sample of 13 Anganwadi centres (AWCs) in the urban slum pockets of Girdharnagar ward were selected, and data were collected by moving house to house till 15 houses (in the distribution of each selected Anganwadi area) were covered in any random direction from the starting point taken as the AWC for that area. Each participant was duly informed of the study and was given health education regarding spacing and family planning.

Statistical Analysis

Data collected was entered in Microsoft Office 2007, and Epi Info 7 was used for statistical analysis for applying Chi-square test. $P < 0.05$ was considered to be significant.

RESULTS

Table 1 shows sociodemographic profile of the study sample. The mean age of subjects ($n = 195$) was 26 (standard deviation = 3.7) years and average family size was 6 members. The literacy rate was 47.7% and 87.7% of the mothers belonged to families with socioeconomic classes III, IV, and V. Table 2 shows contraceptive and birth spacing parameters. 98%

Table 1: Sample characteristics

Characteristics	Frequency (%)
Mean age of participants (years)	26±3.7
Average family size	6
Educational status	
Literate	93 (47.7)
Illiterate	102 (52.3)
Employment	
Employed/job/business	12 (6.2)
Unemployed/housewife	183 (93.9)
Socioeconomic class (according to modified Prasad classification November 2015)	
Class I	6 (3.1)
Class II	18 (9.2)
Class III	54 (27.7)
Class IV	75 (38.5)
Class V	42 (21.5)
Children<5 years in a household (mean)	1.69±1.31

Table 2: Contraception usage and birth spacing parameters

Parameters	Frequency (%)
Knowledge of place of procurement of a contraceptive	
Hospital/health center	168 (86.2)
Health worker	111 (56.7)
Pharmacy	102 (52.2)
Friend/relative	15 (7.6)
Do not know	5 (1.9)
Current contraceptive method in use (*n*=174)	
No method	88 (50.6)
Pill	25 (14.4)
Copper-T	14 (8.0)
Condom	32 (18.4)
Tubal ligation	8 (4.6)
Lactational amenorrhea	7 (4.0)
Birth spacing (*n*=156)	
<36 months	111 (71.2)
≥36 months	45 (28.8)
Median birth spacing interval	27 months
Contraceptive prevalence rate of any method	49.4%
Unmet need of family planning	46.2%
Unmet need for limiting	34.6%
Unmet need for spacing	11.6%

($n = 190$) of subjects knew about any place of procurement of contraceptive services. Some women ($n = 21$) were pregnant at the time of the study and were not asked about contraceptive usage. Out of remaining 174 women about 50.6% ($n = 88$) were not using any contraceptive method. Most preferable method of contraception among the remaining 49.4%

(*n* = 86) couples who were using any method was condom (18.4%, *n* = 32), followed by Pill (14.4%, *n* = 25), copper-T (8%, *n* = 14), Tubal ligation (4.6%, *n* = 8), and lactational amenorrhea (4%, *n* = 7). Striking feature was that vasectomy was not found to be practiced by any subject partner. Adequate birth spacing interval was found in 28.8% (*n* = 45) while 71.2% (*n* = 111) had a birth spacing interval of less than 36 months. Median birth spacing interval was found to be 27 months (Table 2).

Contraceptive prevalence rate of any method was 49.4%. The total unmet need for family planning was approximately 46.2% out of which 34.6% and 11.6% were for limiting and spacing, respectively (Table 2).

Contraceptive usage was high among literate subjects (63.5%) as compared to among illiterate subjects (32%) which were found to be statistically significant on applying Chi-square test (Table 3).

Birth spacing of less than 36 months was found in 71.2% of couples while 28.8% practiced adequate birth spacing of ≥36 months, out of which 73.3% were literate (Figure 1).

It was found that 44% of literate couples were practicing adequate birth spacing of >36 months while only 16.9% of illiterate couples follow the same practice which was statistically significant on applying Chi-square test (Table 4).

Despite high (98%) knowledge of place of procurement of family planning services only 49.4% of the couples were

found to be using any of the contraceptive methods and a mere 28.8% practiced adequate birth spacing, which reflects huge gaps in awareness and utilization of family planning services (Figure 2).

DISCUSSION

India was the first country to introduce family planning program in early 1950s and yet is the 2nd most populous country in the world, still in late expanding demographic stage. Even after about 65 years of expertise in the field, high unmet need for family planning was found in urban slums of Girdharnagar ward of Ahmedabad (46.2%) which was higher compared to the figures given by DLHS-3 for Ahmedabad, i.e., 20.5%;[4] and figures for India given by NFHS-3, i.e., 12.8%.[2] Similar studies conducted elsewhere have given the following figures for unmet need: 49.8% in urban slums of Delhi,[5] 44% in a tribal area of Maharashtra,[6] 41.6% in Haryana,[7] 25.4% in a resettlement colony of New Delhi,[8] 21.7% in Gwalior.[9]

Vasectomy not being accepted as a terminal method for contraception by subject partners was also seen in a similar study conducted in urban slums of Delhi[5] which indicates need for proper counseling and health education of males. Studies have shown that increased involvement of men in reproductive health of the family is highly appreciable and motivates their partner to control fertility.[10,11]

Median birth spacing interval was found to be 27 months which was less than the median birth spacing interval of India (29.4 months) and even lesser from the actual spacing interval for South-East Asia Region countries (33.6 months).[12]

This study utilized purposive sampling methodology with complete focus on urban slum population which limits its generalizability and advocates for further studies to be undertaken in a comparative manner, taking urban slum,
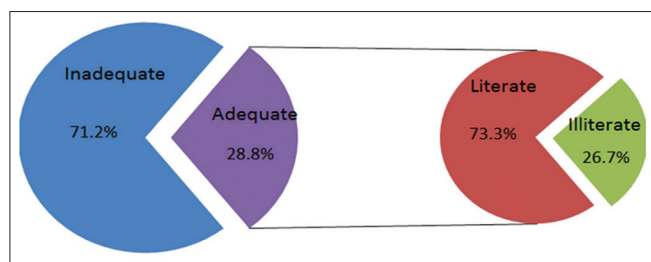
Figure 1: Birth spacing pattern
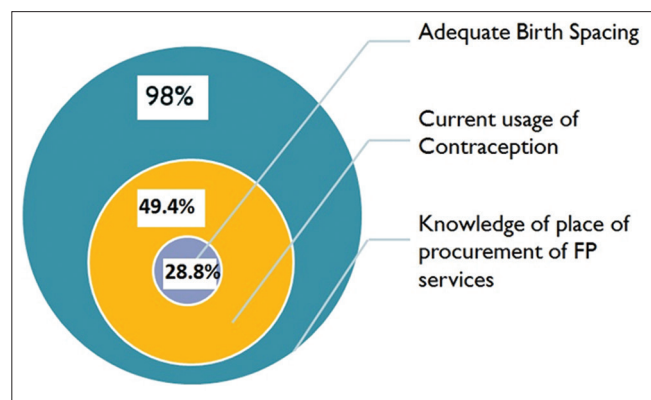
Figure 2: Gap between knowledge and family planning practices

Table 3: Association of education and contraceptive practice

Educational Status	Using contraceptive (%)	Not using contraceptive (%)
Literate	61 (63.5)	35 (36.5)
Illiterate	25 (32.0)	53 (68.0)

χ^2=17.07; which is> 3.84 at dof=1; *P*<0.05

Table 4: Birth spacing and education

Educational Status	Inadequate birth spacing	Adequate birth spacing
	<36 months (%)	≥36 months (%)
Illiterate	69 (62.2)	12 (26.7)
Literate	42 (37.8)	33 (73.3)

χ^2=16.16; which is > 3.84 at dof=1; *P*<0.05

and nonslum population. Furthermore, out of total 43 AWCs in Girdharnagar ward of Ahmedabad city only 13 AWCs distribution areas were taken into consideration owing to limited time, manpower, and financial constraints. Still, the findings of the study cannot be overlooked and so, to conglomerate the efforts being put for population stabilization, it calls for serious action from all the stakeholders in the health-care sector.

CONCLUSION

Despite all the efforts being made in the national family planning program, it is clearly evident from the study that with increasing urbanization and mushrooming of urban slums we are still behind in meeting the needs for contraception and maintaining adequate birth spacing interval. High awareness about place of procurement and high unmet need indicate that there are certain user perspectives among nonusers which have not been addressed. The previous studies have identified certain factors as a reason for not using contraceptive such as lack of information,[6] family and husband opposition,[6,13] and irregular menstruation with oral pills and weakness.[14] Prompt action is thus required to address this issue as urban slums are proving to be a challenge to maintain the ratio of health-care service delivery and utilization.

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