

Original Research Article

Determinants of Large Family Size Desire in Slums of Varanasi, UP, India

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ABSTRACT

Introduction: The total fertility rate in major states of India is still ≥ 3.0 children and in socially disadvantaged class ≥ 4.0 children. Urban Slums are mostly socially disadvantaged class. The present analysis carried to identify the factors responsible for large family size desire.

Material & Methods: The study carried on eligible couples of Varanasi slums. Children desired ≤ 2 were considered small sized family and >2 large. Comparisons made by F test, t test and χ^2 test. Logistic regression was also carried.

Results: The larger family size desire was in 39.8% with overall average 2.55 ± 0.89 children; highest was in Muslims (2.95 ± 0.91); no difference was found between Hindus class category. Nuclear, lower income class desired larger family size. Younger's had lesser desire children. As education increased, desire of children significantly reduced. Only caste/religion, family type, PCI, age of both of husband & wife and education of wife were significant contributors to large family size desire. Compared to Muslim, large family size desire in General class was lesser by 40%. Desire of large family size was 2.27 times higher in nuclear families than joint. In lower income class larger family size desire was 1.5 times higher than middle income class and lesser by 60% if husband were 25-34 years compared with those ≥ 35 years. Compared to wife education above middle pass, large family size desire was more than 2.10 and 2.50 times higher among illiterate and up to middle pass wives.

Conclusion: The whole community constituted mostly by socially disadvantaged community with poor economic condition, poor educational background and living in traditional way needs to be educated about the benefits of small family size. Attitudinal change to small family norm can be brought through organizing intensive educational campaign.

Key Words: Fertility, TFR, Family size, education, income.

INTRODUCTION

Excess fertility in developing nations is a major impediment to socio-economic development, hence are moving with the futuristic goal to reduce fertility with major aims to promote economic growth, to reduce environmental pressures and dependency ratios so as ability of society to invest in health and education is strengthened. ^[1] With present trend of growth, country India presently sharing

17.5% of the world population is expected to increase from 1210 million in 2011 to 1400 million in 2026. The major challenges of high fertility are prevalence of low age marriage, teenage pregnancy, child mortality and desire of more children, especially of sons. Overall, the average desired number of children reported by women aged 15-49 was 2.3 with more preference to sons and son

preference being the highest among lowest wealth quintile families. [2]

Urban population of India is growing fast which is predicted to increase to 33% by 2026. [3,4] This is because of large number of poor migrants from rural area and prevailing higher fertility pattern of urban poor who mostly live in slums. The slum population in Indian cities is alarmingly ballooning up; since 1991 to 2001, annum growth rate of the country was 2%, of urban population 3%, of mega cities 4% while of slum population 5%. Total slum population reported in 2001 census was 18.30% of the total urban population that though reported decreased to 17.37% in 2011 census, the reason behind is in 2001 census only 1743 statutory towns with population over 20,000 were covered while in 2011 census a total of 2613 statutory towns were covered. [5,6]

In cities, Meerut and Faridabad of Uttar Pradesh (UP), the slum population is more than 40% of the city population. In Varanasi, as per record of District Urban Development Authority (DUDA slum population is about 40%. [7] Total fertility rate (TFR) in urban poor community is 2.8 and 43% couple move to higher order births (3 and more) indicating probably desire of more children, especially of more sons and poor contraceptive practice. Though, desire of children has decreased from 2.9 in 1991-92I to 2.6 in 1997-98 and further to 2.4 in 2005-06 with a strong son preference that was much more (64.3%) in lowest and second lowest wealth index community. [3,8,9] Parity progression was found higher at all parities if daughters were more than sons. [10] In UP overall TFR was 3.8 children (4.1 in rural and 3.0 in urban) and in socially disadvantaged class much higher (4.5 in scheduled castes, 3.8 in other backward classes and 4.3 in Muslims), though, strong relation existed with education. [3] The slums are mostly habited by socially disadvantaged community (OBC, SC/ST and Muslims) whose literacy is poor, majority are below

poverty line and live with their traditions, cultures and taboos. Obviously, this poor community in desire of more children is likely to face increased economic burden in their future to come. Slums of eastern UP are the poorest, as this region is backward with high rate of illiteracy and the poorest economic condition. Since, the desire of number of children will image the fertility behaviour that further will image to economic condition resulting to health of both child and mother and development of the family as well; hence present analysis was undertaken to identify the extent of desire of children and the associated determinants.

MATERIALS AND METHODS

A cross sectional survey was carried in 2011-2012 on 15 randomly selected slum pockets out of a total 217 of Varanasi city. Out of 15 selected slums, a total 774 eligible couples were randomly selected only one from a family and wives of eligible couples were interviewed on a predesigned and pre-tested schedule. Though, the major aim of data collection was to assess fertility behaviour, contraceptive practices and utilization of maternal and child health care services and their association with background characteristics of families and eligible couples, the present analysis is only confined to the desire of children as this information was also contained in data set. The eligible couple (wife aged < 35 years) were only subjected to analysis, the reason being that a very few after the age 35 years continue child bearing process and a large segment enter to menopausal age after age 40 years. For the purpose of analysis, age category for both husband and wife taken was <25, 25-34 and ≥35 years and education as illiterate, up to middle and above middle level respectively; while occupation of husband considered was business, skilled worker, unskilled worker and service and of wife house wife and working. Family was categorized for religion/caste as General, OBC, SC/ST

following classifications for state Uttar Pradesh approved by Government of India [11-14] and Muslims; while family type as nuclear and joint. Per capita income had only two categories as lower and middle. [15] A couple was treated to favour small family size, if desire of children was either 1 or 2 and large if >2.

Statistical analysis: The data was analysed by SPSS version 16.0 and the results presented were in percent for qualitative and categorized quantitative characteristics along with mean and standard deviation (SD). Initially, data was summarised for background characteristics of eligible couples along with average desired number of children for the respective categories. Secondly, association of desire to large sized family with background characteristics of the eligible couples was judged by bivariate analysis followed by logistic regression considering those characteristics found significantly associated in bivariate. Statistical significance was considered at $p = 5\%$.

OBSERVATIONS AND RESULTS

As indicated in Table-1, nearly half (47.3%) of the eligible couples were SC/ST followed by 38.3% OBC and rest were of General class and Muslims 8% each; preponderance was of nuclear family (81.0%). Majority of eligible couples (63.1%) were from the family size of 2-5 members followed by 32.1% between 6-10 members. None of the family belonged to upper per capita income (PCI) category, while 66.9% were in middle PCI and rest in lower PCI categories. Majority of the husbands (72.2%) and wives (59.3%) were of age group 25-34 years. Nearly quarter husbands (26.0%) and nearly half (45.6%) wives were illiterate; one third (32.5%) husband and one sixth (18.2%) wives were above middle pass. Majority husbands (45.0%) were unskilled worker followed by 22.6% small scale business; skilled worker and in service were nearly 15% each, while, mostly wives (96.2%) were house wife. Overall desired children by

couples were 2.55 ± 0.89 and desiring > 2 children was stated by 39.8% of the wives. The highest desired number of children was in Muslims (2.95 ± 0.91) followed by SC/ST (2.59 ± 0.94) and OBC (2.46 ± 0.81) and was the lowest among the General class (2.43 ± 0.81); no statistical difference between any class category of Hindu religion was found but in Muslims desire of children was significantly higher from each class category of Hindus. Desire of children was significantly higher in nuclear families (2.59 ± 0.90) than those of joint families (2.41 ± 0.83). In family size with 2-5 and >10 members, the desire of children was almost same around 2.40 children but significantly much higher (2.91 ± 1.03) in those with family size 6-10 members compared to both family sizes. Middle income group showed significantly lesser desire of children (2.40 ± 0.81) than those of lower income group (2.87 ± 0.95). Younger were the husband, significantly lesser was the desire of children; these were (2.23 ± 0.69) in the age group below 25 years, 2.51 ± 0.88 in the age group 25-34 years and 2.93 ± 0.94 in the age group ≥ 35 years. Obviously similar pattern will exist with the age of wife being the responder. As education of husband was increasing, significant reduction in desire of children was seen (among illiterates 2.71 ± 0.92 , among up to middle 2.60 ± 0.92 and among above middle 2.36 ± 0.71). Desire of children stated was significantly lesser if husbands were in service (2.33 ± 0.83) than those either unskilled worker (2.64 ± 0.92) or skilled worker (2.52 ± 0.84) or doing small business (2.55 ± 0.88). Increasing level of education of wives too showed significantly decreased desire of children from 2.69 ± 0.91 among illiterates to 2.55 ± 0.89 among up to middle and further to 2.22 ± 0.75 among above middle level; while occupation of wives did not show any difference.

Table-1: Background characteristics of eligible couples and desire of children

Characteristics	No.	%	Average desired children & SD	P value	Post-hoc analysis (SNK) result for desire of children
Caste/Religion					
General	51	7.8	2.43 ± 0.81	0.000	Similar in General, OBC & SC/ST but significantly higher in Muslims than each
OBC	252	38.3	2.46 ± 0.81		
SC/ST	311	47.3	2.59 ± 0.94		
Muslim	44	6.7	2.95 ± 0.91		
Family Type					
Nuclear	533	81.0	2.59 ± 0.90	0.043	Significantly higher in nuclear families
Joint	125	19.0	2.41 ± 0.83		
Family Size					
2-5	415	63.1	2.39 ± 0.75	0.000	Similar in 2-5 & ≥ 10 but Significantly higher in 6 -10 members
6-10	211	32.1	2.91 ± 1.03		
≥ 10	32	4.9	2.47 ± 0.92		
PCI group					
Lower	218	33.1	2.87 ± 0.95	0.000	Significantly higher in lower PCI class
Middle	440	66.9	2.40 ± 0.81		
Husband Age (Years)					
Below 25	69	10.5	2.23 ± 0.69	0.000	Significantly higher in each increased age groups
25-34	475	72.2	2.51 ± 0.88		
35 & above	114	17.3	2.93 ± 0.94		
Husband education					
Illiterate	171	26.0	2.71 ± 0.92	0.000	Similar among illiterate & up to middle but Significantly lesser in above middle level
Up to middle	273	41.5	2.60 ± 0.92		
Above middle	214	32.5	2.36 ± 0.71		
Husband occupation					
Small Business	149	22.6	2.55 ± 0.88	0.000	Similar in service, business & skilled worker as well as similar in business, skilled worker & unskilled workers
Skilled worker	116	17.6	2.52 ± 0.84		
Unskilled worker	296	45.0	2.64 ± 0.92		
Service	97	14.7	2.33 ± 0.83		
Wife age (Years)					
Below 25	268	40.7	2.30 ± 0.76	0.000	Significantly higher in each increased age groups
25-34	390	59.3	2.73 ± 0.93		
Wife Education					
Illiterate	300	45.6	2.69 ± 0.91	0.000	Similar among illiterate & up to middle but significantly lesser in above middle level
Up to middle	238	36.2	2.55 ± 0.89		
Above middle	120	18.2	2.22 ± 0.75		
Wife occupation					
House wife	633	96.2	2.69 ± 0.91	0.075	Similar either house wife or working
Working	25	3.8	2.55 ± 0.89		
Desire of children					
1 or 2	396	60.2	1.93 ± 0.26	0.000	
>2	262	39.8	3.50 ± 0.63		
Desired family size					
Mean ± SD					2.55 ± 0.89
Range					1-6
Median					2
Inter Quartile Range					2-3

Table-2 indicates crude odds ratio (COR) and adjusted odds ratio (AOR) to desire of large family size with the background characteristics of the eligible couples. The COR indicated that all the characteristics except occupation of wife were associated with desired of large family size i.e. >2 children, hence AOR was obtained by excluding the occupation of the wife. The p values of AOR indicated that caste/religion, type of family & PCI, age of both husband's & wives' and education of wives only emerged as the significant contributor to the desire of

large family size. Compared to Muslim, the desire of large family size among General class was lesser by about 40% (AOR = 0.43; CI: 0.17-0.91), but almost similar to OBC and SC/ST class. Nuclear was the family, desire of large family size was 2.27 (CI: 1.33-4.16) times higher compared to those of joint families. In lower income group, desire of larger family size was 1.5 times higher than middle income group. Compared with age of husband ≥ 35 years, desire of larger family size was lesser by 60% (OR = 0.61; CI: 0.38-0.98) if husbands were of age 25-

34 years but almost similar among those whose husbands were of age below 25 years. Wives if < 25 years age, desire of large family size was lesser by about half (OR = 0.56; CI: 0.37 – 0.85) compared to wives of age 25–34 years. Compared to

the education above middle pass, the desire of large family size among wives was more than twice 2.10 (CI: 1.10-4.00) and more than 2.5 times (OR = 2.53; CI: 1.40-4.56) higher among illiterates and up to middle pass respectively.

Table-2: Determinants of desire of large family size: result of logistic regression

Determinants	COR	P Value	CI of COR	AOR	P Value	CI of AOR
Caste/Religion						
General	0.45	0.055	0.20 – 1.02	0.43	0.035	0.17 – 0.91
OBC	0.36	0.002	0.19 – 0.69	0.37	0.010	0.17 – 0.79
SC/ST	0.50	0.033	0.26 – 0.95	0.53	0.090	0.25 – 1.11
Muslims	Ref.	--	--	--	--	--
Family type						
Nuclear	1.82	0.006	1.19 – 2.78	2.37	0.003	1.35 – 4.16
Joint	Ref.	--	--	--	--	--
Family size						
Below 5	0.95	0.897	0.45 – 2.03	0.39	0.056	0.15 – 1.02
5 - 9	2.20	0.047	1.01 – 4.79	1.18	0.714	0.48 – 2.92
10 or more	Ref.	--	--	--	--	--
PCI						
Lower	2.65	0.000	1.89 – 3.69	1.52	0.033	1.04 – 2.25
Middle	Ref.	--	--	--	--	--
Husband age (years)						
Below 25	0.16	0.000	0.08 – 0.32	0.44	0.056	0.19 – 1.02
25-34	0.42	0.000	0.27 – 0.63	0.61	0.042	0.38 – 0.98
35 & above	Ref.	--	--	--	--	--
Husband education						
Illiterate	1.97	0.002	1.30 – 2.99	1.06	0.847	0.59 – 1.89
Up to middle	1.75	0.004	1.98 – 2.55	1.18	0.504	0.73 – 1.90
Above middle	Ref.	--	--	--	--	--
Husband occupation						
Business	1.44	0.193	0.83 – 2.50	1.25	0.471	0.68 – 2.31
Skilled worker	1.74	0.059	0.98 – 3.09	1.32	0.393	0.70 – 2.52
Unskilled worker	1.96	0.008	1.19 – 3.21	1.37	0.289	0.77 – 2.44
Service	Ref.	--	--	--	--	--
Wife age (years)						
Below 25	0.39	0.000	0.28 – 0.54	0.56	0.006	0.37 – 0.85
25-34	Ref.	--	--	--	--	--
Wife education						
Illiterate	3.00	0.000	1.84 – 4.90	2.10	0.024	1.10 – 4.00
Up to middle	2.62	0.000	1.58 – 4.34	2.53	0.002	1.40 – 4.56
Above middle	Ref.	--	--	--	--	--
Wife Occupation						
House wife	1.74	0.224	0.71 – 4.21	--	--	--
Working				--	--	--

DISCUSSION

High TFR is the consequence of more births because of desire of more children that resulting to poor contraceptive practices. High TFR is the leading factor to sizable population growth and will affect socio-economic development of nation. The developing nations including India, though had made and making continuous effort to reduce the fertility to the replacement level (2.1) so as socio-economic development is accelerated, however, inspite of intensive effort, present trend of annual population

growth project India's population to 1400 million by the year 2026. [1,2] The favouring characteristics to high TFR like early marriage, teenage pregnancy, desire of more children and child mortality are still high in many poorer states and much more in urban slums that were 18.30% of the total urban population in 2001 census and though reported decreased to 17.37% in 2011 census because of more number of towns coverage for slum areas. The alarmingly increasing slum population due to inherent high fertility behaviour and settlement of poor migrants from rural

areas is of great concern to urban planners. Slums are mostly habited by socially disadvantaged community and in Indian socially disadvantaged community TFR is very high (4.5 in scheduled castes, 3.8 in OBC and 4.3 in Muslims in UP), hence, slums constituting about 7% of the country population contribute substantially to population growth. [2-4] The background characteristics of eligible couples of Varanasi slums seem to favour large family size as 93.3% belonged to SC/ST or OBC or Muslims class; mostly (81.0%) living in nuclear family. None were in upper income class group; more than one third (35.6%) live in lower income class. Educational attainment of eligible couples was poor as 26.0% husbands and nearly half (45.6%) of the wives were illiterate. Majority of the husbands (45.0%) were unskilled worker followed by 22.6% engaged in small scale business; skilled worker and in service were nearly 22.6% and 14.7% respectively; those in service were of low profile cadre. Almost all wives (96.2%) were house wife.

Overall desire of children was 2.55 ± 0.89 ranging from 1 to 6 children; nearly forty percent (39.8%) wives desired ≥ 2 children with an average of 3.50 ± 0.63 . Though, desire of children was found decreasing from 2.59 in SC/ST to 2.46 in OBC and further to 2.43 in General class, but statistically these were similar; while in Muslims desire of children was 2.95 and is significantly much higher than each class of Hindus. Wives living in nuclear families desired significantly higher number of children (2.59) than wives of joint families (2.41). Presence of only one fifth joint families indicating very high disintegration rate in this community and further disintegration of joint family, if happens may result to high fertility. Family size was also found as the determinant; in middle sized families i.e. 6-10 members, the desire was significantly higher by 0.52 and 0.44 children than those of small and large sized families i.e. with 2-5 and > 10 members respectively.

Middle income class had lesser desire of children (2.40 ± 0.81) than those of lower income class (2.87 ± 0.95) and thus, lower income class after having more children will suffer further with higher economic burden. Younger were the husband and wife, desire of children was much lesser compared to the higher aged husband and wife; the reason behind is in modern era young generation is more concern to future of the family. More concern to future of the family is evident from the fact that as the education of either of the spouse was increasing, significant reduction in desire of children was seen; the difference of desired children between illiterate husband and above middle pass was of 0.35 children while this difference between illiterate wife and above middle pass was of 0.47. Similarly, Desire of children was significantly lesser if husbands were in service (2.33 ± 0.83) than those either unskilled worker (2.64 ± 0.92) or skilled worker (2.52 ± 0.84) or doing small business (2.55 ± 0.88). Education and occupation of father is definitely showing concern to the future of their children, but desired number of children was similar irrespective of occupation of wives.

In multivariate analysis, the main characteristics of eligible couples that emerged to favour large family size were caste/religion, type of family, PCI of the family, age of both husband's & wives and education of wives but not of husband. Compared to Muslims, desire of large family size in General class was lesser by 40% (AOR = 0.43; CI: 0.17–0.91) but in OBC and SC/ST almost similar to Muslims; the population in slum is mostly habited by SC/ST, OBC and Muslims, hence fertility among these desiring large number of children is expected to be high. Nuclear was the family, desire of large family size was 2.27 (CI: 1.33 – 4.16) times higher compared to the joint family. Disintegration of family from joint to nuclear in socially disadvantaged society is at faster rate that may be an added factor for high fertility. In lower income class 1.5

times higher desire of larger family size compared to middle income class is going to further increase economic burden to these families. Among younger aged couples, the desire of larger family size was lesser by about 60% indicating attitudinal change of parents in favour of future to their children that will promote to increase of contraceptive practice resulting to substantial decrease of population growth. Compared to the education above middle level of wives, the desire of large family size was more than twice 2.10 (CI: 1.10-4.00) and more than 2.5 times (OR = 2.53; CI: 1.40-4.56) higher in illiterate and primary to middle level pass wives respectively. Level of education clearly indicates the lesser desired children and will have impact on fertility, but it is a difficult task to bring the changes in short span of time; this could be a long term goal. The study is carried in slums of Varanasi city of UP that is categorized as B class city. The results though cannot be generalized for all Indian slums; but the slums of cities falling into class B category and/or below of state UP and other adjoining states like Bihar, Madhya Pradesh, Rajasthan and Jharkhand, the situation may be similar or even worse. However, similar situation may also appear in other Indian slums of same class cities with some regional variation due to cultural practices and beliefs.

CONCLUSION

The whole community constituted mostly by socially disadvantaged community with poor economic condition, poor educational background and living in traditional way needs to be educated about the benefits of small family size. Study reveals that educational attainment had pivotal role to desire of small family size but enhancement of educational status will be a long term goal, hence, attitudinal change to small family norm can be brought through organizing intensive educational campaign.

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REFERENCES

1. Coale AJ, Hoover EM. Population growth and economic development in low-income countries: A case study of India's prospects and Princeton University Press. Princeton; 1958.
2. Bhat PN Mari, Arnold F, Gupta K, Kishor S, Parasuraman S, Arokiasamy P, Singh SK, Lhungdim H. National Family Health Survey (NFHS-3). International Institute for Population Sciences, Deonar, Mumbai. September 2007. 540p. Vol.1. Main Report
3. John D, Chander SJ, Devadasan N. National Health Mission: An analysis of strategies and mechanisms for improving services for urban poor. National Workshop on Urban Health and Poverty. New Delhi: Urban Health Division, Ministry of Health and Family Welfare, Government of India, 2008. 85p.
4. World Urbanization Prospects: The 2005 Revision. New York: United Nations, DESA, Department of Economic and Social Affairs, Population Division New York. October 2006: 196p.
5. Census of India. Slum Population. Office of the Registrar General and Census Commissioner of India. Delhi, India. 2001. Series-1. 475p
6. Primary Census Abstract Slum - census of India. Office of the Registrar General & Census Commissioner, India. New Delhi. 30-09-2013. 40p (www.censusindia.gov.in/2011)
7. DUDA Varanasi. Measuring, Learning & Evaluation Project for the Urban Reproductive Health Initiative. Base Line Survey Report Draft, Varanasi City. Varanasi District Urban Development Authority (DUDA), March 2011. 85p.
8. Roy TK, Arnold Fred, Kulkarni S, Kishor S, Gupta K, Mishra V, Nangia P, Retherford Robert D, Pandey A,

- Kumar S. National Family Health Survey (NFHS-2). International Institute for Population Sciences, Deonar, Mumbai. October 200. 439.
9. Ramesh BM, Arnold F, Roy TK, Kanitkar T, Govindasamy P, Retherford D Robert. National Family Health Survey (NFHS-1). International Institute for Population Sciences, Deonar, Mumbai. August 1995. 434p. Main Report.
 10. Chaudhuri S. The Desire for Sons and Excess Fertility: A Household-Level Analysis of Parity Progression in India. International Perspectives on Sexual and Reproductive Health; Dec. 2012; 38(4):178-186
 11. Annexure V – Caste Code. http://adfdell.pstc.brown.edu/arisreds_data/annex-5.pdf
 12. Central list of OBC for the state of Uttar Pradesh. <http://ncbc.nic.in/Writereaddata/cl/up.pdf>
 13. List of Scheduled Castes – Schedule Caste Welfare: Ministry of Social Justice. <http://socialjustice.nic.in/sclist.php>
 14. State wise Scheduled Tribes Uttar Pradesh. tribal.nic.in
 15. Prasad BG. Changes proposed in Social classification of Indian families. J Indian Med Assoc 1970; 55: 198-9.

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