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Adolescent Attitudes Toward Family Size in India**

Introduction

AS FAMILY size comes within the conscious control of most of the world's population, desired family size becomes increasingly relevant to the determination of fertility levels. Despite the popularity of survey questions on ideal or desired number of children, important problems of substance and method remain current. Among the questions addressed in this paper are: (1) Are there differences between young men and women in number of children desired, and, if so, what accounts for the differences? (2) What factors other than sex account for variation in desired family size? (3) Would a different measure of desired family size, with a less "leading question" format, produce the same results? (4) How early in the life cycle are attitudes toward family size formed, and how stable are they?

The answer to the first question regarding differences by **sex** has been handicapped by a paucity of surveys on the male. However, Mason and Taj (1987: 631-32) were able to summarize the findings of several dozen studies up to the mid 1980s, and concluded that "more often than not . . . women's fertility goals are very similar (to men's). When gender differences do occur . . . they usually are small and are of both types (men more pronatalist than women and vice-versa)." Since their review, however, larger, more systematic, and more cross-nationally comparable surveys have been undertaken in many countries. The results are again quite mixed. National Demographic and Health

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surveys (DHS) among East African countries and in Pakistan and Bangladesh have failed to reveal much variation in ideal family size between men and women. However, in five of six West African countries, male preferences are markedly higher than female (Ezeh *et al.*, 1996). In three Latin American countries, three different results emerged: In Peru, married men expressed a desired size smaller than married women (2.8 versus 3.4). In the Dominican Republic males preferred more than females (3.7 versus 3.4); and in Brazil the means were almost identical (2.9 versus 2.8) (Loaiza, 1998). Clearly, no generalization is possible across or within regions.

One limitation of the generally superior DHS data is that they typically refer only to married persons. Obviously marriage itself may have a profound effect on attitudes toward fertility, and it would be useful to ascertain such attitudes and their correlates prior to marriage. In the earlier review Mason and Taj (1987) identified only five instances of surveys of unmarried respondents. In four of these, men wanted more children than women.¹ Earlier in this decade, Stycos (1998) conducted surveys of secondary school students in three Latin American countries: Colombia, Costa Rica and Peru. The average number of children desired was only about 2.5, and differences by gender were small. However, in each of four school grades within each of the three countries males preferred more children. Moreover, when 13 economic and psychological variables were held constant by multiple regression, males continued to prefer more children in all three countries, at a statistically significant level in two of them. The present paper examines the question based on a large sample drawn from secondary school populations in three States of India.

The Sample

The Indian survey was initiated by the then Director of the Family Planning Foundation, Harish Khanna (deceased) who believed that an anticipated population education programme for adolescents should be preceded by a systematic examination of adolescent knowledge and attitudes. Since the Foundation wished to launch a family planning education programme for an in-school population, the study was limited to current high school pupils in the ninth, tenth, and eleventh grades.

Three states, Uttar Pradesh (UP), Rajasthan and Haryana were selected for the overall sample. These states are all located in the northern and central parts of India and comprise nearly one-quarter of the Indian population. (UP alone constitutes 16 percent.) They show considerable social and economic differences. Table 1 shows that although all three states are below the national average per-capita product, by the criteria of female literacy, income, poverty level, and availability of electricity and

¹ One of the surveys took place in India among 317 rural Punjabi tenth graders. The mean desired by boys was 3.0, by girls 2.4 (Kee, 1981).

TABLE 1: SOCIO-ECONOMIC MEASURES FOR INDIA AND 3 STATES

	<i>India</i>	<i>Haryana</i>	<i>Rajasthan</i>	<i>UP</i>
a. Percent of households with electricity	51	85	52	32
b. Percent of household heads who are Muslim	11	4	6	16
c. Percent who see TV > once per week (ever married-women 13-49)	32	49	18	19
d. Ever-married women 13-49 who are 'iterate	37	36	12	24
e. Per capita product in rupees. 1992-1993	15.746	10.575	5.220	4.787
f. Percent below poverty line	48	25	34	50
g. Percent of total population (1991)	100	2	5	16
h. Current use of any contraceptive method	41	50	32	20
i. Singulate Mean Age at marriage	20.0	18.4	18.4	18.6

Sources a-d, h, i: International Institute for Population Sciences. 1995. *Sources e-f:* Department of Economics and Statistics. 1992-93. *Source g:* Tyagi. 1991.

television. Haryana seems to be the most advanced, and UP the farthest behind in economic development.

Sample design and field work were carried out by the Operations Research Group and the Family Planning Foundation in India with the objectives of a mass media campaign in mind. Approximately 15,000 questionnaires were canvassed in 1991, 45 per cent from UP, 36 per cent from Rajasthan and 19 per cent from Haryana. Within states, all districts were classified according to an index that combined degree of mass media penetration (newspapers and TV), literacy, and couple contraceptive protection rate. Ten districts were selected from each state in order to guarantee representation from districts ranking high, medium and low on the index, and to ensure geographic spread. Within each district five urban and five town or rural schools were selected, with representation from both private and public schools. From each school twenty students from each of the three grades 9-11 were selected randomly, resulting in the sample of nearly 15,000 students largely between the ages of 14 and 16. Although we have not attempted to weight the samples to be more representative of the students from each state, we will hold constant key characteristics that could reflect sampling biases.

Our sample of ninth to eleventh graders is roughly comparable to the category "High School Complete" used in the Indian National Family Health Survey (NFHS). In that nationally representative sample of ever married women 13-49, 11 per cent had achieved high school or more. In the States of interest here, the proportions ranged from 6 per cent in Rajasthan to 14 per cent in Haryana. Among women 15-19 years of age, who most closely resemble the age group in our survey, 15 per cent had high school educations. Thus, in terms of schooling, our sample is drawn from the upper 5-15 per cent of India's adolescent population. These elite young men and women will probably be pace-setters for Indians future fertility patterns.

Desired Family Size

India's 1992-93 National Family Health Survey (International Institute for Population Sciences, 1995) contained a question commonly used in KAP (Knowledge, Attitude and Practice) surveys to assess desired family size: "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" (A minor variation was used for childless women.) Unfortunately, males were not interviewed, but the national average number desired for married women of reproductive age was 2.9. The mean for UP exceeded the national average by one-half child (3.4) while Haryana (2.6) averaged one-half child below the national average, and Rajasthan fell in between (3.0). Among women aged 15 to 19 the same ranking by state is observed, and among women of these ages with at least high school education, the means, though lower, also follow this ranking, ranging from 2.4 in Haryana to 3.0 in UP (International Institute for Population Sciences, 1995:

194).

Unlike the personal interviews conducted in the national survey, questionnaires in our school sample were self-administered, and question wording was somewhat different. However, the concept—desired number of children—was similar. About mid-way in the questionnaire, respondents were asked "What do you think is the ideal number of children for (a) an average Indian family, (b) a poor family, (c) a rich family?" These items were followed by "All things considered, how many children would you like to have?"

Responses to the latter question indicate a remarkable consensus: 17 per cent want no children or one child, and another three-quarters want only two. Whereas less than 40 per cent of the married women in the NFHS said they wanted only two or fewer children, nine of every 10 students did so. If we limit the comparison to NFHS women 15-19 who reported a high school education, the difference narrows considerably, with means of 2.2 for the NFHS and 1.9 for the young women in our school survey.²

We have already noted that in the NFHS. Haryana and UP showed the lowest and highest values respectively, both for all women and for younger well educated women. In the school sample, although the regional differences are muted (perhaps as a zero floor for desired number is approached) UP students in every grade and sex group desire more children than students in Haryana and Rajasthan (i.e.. nine comparisons, not shown). Thus, UP, the least developed State in our sample, consistently shows somewhat larger family size preferences, despite the controls thus far. on sex, education and age.

Sex Differences

In the student sample, males in each grade of each state express a desire for more children than females. The differences are small—male means are five to six percent

² Women 15-19 in the NFHS were already married and thus atypical of all women in this age group. Women who married at these early ages might be expected to be more favourable toward large families.

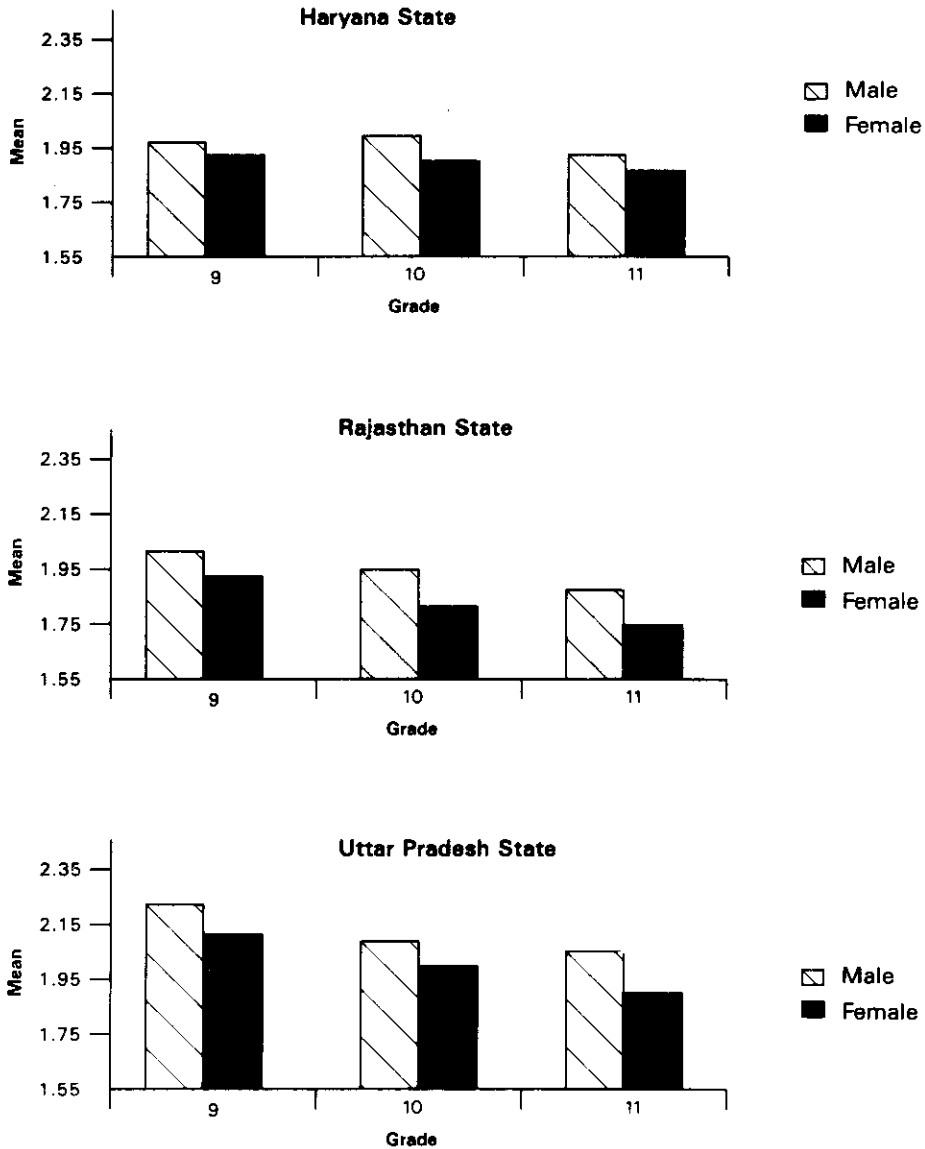


Fig. 1. Desired Number of Children by Sex and Grade

higher than female—but they hold for each of the nine grade/sex comparisons (Fig. 1). If we total the three state samples, the proportion of girls who want one child or no children (25 per cent) is two-thirds higher than for boys (14 per cent).

However, desired family size suffers as an analytic variable both because of the small degree of variation around its mean and because of methodological difficulties. To ask how many children are wanted is to inform the respondents that they are expected to have and to articulate some number, when they may never have thought in these terms before. When we asked whether or not the respondent had ever thought about desired

size, half of the sample (49 per cent) said they had never had.³ In such circumstances, stereotypic and facile responses are facilitated by government propaganda favouring the two child family.⁴ (A popular government slogan in the mass media is "We two, our two".)

To get at non-numeric attitudes toward family size we offered the respondents three more general statements about children and asked for their degree of approval or disapproval:

"Having children makes a marriage secure."

"Children provide economic security for the parents' old age."

"A big family is a sign of God's blessings."

The responses were coded from 1 (strongly agree) to 5 (strongly disagree) and summed to create an index termed FAMPREF. The index ranges from 3 (strongest approval of large families) to 15 (strongest disapproval of large families). Alpha reliability measures exceeded .80 in all three states. The non-response rate to one or more of these items was under three percent in Rajasthan and Haryana. but was about 8% in UP. An r of $-.15$ with desired number of children suggests a relationship in the expected direction, but the strength of the relation is modest.

Figure 2 confirms and magnifies the differences by sex found in Fig. 1. In all nine comparisons for grade and State, females had a significantly higher score on FAMPREF than males, indicating a stronger disapproval of large families. Male-female differences that were only about 5 per cent for the desired number, are now considerably larger. They are smallest in Haryana (4-7 per cent), largest for UP (10-18 per cent), and intermediate for Rajasthan (8-11 per cent). For the entire sample, the average score for girls is 10 per cent higher than for boys.

In each state, as grade increases from ninth to eleventh, disapproval of the large family also increases, the FAMPREF index rising by 9 per cent in Haryana and UP, and by 18 per cent in Rajasthan. An early study of 1100 North Indian school children in grades 1-11 suggests that this tendency may be even more pronounced at the younger grades. The mean desired number of children declined monotonically from 4.3 among urban children in the first three grades to 2.5 among those in grades 8-11. Among rural respondents the mean declined from 5.2 to 3.0.³ In an additional question close to our FAMPREF measure, the students were asked whether large or small families were better.

³ However, there is no difference in desired size between those who have and those who have not thought about it. The mean desired is 1.97 for both.

⁴ Even so, analysts of the Indian National Family and Health Survey noted that "Some women had difficulty in answering these hypothetical questions, and often the questions had to be repeated." About 10 per cent failed to give a numeric response (International Institute for Population Sciences. 1995: 189).

⁵ In face-to-face interview the question asked was "After marriage, how many children would you like to have?" The decline in desired number with level of schooling persisted when sex, caste, and urban/rural location were held constant.

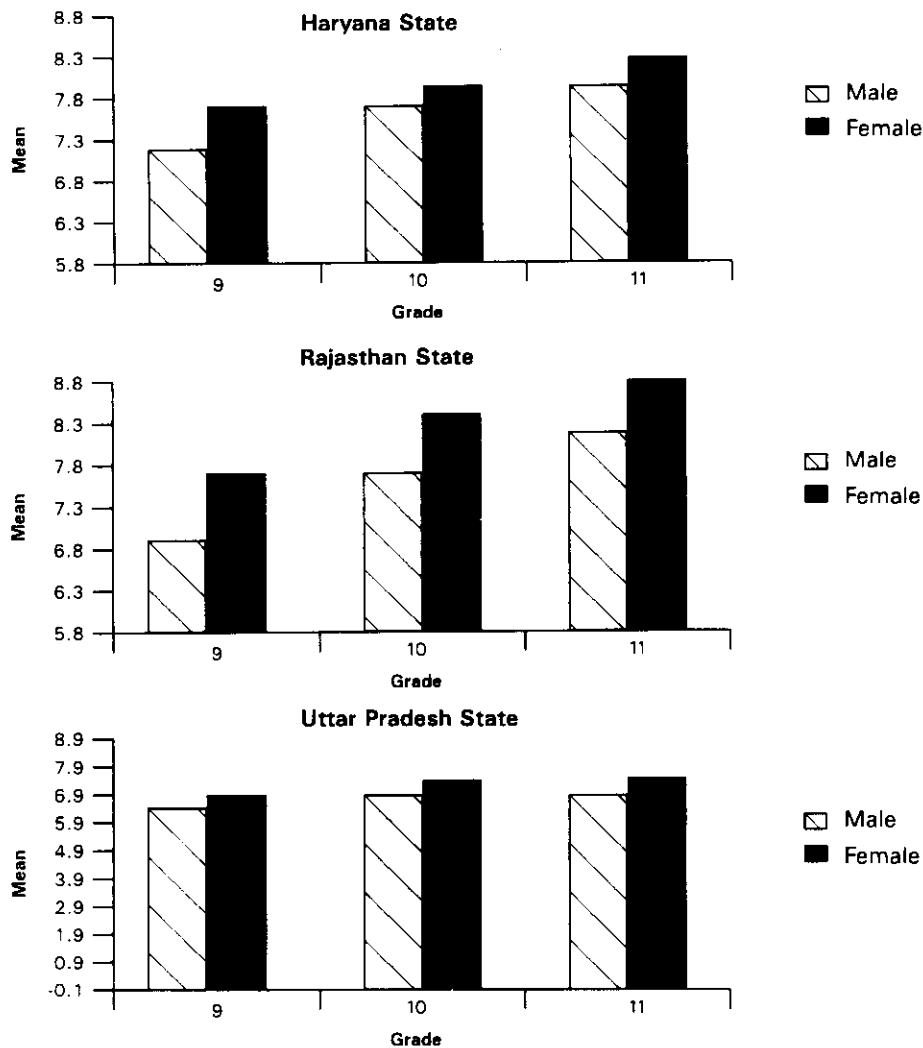


Fig. 2. Mean FAMPREF by Sex and Grade

The proportions preferring small families increased markedly with schooling for both boys and girls (Pohlman and Rao, 1970).

However, a school sample is not a random sample of the population. In India, boys are more likely than girls to attend secondary school. In UP for example, the enrolment ratio for boys aged 6-14 is 73 per cent, for girls only 48 per cent (Population Research Centre, 1994). Those girls who do attend school are more likely to come from urban homes with better educated parents. State differences in dropout rates and attendance among the states may also be expected, insofar as cultural differences could stimulate or inhibit girls from attending. Table 2 shows that background variables such as State,

TABLE 2: ZERO ORDER CORRELATIONS BETWEEN FAMPREF AND 3 CLUSTERS OF VARIABLES, BY STATE

	<i>Haryana</i>	<i>Rajasthan</i>	<i>UP</i>	<i>Total</i>
Background Variables				
Sex	.08	.13	.11	.12
Class (Grade)	.11	.18	.08	.12
Parents education	.23	.25	.26	.23
Rural/urban residence	.14	.19	.26	.20
Communications Exposure				
Type of school	.11	.10	.12	.12
Television exposure	-.18	-.15	-.20	-.18
Sex education exposure	-.22	-.22	-.27	-.23
Values				
Religiosity	-.29	-.33	-.29	-.27
Male dominance	.48	.48	.57	.53
Sexual liberality	.25	.30	.37	.32

rural/urban residence and parents' education predict FAMPREF even better than sex.

The most notable feature is the similarity of the signs and levels of correlations across the three states, indicating that the relationship of the background variables to family size attitudes is strikingly similar and is according to expectation. In each state the large family is more disapproved by girls, by students in the higher grades, by those from better educated families and by those who live in more urban areas. (We have also noted earlier that large families receive more approval in UP.)

Religion

Although the National Family Health Survey found that Muslim women were more likely than others to want more children than they already had,⁶ differences in *ideal* numbers of children were small, and decreased as age decreased. Thus, ideals for all Muslim women were 18 per cent higher than those of Hindu women (3.3 versus 2.8); but among women 15-19 the difference shrinks to 11 per cent. In our school sample, desired number of children is 10 per cent higher for Muslim girls (2.17 vs. 1.97). However, the relation to FAMPREF is inconsistent: in one State the Muslim means are

⁶ Differences were especially marked at lower parities. For example, among women with two living children, 61 per cent of Hindu women but only 39 per cent of Muslim women wanted no more children (International Institute for Population Sciences, 1995: 186). However, for all parities, the percentages wanting no more were 57 per cent for Hindus and 49 per cent for Muslims.

higher, in another lower, and in the third the same. The overall correlation is about zero. For this reason we will not include religious affiliation in most of the analysis to follow.

Other Explanatory Variables

To ascertain whether the associated background variables might explain the gender differences/ FAMPREF was regressed on State and the four Background Variables shown in Table 2. Together these characteristics account for 11% of the variance in FAMPREF. In the multiple regression the contribution of sex, though small, is statistically significant. (Its Beta is .03 compared with an average of about .15 for the other variables.) Thus, much, though not all, the initial relation of sex to FAMPREF is explained by the fact that girls are more likely to come from urban, better educated homes.

If the demographic and social variables account for only a small part of the variance, and if they fail to explain entirely the relation of sex to family size attitudes, at least two other types of potentially explanatory variables were available in the survey:

Communications Exposure to educational or motivational programmes that might affect attitudes, and *Values* that provide an ideological context for family size attitudes (lower portions of Table 2).

Three measures reflect educational exposure—type of school (public or private), exposure to sex or family planning education in school, and degree of exposure to television. Another three variables are used to reflect values: Religiosity (how important the respondent regards religion in his/her life); Male Dominance (based on several measures of attitudes toward sexual equality); and Sexual Liberality (derived from a factor analysis of sexual attitude and behaviour items). The Appendix gives more precise definitions of these variables, both sets of which have the expected relationships with FAMPREF. The Communications portion of Table 2 shows that approval of the small family is associated with more exposure to sex/family planning education in school, more television exposure, and enrolment in a private school. The Values section of the table, shows that small family values are especially strongly associated with secularity (weaker religious orientation), belief in male dominance, and a more conservative sexual ambience. Again, the signs and magnitudes are very similar across the three States.

Table 3 shows several models to account for variation in FAMPREF. When the measures of educational exposure are added to the background variables in Model II, the explained variance increases by one-third (four percentage points), with all three exposure measures showing significant relationships to FAMPREF. However, the relation to school type (government or private) is of borderline significance. Sex is unaffected by the addition of these variables, and maintains its significant, if small, relation.

Model III of Table 3 adds the value variables. A marked rise in R^2 —from .15 to .30— in explained variance occurs, with all three value variables showing strong independent

TABLE 3: FAMPREF REGRESSED ON THREE SETS OF VARIABLES, FOUR MODELS

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>Unstand-ardized</i>	<i>Stand-ardized</i>	<i>Unstand-ardized</i>	<i>Stand-ardized</i>	<i>Unstand-ardized</i>	<i>Stand-ardized</i>	<i>Unstand-ardized</i>	<i>Stand-ardized</i>
Intercept	5.8	.00	8.3	.00	4.7	.00	4.9	.00
Sex	.19	.03	.20	.04	-.03	-.00		
Grade	.45	.13	.40	.12	.18	.05		
Place	-.44	+.14	-.32	-.10	-.08	-.03		
Parents education	.12	.18	.09	.14	.02	.03		
Rajasthan	.95	.17	.84	.15	.49	.09	.50	.09
Haryana	1.02	.15	.93	.13	.48	.07	.45	.07
Adj. R^2		.115						
<i>N</i>		13,051						
Public/Private School			.12 ^b	.02	.13	.02		
TV exposure			-.25	-.08	-.09	.03		
Sex education			-.64	-.18	-.21	-.06	-.22	.06
Adj. R^2			.15					
<i>N</i>			12,293					
Religiosity					-.70	-.11	-.75	-.12
Sexual liberality					.19	.13	.21	.14
Male dominance					.26	.38	.28	.40
Adj. R^2					.30		.30	
<i>N</i>					8,354		8,724	

relations to FAMPREF. Sex now falls below significance, and several other variables have heavily reduced Betas: grade, place of residence, education of parents, school type, and television exposure show Betas of .05 or less. When these weakly associated variables are dropped, as in Model 4, the R^2 is essentially unchanged. Thus, the value set, plus State and exposure to sex education, provide the most parsimonious explanation of attitude toward family size.

However, in the questionnaire, the male dominance items were mixed among the items comprising the FAMPREF measure. All these items were of the Lickert approve/disapprove format, perhaps producing a response set, a repetitious pattern of agreement or disagreement. To assess the potential impact, we removed the male dominance measure from the independent variables and recalculated the models (not shown). With male dominance removed the R^2 (.16) is almost halved, but the other explanatory variables in Model 4 are all highly significant, and the two value measures—religiosity and sexual ambience—have Betas twice the magnitude of the other variables. Thus, the value measures dominate the explanation of attitudes toward the large family.

The saturated model was run separately for males and females, and separately for each of the three states. The sex-separate runs produced R^2 s of .26 for boys and .33 for girls. Betas were similar in magnitude to those seen in Table 3. R^2 s for the States varied

only between .28 and .35, and tests of significance showed almost identical results among the three.⁷ For example, sex was significant in none of the States, exposure to sex education was significant in all three. The magnitude of the standardized estimates was also very similar. For example, male dominance values varied only between .37 and .39. Finally, we included religious affiliation as an independent variable in Model 4 (Muslim versus non-Muslim). It failed to reach significance and did not alter the values of the other variables in the model. However, *religiosity* continued its strong impact.

Conclusions

The data consist of about 15,000 questionnaires self-administered in a sample of secondary schools in Uttar Pradesh, Haryana and Rajasthan, where 5-15 per cent of the population aged 15-19 is enrolled in school. Based on responses to a standard question on desired family size, it is evident that the two child norm is in place by the time of the ninth grade (ages 13-14), despite the fact that half of the respondents have never thought before about how many children they would like to have. Moreover, as in Latin America a difference in desired family size by sex is in place by at least the ninth grade. As suggested by earlier Indian studies, the male preference for larger families may be present well before this. In *the* present study, there is a tendency for ideal size to diminish with grade in all three states, a relation that holds when other background characteristics are held constant. A non-numerical index of attitude toward the large family further confirmed and strengthened the relation between sex and desired family size.

Uttar Pradesh, the least economically developed of the three, showed the highest desired size (2.0 versus 1.8 in the other States). Differences by sex were also most pronounced in UP, and State proved to be one of the strongest predictors.

Other correlates of the non-numeric index (FAMPREF) were of three kinds: background characteristics such as parents education and rural/urban residence; Communications exposure (to television and to sex education programmes); and general values such as gender equality and religiosity. Since girls who attend school tend to be of higher social status than boys, much, though not all, of the sex variation in FAMPREF was explained by the background controls.

Liberal values about male-female dominance relations, religiosity, and sexual conservatism provided the most powerful explanations of small family preferences in all three States. Their inclusion in a model fully removes the influence of sex, but does not eliminate the impact of State. Thus, differences by sex may be explained not only by the sex selective nature of secondary schooling, but by the different general value systems of young men and women. Girls evaluate themselves as more secular and more egalitarian in their views of male/female relations, and are more conservative about sex

⁷The only exception was rural/urban residence, which reached significance in UP but not in the other two States.

relations. It is largely these values that explain their somewhat smaller family size preferences. However, that State differences persist suggest we have not specified all the cultural factors instrumental in the greater preference for large families in UP.

That sex education maintains a significant negative relation to FAMPREF despite the large number and variety of controls is a heartening finding for educators, as is the fact that desired size diminishes as grade in school increases. Greater attention to general values in the school curriculum, especially targeted at males and at schools in less privileged States (such as UP), might further narrow the gap between the sexes as regards desired family size.

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Variable Definitions

Sex:	Females = 1. Males = 0
Class:	grades 9, 10, 11
Place of origin:	1 = city. 2 = town. 3 = village
Parent's education:	The sum of five categories of schooling for each parent, ranging from both illiterate (2) to both with high school or more (10).
Siblings:	Number of brothers and sisters
School type:	1 = private, 2 = public
Exposure to sex/family planning education in school :	Three categories from exposed to both (2) to exposed to neither (4).
Media Exposure:	Four categories from sees television regularly (1) to never sees television (4).
Religiosity:	Considers religion to be very important (2) or less than very important (1).
Male Dominance:	Sum of four five-category items assessing attitudes toward male domination, from strongest approval (4) to strongest disapproval (20).
Sexual Liberality:	Sum of four items derived from a factor analysis: whether respondent feels peer pressure to smoke or have sex, talks about sex, has liberal attitude toward sex relations. Scores range from 4 to 12, higher values indicating more conservatism.
Family Size Orientation FAMPREF	Sum of three items (see text) reflecting approval /dis approval of large families, ranging from strongest (3) to strongest disapproval (15) of family values.