Original Research Article

Knowledge about Consequential Effect of Over Population, Contraceptive Devices and Attitude towards Family Size among Post-Graduating Girls

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ABSTRACT

Background: Present Indian population increase is still higher because in many states that constitute about half of the population Total Fertility Rate (TFR) is still 3 children or more. The level of education has strong association with TFR and will play pivotal role in developing the country.
Objective: The prime objective of the present study was to assess opinion on consequences of high population growth, desired future family size along with sex composition and knowledge about various contraceptive methods & their sources of post-graduating girls.
Methods: The study was carried in Division of Biostatistics, Department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University during 2010-11 among 100 post graduating girls representing from all corners of the country. Percentages as well as means along with standard deviations (SD) were obtained.
Results: Overpopulation leads to financial problem causing crises of food, clothing, housing and schooling, health and diseases was stated by 95.6% of the girls. About population control, about three quarter (74.4%) girls viewed to accelerate awareness of family planning methods. Majority of these girls (3/4th) were favouring only 2 children; however, among these post graduating girls Schedule caste/Schedule Tribe (SC/ST) girls had significantly larger family size desire than other backward classes (OBC) and general class girls. The most commonly known spacing methods were condom (male) and oral pills and major sources were TV/Transistor or text books.
Conclusions: The education of the girls seems to be the most important component to have better realization of problem of over-population, its control strategy and to follow the small family norm. However, social class role cannot be denied for which attitudinal change is required.

Keywords: Contraceptive devices, Over-population, Family size, Fertility, Education.

INTRODUCTION

The population of India has dramatically increased despite of intensified effort to family planning program. The TFR that was 3.39 during National Family Health Survey (NFHS)-I decreased substantially to 2.85 during NFHS-II and further to 2.68 with meager reduction during NFHS-III. [1] The reduction in fertility was reported at ages 20 and above; while a little at age 15-19. India is a mix of many religious societies and is very heterogeneous in education with varied attitude on family size. The TFR in India was 1.8 children higher in women with no education than those with 12 or more years of education; 0.5 children higher in Muslims than Hindus and 0.6, 0.8, and 0.4 children higher in

scheduled caste, scheduled-tribe and in other backward classes (OBC) than those of general caste category. The TFR decreases steeply by the household's wealth index; from 3.9 children in women living in lowest wealth quintile to 1.8 children in highest wealth quintile. The higher fertility in India is mainly due to poor literacy, especially of women, higher prevalence of low age at marriage, desire of larger family size with more preference to sons, higher mortality, especially during infancy period and lesser empowerment to women in decision making. NFHS-III indicated 40.6% of reproductive age mothers have never attended school; 44% women aged 20-24 years were married by the age of 18 years; much higher in rural (52.5%) compared to urban (28.1%) and a significant proportion of mothers viewed 3 or more children and overall family size preference of 2.3 children. [1] Studies indicated strong preference for sons affecting both attitude and behaviour with respect to children and the choice regarding number and sex composition. [2-4] Though, a significant reduction of IMR from 77 infant deaths in 1991-95 to 57 in 2001-05 and further to 40 by 2013 but still high; the main reason is frequent births with shorter spacing resulting to underweight new born and consequently to high risk of infections and ultimately to death. [5,6]

About 20-30% women above age 35 years and almost 80% in the age below 20 years did not practice any contraception with wide gap between Hindus and Muslims. The dominance of female sterilization after the age 30 years was apparent. The practice of contraceptive was much higher in those who had more sons than daughters indicating clearly the preference to sons. Contraceptive use was generally in those women participating more in decision makings indicating empowerment of women play important role to fertility regulation and there by fertility reduction; but women empowerment was found more in better education group. [1] The education of women is directly associated with the attitude on family size and autonomy that play the pivotal role in the fertility regulation and control process. Girls from higher education family had better knowledge of contraceptives, had attitude to practice contraception in future than those of low education family. [7,8] The girls nearing marriage age and will be the mothers of tomorrow can show immediate impact on fertility regulation by delayed marriage and adequate spacing by practice of contraception. The girl populations who all will be married during forthcoming ten years constitute the huge chunk of the population and their knowledge and attitude towards family planning practice will definitely change the direction of population growth. Hence, the present study was undertaken among post-graduating girls in Varanasi with the objectives:

1. To assess the opinion of girls about the consequences of population increase and the strategy of control.
2. To assess the opinion of girls about their future family size along with the desired sex composition.
3. To assess the present knowledge of girls about various contraceptive methods and their sources.

MATERIALS AND METHODS

A cross sectional study was carried between 2010-11 among 100 post graduating girls of non co-education Colleges of Varanasi City. The sample size was determined at $\alpha = 5\%$ with 10% permissible error of the true estimate by using the formula n $= \frac{4PQ}{L^2}$; where P is the proportion of girls aware of one spacing and one terminal method = 80% that was obtained from the pilot survey; Q = 100-80 = 20% and L = 10% of 80% = 8. A representative selection of colleges was first obtained by categorizing the colleges. The selected colleges of Varanasi city were Mahila Maha Vidyalaya (MMV), Banaras Hindu University (BHU) representing girls from all corners of the country; Dheerendra (MMV), a college representing only local

and medium class society girls and Sunbeam Kanya MMV representing girls from the affluent community of the city. From the respective colleges 34, 33 and 33 girls were selected randomly. The information was collected on pre-structured and pre-tested open ended questionnaire consisting questions on background information, views of the girls about the increasing population of the country and of large family size and their consequences; desired family size with the sex composition as well as knowledge of the girls about various contraceptives methods and the sources of their knowledge. The data collected was analyzed through SPSS Version 16. Qualitative measurements were presented in percent and quantitative measurements were presented by average along with standard deviations (SD). The differences between means were validated by unpaired t test. Significance was considered at $\alpha=5\%$

RESULTS

More than 2/3rd girls were below the age of 25 years with preponderance of Hindu's girl. Nearly half of the girls were of general caste and more than 80% from nuclear families. More than 80% fathers of these girls were either graduate or of above qualification; nearly 50% mothers were also either graduate or of above qualification. More than half of the fathers of these girls were in service and mostly mothers (84%) were house wives (Figure-1).
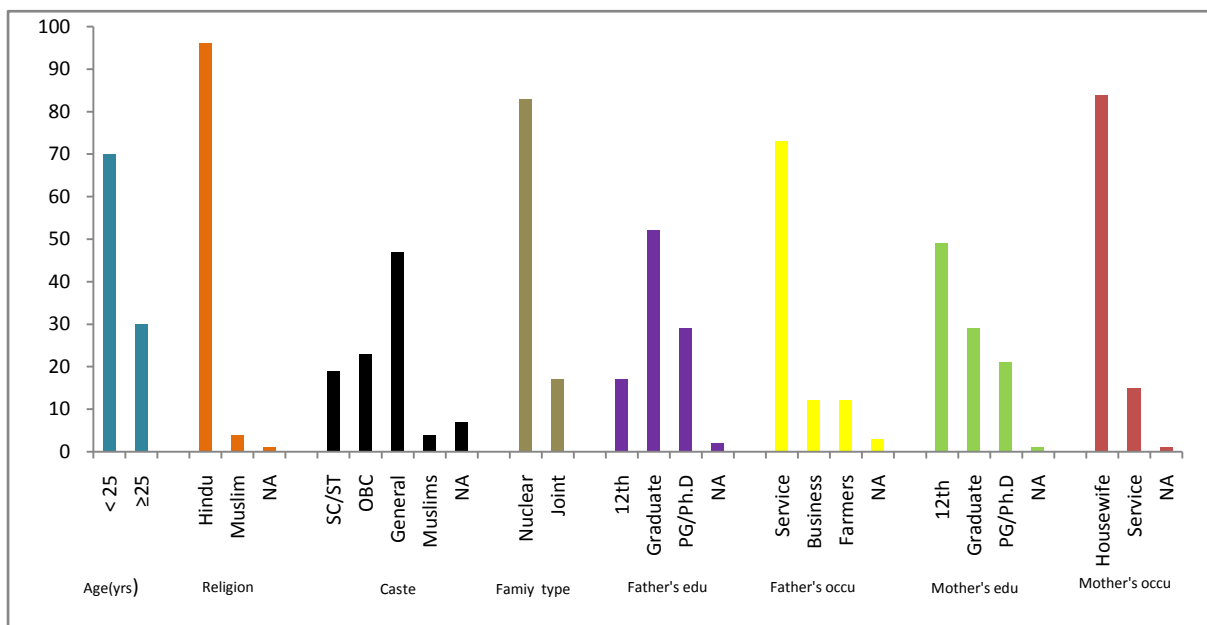

Figure-1: Background characteristics of studied girls

Only 90% girls stated about the consequences of over population of the country; the most important consequence stated by 95.6% of the girls was financial problem leading to crises of food, clothing, housing, schooling, health and diseases followed by 61.1% as unemployment and brain drain (Table-1).

Out of those (83%) who stated about the control of population growth; 74.7% girls viewed to accelerate awareness of family planning methods, at the same time nearly half (51.8%) viewed adoption of contraceptive methods. Promoting late age marriage, making sex education compulsory, giving value to women's decision, removing sex discrimination, eliminating dowry system, making aware about the benefits of small family and consequences of large family were also

viewed by nearly one third of the girls as the solution to control over-population (Table-2).

Table-1: Opinion of girls: consequences of over population in the country

Consequences of over population	No.	Percent
Did not state	10	10
Stated	90	90
Financial problem leading to crises of food, clothing, housing, schooling, health & diseases	86	95.6
Over mining of natural resources, land division, deforestation, disturbance to echo system	39	43.3
Increase crime and corruption	15	16.7
Overcrowding, pollution and global warming	28	31.1
Unemployment and brain drain	55	61.1
Poor infrastructure development and governance	12	13.3

Table-2: Opinion of girls: how to control the population growth

How to control the population growth	No.	Percent
Did not state	17	17
Stated	83	83
Making aware about the small family and consequences of large family	29	34.9
Creating/accelerating awareness of family planning methods	62	74.7
Creating rule like China for number of children	27	32.5
Adopting/practicing contraceptive methods	43	51.8
Increasing literacy status	17	20.5
Promoting late marriage/making sex education compulsory/ giving value to women's decision/ removing sex discrimination/ eliminating dowry system	31	37.3
Giving incentives to small family norms followers/ taxing more to large size families	7	8.4

Table-3: Opinion of girls: desire of family size by sex

Number of children desired and sex	No.	Percent
Only one	24	24
Any sex	20	83.3
Male	1	4.3
Female	3	12.4
Two	73	73
Any sex	16	21.9
One male & one female	57	78.1
Three	3	3
Any sex	0	0
Two male & one female	2	66.7
One male & two female	1	33.3

Table-4: Average desired number of children by caste of the girls

Caste	No. of girls	Mean ± SD	P value
General	47	1.74 ± 0.44	General vs OBC = 0.764
OBC	23	1.70 ± 0.56	General vs SC/ST = 0.000
SC/ST	19	2.00 ± 0.00	OBC vs SC/ST = 0.014

About 1/4th of the girls were in favour of only one child and mostly (83.3%) had no sex preference, while 3/4th favouring two children out of which about 1/5th had no sex preference but rest 4/5th preferred 1:1 male female ratio (Table-3).

As indicated below in table-5, there was no difference on average desired family size between general and OBC caste categories; while SC/ST had desired significantly larger family size than general and OBC.

Table-5: Knowledge of various contraceptives and the source of knowledge

Contraceptives	% Aware	Mother/relatives/ friends/ neighborhood	TV/ Transistors	Magazine/ Newspaper/ Text Books
Spacing Methods				
Condom (Male)	98	30	98	73
Oral pills	87	36	80	67
Cu-T	75	38	37	53
Emergency contraceptive	68	29	55	44
Condom (Female)	61	20	20	51
IUD	33	15	3	22
Injectables	26	10	11	13
Foam tablets	21	11	4	17
Traditional Methods				
Withdrawal method	25	36	0	18
Rhythm method	18	12	0	11
Folk method	18	14	0	6
Terminal methods				
Tubectomy	98	25	23	74
Vasectomy	95	20	22	63

Almost all the girls knew terminal methods through magazine /newspaper/ text books; while the most commonly available and practiced spacing methods in the country e.g. condom (male), oral pills, Cu-T was known to more than 3/4th of the girls; highest was the condom male (98%)

DISCUSSION

Dramatic Indian population increase caused by high TFR needs immediate check for its control. The focus should be to the rural part especially north Indian 5 states e.g. Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan and Jharkhand where still TFR is 3.0 children or more. [1] The reason behind is low age at marriage, poor literacy level, especially of women, desire of larger family size with more preference to male child, higher mortality, especially during infancy period, no or lesser empowerment to women in decision making and lesser practice of contraception. Education of mother is the most important component to care all causes of high TFR including mortality during infancy. So, the present study was carried on post graduating girls. These girls were very much conversant with the consequences of over population as 95.6% stated financial problem will emerge that will lead to crises of food, clothing, housing, schooling, health and diseases followed by 61.1% as unemployment and brain drain. This knowledge absolutely if in practice will result to adaption of the small family norm. Since 74.7% girls viewed to accelerate awareness of family planning methods and 51.8% viewed adoption of contraceptive methods and a significant proportion believed promoting late marriage, giving value to women's decision, removing sex discrimination, eliminating dowry system, making aware about the benefits of small family and consequences of large family is the positive signal towards small family norm. Almost all had viewed one or two children as the family size that clearly indicating the impact of their outlook towards small family norm which is the influence of their education. Moreover, the

followed by oral pills (87%) and Cu-T (75%). Emergency contraceptive and condom (female) was also known to 68% and 61% of the girls and the main sources for commonly practiced spacing contraceptives were TV/Transistor and magazine /newspaper/ text books (Table-5). in-discriminatory attitude of these girls about sex of born is an added advantage of education towards small family size. The knowledge about contraceptives or other spacing methods (especially commonly available methods) is fairly high. TV/Transistor, Magazines and books are their main sources of knowledge. This indicates that access of TV and transistors even to those who are less educated can enhance the knowledge of contraception. The knowledge of traditional methods are lacking, majority of the girls live in rural parts, and for them knowledge of traditional method is of more importance, as modern methods may not be accessible easily, even if accessible shy nature could be a hurdle to practice.

The education of the girls is the important component to have better realization of problem of over population, its control strategy and to follow the small family norm. Educating girls means bringing the attitudinal changes and making them aware of more contraceptive devices which in turn may in practice leading to control of population growth. Frequent advertisement through TV, news papers and magazines should be made, especially on traditional methods of contraception that is lacking in these educated girls.

CONCLUSIONS

The education of the girls seems to be the most important component to have better realization of problem of over-population, its control strategy and to follow the small family norm. However, social class role cannot be denied for which attitudinal change is required.

REFERENCES

1. National Family Health Survey India, 2005-06 NFHS-3. International Institute for Population Sciences, Mumbai & ORC Macro; 2007. Vol. 1. 588p.
2. Mishra V, Roy TK, Retherford RD. Sex differentials in childhood feeling, health care and nutritional status in India. Popul Develop Rev. 2004; 30(2): 269-295.
3. Bhat PNM, Zavier AJF. Fertility decline and gender bias in Northern India. Demography. 2003; 40(4): 637-657.
4. Pande RP, Astone NM. Explaining son preference in rural India: The independent role of structural versus individual factors. Popul Res Policy Rev. 2007; 26(1): 1-29.
5. Registrar General of India. *SRS Bull* 2014; *49:* 6 p
6. Rutstein SO. Effects of preceding birth intervals on neonatal, infant and under five year's mortality and nutritional status in developing countries: evidence from the Demographic and Health Surveys. Int J Gynecol Obstet. 2005; 89 (Supll-1): S7-S24.
7. Gupta S, Sinha A. Awareness about reproduction and adolescent changes among school girls of different socio economic status. J Obstet Gynecol India. 2006; 56: 324-328.
8. Madhumita G, Devasis D, Tushar KB, Debidas G. Awareness level of family planning practices in school going adolescent girls of different socio economic groups in rural sector. J Hum Ecol. 2009; 27 (2): 101-104.7.

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