

## Gender Roles in Family Decision Making: Results from Indian States

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### Abstract

*Basic family decisions like desire to limit child-bearing, sex of the new-born or child care are not always an individual affair but involve interaction between choices of men and women in the family. This study examines how background characteristics as well as decisions of men and women determine the family outcomes such as, women's fertility, family-size, sex preference of the new-born and children orphan-hood. Our analysis is performed using cross-sectional data pertaining to 29 states of India. The results indicate that while men's preferences for male children remain as a significant barrier to fertility reductions, women's literacy level can contribute to the men's decisions of limiting family-size. The men's literacy along with women's lack of media exposure weakens women's desire for controlling family-size and also enhances their preference for the male child. Finally, while alcohol use by men and literacy level or cash earning of women plays a role for the separation of children from their parents, the lack of wealth possession and men's literacy level seems to have prevented the abandonment of children across Indian states.*

**Key Words:** Family Decisions, Family Structure, Child Care, Cross-Sectional Models, India, Regional Dimensions.

**JEL Classification:** D10, J12, J13, C21, O53, R11

Paper for 18<sup>th</sup> Annual Conference on Global Economic Analysis,  
Organized by Centre for Global Trade Analysis (Perdue University)  
and Centre for Policy Studies (Victoria University, Melbourne)  
Melbourne Convention Centre, Melbourne, Australia, 17-19 June 2015.

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## 1. Introduction and Objective:

The formation of family and its structure across societies are expected to depend on the choices of men and women, but major family decisions like the desire to limit child-bearing or the sex of the new-born also involve interaction of the men's and women's decisions in the family. Although, the phenomena of high women's fertility or son-preference are apparent in the national-level estimates for India, there remain significant degrees of variation across states of India. Since the nature of co-operation (or conflict) commonly influence the family-decision, it is worthwhile to examine the extent to which family decisions of women differ from that of the men. For instance, India and the northern-region states are familiar for the high women's fertility rates and their strong son-preference in the family composition. It is of particular interest to make inquiries on whether the desire to limit child-bearing or son-preference is actually a desire of the men or women actors in the family. On the other hand, there are aspects of family life, viz, domestic violence of the nature emotional, physical and sexual on the currently married women or the separation of children from their parents, which have been observed to bear a negative influence on the familial developments. The recent data (from National Family Health Survey III) suggest high prevalence of different forms of violence. i.e., overall 39% of currently married women belonging to age 15-49 have ever experienced any physical or sexual or emotional violence in their current marriage and 27% have experienced the violence in the past 12 months. This indicates that the majority of currently married women who have ever been abused by their husbands are also currently being abused. Similarly, a sizeable proportion of children below age 18 years do not live with either parent even when both the parents are alive.

It therefore remains imperative to analyze the interactions and impacts of women's and men's decisions on family choices to understand how family policies are evolved that makes happen various family outcomes, viz., women's fertility, family-size, sex preference of the new-born or nature of the child-care. In this background, this study examines how these family outcomes are evolved from the choices and decisions of women and men by using

data from 29 Indian states.<sup>1</sup> The plan for the rest of the paper is as follows. Section 2 discusses the roles of gender power in family decision making. In section 3, we focus on the major family issues in India that have been highlighted by the previous research. Section 4 draws attention to recent aspects that are considered as essential determinants of family decision-making processes in India. The methodology of the empirical model, database and results from our cross-sectional analysis on Indian states are presented in section 5. The conclusion and policy implications are contained in section 6.

## 2. Gender Role in Decision Making:

Economists often believe that the family decision-making process is the outcome of conscious choices of each spouse, and the decision-making power of each spouse is determined by economic as well as non-economic factors. The gender status is a vital aspect that influences the decisions of men and women in any family, and the factors that influences the power that husbands or wives wield in a family determines the decision-making process of the unit. The academic literature on the area of consumer research has widely analyzed the choices of husbands and wives to understand the financial decision-making process of the families (Ferber and Lee 1974, Rosen and Branbois 1983, Elder and Rudolph 2003, Bernasek and Bajtelsmit 2002). Similarly, the role of women or the female autonomy in the household decision making process on health and family planning have been examined by Anderson and Eswaran [2005], Furuta and Salway [2006], Acharya, et al [2010]. In a recent study, Bertocchi, Brunetti and Torricelli [2012] investigated the determinants of family decision making power on economic and financial choices by considering individual characteristics of each spouse, household characteristics, and family background factors by using data over the period 1989-2010, which are drawn from the Bank of Italy Survey on Household Income and Wealth. They found the probability that the wife is in charge of economic and financial decisions increased with the difference between her years of age, level of education, income, husband's characteristics, as well as household characteristics such as family size and wealth.

However, the decision of fertility control is not an individual affair but involves individual or joint decision making in the family. Thus, the nature of cooperation existing

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<sup>1</sup> *The states data that we consider are Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, and West Bengal.*

between the husband and wife affects the decision on family size and sex-choice of the new-born. It is therefore implicit that the women's status remains particularly crucial for the family decision making. The gender status depends on the *gender power*, which may refer to access to education, money income, wealth, social roles etc. It is predictable that there have been some changes on the women's status with regard to the authority and decision-making mechanism of Indian family system along with the access of education and media presence. The recent research-findings also seem to indicate that empowerment of women have impacted on the family outcomes through its effects on the contraceptive-use and by weakening the son preference or by the spacing of children (Dyson and Moore 1983, Mason 1986, Malhotra et al. 1995, Presser and Sen 2000, Mason and Smith 2000, Jejeebhoy and Sathar 2001, Pande and Astone 2007).

### 3. Family Issues in India:

The family as an institution has undergone changes over several past decades in India, where earlier studies in the past have found the existence of a joint family system (Mandelbaum, 1959, Gore, 1965, 1968). The social and economic changes over the years had its impacts on the Indian family structure, which endured changes in the family-composition and generated various forms like joint family, nuclear family, nuclear family with dependants, etc. (Ross 1961, Beteille 1964, Gore 1968, Kapadia, 1969, D'Souza 1971, Richard et al 1985). Subsequent studies found the rise of nuclear families over the years in many parts of the country (Niranjan et.al. 1998, Freed and Freed). The declining fertility levels have mainly been assigned as a reason for the reduction in family size. However, there remain regional variations on the family size in India, e.g., southern states have smaller family size than other parts of India, also the percentage of nuclear families are more prominent in urban areas than in rural areas. Studies have attempted to determine the socio- economic determinants of family-composition in terms of differences in religion (Hindus and non-Hindus), castes, land-ownership, economic status, age, literacy level, place of residence, etc.

Several studies have confirmed the presence of son preference in the family decisions of South Asian countries and linked it with the use of sex-selective abortions or female infanticide and high male/female sex ratios at birth (Das Gupta and Bhat 1997, Arnold et al 1998, Sudha and Rajan, 1999). The nexus among son preference, fertility behavior and family composition has previously been highlighted in several studies (Rosenzweig and Schultz 1982, Behrman 1988, Kishore 1993, Murthi, Guio and Dreze 1995, Mutharayappa et

al 1997, Arnold et al 1998, Agnihotri 1999, Clark 2000, Miller 2001, Bandhyapadhyay 2003), whereby it is argued that a strong preference for sons has been the major stumbling block for reduction of women's fertility and family-size in India. The contemporary research findings in India have indicated that the persistence of son preference had an impact not only on the preferred family-composition, but also on the use of contraception, spacing as well as the number of children in the family (Das Gupta 1987, Das Gupta and Bhat 1997, Clark 2000, Pande 2003, Pande and Astone 2007). The son preference in India is found to be stronger in northern India states (Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh) in comparison to southern Indian states (Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu). In a recent study involving south-Asian countries of India, Bangladesh and Nepal, Jayaraman, Mishra and Arnold [2008] argued that the widespread feature of son preference bears a major influence on women's reproductive behavior. They observe that women in India with more sons have a lower desire to bear another child and are more likely to use contraception than those with more daughters.

#### 4. Current Scenario:

The UNDP's Human Development Report 2013 categorized India as the worst place in the south-Asian region for women with a poor Gender Inequality Index rank of 132 out of 187 countries. All countries in South Asia with the exception of Afghanistan (147<sup>th</sup>), were a better place for women than India, with Sri Lanka (75<sup>th</sup>) topping them all while Nepal ranked 102<sup>nd</sup>, Bangladesh 111<sup>th</sup>, and Pakistan 123<sup>rd</sup>. The aspects of gender inequality are also prominent in the familial set-up in India. Some of the Indian states have displayed gender inequality in health and education so that it is common to find women recording higher illiteracy, employment concentration in casual unskilled and low paid work and be prone to violence both within and outside the family. On the other hand, there are states that are economically progressive but have skewed sex ratios in comparison to other states. The comparison of the Census data of two points of time, 2001 and 2011 reveals that the infant and child sex ratio (between age 0 to 7) performed worse than the sex ratio for the older age group (7 and above). It therefore follows that India's gender gap has widened in the last decade after a sharp increase in the female foeticide due to son-preferences. The relevant data reflects that women's desire to have no more children after two exceeds the same for men in 13 states, and conversely men's response to limit child bearing exceeded that of women's in 16 states and in all-India (Figure 1). On the other hand, the women's son-preference clearly

exceeded that of men in 14 states in our sample as well as in all-India, while the men's son-preference clearly exceeded that of women in the remaining 14 states (Figure 2).

*(Insert Figure 1 and 2)*

According to Kishor and Johnson [2004], the problem of domestic violence has recently been recognized internationally as a threat to the health and rights of women.<sup>2</sup> It is understood that that domestic violence not only poses a direct threat to women's conception, but also adversely impacts on the survival and wellbeing of children in the family (Kishor and Johnson 2006, Hindin, Kishor, and Ansara, 2007). Garcia-Moreno et al [2006], who estimated the extent of physical and sexual intimate partner violence against women in 10 countries, viz., Bangladesh, Brazil, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia and Montenegro, Thailand, and the United Republic of Tanzania, concluded that women were at far greater risk of physical or sexual violence by a partner than from violence by other people.

According to researchers, domestic violence in India results due to factors such as poverty, son preference, dowry, low educational status, childlessness, infidelity, women's alleged negligence of in-laws and children, also drug and alcohol use of men (Bhatt 1998, Murthy et al 2004, Mitra 2006, Koenig et al 2006). The NFHS-3 data reported that about 35% of ever married women had experienced physical spousal violence, whereas 16% and 10% had encountered emotional and sexual violence, respectively at the all India level. The magnitude of different forms of spousal domestic violence varies greatly across the states of India (Figure 3). It can be seen that some of the northern-Indian states (Bihar, Jharkhand, Rajasthan, and Uttar Pradesh), central-Indian states (Gujarat and Madhya Pradesh), southern-Indian states (Andhra Pradesh and Tamil Nadu), northeastern parts of India (Arunachal Pradesh) and eastern-Indian states (Odisha, Tripura and West Bengal) recorded higher magnitudes of all forms of spousal violence.

*(Insert Figure 3)*

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<sup>2</sup> This study uses household and individual-level data from the Demographic and Health Surveys (DHS) program from nine countries (viz., Cambodia, Colombia, Dominican Republic, Egypt, Haiti, India, Nicaragua, Peru and Zambia) to examine the prevalence and correlates of domestic violence and the health consequences on women and their children.

The association of children with the parents or the co-residence of the family remains a crucial feature of the family composition that influences the children's development and wellbeing. The abandonment of children from their parents may result from parental death, poverty and livelihood insecurity or due dysfunctional family set-ups. According to the NFHS-3 data, about 70 percent of Indian children under age 18 years live with both their parents in every state. The percentage of children living only with their mother while their father is living elsewhere remained high on the states of Kerala, Bihar, Himachal Pradesh, Uttar Pradesh, Goa and Tamil Nadu. On the other hand, proportion of children who do not live with either parent even though both parents are alive remained high in Sikkim, Nagaland and Arunachal Pradesh. Figure 3 contains information on orphan-hood status of all children below 18 years of age with both the parents alive. As female literacy has been found to be associated with better health and labor market outcomes for women, exposure to the mass-media has the potential to empower women in their roles of decision-making. The Indian women are less likely than men to have exposure to television, radio, newspapers, magazines and movies. Alternatively speaking, about 35% of women in India do not have exposure to any forms of these media in comparison to 18% of men.

## 5. Empirical Examination:

### 5.1 Methodology:

We have formulated individual models to explain how differences in women's fertility, family-size, sex-preference of the new-born or the child-abandonment across India states can be explained due to the responses of women and men on explanatory variables. The main explanatory variables that we consider are: literacy levels, media exposure, wealth possession, relative cash earning of women, men's perception on female contraceptive use, alcohol use and spousal violence. We specify four models as follows:

$$\text{Women's Desire for no more Child} = f(\text{Men's Literacy, Women's Literacy, Men's Exposure to Media, Women's Exposure to Media, Wealth Possession}) \quad (1)$$

$$\text{Men's Desire for no more Child} = f(\text{Men's Literacy, Women's Literacy, Men's Exposure to Media, Women's Exposure to Media, Wealth Possession}) \quad (2)$$

$$\text{Women's Sex Preference for Newborn} = f(\text{Men's Literacy, Women's Literacy, Men's Exposure to Media, Women's Exposure to Media, Wealth Possessions}) \quad (3)$$

*Men's Sex Preference for Newborn = f (Men's Literacy, Women's Literacy, Men's Exposure to Media, Women's Exposure to Media, Wealth Possessions)* (4)

*Magnitude of Orphaned Children = f (Men's Literacy, Women's Literacy, Alcohol Use, Spousal Violence, Relative Cash Earning of Women, Wealth Possessions)* (5)

*Total fertility Rate = f (Men's Literacy, Women's Literacy, Wealth Quintiles, Men's Perception on Female Contraceptive Use, Men's Sex Preference, Women's Sex Preference)* (6)

## 5.2 Data Base:

The basic data is gathered from the most recent National Family and Health Survey, Third Round, (2005-06) brought out by the International Institute for Population Science, Mumbai on behalf of the Ministry of Health and Family Welfare, (GoI).

## 5.3 Results:

The results obtained from estimating these six equations are provided in Table 1 to Table 3. Since the OLS estimation generated autocorrelation problem as evident from the low Durbin-Watson test statistic, we have provided the results from Cochrane-Orcutt estimation after correcting the serial-correlation problem. The explanatory variables that turn out to be statistically significant bear correct signs in all the equations. In Equation (1b), the levels of women's literacy positively contributed to the women's desire for limiting the family-size and have no more children after two. The women's non-exposure to any form of media contributed against their response towards no more child-bearing. The literacy levels of men have, however, been found to be reducing the women's desire for controlling the family-size in the same equation. On the other hand, the results on the determinants of Men's Desire for no more children reported in Equation (2b) indicate that women's literacy positively contributed to men's decisions. These results largely suggest that while women's literacy and exposure to media contributes towards their desire for controlling the family-size, men's literacy appears to influence against the women responses in states of India.

### *(Inset Table 1)*

Equations (3) and (4) reports results on the determinants of women's and men's sex preference for the newborn. We find that higher literacy among men generated a contributory impact on the women's sex-preference for the male child (Equation 3b). The lack of women's media exposure, however, seems to be having a direct impact on their desire for male child,



as well as positively influences the similar desire by men (Equation 4b). These results clearly point out how the responses of both women and men significantly influence the opposite member's sex-preference decision in the family.

*(Inset Table 2)*

The estimation of the magnitude for orphaned children according to Equation (5) reveal several significant (statistically) variables, viz., women's literacy, men's literacy, wealth possession in the family, men's alcohol use and relative cash earning of women (% of married men who claim that their wife earns more or same as them). The spousal violence (% of married women who experienced emotional, physical or sexual violence) remains the only explanatory variable that failed to reveal statistically significant effect in equation (5b). The results indicate statistically significant and direct effect of men's alcohol use for the prevalence of orphaned children across Indian states. While alcohol use turned out to be the significant determinant for the children's orphan-hood from the men's side, it is of particular curiosity to explore the women's role on children separated from parents. Quite interestingly, women's literacy level as well as their relative cash earning turns out to be the contributing factors towards the separation of children from their parents. On the other hand, the lack of family wealth possession and men's literacy level seem to prevent the abandonment of children below the age 18, with both parents alive. Finally, a majority of the explanatory variables turn out to be statistically insignificant in equation (6) that estimates the total fertility rate of women. Thus, leaving men's preference for male-child all other variables, viz., men's literacy, women's literacy, family wealth possession, men's perception on female contraceptive use and women's sex preference remained statistically insignificant (Equation 6b). The coefficient sign for the men's sex-preference bear correct sign and revealed direct impact on the women's fertility rate. This clearly indicates that men's preference for male children across Indian states exerts a positive impact on the fertility rates of women.

*(Inset Table 3)*

## 6. Conclusions:

The stark evidence of gender inequality is reflected in the fact that one sex is preferred to the other in the Indian family system. The existing set of studies attempted to point out how the roles played by wives and husbands have been changing over time on the family decision-making process. It is also highlighted that how the important decisions on family matters like family size, contraceptive use or economic and financial matters are now being taken by the female actors. However, there exists a gap in the literature with regard to how the choices and decision structures of the male and female actors have influenced the family outcomes such as, women's fertility, family-size, sex preference of the new-born and children orphan-hood in India. This study provided an attempt to address this gap and examined how the decisions of men and women along with relevant background characteristics determine the family outcomes in India by using cross-sectional data pertaining to 29 states.

This study aims at examining how the basic family outcomes on sex-preference of the new-born, limiting the family size or child bearing and rearing practices emerge from the choices of men and women in the family. We therefore analyze how the decision making process of both husband and wife in the family are influenced by education, media exposure and wealth possession. Our results show that husband's preference for male child is prevalent and has been found to have contributed immensely to augment women's fertility that resulted and large family size. The literacy levels of women have played a role in the men's decisions of limiting family-size. Interestingly, literate men and women lacking media exposure weakened women's desire for controlling family-size and also enhanced their preference for the male child.

It therefore appears that the women empowerment programmes meant for improving the education and media exposure of women can influence the sex-preference of the new-born as well as family-size among couples within and families. We also examine the roles played by husbands and wives on the outcomes on child bearing, childcare and upbringing by considering the aspects of husband's alcohol use, spousal violence, relative cash earning of women and husband's perception on female contraceptive use. There is evidence that alcohol use by men played a role for the separation of children from their parents. Similarly, literate women or women with cash earning are found to be more likely to abandon the children. The lack of family wealth possession as well as men's literacy level appeared to be averting the child-abandonment across Indian states.

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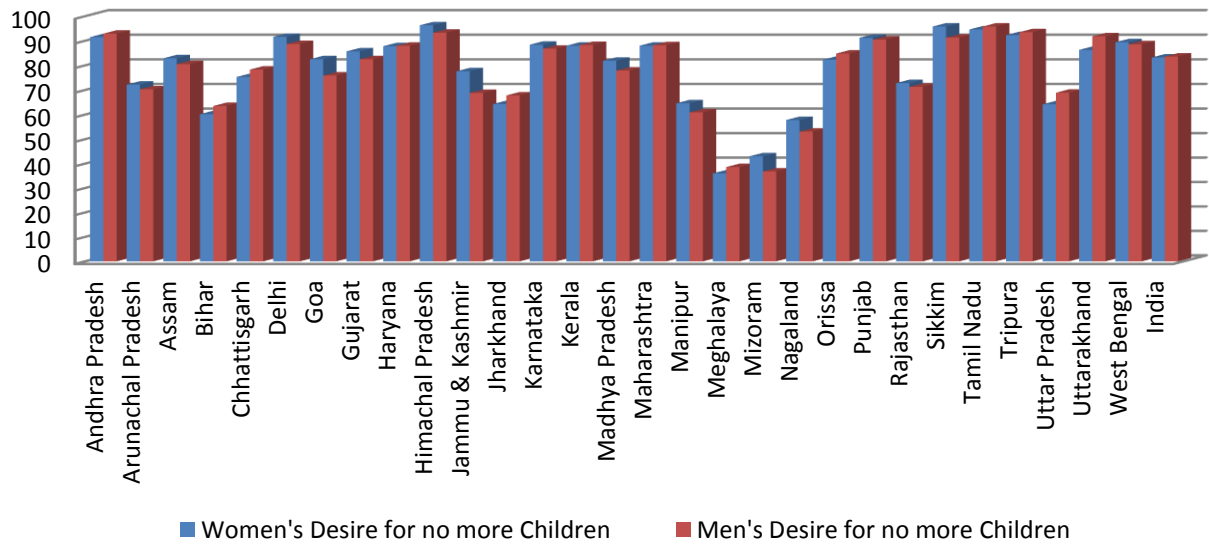
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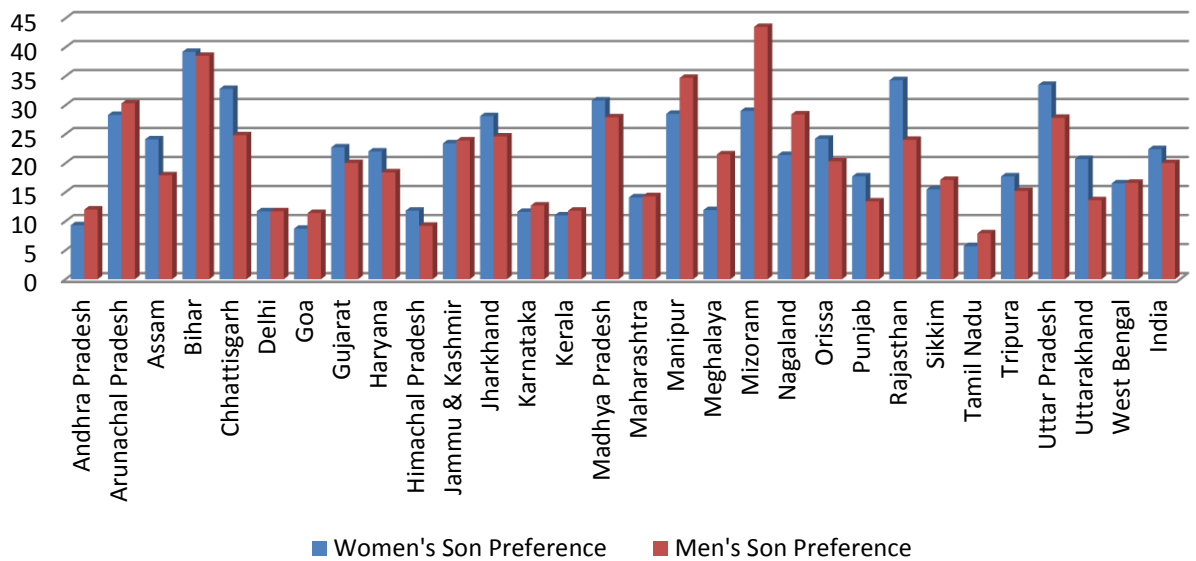
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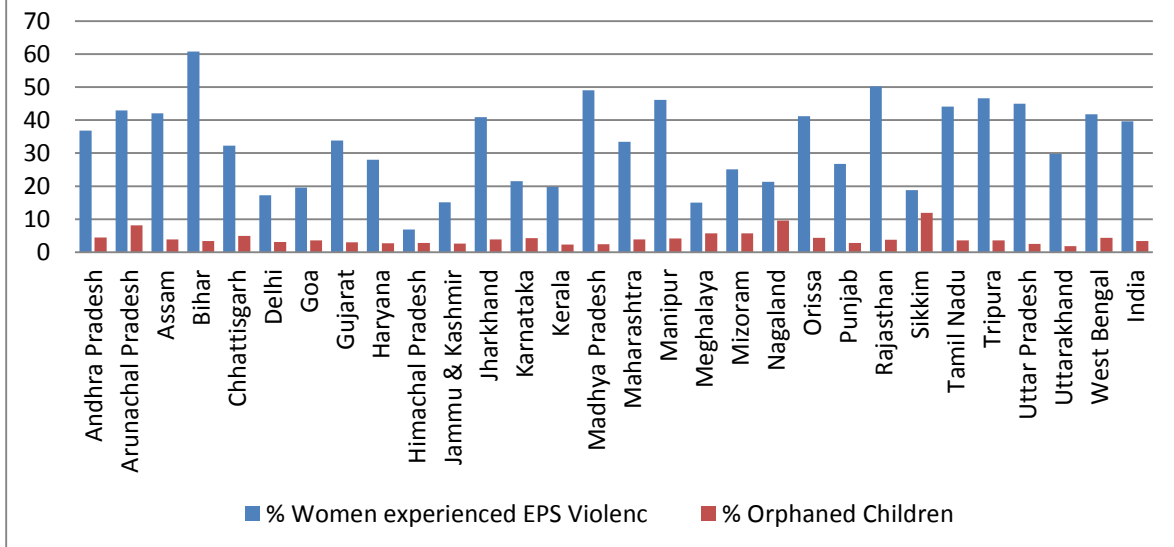
**Figure 1: % of Women and Men Who Want no more Children After 2.**



**Figure 2: Percentage of Women and Men Who Want More Boys.**



**Figure 3: % Women Experienced Emotional-Physical-Sexual Violence and % of Orphaned Children.**





**Table 1: Regression Results: Dependent Variable: Desire to Limit Childbearing by Women & Men (sample: 29states plus all-India).**

	Dependent Variable			
	% of Women who want no more children after 2		% of Men who want no more children after 2	
<i>Explanatory Variables</i> ↓	OLS (1a)	Cochrane- Orcutt (1b)	OLS (2a)	Cochrane- Orcutt (2b)
Constant	28.85 (1.96) *	26.94 (3.22) *	28.70 * (1.85)	20.53 (2.08) *
% of Literate Women	0.59 (-1.47) **	0.55 (2.25) *	0.58 (-1.37) **	0.57 (1.99) *
% of Literate Men	-0.28 (0.34)	-0.69 (-1.55) **	0.23 (0.27)	-0.47 (-0.90)
% of Women not regularly exposed to any Media (Newspaper, TV, Radio, Movies)	-0.52 (-0.86)	-0.46 (-1.37) **	-0.39 (-0.60)	-0.21 (-0.53)
% of Men not regularly exposed to any Media (Newspaper, TV, Radio, Movies)	-0.49 (-0.64)	-0.06 (-0.15)	-0.66 (-0.82)	-0.10 (-0.21)
% of Population belonging to the Lowest Two Wealth Quintiles	0.08 (0.26)	0.23 (1.30)	0.13 (0.42)	0.22 (1.04)
R-Squared	0.28	0.56	0.23	0.47
R-Bar-Squared	0.13	0.41	0.08	0.29
DW Statistic	1.45	1.98	1.55	1.89
F-Statistic	1.91	3.73	1.80	2.61

Note: \* and \*\* indicate statistical significance at 5% and 20% level of significance, respectively.

**Table 2: Regression Results: Dependent Variable: Sex-Preference for the New-Born by Women & and Men (sample: 29states plus all-India).**

<i>Explanatory Variables</i> ↓	Dependent Variable			
	% of Women who want more sons than daughters		% of Men who want more sons than daughters	
	OLS (3a)	Cochrane-Orcutt (3b)	OLS (4a)	Cochrane-Orcutt (4b)
Constant	-11.76 (-1.90) **	-15.16 (-2.22) *	-8.88 (-1.02)	-5.77 (-0.57)
% of Literate Women	-0.39 (-2.36) *	-0.08 (-0.58)	-0.08 (-0.32)	0.16 (0.68)
% of Literate Men	0.98 (2.90) *	0.79 (2.23) *	0.60 (1.26)	0.21 (0.44)
% of Women not regularly exposed to any Media (Newspaper, TV, Radio, Movies)	0.24 (0.96)	0.49 (1.79) **	0.09 (0.26)	0.52 (1.72) **
% of Men not regularly exposed to any Media (Newspaper, TV, Radio, Movies)	0.18 (0.55)	0.32 (0.73)	0.35 (0.76)	0.10 (0.23)
% of Population belonging to the Lowest Two Wealth Quintiles	0.09 (0.75)	0.09 (0.89)	0.10 (0.56)	-0.07 (-0.38)
R-Squared	0.62	0.68	0.24	0.33
R-Bar-Squared	0.54	0.57	0.08	0.10
DW Statistic	2.48	1.98	2.15	1.96
F-Statistic	7.92	6.11	1.57	1.43

Note: \* and \*\* indicate statistical significance at 5% and 20% level of significance, respectively.

**Table 3: Regression Results: Dependent Variable: Orphaned Children and Women's Fertility Rate (sample: 29states plus all-India).**

	Dependent Variable			
	% of Children (under 18)not living with either parents, with both alive		Women's Total Fertility Rate	
<i>Explanatory Variables</i> ↓	OLS (5a)	Cochrane- Orcutt (5b)	OLS (6a)	Cochrane- Orcutt (6b)
Constant	2.12 (1.07)	6.27 (3.83) *	0.59 (3.05) *	0.56 (2.39) *
% of Literate Women	0.03 (0.61)	0.11 (1.99) **	-0.01 (-1.08)	-0.01 (-1.00)
% of Literate Men	-0.12 (1.12)	-0.39 (-3.84) *		
% of Population belonging to the Lowest Two Wealth Quintiles	0.04 (0.11)	-0.06 (-2.04) *		
Men's Perception on Female Contraceptive (% of Men who believes that Woman who use contraception may become promiscuous)			-0.01 (-0.69)	-0.01 (-0.85)
% of Women experienced Emotional or Physical or Sexual Violence	-0.03 (-0.81)	0.03 (0.79)		
% of Men who Takes Alcohol	0.08 (2.10) *	0.10 (2.96) *		
Relative Cash Earning of Women (% of Married Men who claim that their wife earns more or same as them)	0.05 (1.41) **	0.04 (1.31) **		
Women's Preference for Male Child			-0.01 (-0.18)	-0.01 (-0.42)
Men's Preference for Male Child			0.05 (2.10) *	0.06 (3.27) *
R-Squared	0.33	0.59	0.47	0.63
R-Bar-Squared	0.16	0.38	0.38	0.50
DW Statistic	1.81	1.86	2.77	1.97
F-Statistic	2.03	2.80	5.60	4.64

Note: \* and \*\* indicate statistical significance at 5% and 20% level of significance, respectively.