# The Role of Husband, Mother-in-Law and Social Networks on Fertility Patterns in Rural India

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## Abstract

The stubbornly elevated patterns of fertility among rural Indian women characterized with too many, too often and too closely spaced children contests the available demographic propositions. This paper aims to provide novel empirical evidence on the role of social networks in determining fertility of women in India using ego-centric social network data collected in 2010 covering 567 women aged between 18-35 years in rural Jaunpur, Uttar Pradesh, India. We investigate: 1) whether actual and desired number of children of social networks are associated with fertility controlling for demographic and socio-economic characteristics of the respondents, their husband, mother-in-law, and biological mother; and 2) what explains the influence of social networks on fertility patterns. The paper demonstrates that social networks play a key role, through social contagion and social pressure, in driving fertility behavior of sample women. However, the role of mother-in-law dissipates once characteristics of husband and networks are controlled for.

## 1.     Introduction

Burgeoning body of empirical research in social and behavioral sciences over the past few decades have highlighted the position of *social networks* which often trigger crucial transitions along the life course of human population (Bott, 1971; Granovetter, 1973; Berkman, 1984; Rogers, 2003; Luke and Harris, 2007; Valente, 2010). Evidences across countries have noted that several vital facets of human life/behavior including education, work, marriage, parenthood, migration, nutrition, health status, health care utilization, mortality, political orientations etc. were robustly associated with degree and structure of their social affiliations/social networks (Sheldon, 2002; Bian*et al*., 2005; Milardo, 1986; Hammer, Gutwirth, Phillips, 1982; Banerjee, 1983; Christakis and Fowler, 2007; Smith and Christakis, 2008; Deri, 2005; Berkman and Syme, 1979). These results situate social networks as vital pool of resources and real life experiences/behaviors that may influence/help individuals to make informed decisions.

Recently, demographers have also employed the social network perspective in order to advance empirical explanations of changing demographic behavior across diverse contexts. Macro level studies have recognized the important linkages between social networks and fertility behavior (Montgomery and Casterline, 1993; Rosero-Bixby and Casterline, 1993; Montgomery and Casterline, 1996; Bongaarts and Watkins, 1996).This body of research identifies social learning, social influence and joint evaluation as three main pathways through which social networks manipulate demographic behavior. Furthermore, several micro level studies have also shown the influence of informal social interaction with relevant others/network member on individual fertility performance. For instance, a community level study from Nepal examined the perception of changing risk of infant mortality on subsequent modification of fertility behavior among women (Sandberg, 2006). This research highlighted how social learning about the changing risk of infant mortality through socially proximate individuals shaped fertility response in a developing society. Social networks could influence fertility through providing social support, exerting social pressure, contributing to social learning and shaping social contagion (Keim, Klärner, & Bernadi, 2009).

Indian fertility has gradually declined across several states at disparate pace since late 1970s, largely owing to array of structural changes and family planning efforts (Haub, 2011). The process of fertility decline remained highly uneven and rather pronounced in socioeconomically forward districts/ states in southern India (Guilmoto and Rajan, 2001). However, many women in rural Uttar Pradesh (the most populous province of India) still continue to bear on the average four children in their reproductive span (IIPS, 2010). Furthermore, use of modern family planning methods remained relatively low (42 percent) with one out of every five currently married women (15-49 years) reported unmet need for family planning method in Uttar Pradesh (IIPS & Macro International, 2007). Women reportedly do not use contraception due to fear of side effects or disapproval of their close relatives/friends (Sedgh*et al*., 2007). This shows that significant others may have important influence upon rural women fertility behavior. However, to what extent the attitudes, behavior and opinions of close relatives, neighbors and friends (hereafter referred to as social networks) on child bearing matters might determine the actual family size among Indian women is poorly understood.

## 2.    Indian Context

Demographic literature indicates substantial variation in fertility among Indian women across place of residence (rural vs. urban), education attainment, economic status, caste and religion affiliations, and spatial units (Dyson and Moore, 1983; James, 1999; Dreze and Murthi, 2001; Guilmoto and Rajan, 2002). In addition, the low status of women along with alarming degree of son preference has curtailed the pace of fertility decline in India (Das, 1987; Jejeebhoy, 1991; Bhat and Zavier, 2003).

India provides a unique setting to investigate the role of social networks on fertility behavior since the patrilineal familial practice requires a married woman to move into her husband's family. Arrival into in-laws household/family oblige that the newlywed bride will be conditioned as per the prevailing norms, customs and expectations under the stewardship of mother-in-law and other senior women in the households. This suggests that the bride is expected to operate as per the expectations and norms set by other women in the households. Therefore, *significance others* who can influence fertility decision may include a mother-in-law and other relatives from a husband's family, whereas, in a matrilineal system like in the North of Thailand etc., in-laws may play a minimal role.

Despite the important influence of social networks' on fertility patterns, by far there has been dearth of empirical study that focuses on India. Hence, this paper aims to provide novel empirical evidence on the role of social networks on fertility of women in India using the ego-centric personal social network data collected in 2010 covering 567 women aged between 18-35 years in rural Jaunpur, Uttar Pradesh, India. We investigate: 1) whether actual and desired number of children of social networks is associated with fertility controlling for demographic and socio-economic characteristics of the respondents; and 2) what explains the influence of social networks on fertility patterns.

**3.     Research hypothesis**

Drawing upon the available literature/theories mentioned above, the following hypotheses are derived:

**H1**: Net of the effects of individual characteristics, social networks plays a role on fertility patterns through two plausible processes:

> H1.1: Social contagion process (measured by actual number of children of network members)

> H1.2: Exerting social pressure (measured by desired family size of network members)

**H2:** Husband and mother-in-law have bigger influence on ego fertility than biological mother because once married, the women were adopted into a husband's family.

**H3:** The influence of husband on fertility patterns is lower when ego has a similar status (measured by education and age) with her husband.

**4.     Data and Methods**

**Data**

The unique data for the present study comes from a field based work conducted during February-May, 2010 in a rural village- *Chandwak*– in Jaunpur district, Uttar Pradesh, India[1]. All currently married women aged between 18-35y (N=700) were targeted for interview. With the response rate of 81 percent, finally detailed ego-centric social network data were collected from 567

women. Direct information on social networks was obtained using *name generators* (network members with whom respondent discuss matter of child bearing) following by *name interpreters* (socioeconomic and demographic attributes of each social network with whom the respondent discusses about fertility matter). In addition, information about the individual and household socioeconomic characteristics, complete birth history and family planning practices of the respondents was also collected. Furthermore, in-depth interviews and focus group discussions were also conducted to support the quantitative data and advance appropriate narrative.

**Outcome variable**

The main outcome variable was *number of children ever born* to currently married women (18-35y) in order to depict the pattern of fertility in the study population.

**Exposure variable**

The main explanatory variables include actual and desired family size of the social network (*main alter* and *other alters*), desired family size of husband and mother-in-law, and the actual and desired family size (for the respondents) of biological mother. Note that the information on desired family size of social networks including husband, mother-in-law and biological mother is self-reported by the respondents.

**Control variable**

We controlled for various pertinent factors in the analysis drawing upon the relevant demographic literature. This includes age, year of schooling, number and gender composition of surviving children, experience of child loss, social class, wealth status, desired family size of respondent, and husband's age and education.

**Analytical strategy**

*Identification of main alter and other alters*

The respondents can name up to four persons as their network members with whom they discuss about child bearing matter. In order to identify the key person within the social network who might have the most influence on fertility outcome of the respondents, we employed factor analysis to generate a composite index of main alter. The index is created based on four items: duration of contact/relationship, degree of closeness, frequency of contact and provision of urgent material support. Using the factor loading we identified the 'main alter' i.e. a network member with the highest index score whereby the remaining network members are grouped into 'other alters' category.

We used cross tabulations to examine the fertility patterns (*number of children ever born*) across main and other alters, husband, mother-in-law, biological mother and other selected socioeconomic and demographic characteristics of the respondents. Oneway ANOVA was used to check the strength of statistical difference of the outcome variable across explanatory factors. Finally, we fit separate panels of nested linear regression models to examine the effect of actual and desired family size of the main alter after adjusting for the actual and desired family size of other alters, husband's and mother-in-law's desired family size, biological mother's actual and desired family size (for respondent) and other control variables.

## 5. Results

*5.1 Bivariate Analysis*

[TABLE 1: ABOUT HERE]

The results in **Table 1** presents age stratified differentials in mean children ever born to currently married women (18-35y) by selected socioeconomic, demographic and network properties. Mean

children ever born were higher among women with large desired family size. Interestingly, the mean children ever born to the respondents was relatively large when the desire family size of the main alter was high (≥four children). Similarly, the mean children ever born to the respondents were also high if husband or mother-in-law expressed large desired family size. In addition, women who returned non-numeric response (upto God or can't say) to questions on desired family size were on average having relatively large actual family size than their counterparts.

Furthermore, results also suggest consistent patterns of variations in mean children ever born across socioeconomic and demographic characteristics of the sampled women. The mean children ever born were relatively large among women with relatively no/limited schooling, from economically poor households, affiliated to weaker social groups (scheduled caste), had more daughters than sons and experienced child loss.

*5.2 Multivariate Analysis*

[TABLE 2: ABOUT HERE]

We fit several panels of nested adjusted linear regression models to test our research hypotheses. Results presented in **Table 2** indicate significant influence of actual number of surviving children of main alter on the mean children ever born among the respondent suggesting the operation of social contagion. These effects were far more pronounced among the relatively younger women (18-27 years) than their older counterparts (28-35 years).However, the actual number of surviving children of other alters were only weakly associated with the childbearing of the respondent.

[TABLES3 AND 4: ABOUT HERE]

The data from **Table 3** shows significant influence of desired family size of main alter on the actual family size of the respondents suggesting the operation of social pressure. However, desired family size of other alters were not associated with the respondent's actual fertility. Finally, the estimates presented in **Table 4** depict strong influence of desired family size of

husband on actual fertility of the respondents. However, the desired family size of mother-in-law and biological mother were not associated with the actual family size of the respondents.

## 6.       Discussion and Conclusion

We find that net of demographic and socio-economic characteristics, the actual and desired family size of social network members are associated with fertility patterns of the sampled women. These relationships however vary with the age of the women.

The contribution of this paper is three-folded. First, we provide novel empirical evidence on the role of social networks on fertility behavior of women in India. Besides, given that the survey specifically asks whether the respondents discuss with their network members about childbearing issues, unlike many other studies, we are able to directly capture a specific role of social networks on fertility decision.

Second, the richness of the data allows us to explore both the quality and quantity dimensions of the networks. Not only that the information on the size of the networks is available, it is also possible to identify the socio-demographic characteristics of each member in the networks.

Third, we demonstrate that social networks play an important role towards shaping fertility patterns among women in rural India. We also note that both social contagion and social pressure are playing important role towards conditioning fertility patterns in the study area. However, we don't find any statistically significant influence of desire family size of mother-in-law on fertility patterns of the respondents.

**References**

Bott  E. (1971). Family and Social Network (2nd ed.).  New York: Free Press.

Granovetter MA. (1973). Strength of weak ties. American Journal of Sociology 78 (6): 1360-130.

Berkman LA. (1984). Assessing the physical health effects of social networks and social support. *Annual Review of Public Health* 5: 413-432.

Rogers EM. (2003). Diffusion of innovations (5th ed.). New York: Free Press.

Luke DA, Harris JK. (2007). Network analysis in public health: history, methods and applications. *Annual Review of Public Heath* 28: 69-93.

Valente TW. (2010). Social networks and health: models, methods and applications. New York: Oxford University Press.

Sheldon SB. (2002). Parents' social network and beliefs as predictors of parent involvement.*The Elementary School Journal* 102(4): 301-316.

Mutz DC. (2002). Cross-cuing social networks: testing democratic theory in practice. *American Political Science Review* 96 (1): 111-126.

Bian Y, Breiger R, Davis D, Galaskiewicz. (2005). Occupation, class and social networks in China.*Social Forces* 83(4): 1443-1468.

Milardo RM. (1986). Personal choice and social constraints in close relationships: applications of network analysis. *Springer Series in Social Psychology* 145-166.

Hammer M, Gutwirth L, Phillips SL. (1982). Parenthood and social networks; a preliminary view.*Social Science and Medicine* 16(24): 2091-2100.

Banerjee B. (1983). Social networks in the migration process: empirical evidence on chain migration in India. *The Journal of Developing Areas* 17(2): 185-196.

Christakis NA, Fowler JH. (2007). The spread of obesity in a large social network over 32 years. *The New England Journal of Medicine* 357: 370-379.

Smith KP, Christakis NA. (2008). Social network and health.*Annual Review of Sociology* 34: 405-429.

Deri C. (2005). Social networks and health service utilization. *Journal of Health Economics* 24(6): 1076-1107.

Berkman LF, Syme SL (1979). Social networks, host resistance, and mortality: a nine year follow-up study of Alameda county residents. *American Journal of Epidemiology* 109 (2): 186-204.

Montgomery MR, Casterline JB. (1993).The diffusion of fertility control in Taiwan: evidence from pooled cross-section, time-series models. *Population Studies* 47(3):457-479.

Rosero-Bixby L, Casterline JB. (1993) Modelling diffusion effects in fertility transition. *Population Studies* 47(1): 147-167.

Montgomery MR, CasterlineJB.(1996). Social learning, social influence and new models of fertility.*Population and Development Review (Supplement)* 22:151-175.

Bongaarts J, Watkins SC. (1996).Social interactions and contemporary fertility transitions.*Population and Development Review* 22(4): 639-682.

Sandberg J. (2006). Infant mortality, social networks, and subsequent fertility.*American Sociological Review* 71(2): 288-309.

Keim S, Klärner A, Bernadi L. (2009). Who is relevant: exploring fertility relevant social networks. MPIDR Working Paper WP 2009-001. http://www.demogr.mpg.de/papers/working/wp-2009-006.pdf

Haub C (2011). Future fertility prospects of India. Expert Paper No. 2011/4 United Nations Department of Economic and Social Affairs, Population Division, United Nations, New York.http://www.un.org/en/development/desa/population/publications/pdf/expert/2011-4_Haub_Expert-Paper_FINAL_ALL-Pages.pdf

Guilmoto CZ, Rajan SI (2001). Spatial patterns of fertility transition in Indian districts, *Population and Development Review* 27(4): 713-738.

International Institute for Population Sciences (IIPS) and Macro International (2007). National Family Health Survey (NFHS-3), 2005-06: India: Volume 1. Mumbai, IIPS.

Sedgh G, Hussain R, Bankole A, Singh S (2007). Women with an unmet need for contraception in developing countries and their reasons for not using a method. Occupational Report No. 37, Guttmacher Institute, New York. http://www.guttmacher.org/pubs/2007/07/09/or37.pdf

Dyson T, Moore M. (1983).On kinship structure, female autonomy and demographic behavior in India.*Population and Development Review* 9 (1): 35-60.

Dreze J, Murthi M. (2001). Fertility, education and development: evidence from India. *Population and Development Review* 27(1): 33-63.

James K. (1999). Fertility decline in Andhra Pradesh: a search for alternative hypothesis. *Economic and Political Weekly*34(8): 491-499.

Das N. (1987). Sex preference and fertility behavior: a study of recent Indian data. *Demography* 24(4): 517-530.

Jejeebhoy S. (1991). Women's Status and Fertility: Successive Cross-Sectional Evidence from Tamil Nadu, India,1970-80. *Studies in Family Planning* 22(4): 217-230.

**Table 1: Descriptive statistics and mean children ever born (standard deviation) by selected demographic, socioeconomic and network characteristics among currently married women (18-35y) in rural Jaunpur, Uttar Pradesh, India, 2010.**

| Characteristics | Mean Children Ever Born (MCEB) | | | Sample (%) |
|---|---|---|---|---|
| | 18-27y | 28-35y | Overall | |
| **Total women** | 2.21 (1.90) | 3.92 (1.91) | 3.11 (2.09) | 567 (100.00) |
| *Egos characteristics* | | | | |
| *Educational status* | | | | |
| Illiterate | 2.96 (2.05) | 4.71 (2.20) | 3.93 (2.30) | 189 (33.33) |
| Primary | 2.00 (1.34) | 4.25 (1.99) | 3.42 (2.07) | 57 (10.05) |
| Secondary | 2.25 (2.14) | 3.65 (1.37) | 3.04 (1.88) | 186 (32.80) |
| Higher Secondary | 1.44 (1.17) | 2.66 (1.34) | 1.93 (1.37) | 135 (23.81) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Duration of marriage* | | | | |
| <=10y | 1.86 (1.63) | 2.63 (1.31) | 1.96 (1.61) | 261 (46.03) |
| >=10y | 4.23 (2.10) | 4.07 (1.92) | 4.09 (1.94) | 306 (53.97) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Sex composition of children* | | | | |
| Son=daughter | 2.03 (2.27) | 3.65 (1.86) | 2.69 (2.25) | 168 (29.63) |
| Son>daughter | 2.00 (1.54) | 3.83 (2.06) | 3.08 (2.07) | 249 (43.92) |
| Son<daughter | 2.81 (1.68) | 4.28 (1.65) | 3.64 (1.81) | 150 (26.46) |
| *P-value* | 0.011 | 0.097 | 0.000 | |
| *Experience of child loss* | | | | |
| No | 2.09 (1.84) | 3.56 (5.18) | 2.81 (1.90) | 480 (84.66) |
| Yes | 3.57 (2.03) | 5.18 (2.22) | 4.79 (2.27) | 87 (15.34) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Wealth status* | | | | |
| Poor | 2.50 (1.95) | 4.84 (2.39) | 3.42 (2.42) | 189 (33.33) |
| Middle | 2.11 (1.68) | 3.97 (1.54) | 3.20 (1.84) | 189 (33.33) |
| Rich | 1.88 (1.99) | 3.26 (1.64) | 2.71 (1.91) | 189 (33.33) |
| *P-value* | 0.077 | 0.000 | 0.003 | |
| *Social groups* | | | | |
| Scheduled caste | 2.01(1.68) | 3.86(1.83) | 2.80(1.97) | 270 (47.62) |
| Other backward class | 2.29(1.79) | 3.75(2.00) | 3.29(2.04) | 162(28.57) |
| Forward caste | 2.00(1.53) | 3.53(1.80) | 2.76(1.83) | 78 (13.76) |
| Muslim | 3.85(3.21) | 5.27(1.56) | 4.72(2.42) | 54 (9.52) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Desired family size* | | | | |
| <=Two children | 1.88 (1.57) | 3.50 (1.93) | 2.67 (1.93) | 366 (64.55) |
| Three children | 3.06 (2.31) | 4.04 (1.55) | 3.66 (1.93) | 117 (20.63) |
| >=Four children | 4.50 (1.56) | 5.28 (1.17) | 5.11 (1.29) | 54 (9.52) |
| Can't say/Upto God | 2.00 (2.38) | 4.66 (3.60) | 2.80 (3.01) | 30 (5.29) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Mother's characteristics* | | | | |
| *Educational status* | | | | |
| Illiterate | 2.51 (2.27) | 4.17 (2.44) | 3.33 (2.49) | 207 (36.51) |
| <=Secondary | 2.15(1.41) | 3.75(1.57) | 3.02(1.69) | 249(43.92) |
| Higher Secondary | 1.68 (1.94) | 3.85 (1.59) | 2.91 (2.05) | 111 (19.58) |
| *P-value* | 0.040 | 0.238 | 0.157 | |
| *Mother's children ever born* | | | | |
| <=Three | 1.33 (0.86) | 2.66 (1.51) | 1.90 (1.35) | 63 (11.11) |
| Four | 3.00 (2.42) | 4.29 (1.68) | 3.68 (2.15) | 96 (16.93) |
| >=Five | 2.19 (1.83) | 3.98 (1.95) | 3.16 (2.10) | 408 (71.96) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Desired family size* | | | | |
| <=Two children | 1.35 (1.11) | 3.45 (2.61) | 2.32 (2.21) | 156 (27.51) |
| Three children | 2.00 (1.24) | 3.82 (1.53) | 2.95 (1.67) | 132 (23.28) |
| >=Four children | 3.40 (2.66) | 4.42 (1.23) | 4.20 (1.66) | 72 (12.70) |
| Can't say/Upto God | 2.85 (2.26) | 4.02 (1.83) | 3.43 (2.14) | 207 (36.51) |
| *P-value* | 0.000 | 0.035 | 0.000 | |

| Characteristics | Mean Children Ever Born (MCEB) | | | Sample (%) |
|---|---|---|---|---|
| | 18-27y | 28-35y | Overall | |
| **Husband's characteristics** | | | | |
| *Educational status* | | | | |
| Illiterate | 2.00 (1.57) | 5.43 (2.44) | 3.83 (2.69) | 90 (15.87) |
| Primary | 3.14 (2.00) | 3.83 (2.14) | 3.57 (2.10) | 57 (10.05) |
| >=Secondary | 2.16(1.93) | 3.59(1.56) | 2.90(1.89) | 420 (74.07) |
| *P-value* | 0.058 | 0.000 | 0.000 | |
| *Desired family size* | | | | |
| <=Two children | 1.72 (1.20) | 3.20 (1.58) | 2.40 (1.57) | 324 (57.14) |
| Three children | 3.36 (2.34) | 4.08 (1.62) | 3.85 (1.90) | 102 (17.99) |
| >=Four children | 3.44 (1.92) | 5.00 (0.76) | 4.39 (1.53) | 69 (12.17) |
| Can't say/Upto God | 3.71 (3.40) | 5.23 (2.95) | 4.70 (0.86) | 60 (10.58) |
| Not discussed | 0.75 (0.86) | -- | 0.75 (0.86) | 12 (2.12) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| **Mother-in-law's characteristics** | | | | |
| *Desired family size* | | | | |
| <=Two children | 1.53 (0.98) | 2.77 (1.50) | 1.83 (1.24) | 111 (19.58) |
| Three children | 2.05 (1.17) | 3.28 (1.11) | 2.55 (1.29) | 102 (17.99) |
| >=Four children | 3.00 (2.65) | 4.86 (2.27) | 4.36 (2.51) | 90 (15.87) |
| Can't say/Upto God | 2.77 (1.57) | 4.47 (2.00) | 3.92 (2.02) | 84 (14.81) |
| Not discussed | 2.66 (2.64) | 3.58 (1.64) | 3.21 (2.14) | 180 (31.75) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| **Main alter characteristics** | | | | |
| *Desired family size* | | | | |
| <=Two children | 2.15 (1.74) | 3.55 (1.68) | 2.84 (1.84) | 231 (40.74) |
| Three children | 2.45 (2.07) | 4.27(2.41) | 3.40 (2.43) | 126 (22.22) |
| >=Four children | 2.11 (1.21) | 4.25 (1.94) | 3.33 (1.97) | 63 (11.11) |
| Can't say/Upto God | 2.50 (2.50) | 4.00 (1.79) | 3.36 (2.23) | 99 (17.46) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| *P-value* | 0.000 | 0.106 | 0.060 | |
| *Educational status* | | | | |
| Illiterate | 2.53 (2.45) | 4.70 (2.55) | 3.64 (2.72) | 159 (28.04) |
| Primary | 1.75 (1.22) | 3.40 (1.15) | 2.82 (1.41) | 69 (12.17) |
| Secondary | 2.42 (1.69) | 3.90 (1.74) | 3.14 (1.86) | 123 (21.69) |
| Higher Secondary | 2.07 (1.64) | 3.42 (1.55) | 2.76 (1.73) | 165 (29.10) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| Can't say | -- | 4.00 (0.00) | 4.00 (0.00) | 3 (0.53) |
| *P-value* | 0.073 | 0.000 | 0.003 | |
| *Comparative educational status* | | | | |
| Ego education<main alter education | 2.34 (2.19) | 3.75 (1.83) | 3.07 (2.13) | 162 (28.57) |
| Ego education=main alter education | 1.97 (1.58) | 4.22 (2.26) | 3.17 (2.26) | 225 (39.68) |
| Ego education>main alter education | 2.71 (2.01) | 3.54 (1.41) | 3.13 (1.77) | 129 (22.75) |
| Can't say | -- | 4.00 (0.00) | 4.00 (0.00) | 3 (0.53) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| *P-value* | 0.018 | 0.181 | 0.841 | |
| *Relationship of main alter with ego* | | | | |
| Natal sister | 2.13 (1.64) | 4.02 (1.67) | 3.28 (1.90) | 168 (29.63) |
| Mother | 2.30 (1.88) | 3.41 (2.16) | 2.84 (2.08) | 75 (13.23) |
| Conjugal sister | 2.78 (2.20) | 3.70 (1.85) | 3.23 (2.08) | 165 (29.10) |
| Friend/colleague | 1.35 (1.18) | 3.66 (1.35) | 2.26 (1.68) | 69 (12.17) |
| Others | 2.60 (2.32) | 5.12 (3.08) | 4.15 (3.04) | 39 (6.88) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 3 (0.53) |
| Can't say | -- | 4.00 (0.00) | 4.00 (0.00) | 48 (8.47) |
| *P-value* | 0.000 | 0.030 | 0.000 | |

| Characteristics | Mean Children Ever Born (MCEB) | | | Sample (%) |
|---|---|---|---|---|
| | 18-27y | 28-35y | Overall | |
| *Other alters characteristics* | | | | |
| *Desired family size* | | | | |
| <=Two children | 1.90 (1.38) | 3.52 (2.03) | 2.81 (1.95) | 273 (48.15) |
| Three children | 2.52 (1.96) | 5.00 (1.62) | 3.64 (2.19) | 93 (16.40) |
| >=Four children | 5.25 (2.49) | 4.00 (1.18) | 4.50 (1.88) | 30 (5.29) |
| No other friend | 1.54 (1.25) | 3.14 (1.68) | 2.16 (1.62) | 54 (9.52) |
| Can't say/Upto God | 3.00 (2.69) | 4.61 (1.75) | 3.91 (2.33) | 69 (12.17) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Educational status* | | | | |
| Illiterate | 2.81 (2.15) | 4.22 (1.56) | 3.68 (1.92) | 87 (15.34) |
| Primary | 2.93 (2.62) | 4.25 (1.87) | 3.61 (2.34) | 93 (16.40) |
| Secondary | 2.03 (1.75) | 4.10 (2.26) | 3.05 (2.26) | 177 (31.22) |
| Higher Secondary | 2.21 (1.38) | 3.38 (1.82) | 2.91 (1.75) | 105 (18.52) |
| No other alters | 1.54 (1.25) | 3.14 (1.68) | 2.16 (1.62) | 54 (9.52) |
| Can't say | 3.00 (0.00) | -- | 3.00 (0.00) | 3 (0.53) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| *P-value* | 0.004 | 0.033 | 0.000 | |
| *Comparative educational status* | | | | |
| Ego education<other alter education | 2.00 (1.17) | 3.66 (1.76) | 3.16 (1.78) | 90 (15.87) |
| Ego education=other alter education | 2.40 (1.71) | 4.06 (1.63) | 3.29 (1.86) | 174 (30.69) |
| Ego education>other alter education | 2.47 (2.35) | 4.09 (2.34) | 3.25 (2.48) | 198 (34.92) |
| No other alters | 1.54 (1.25) | 3.14 (1.68) | 2.16 (1.62) | 54 (9.52) |
| Can't say | 3.00 (0.00) | -- | 3.00 (0.00) | 3 (0.53) |
| No alters | 1.42 (1.43) | 4.00 (1.51) | 2.87 (1.95) | 48 (8.47) |
| *P-value* | 0.046 | 0.207 | 0.015 | |
| Does husband usually stay in household | | | | |
| No | 1.72 (1.38) | 3.63 (1.39) | 2.54 (1.67) | 132 (23.28) |
| Yes | 2.40 (2.04) | 3.99 (2.01) | 3.28 (2.17) | 435 (76.76) |
| *P-value* | 0.008 | 0.208 | 0.003 | |
| *Ego's educational status by Husband Migration status* | | | | |
| Illiterate :Migrant | 2.22 (1.64) | 4.28 (1.70) | 3.12 (1.95) | 48 (36.36) |
| Primary : Migrant | 1.50 (0.54) | 2.00 (0.00) | 1.66 (0.50) | 9 (6.82) |
| Secondary : Migrant | 1.75 (1.42) | 3.50 (1.14) | 2.62 (1.55) | 48 (36.36) |
| >=Higher secondary : Migrant | 1.00 (0.59) | 3.00 (0.00) | 1.66 (1.07) | 27 (20.46) |
| *P-value* | 0.031 | 0.000 | 0.000 | |
| Illiterate : Non- migrant | 3.31 (2.14) | 4.82 (2.31) | 4.21 (2.35) | 141 (32.41) |
| Primary : Non-migrant | 2.20 (1.52) | 4.45 (1.95) | 3.75 (2.09) | 48 (11.03) |
| Secondary : Non-migrant | 2.47 (2.36) | 3.70 (1.44) | 3.19 (1.97) | 138 (31.73) |
| >=Higher Secondary : Non-migrant | 1.57 (1.26) | 2.60 (1.46) | 2.00 (1.44) | 108 (24.83) |
| *P-value* | 0.000 | 0.000 | 0.000 | |
| *Comparative education of spouse* | | | | |
| Both illiterate | 2.50 (1.52) | 5.28 (2.57) | 4.12 (2.58) | 72 (12.70) |
| Husband education>Wife education | 2.55 (2.12) | 3.85 (1.72) | 3.29 (2.01) | 327 (57.67) |
| Husband education=Wife education | 1.23 (0.90) | 2.70 (0.91) | 1.86 (1.16) | 69 (12.17) |
| Husband education<Wife education | 1.89 (1.72) | 3.71 (1.77) | 2.66 (1.95) | 99 (17.46) |
| *P-value* | 0.000 | 0.000 | 0.000 | |

*Note:* Mean age of women 18-27y was 23.20y (2.51) while same for women 28-35y was 31.48y (2.35).

**Table 2: Social contagion on ego fertility**

| | Married women (18-27y) (n=267) | Married women (28-35y)(n=300) | Married women (18-35y)(n=567) |
|---|---|---|---|
| ***Main alter*** | | | |
| *Number of surviving children* | | | |
| ≤ 2 children (ref.) | | | |
| 3-4 | **-0.677*** | -0.404 | **-0.780*** |
| ≥ 5 | **-1.402*** | -0.033 | **-0.603*** |
| Can't say/Up to God | **-2.245*** | -1.172 | -0.898 |
| No alters | -0.189 | 0.353 | -0.426 |
| ***Other alters' characteristics*** | | | |
| *Number of surviving children* | | | |
| ≤ 2 children (ref.) | | | |
| 3-4 | **0.958**** | **0.702*** | 0.316 |
| ≥ 5 | **1.264*** | **0.835*** | **0.445*** |
| No other alters | 0.625 | -0.552 | -0.302 |
| Can't say/Up to God | **2.228*** | -- | 0.352 |
| No "other alter" | -- | -- | -- |

*Note: Models are adjusted for ego, husband, mother, mother-in-law and alters characteristics; *p<0.05, **p<0.01, ***p<0.001*


**Table 3: Social pressure on ego fertility**

| | Currently married women (18-27y) (n=267) | Currently married women (28-35y)(n=300) | Currently married women (18-35y)(n=567) |
|---|---|---|---|
| ***Main alter characteristics*** | | | |
| *Desire family size* | | | |
| ≤ 2 children (ref.) | | | |
| 3 | **0.704*** | **0.575*** | **0.640*** |
| ≥4 | **-1.036*** | -0.664 | **-0.813**** |
| Can't say/Upto God | **1.690*** | 0.476 | 0.525 |
| No alters | -- | -- | -- |
| ***Other alters characteristics*** | | | |
| *Desire family size* | | | |
| ≤ 2 children (ref.) | | | |
| 3 | -0.155 | **-0.735*** | -0.061 |
| ≥4 | 0.369 | 0.129 | -0.295 |
| No other friend | -- | -- | -- |
| Can't say/Upto God | -0.817 | 0.059 | 0.227 |
| No alters | -- | -- | -- |

*Note: Models are adjusted for ego, husband, mother, mother-in-law and alters characteristics; *p<0.05, **p<0.01, ***p<0.001*

**Table 4: Husband have bigger influence on ego fertility**

|  | Currently married women *(18-27y)* *(n=267)* | Currently married women *(28-35y)(n=300)* | Currently married women *(18-35y)(n=567)* |
|---|---|---|---|
| *Husband's desired family size* |  |  |  |
| ≤2 children (ref.) |  |  |  |
| 3 | 0.134 | 0.244 | **0.521\*\*** |
| ≥4 | -0.188 | 0.964* | **1.261\*\*\*** |
| Not discussed | -0.54 | -- | -- |
| Up to God | 0.578 | 0.678 | **1.211\*\*\*** |
| *Mother-in-law's desired family size* |  |  |  |
| ≤2 children (ref.) |  |  |  |
| 3 | **-0.661\*** | -0.272 | -0.277 |
| ≥4 | -0.83 | 0.18 | 0.445 |
| Not discussed | -- | -- | -- |
| Up to God | -0.176 | 0.219 | -0.154 |
| *Mother's desired family size* |  |  |  |
| ≤2 children (ref.) |  |  |  |
| 3 | **1.073\*\*** | -0.24 | -0.033 |
| ≥4 | 0.888 | -0.041 | 0.022 |
| Up to God | **1.624\*\*\*** | -0.494 | 0.157 |

*Note: Models are adjusted for ego, husband, mother, mother-in-law and alters characteristics; *p<0.05, **p<0.01, ***p<0.001*