

## A Study on Fertility Perception: An Experience from West Bengal, India

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### ABSTRACT

**Background:** Fertility pattern has some influence on health of mother and child as well as it can resist population growth.

**Methods:** A cross sectional study on fertility perception among married women of reproductive age group, was carried out in 3 blocks and 2 municipality areas of Howrah District of West Bengal, India, covering 12 villages and 4 wards, selected by stratified multistage random sampling, for a period of 6 months from April to September 2009. Two thousand married women were the respondents.

**Results:** Respondents were mainly belonged to poor and below poverty line groups (86.7%), one third (33.4%) were illiterate and just literate group, 66.8% of the respondents belonged to Hindu by religion and 63.4% had history of teen age pregnancy and more than 50% of the respondents were married early (below 18 years). The study revealed that perception about age of marriage, interval between marriage and 1<sup>st</sup> pregnancy and spacing were incorrect in case of 45.8%, 37.6% and 23% of the respondents, respectively. 22.3% and 13.1% of the respondents had no proper idea regarding desired no of children and Family Planning methods, respectively and their knowledge varied with literacy status, age and religion. Majority (67.5%) of the study population received information about family planning methods from health personnel.

**Conclusions:** Correct Knowledge regarding different components of fertility among Eligible Couples to be enhanced by intervention through Information, Education and Communication (Interpersonal Communication and Mass Media).

**Keywords:** Eligible couple, family planning methods, fertility

### INTRODUCTION

Good health, higher acceptance of birth control methods and a fall in fertility are believed to go together. Economic development, improvements in literacy and a better employment situation are also believed to have the same effect on fertility. Priorities may differ but improvements in the quality of life lead to fertility reduction.<sup>[1]</sup> Child marriage and early confinement is a long established custom in India with poverty and ignorance magnifying the problem.<sup>[2]</sup>

In India some demographers have estimated that if marriages were postponed from the age of 16 to 20-21 years, the number of birth would decrease by 20-30%. Studies indicate that 10-25% of all births occur within 1-5 years of married life, 50-55% of all births within 5-15 years of married life. So family planning efforts should be concentrated in the first few years of married life.<sup>[3]</sup> Among young women of 15-19 years in West Bengal, one quarter has already begun child bearing much higher than the national average (16%). 52% of non-first order births occur within 3 years of previous births. Research showed that waiting at least 3 years between children reduces the risk of infant mortality.<sup>[4]</sup> Key factors in fertility decline included marked change in marriage pattern, increased availability of contraceptives and extension of services offered through family planning.<sup>[5]</sup> Studies in the Philippines<sup>[6]</sup> and Zambia<sup>[7]</sup> showed perceptions of couples were important for the fulfilment of desired family planning objectives. Knowledge about fertility and family planning measures are indispensable for reduction of birth rate as well as maternal and under 5 mortality rates.

So with the above perspectives, the present study was undertaken with objectives of assessing Perception of married women (15-49 years) in a district of West Bengal, India, regarding different components of fertility and to identify social co-relates influencing it.

## METHODS

A community based cross-sectional study was undertaken over 6 months from April 2009 to September 2009 by stratified multistage random sampling among married women of reproductive age group in Howrah district of West Bengal, India.

The sample size was 2000 eligible couples. The minimum sample size came to be 1879 (approx.) considering allowable error 5% and using formula  $4PQ/L$ ,<sup>[2]</sup> based on percentage of early marriage rate (46.6%) according to NFHS-3, W.B.<sup>[4]</sup>

Study Area – Out of total 19 districts of W.B, Howrah district was selected randomly, from where a total of 16 areas were selected randomly by stratified multistage sampling. Out of total 9 blocks and 3 municipalities of the district, 3 blocks and 2 municipality areas were randomly selected. From each rural block, 2 sub-centers and from each sub-center area, 2 villages were selected randomly. Two wards were also selected from each municipality area randomly.

So total 12 villages and 4 wards were chosen for study purpose. One hundred twenty five eligible couples were covered from each area to get 2000 eligible couples from the study area.

Data Collection Technique-Females were the respondents from each family. Data collected from the respondents by interview technique through predesigned and pretested schedule. Faculty members of the department of community medicine, Calcutta National Medical College interviewed female members of eligible couples by house to house visit. Variables like socio-demographic characteristics, age at marriage, ideal age of marriage for girls, gap between marriage and first child birth, preference of number of children, spacing, and knowledge about family planning were studied. Data analysis was done both manually and by computer feeding.

- Social class was determined by per capita monthly income.<sup>[8]</sup>

## RESULTS

The socio-demographic profiles of the 2000 currently married women of reproductive age group showed that majority (84.8%) were in the age group of 18-35 years and 1% was in less than 18 years age group. Most of the respondents (66.8%) were Hindu by religion and 32.9% were Muslim and rest (0.3%) belonged to others. In present study the fertility rate was observed as 1.94 per one thousand currently married women of reproductive age group.

About 87% of the respondents below poverty line (BPL) social class. 33.4% of the respondents belonged to illiterate and just literate group, 21.3%, 40.1%, 5.2% of the respondents belonged to primary, secondary, graduate and above group, respectively. 55.1% of the respondents married early (below 18 years) 63.4% of the respondents had history of early pregnancy (less than 20 years) shown in Table 1.

Those married early (55.1%), among them poor and BPL groups contributes near about 92% and rest were lower, upper middle, high and upper high (6.3%, 1.2%, 0.5% and 0.09%) groups, respectively.

Majority of the respondents (45.8%) were unaware about the ideal age of marriage for girls (more than 18 years age).

The study revealed that 36.5% of respondents had wrong knowledge about ideal interval between marriage and 1<sup>st</sup> pregnancy (more than 2 years)

and 1.1% had no knowledge of interval between marriage and 1<sup>st</sup> pregnancy. But age, religion and literacy status of the respondents had no statistical association with it. Table 2 shows that 23% had incorrect knowledge about spacing between subsequent pregnancies ( $\geq 3$  years) and higher the literacy status better the knowledge of spacing and it was statistically significant ( $P = 0.000$ ).

Correct knowledge about spacing was more in case of Hindu (78.5%) than Muslim (73.8%).

**Table 1:** Background socio-demographic characteristics of respondents

| Socio-demographic characteristics | No   | Percentage |
|-----------------------------------|------|------------|
| Age in years                      |      |            |
| <18                               | 21   | 1.0        |
| 18-23                             | 491  | 24.6       |
| 24-29                             | 632  | 31.6       |
| 30-35                             | 573  | 28.6       |
| $\geq 36$                         | 283  | 14.2       |
| Religion                          |      |            |
| Hindu                             | 1336 | 66.8       |
| Muslim                            | 659  | 32.9       |
| Others                            | 5    | 0.3        |
| Social class                      |      |            |
| BPL (Rs.<500)                     | 673  | 33.7       |
| Poor (Rs. 500-1499)               | 1070 | 53.3       |
| Lower middle (Rs. 1500-2999)      | 191  | 9.6        |
| Upper middle (Rs. 3000-4999)      | 33   | 1.7        |
| High (Rs. $\geq 5000$ )           | 33   | 1.7        |
| Literacy status                   |      |            |
| Illiterate                        | 538  | 27.0       |
| Just literate                     | 129  | 6.4        |
| Primary                           | 426  | 21.3       |
| Secondary                         | 802  | 40.1       |
| Graduate and above                | 105  | 5.2        |
| Age of marriage                   |      |            |
| <18                               | 1102 | 55.1       |
| 18-23                             | 842  | 42.1       |
| 24-29                             | 48   | 2.4        |
| 30-35                             | 8    | 0.4        |
| Age of 1 <sup>st</sup> pregnancy  |      |            |
| <20                               | 1268 | 63.4       |
| 20-24                             | 649  | 32.5       |
| 25-29                             | 70   | 3.5        |
| 30-34                             | 4    | 0.2        |
| $\geq 35$                         | 2    | 0.1        |
| Not pregnant                      | 7    | 0.3        |
| Total                             | 2000 | 100.0      |

BPL=Below poverty line

About 22.3% of respondents prefer to have more than three children irrespective of literacy status. Preference to have 3 or more number of children by the respondents is indirectly proportional to literacy status [Table 3].

It was observed from Table 4 that 86.9% of respondents had some idea about FP methods. Unawareness was highest (20.8%) among illiterate and just literate group and lowest (8.6%) in case of graduate and above group. The difference was statistically significant ( $P = 0.001$ ).

Majority (67.5%) received information about family planning methods from health personnel [Figure 1].

## DISCUSSION

The present community based study highlights various factors which influence the perception of currently married women of reproductive age group regarding different components of fertility.

**Table 2:** Literacy wise Knowledge about spacing between subsequent pregnancies

| Literacy status of the respondent        | Pregnancy interval/spacing in years |     |         |      |                |      |
|--|-------------------------------------|-----|---------|------|----------------|------|
|  | 1 year                              |     | 2 years |      | $\geq 3$ years |      |
|  | No                                  | %   | No      | %    | No             | %    |
| Illiterate and just literate ( $n=667$ ) | 38                                  | 5.7 | 173     | 25.9 | 456            | 68.4 |
| Primary ( $n=426$ )                      | 14                                  | 3.3 | 96      | 22.5 | 316            | 74.2 |
| Secondary ( $n=802$ )                    | 16                                  | 2.0 | 113     | 14.1 | 673            | 83.9 |
| Graduate and above ( $n=105$ )           | 2                                   | 1.9 | 7       | 6.7  | 96             | 91.4 |
| Total ( $n=2000$ )                       | 70                                  | 3.5 | 389     | 19.5 | 1541           | 77   |

$\chi^2=67.97$ ,  $df=3$  and  $P=0.0000$  (1 and 2 years merged)

**Table 3:** Preference of number of children in relation to literacy status of the respondent ( $n=2000$ )

| Literacy status of the respondent        | Preference of number of children No (%) |             |            |
|--|---|-------------|------------|
|  | 1                                       | 2           | $\geq 3$   |
| Illiterate and just literate ( $n=667$ ) | 19 (2.9)                                | 401 (60.1)  | 247 (37.0) |
| Primary ( $n=426$ )                      | 37 (8.7)                                | 296 (69.5)  | 93 (21.8)  |
| Secondary ( $n=802$ )                    | 123 (15.4)                              | 577 (71.9)  | 102 (12.7) |
| Graduate and above ( $n=105$ )           | 32 (30.5)                               | 69 (65.7)   | 4 (3.8)    |
| Total ( $n=2000$ )                       | 211 (10.6)                              | 1343 (67.1) | 446 (22.3) |

$\chi^2=65.87$ ,  $df=3$  and  $P=0.0000$  (1 and 2 column merged)

**Table 4:** Knowledge of FP methods according to literacy status of the respondents

| Literary status of the respondents | Knowledge of FP methods (n=2000) |            |       | P value                           |
|------------------------------------|----------------------------------|------------|-------|-----------------------------------|
|                                    | Yes (%)                          | No (%)     | Total |                                   |
| Illiterate and J.L                 | 528 (79.2)                       | 199 (20.8) | 669   | $\chi^2=63.45$<br>df=3<br>P=0.001 |
| Primary                            | 368 (86.4)                       | 158 (13.6) | 426   |                                   |
| Secondary                          | 746 (93.0)                       | 56 (7)     | 802   |                                   |
| Graduate and above                 | 96 (91.4)                        | 9 (8.6)    | 105   |                                   |
| Total                              | 1738 (86.9)                      | 262 (13.1) | 2000  |                                   |

The study revealed that more than 50% of the respondents married early (less than 18 years) which was corroborated with the findings of NFHS-3 of West Bengal, where it was found that, at age 15, 7% of women were mother or pregnant and at age 19, this proportion increases to almost 49%. About 53.3% women of reproductive age group married before the age of 18 years.<sup>[4]</sup>

First pregnancy occurred below the age of 20 years in case of 63.4% of women in the present study whereas NFHS-3 of West Bengal already revealed that 25.3% of women aged (15-19 years) were mothers or pregnant at the time of survey.<sup>[4]</sup>

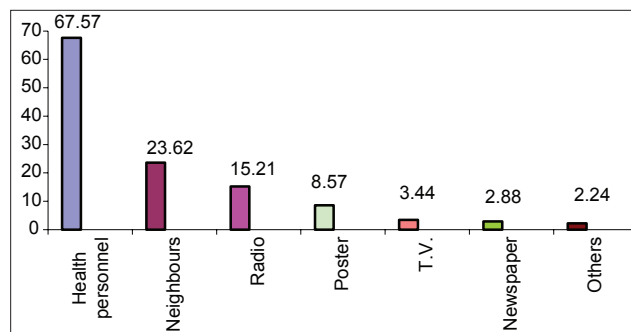
Fertility rate-1.94/I000 women was determined by the present study against 2.27 as per NFHS-3 of W.B<sup>[4]</sup> and in India it was 2.8 (SRS 2006).<sup>[9]</sup>

It was revealed from the present study that 54.2% of respondents had correct knowledge about the ideal age of marriage, which was less than the findings of the earlier study<sup>[10]</sup> (75% had knowledge about ideal age of marriage).

About 77.7% of the respondents prefer to have 2 or less number of children whereas in earlier studies,<sup>[4]</sup> 82% of women and men considered ideal family size to be 2 children or less. About 66% of rural women considered 2-3 children as an ideal, as observed by Saraswati *et al.*<sup>[11]</sup>

The ideal gap between subsequent pregnancies should be less than 3 years commented by 23% of the respondents in the present study, this finding did not corroborate with the findings of Oswal<sup>[12]</sup> where 66% favored spacing of 2-3 years.

Regarding knowledge of family planning methods, the findings (86.9%) of the present study was similar to the findings of NFHS-3 of West Bengal, where on an average 85.7% of currently

**Figure 1:** Different source of information about FP methods

married women of reproductive age group had knowledge about family planning methods.

Perception of study population in relation to literacy status varied significantly with educational attainment i.e., lowest among illiterates and highest in case of higher educated group was revealed by the present study. Similar observation also obtained by the earlier study.<sup>[13]</sup> The process of decision making was analyzed in a knowledge, attitude and practice survey in a Mexican community and a wide gap between women's fertility desires and their actual fertility was observed.<sup>[14]</sup>

## CONCLUSIONS AND RECOMMENDATION

Wrong perception about fertility still prevailed in the community of Howrah district of West Bengal, India. Area specific awareness generation programmes to be organized for intervention in urban slums, gram panchayat and village level on different components of fertility to promote correct perception. Specific emphasis to be provided for prevention of early marriage, delay the 1<sup>st</sup> child birth, spacing and enhanced use of contraceptives. Dissemination of proper knowledge to the target population through involvement of trained influencers (ASHA, AWW, MPW, Local leaders) is needed for improvement of fertility perception.

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