Gender, region, religion and reproductive behaviour in India and Pakistan.[*]

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The demographic profile of South Asia is one of high levels of fertility, low ages at marriage and relatively low contraceptive prevalence. This generalisation, however, obscures considerable variations in reproductive behaviour and there exist such notable exceptions from this standard pattern as Sri Lanka, Kerala and Tamil Nadu, which pioneered the fertility transition in South Asia (Dyson and Crook 1984). The transition in reproductive behaviour has tended to occur at differing paces within South Asia. Even by the 1990s, the northern Indian states, including Uttar Pradesh and Bihar, and Pakistan continued to experience fairly high levels of fertility and low levels of contraceptive practice.

Several arguments have been advanced in the literature to explain the different paces at which fertility transition has proceeded in different settings. The most obvious is varied economic development levels – however the extent to which this can explain the more rapid pace of reproductive change in Kerala, Tamil Nadu and Bangladesh is questionable, given their lower than average levels of economic development. Others have argued that it has been the strong role of the family planning programme and the availability of services by the state that have accelerated the pace of reproductive change, including, for example, in Bangladesh (Robinson 2001, Cleland et al 1994). Social development levels –notably educational levels and health patterns as reflected in life expectancy -- have also been cited as contributing to the transition in such areas as Tamil Nadu, Kerala and Sri Lanka (Caldwell, 1982). In addition, and related to social development are different familial systems and gender hierarchies that have been argued to explain differences in reproductive behaviour (Malhotra et al, Dyson and Moore 1983, Jejeebhoy 2001, Kazi and Sathar 2001,Visaria 1996, Kabeer 1985); by and large, studies have employed aggregate data from regions in South Asia, particularly India, to approach gender based analyses (Malhotra et al 1995, Dyson and Moore 1983, Miller 1997).

It is this explanation that we would like to pursue in this paper, using individual level data from three sites in South Asia. South Asia is generally characterised by the subordinate role of its women and their limited ability to invest in their children's futures and make independent decisions about childbearing. We propose the argument that in South Asia, gender systems play a central role in conditioning the pace at which the fertility transition proceeds, and accounts thereby for the variation in the pace of demographic change across the region. The general aim of this paper then is to explore

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the extent to which the autonomy of women accounts for the different paces of fertility change and contraceptive practice in three sites in South Asia – Uttar Pradesh and Tamil Nadu in north and south India respectively, and Punjab in Pakistan.

The objectives of this paper are to explore empirically the links between female autonomy and such aspects of reproductive behaviour as fertility preferences, and contraceptive behaviour in three culturally distinct sites in South Asia, namely Tamil Nadu and Uttar Pradesh in India and Punjab in Pakistan. Sites in Uttar Pradesh in north India and Punjab, Pakistan represent settings that have been slow to experience reproductive change, and continue to experience considerable unmet need; sites in Tamil Nadu in Southern India represent settings that are less gender stratified and in which reproductive behaviour is more in line with women's intentions. At the same time, the analysis explores the extent to which region, nationality and religion influence aspects of reproductive behaviour and their links to female autonomy. While similar work has compared the north-south cultural difference within India, we will be able to expand the discussion with the inclusion of data from Pakistan as an additional cultural identity in the sub-continent.

Background of study sites

The three states, Punjab, Tamil Nadu and Uttar Pradesh, from which the communities are drawn, have distinct socio-economic features. Punjab is the most populous province of Pakistan with 52 percent of the population. In general its indicators are close to averages for the country. The state is primarily agricultural with the exception of its few large cities-- Lahore, Faisalabad and Gujranwala—in which industrial activities are concentrated. While 43% of the state falls under the poverty line, in rural Punjab, income disparities are wide: poverty levels in Southern Punjab (36%) are considerably higher than those in Northern Punjab (17%) (World Bank 1995). Literacy rates in Punjab (population aged 10 or above) were 51 percent among males and 25 percent among females, compared to 47 and 21 percent, respectively, in rural Pakistan. There has been considerable internal and external migration in Punjab, which has rendered it open to wider outside influences than other parts of Pakistan. Infant mortality and fertility levels, however, remain high: 92, and 5.3 respectively (Pakistan Fertility and Family Planning survey, 1996-97).

Uttar Pradesh and Tamil Nadu in India lie at two extremes of the social and cultural spectrum in India, although economically they are relatively similar. Both states are poor, with about 37% in Uttar Pradesh and 40% in Tamil Nadu (and 33% in India) living below the poverty line, and both states are largely agricultural (Uttar Pradesh, 72%, Tamil Nadu, 61%, India, 70%). Yet there are huge differences in social development levels. For example, literacy rates are much higher in Tamil Nadu (63%) than in Uttar Pradesh (42%), and fertility and mortality are much lower -- for example the infant mortality rate is 98 per 1000 live births in Uttar Pradesh to 58 in Tamil Nadu, and the total fertility rate is 5.1 in Uttar Pradesh compared to 2.2 in Tamil Nadu. Within each state, Hindu-Muslim disparities are evident in Uttar Pradesh but not in Tamil Nadu: Muslims experience higher total fertility rates than Hindus do in Uttar Pradesh (5.3 and 4.8 respectively), but

identical rates in Tamil Nadu (2.5 each) (Population Research Centre, Lucknow University, and International Institute for Population Sciences, 1994; Population Research Centre, The Gandhigram Institute of Rural Health and Family Welfare Trust, and International Institute for Population Sciences, 1994).

The few available social indicators reflecting gender disparities make these regional differences in women's situation and vulnerability clear. For example, in Uttar Pradesh, life expectancy is about four years higher for males than for females (54, and 49, respectively); in Tamil Nadu, life expectancy for both females and males is 61 years. Moreover, the maternal mortality ratio is 931 in Uttar Pradesh and 319 in Tamil Nadu. And gender disparities in literacy are far wider in Uttar Pradesh (25% for females compared to 56% for males) than in Tamil Nadu (51% for females compared to 74% for males).

Data

Data are drawn from these three states. A total of over 3000 currently married women aged 15-40 comprises the sample. The data sets employed in this study are one of the first to try and operationalise autonomy among women from different cultural and religious cultures. The main objective of the surveys was to operationalise the concept of autonomy, and assesses its relationships to reproductive behaviour. Similar studies were conducted in three other Asian countries, namely Malaysia, the Philippines, and Thailand (Mason and others, 1995).

In Pakistan, Punjab province was purposively selected. Punjab province is the most developed in the country in terms of agricultural productivity, road structure, sanitation, communications and availability of facilities. Yet it is by no means homogeneous: the province houses four distinct agro-economic zones, with central and south Punjab revealing quite different levels of development and feudalism than those in North Punjab. These zones differ not only in level of development and agricultural patterns (rain fed versus irrigated agriculture) but also in terms of feudalism and consequent female autonomy (rain-fed rural areas and the peri-urban areas are less feudalistic than the irrigated areas). In order to represent this diversity of zones, a total of ten communities were selected from the four agro-economic zones. Nine of these were rural and one was peri-urban. The ten communities with different cropping patterns and irrigation systems— (a) Northern rainfed districts (Rawalpindi, Attock and Chakwal), (b) Northern semi-irrigated districts (Mianwali and Khushab), (c) Central (Faisalabad and Sahiwal), and (d) South Punjab irrigated districts (Multan and Bahawalpur) and (e) a peri-urban area in Central Punjab (Gujranwala district). In Punjab 1036 currently married women were successfully interviewed. They were selected from 10 communities ranging in size from 2500 to 5000 households in the largest community. In the 10 villages selected all households were listed and about 100 households sampled randomly to interview one currently married woman in each one.

In India, Uttar Pradesh in North India and Tamil Nadu in South India were also selected deliberately to represent a range of gender and socio-cultural conditions. Within each

state, similarly, two districts were purposively selected (on the basis of an index of development, measured from such indicators as income, percent of roads surfaced and other economic criteria) so as to maximise differences in socio-economic conditions, while at the same time allowing for comparisons of Hindu and Muslim women. And from each district, one taluka (sub-district) was selected similarly. The four sites thus selected included: from Tamil Nadu, Pollachi taluka from Coimbatore district (ranked 1 of 21) and Mudukulathur taluka from Ramnathpuram district (ranked 18 of 21); and from Uttar Pradesh, Kunda taluka from Meerut district (ranked 2 of 63), and Baghpat taluka from Pratapgarh district (ranked 51 of 63).

From each of the four sites in India, a cluster of contiguous villages of roughly 1000-2000 households was randomly selected, and about 800 currently married women aged 15-39 were randomly selected for interview from each state. Husbands who were present were also interviewed. In each setting, on the assumption that socio-cultural norms governing female autonomy vary widely among Hindus and Muslims, about half of all respondents selected were Hindu and the other half Muslim. As a result, the Indian sample comprises four geographical sites, and within each site, two distinct religious groups, Hindus and Muslims. A total of 1842 women, aged 15-39, constituted the sample.

In the course of interviews with women, respondents were asked not only about their education and their work status but also about a variety of dimensions of autonomy within their married lives, including their decision-making authority, their personal freedom of movement, control over economic resources, wife-husband power relations, and other attitudes. The inclusion of these dimensions of female status in this data set allows for a better understanding of women's status and the extent to which education and economic activity are reliable proxies for autonomy more generally.

Methods

In this paper, reproductive and contraceptive behaviour – desire for additional children, contraceptive practice, and met need – are examined in respect of three blocks of explanatory variables. First are ‘development’ variables, notably household possession of modern durables, access to toilet facilities, brick-walled homes and electricity. Also included here are measures of the educational levels of women and their husbands. A second set comprises a series of indices of female autonomy measuring such dimensions as mobility, decision making, access to and control over resources and freedom of threat from husbands (see Jejeebhoy, 2000; Jejeebhoy and Sathar, 2000).[i] A third block covers region, nationality and religion.

Tables 1, 2 and 3 present variations in the development, autonomy and reproductive behaviour across five community groups – Punjabi women from Pakistan, and Hindu and Muslim women from Uttar Pradesh and Tamil Nadu, India, respectively.

Tables 4 and 5 present results of multilevel logistic regressions, analysing factors underlying preferences for additional children and current contraceptive practice. A multilevel modelling approach was used to represent the structure of the data, villages

selected within districts, and districts within regions. The analysis was performed using the software package MLn (Rasbash and Woodhouse, 1995). Binary response variables – desire for no more children, current contraceptive use – were linearised by a logit transformation.

The models for desire for no more children and whether contraceptive user were fitted allowing for variation between villages within district, between districts within region and between regions. The final models include demographic, education and autonomy indices and those household variables[1] which proved significant in at least one case. Variance components, or random intercept, models were fitted, which assume that the average probability of desire for no more children/contraceptive use varies randomly across regions, districts and villages. The overall variance is partitioned into that which is attributable to variation between regions, that which arises due to variation between districts within regions and that which arises due to variation between villages within districts. Variance estimates are presented in the tables but not pursued, the nature of the sample design in particular indicating the need for further work exploring random coefficients models.

The fitted models express overall relationships between explanatory variables and desire for no more children/contraceptive use Next, to examine region/country/religion comparisons the models were re-run, dropping the region level variation, and adding region and religion as explanatory variables. This effectively meant adding 4 dummy variables to represent the region/religion categories in comparison with the base, Punjab Pakistan.

Findings:

Tables 1, 2 and 3 highlight the similarities and differences between the five communities in terms of development characteristics, female autonomy levels and reproductive behaviour. As anticipated, there are considerable differences across communities in several respects. As Table 1 suggests, Punjabi women are, by and large, better off than women from both Uttar Pradesh and Tamil Nadu: Punjab in Pakistan (not very different to Punjab in India) is an area very well endowed agriculturally, post the Green revolution. As such, we find that, on average, Punjabi women own a larger number of modern goods (3.6 as compared to 1.9-2.0 in the Indian sites); and come from households with higher income levels. As far as household amenities are concerned too, Punjabi women are better off: they are more likely to live in houses made of bricks than women from the Indian sites (72% compared to 55% and 44% in Uttar Pradesh and Tamil Nadu, respectively) and have access to electricity (81% compared to 39% and 56% in Uttar Pradesh and Tamil Nadu, respectively). Within India, it should be noted that while Tamil Nadu and Uttar Pradesh appear to be similar in the aggregate, there are large differences by religious group on several economic indicators.

[1] With the exception of watching TV, representing a composite of wealth, electricity and transmission.

Panel 2 of Table 1 shows the extent to which the situation is reversed when educational attainment levels are considered. Economic prosperity in the Punjab is not matched in terms of educational investments, particularly in the case of females. Now it is Tamil Nadu that leads, irrespective of religious affiliation. It is important to point out that the differences in educational levels across sites are sharper for women than for their husbands. For example, the proportion of women with any education extends from 20 percent in Punjab to 19% and 39% among Muslim and Hindu women from Uttar Pradesh, respectively, to 70% and 54% among Muslim and Hindu women, respectively, from Tamil Nadu. In short, from Table 1 concludes that while women in Punjab, Pakistan come from economically better off households than do women in the two Indian sites, this advantage does not carry over into the area of educational attainment. Here, it is women from Tamil Nadu who are best off and those from Punjab and Uttar Pradesh who lag behind.

Table 2 present a profile of female autonomy in the five groups. As in the case of educational attainment, findings suggest that on levels of autonomy are uniformly higher among women in Tamil Nadu, irrespective of their religious affiliation, than women in either Punjab or Uttar Pradesh. Women in Uttar Pradesh, irrespective of religious affiliation, report, by and large, similar levels of autonomy to those from Pakistan – although Punjabi women do report higher levels of decision making authority and control over resources and marginally less mobility than do women from Uttar Pradesh. Several conclusions can be drawn from Table 2. First, the divide tends to be regional (north-south South Asia) rather than by country or religion – that is, women in Tamil Nadu, irrespective of religion, tend to experience substantially higher levels of autonomy than do women from either Uttar Pradesh or Punjab. An earlier companion paper has explored in greater depth the relative role of religion and region in influencing women's autonomy and provides clear evidence of the important role of region over political boundaries and religion (Jejeebhoy and Sathar, 2000). A second conclusion of Table 2 is the suggestion that the indices measured here do indeed capture different aspects of female autonomy. Considerably greater variation is observed, for example in such dimensions of autonomy as decision making and mobility, than others, particularly freedom from threat, across the five groups. And although female autonomy in Uttar Pradesh and Punjab tends to be largely similar, Punjabi women appear to have considerably more decision making authority and control over resources, and somewhat more limited mobility than women from Uttar Pradesh.

Table 3 outlines patterns of reproductive behaviour and choices among the five groups. It is well known that Tamil Nadu was one of the first states of India to experience reproductive change and Uttar Pradesh, one of the more recent. Pakistan has generally lagged behind almost all the Indian states in experiencing reproductive change. These disparities are well reflected in our data, but as in the case of female autonomy, differences in reproductive behaviour tend to reflect regional more than national and religious differences**.** For example, the mean number of children ever born and surviving (standardised for age) remain substantially – almost 50% --lower among Hindu and Muslim women of Tamil Nadu than the other three groups; however, among the three northern groups, fertility levels of Punjabi women fall in between those of Muslim and

Hindu women from Uttar Pradesh. Among other socio-demographic indicators, we find little difference in infant and child mortality levels, but considerable variation in marital ages – now it is Punjabi women who report the highest age at marriage (18.2), an age largely comparable to Tamilian Hindu women, moderately higher than that recorded by Tamilian Muslims and substantially higher than that recorded by women from Uttar Pradesh. Findings reported elsewhere however confirm that few proportions of women in all of these sites had a say in the choice of marriage partner or timing (Jejeebhoy and Sathar, 2000).

Reproductive choice is more likely to be reflected in such measures as desire for additional children, contraceptive practice and method choice as reported at the time of the survey Panel 2 of Table 3 reports substantial variation in proportions of women expressing a desire for no additional children, ranging from a high of 70 percent in Tamil Nadu (Hindus and Muslims) to 45 percent in Punjab. Women from Uttar Pradesh lie somewhere in between but are closer in averages to Punjabi women than their compatriots in Tamil Nadu. A similar pattern is found for current contraceptive use: while 24% of Punjabi women, and 16% of Muslim women from Uttar Pradesh report current use of contraception, as many as 47% of Tamilian Hindu women and 38% of Muslim women from Tamil Nadu and Hindu women from Uttar Pradesh report current contraceptive practice. The differences between Muslims and Hindus in Uttar Pradesh and Tamil Nadu are notable. While Muslims and Hindus have similar reproductive intentions in Tamil Nadu, in Uttar Pradesh a greater proportion of Hindu women want no more children, and correspondingly, current contraceptive use is higher among Hindus in both states of India but the difference is starker in Uttar Pradesh.

Table 3 also explores the extent of met need among those expressing a desire for no additional children. We find again that while half and two thirds of Tamilian Muslims and Hindus who want no more children are currently practising contraception, about one third of women from Punjab are doing so. Once more, women in Uttar Pradesh display wide religion wise differences – with Muslims reflecting levels resembling Punjabi women, and Hindus reflecting levels resembling those of Tamilian Muslims. Again, religion specific differences are far narrower in Tamil Nadu than in Uttar Pradesh.

Gender, Region, Religion and Reproductive Behaviour

This section simultaneously examines demographic factors, selected household characteristics reflecting economic status and education, gender indicators, and religion and region in respect of the reproductive outcomes described in Table 3, namely, preference for no more children, current contraceptive use, and metneed. The findings of Table 3 suggest, a priori, the importance of region in explaining differences in these reproductive outcomes. The present exercise investigates the extent to which this prevails after taking into account demographic, development and gender characteristics

Table 4 presents multilevel logistic regression **r**esults analysing the effects of the three sets of independent variables (development, gender and demographic) on reproductive outcomes. The table shows coefficients, transformed into odds ratios, and their statistical

significance for the variables included in the final model. Odds ratios greater than one indicate a greater chance, those less than one a lesser chance of wanting no more children/contraceptive use compared with the base category. Also shown are region, district and village level variance estimates

Findings suggest that once age at marriage and especially the number of sons are controlled, each reproductive outcome tend to be explained by a somewhat different set of factors. Neither household economic conditions nor measures of female autonomy (with the exception of mobility) have a significant bearing on desire for no more children. Rather it is a primary, and especially secondary school education that appears to influence preferences for more children. On the other hand, a host of factors, including economic status indicators and education, as well as most of the autonomy indicators (with the exception of control over resources) variously explain contraceptive use and met need. For contraceptive use, secondary education remains significant, and husband's secondary education and household economic conditions come into play. Of the autonomy measures, mobility, and access to resources are positively associated with the likelihood of contraceptive use.

Finally, met need is explained by household economic status, namely ownership of goods and, to a lesser extent, husband's education. It is also explained by such measures of autonomy as access to resources, mobility, economic decision making and freedom from threat. In this case women living where they were born who want no more children are more likely to be current users suggesting that proximity to natal kin may indeed play a role in enhancing women's ability to realise contraceptive decisions.

Regional effects when introduced in the form of dummy variables (Table 5) are strong and mostly statistically significant. With Punjab as the omitted category, Tamil Nadu Muslims and Hindus are 6.45 and 9.01 times as likely to want no more children, respectively. The differences by nationality are far less significant. Differences between Muslims and Hindus for this dependent variable are significant (Hindus appear to be about twice as likely as Muslims to report wanting no more children). Regional effects (North and South) are, however, strongest.

A similar pattern emerges for current use among all women and those who want no more children, although the size of the regional effect is reduced, from over 6 in the case of women who want no more children to around 3 in respect of current use. Findings thus clearly suggest that it is the regional North –South divide that is of greater significance in distinguishing reproductive outcomes than are either religion or nationality. However, within each region, differences between Muslims and Hindus are evident, particularly in Uttar Pradesh

Conclusions

Several conclusions may be drawn from this paper. For one, findings underscore the clear north-south divide observed by Dyson and Moore (1983) with reference to indicators of female autonomy as well as those relating to reproductive and contraceptive behaviour and choice. More than nationality or religion, it is the region of South Asia that distinguishes most powerfully the autonomy and reproductive levels of South Asian women. Tamilian women – irrespective of their religion -- are significantly different from women from Uttar Pradesh or Punjab – they not only experience considerably higher levels of autonomy, but also are considerably more likely to want no more children, practice contraception, and have met their family planning needs.

Second and related, this paper provides strong support for the argument that individual level autonomy indicators play a role in determining patterns of reproductive and and contraceptive behaviour in South Asia. Even after controlling for socio-economic, demographic and structural indicators, for example, there is evidence that female autonomy levels – albeit not all dimensions of autonomy – influence contraceptive use and the ability to meet needs for contraception. However, these influences are not uniform. The relative influences of individual autonomy indicators and the more structural factors vary over the different reproductive and contraceptive behaviour and choice indicators, and further research is needed to probe these differences.

Third, there is strong evidence that gender systems – as measured by region of South Asia – persist in playing a strong role in explaining reproductive and contraceptive behaviours and choice, even after controlling for women's autonomy. For the most part this influence surpasses that either nationality or religion. Women from Tamil Nadu – largely irrespective of religion are significantly more likely than those from Uttar Pradesh or Punjab to practice contraception, and have met their need for family planning, even after a host of socio-demographic and autonomy indicators are controlled. Patterns experienced by women in the two northern sites of South Asia resemble each other, despite national and religious differences. The results of the multivariate analysis do suggest that religion and nationality have a significant influence on predicting reproductive behaviour (both intentions and action upon those intentions), however these influences are considerably weaker than that exerted by region. They also suggest that being a Muslim or a Hindu has quite different ramifications for reproductive behaviour depending on the region of residence.

Table 1: Developmental Characteristics by Site

	Punjab	UP	UP Muslim	UP Hindu	TN	TN Muslim	TN Hindu
Household indicators							
Modern goods	3.6	1.9	1.4	2.2	2.0	2.1	1.9
% Toilet facilities	19	14	17	12	10	10	10
% Wall brick	72	55	55	56	44	51	35
% Electricity	81	39	38	40	56	66	43
Per capita income	4563*	3739	3092	4360	3362	2972	3853
Amount land	3.1	1.8	0.8	2.7	1.6	0.8	2.6
% Watch own TV	21	14	4	24	12	11	14
% Watch TV	29	17	7	28	31	31	32
Education Indicators							
% Women with primary school (1-5 years)	15	16	15	17	47	56	37
% Women with secondary school (6-10)	5	13	4	22	16	14	17
% Any education	20	29	19	39	63	70	54
% Husband with primary school (1-5)	21	18	23	12	46	52	38
% Husband with secondary school (6-10)	40	52	34	70	33	35	31
% Any education	61	70	57	82	79	87	69

* The Pakistani rupee had lesser value since the approximate exchange ratio was 43 Indian rupees to a dollar as compared to 51 Pakistani rupees in the mid 90's.

Table 2: Women's Autonomy by Site

	Punjab	UP	UP Muslim	UP Hindu	TN	TN Muslim	TN Hindu
Autonomy Indicators							
Combined Indices							
Economic decision making	1.8	0.7	0.7	0.7	2.8	2.6	2.9
Mobility	1.2	1.4	1.4	1.5	2.4	2.0	2.9
Freedom from threat	1.5	1.5	1.6	1.5	1.9	2.0	1.9
Access to economic resources	1.7	1.8	1.9	1.8	2.2	2.2	2.3
Control over resources	1.5	0.7	0.7	0.7	1.4	1.4	1.4
Individual Measures							
% Can go nowhere alone	37	47	50	45	7	10	3
%Afraid disagree with husband	82	59	58	59	36	35	37
% Ever beaten by husband	35	45	41	48	36	34	39
% Live with moth in law/extended family	57	50	40	59	29	32	25
% Born this/neighbouring village	68	47	49	45	64	65	62

Table 3: Reproductive Indicators by Site

	Punjab	UP	UP Muslim	UP Hindu	TN	TN Muslim	TN Hindu
Reproductive Indicators							
Surviving sons (standardized)	1.5	1.7	1.8	1.5	1.3	1.5	1.1
Surviving daughters (standardized)	1.5	1.6	1.7	1.4	1.2	1.3	1.1
Surviving children	3.0	3.2	3.6	2.9	2.5	2.8	2.2
Children ever born (standardized)	3.6	3.7	3.9	3.5	2.8	3.1	2.5
% Children born who have died	15	13	10	17	11	10	14
Age at current marriage	18.0	14.8	15.4	14.3	17.8	17.4	18.3
Effective age current marriage	18.2	16.5	16.5	16.6	17.8	17.4	18.3
%Want no more children	45	53	45	61	70	71	69
%Currently using method	24	27	16	38	42	38	47
% Users of those who want no more	37	45	31	55	57	51	66
% Users modern method	28	34	48	29	14	20	8
% Users sterilized	22	60	45	66	83	76	90
% Users traditional method	49	6	7	6	3	5	2
% Ever used	35	35	21	48	47	44	51
% Used before last birth, ever users	52	37	39	37	19	23	15
% Used before last birth, current users	46	26	28	26	15	19	12

Table 4: Factors associated with desire for no more children and contraceptive use

	Want no more children	Current use all women	Current use, want no more
Fixed	**Odds**	**Odds**	**Odds**
Age	1.16***	1.08***	1.01***
Age squared	1.00	1.00***	1.00***
Age at marriage	0.99	1.18*	1.12*
Age at marriage squared	1.00	0.99**	1.00*
Surviving sons	8.32***	2.56***	1.16***
Sons squared	0.77***	0.88***	1.03**
Surviving daughters	3.90***	1.46***	1.14
Daughters squared	0.81***	0.92***	1.03
Primary education	1.36*	1.27*	1.16
Secondary education	2.19***	1.49**	1.26
Husband primary education	1.17	1.08	1.17
Husband sec education	1.23	1.37**	1.18*
Ownership hh goods	0.99	1.07**	1.04***
Toilet	0.96	1.35*	1.21
Amount of land	1.01	0.98*	1.01
Co-residence with mother in law/extended family	0.79*	0.95	1.14
Live where born	0.92	0.79**	1.13***
Economic decision making	1.02	0.94	1.05*
Access to resources	0.96	1.11**	1.06**
Control over economic resources	1.03	0.94	1.07
Mobility	1.08*	1.07**	1.04*
Freedom from threat	1.05	0.94	1.05*

Random effects (Logit scale)	**Estimate**	**Estimate**	**Estimate**
Region level variance	0.53(1.0)	0.07(0.4)	0.14(0.6)
District level variance	0.23(1.1)	0.28(1.2)	0.28(1.2)
Village level variance	0.25(2.5)	0.28(3.0)	0.28(2.7)

Figures in parentheses represent ratio of estimate to standard error

*** Significant at 0.01level

** Significant at 0.05 levels

* Significant at 0.1 level

Table 5: Region and religion in relation to desire for no more children and contraceptive use

	Want no more children	Current use all women	Current use, want no more
All women, India and Pakistan, by state and religion			
U.P Muslims	0.81	0.50	0.72
U.P. Hindus	2.53**	1.62	2.13
Pakistan	1.00	1.00	1.00
T.N. Muslims	6.45***	2.35**	2.87**
T. N. Hindus	9.01***	3.14***	4.92***
All women by religion, country and region			
Religion			
Muslim	1.00	1.00	1.00
Hindu	2.10***	2.09***	2.21***
Country			
Punjab, Pakistan	1.00	1.00	1.00
Uttar Pradesh and Tamil Nadu, India	3.25*	1.68	2.27*
Region			
Northern South Asia (Punjab and Uttar Pradesh)	1.00	1.00	1.00
Southern South Asia (Tamil Nadu)	6.39***	2.80**	3.28***

*** Significant at 0.01level
** Significant at 0.05 levels
* Significant at 0.1 levels

Controlling for age, age at marriage, surviving sons, surviving daughters, education, ownership of household goods, toilet facilities, land ownership, living with mother in law/extended family, living where born, autonomy variables

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[i] Aside from the more usually measured dimensions of women's status described above, women in this survey were asked a battery of questions concerning their autonomy and power within the household. From these responses, five dimensions of autonomy have been selected, and indices for each created: (i) economic decision making; (ii) mobility; (iii) freedom from threat from husband; (iv) access to economic resources; and (v) control over economic resources.

. Economic decision-making authority: is represented by information on the participation of women in three economic decisions: the purchase of food, major household goods and jewellery. The index sums the number of these three purchases in which the woman participates, assigning a score of 1 if she only participates in the decision and 2 if she also has the major say. The index thus ranges from 0 to 6.[i]

. Mobility: The mobility index sums the number of five places -- the health centre, community centre, the home of a relative or friend, a fair and the next village -- to which the woman can go unescorted. The index thus ranges from 0 if the woman must be escorted to every place, to 5 if she can move about unescorted to every place.

. Freedom from threat: The index of freedom from threat ranges from 0 to 3: a zero is assigned if women both fear their husbands and are beaten by them; 1 if they are beaten but do not fear their husbands; 2 if they fear but are not beaten; and 3 if they neither fear nor suffer beating at the hands of their husbands.[i]

. Access to economic resources: The index of access to economic resources sums responses to four questions: (a) having a say in how household income is spent; (b) getting cash to spend; (c) being free to purchase small items of jewellery; and (d) being free to purchase gifts. The index ranges from 0 to 4.

. Control over economic resources: Fewer questions were asked about women's actual control over economic resources. The index ranges from 0 to 3 and includes (a) whether any of the family's valuables (land/jewellery/vessels) belong to the woman (that is, are in the woman's own name) and are controlled by her; (b) whether she has or had some or the major say (assigned a value of 0.5 and 1.0 respectively) in the disbursal of her dowry; and (c) whether she expects to support herself in old age through her own savings.