## RESEARCH REPORT

# FERTILITY PREFERENCES AND BEHAVIOUR: A CASE STUDY OF TWO VILLAGES IN THE PUNJAB, PAKISTAN

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# FERTILITY PREFERENCES AND BEHAVIOUR: A CASE STUDY OF TWO VILLAGES IN THE PUNJAB, PAKISTAN

#### I. Introduction

While substantial fertility decline has started to take place in other countries of the south Asian region Pakistan has shown only a slight decline in the prevailing high fertility rates. Several demographers, economists and sociologists have emphasised the role of demand for children as an important source of change in the reproductive behaviour of individuals [Bulatao (1981); Pullum (1983); Bulatao and Lee (1983); Pritchett (1994)]. With regard to Pakistan many social scientists believe that demand for children is still high which is keeping the fertility levels high, that is couples prefer to have more children. It is thus imperative to have an insight into the fertility preferences maintained by the people which are considered to have an important bearing on the fertility outcomes and contraceptive use behaviour.

The usefulness and importance of measuring reproductive motivation has long been one of the more controversial areas in demography. Along with the basic problems regarding the method to measure human intentions is the issue whether the stated intentions eventually translate into behaviour, and whether can they be used as an effective means of projecting future fertility behavioural trends. Demeny (1988), Blake (1974) and Hauser (1967) reject the usefulness of studying fertility intentions as a reliable indicator of future fertility behaviour. They believe that the answers are tailored to conditions at the time of the interview that do not hold in the long run. On the other hand there are social scientists, like Westoff (1990), Freedman, et al. (1975), Mauldin (1965), and Khan and Sirageldin (1977), who firmly believe in the validity of questions regarding fertility intentions and consider them highly predictive of actual fertility outcomes. Some take a more balanced view, including Bulatao (1981), Pullum (1980), Namboodiri (1972) and Lee (1980), that if the measures are properly devised fertility intentions can be a reliable source of determining actual behaviour. They believe that fertility intentions should be considered as a result of a dynamic process, a series of decisions. As Lee [(1980), p: 206] points out, "there is no reason to expect couples to be more successful in such forecasts than sociologists or economists, and fertility plans will frequently be revised with the benefit of new experiences".

This study takes a stance similar to the last one discussed above. Fertility preferences expressed by respondents, as the succeeding discussion would show, were not without meaning. This, however, does not mean that actual reproductive behaviour of the respondents at the study site completely followed their intentions. The behaviour was being influenced, and consequently modified, by changing socio-economic, and demographic considerations. As anthropologist Bourdieu [(1977), p: 29] very rightly points out, "To consider regularity, that is, what recurs with a certain statistically measurable frequency, as the product of a consciously laid down and consciously respected ruling (which implies explaining its genesis and efficacy), or as the product of an unconscious regulating by a mysterious cerebral and /or social mechanism, is to slip from model of reality to the reality of the model".

Changes in the environment of the individual, including social, economic and demographic conditions, can make the individual reformulate his/her fertility preferences. Measures of fertility preferences, even if they do not completely translate into actual behaviour, do provide an insight into preferred family size and its composition, and its relationship with fertility related behaviour, and also how these preferences are likely to be affected by differentials in social, economic, and demographic conditions of the individual. Further, as observed by Farooq (1981), in developing countries like Pakistan where the contraceptive prevalence rate is low, observed fertility may not reflect actual demand for children, but family size preferences would.

The objectives of the present study, thus, are to investigate firstly, what are the fertility preferences, i.e., the ideal and desired number of children, and the fertility behaviour, i.e., the actual number of children, of the study population. Secondly, how do these preferences vary with changes in the socio-economic and demographic characteristics of the respondents.

The report is developed in five sections. After the introduction, section two gives a brief account of the methodology employed. Section three deals with the fertility preferences of the study population, which includes size and sex preferences, and the desire for additional children. Section four gives an account of the fertility preferences and behaviour among the respondents with selected socio-economic and demographic characteristics. Finally, some concluding comments would be given for the study in section five.

### II. Data and Methodology

The present study could be called an attempt in the field of "anthropological demography". Caldwell [(1996), p: 327] defines this field of demography as, "the use of anthropological approaches and concepts to study the nature and causes of demographic behaviour". Therefore, the methods used to collect and analyse data are a mix of both fields, anthropology and demography. To make the study as comprehensive as possible both the quantitative and qualitative methods were combined so as not to have only the numbers but also know what those numbers meant in reality.

Two villages of the Potohar Plateau, in the Punjab province were selected for this study. A sample of 225 households was selected from these two villages, which accounted for more than half the number of total households living there. The total number of households in one of the villages was approximately 195 while that in the other was around 220, of which 105 and 120 households were selected, respectively. While selecting the households to be included in the sample effort was made to have representation from households belonging to all economic ranks to avoid any bias due to economic differences. In the absence of any income data size of the landholding was the most useful and appropriate means to categorise the population. The sample was selected by a combination of various techniques, which can be referred to as purposive proportionate stratified sampling [Singleton, Straits and Straits, (1993)]. All the households in the two villages were categorised into eight strata based on their land holdings. Fifty per cent of the households were selected from each of these strata. The sample, therefore, comprised households from each stratum proportional to its share in the total population. In purposive sampling one selects units that are "typical" of the population [Singleton, et. al., (1993)], therefore, of these selected households

women in the reproductive age-group, i.e., 15-49 years, comprised the actual research sample. The purpose of the study was reproductive behaviour, so currently married women in the child bearing ages were selected and hence the final sample was achieved by using this purposive proportional stratified sampling technique. Out of the 225 households that were covered, interviews in seven households were left incomplete leaving 218 households. The total number of respondents interviewed from these 218 households was 246 i.e., 246 currently married women in the age group of 15-49 years.

Halcom believes, "Evaluation actions speak louder than evaluation words" [quoted in Patton (1980), p: 175]. Participant observation was, therefore, an important tool for data collection that helped in understanding the research setting, and the respondents and their behaviour, especially the intra-family relations, more meaningfully. For the collection of quantitative data a structured open-ended questionnaire was formulated. An open-ended questionnaire was preferred because a lot of information can be left unrecorded or concealed if the responses are given in the confines of the options provided as answers, as in a standardised structured questionnaire. In-depth informal interviews were conducted to gather the qualitative data, to substantiate the collected quantitative data. The qualitative data were analysed manually, while SPSS was used to analyse quantitative data. The analysis was based on frequency distributions and cross tabulations. To asses the strength and nature of relationships between different factors affecting fertility preferences and behaviour, correlation coefficients were also calculated, along with carrying out regression analysis in certain cases.

#### **III. Fertility Preferences**

McClelland (1983) provides a convenient classification of the questions which have attempted to capture the preferences of women regarding their family size. He classifies four basic categories of questions, namely, "how many more", "over again", "ordering" and "projective". The present study uses the first two types of questions,

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<sup>&</sup>lt;sup>1</sup>. These four categories could be briefly defined as: 1. "How many more"- respondent is asked how many more children are wanted, and the desired family size is computed by adding that number to the respondent's number of living children; 2. "Over again" questions ask the respondent to state the number of children desired if child bearing were to begin over again; 3. Ordering also uses the over again format, but asks respondents to give their most desired family size and to order other family sizes; and 4. Projective questions ask about generalised ideal, norm, or typical family size rather than about the respondent's desires per se (McClelland, 1983, pp. 296-297).

i.e., "how many more" and "over again", to gauge the fertility preferences of the women regarding the size of their family and its gender composition. In the "how many more" category respondents were asked the question whether they wanted any more children or not, and if they did, how many more did they want in addition to those they already had. The total family size they desired to achieve was calculated by adding this number to the number of the respondents' living children. In cases where the respondent did not want additional children the existing number of children was considered her desired number. This category of responses would be referred to as the "desired family size" in the discussion that follows. In the "over again" question respondents were asked to state the number of children they would like to have if it were possible for them to start child bearing all over again. Women who did not have any child were asked to state the number of children they thought they would ideally like to have. This set of responses is referred to as the "ideal family size" in the present study.

As Table 1 shows the mean ideal family size for the respondents was 3.4 while the mean desired family size was 4.4. The mean desired family size is the outcome of the number of living children and future desire of the women so it is expectedly higher than the mean ideal number.

Table 1
Mean Number of Children: Ever born, Still living,
Ideal and Desired

	Mean
Children ever born	4.3
Children still living	3.7
Ideal family size	3.4
Desired family size	4.4

Source: Field data.

#### a. Inter-item consistency of family size preferences

The difference between the mean ideal and mean desired family size gives rise to the need to measure the inter-item consistency of the two responses, as also done by Lightbourne (1985) and Ali (1989). To do this, responses to the two questions regarding fertility preferences were divided into consistent responses and inconsistent responses. Responses were considered consistent if the women did not desire any more children when their current number of living children was more than or equal to their ideal number, or if the women desired more children when their current number of living children was less than their ideal number of children. Responses were considered inconsistent when the women wanted more children in spite of having as many as, or more than, their ideal number, or when they did not want any more children despite having fewer than their ideal number. From these two categories, the proportion of consistent responses was calculated.

As Table 2 shows, 86 per cent of the responses were consistent. This can be regarded as a satisfactory rate considering that Palmore and Concepcion (1985) found the consistency rate falling below 60 per cent for some countries of the Asia-Pacific region. They observed that in several countries a large number of respondents, when asked about their desire to have additional children said they did not want any more children, though they stated a preferred total number of children that exceeded the number of living children.

Most inconsistent responses were given by those women whose actual family size was less than their stated ideal family size but said they wanted no more children. A similar finding is reported by Palmore and Concepcion (1985), and Shah and Palmore (1979) in their studies. These were mostly women who would have liked to have more children but their circumstances inhibited them from having more. For most of these women bad health was the reason that stopped them from wanting more children.

Table 2 Consistency of Women's Responses on Ideal Family Size and Desired Family Size

	Per cent
Consistent Responses	
Ideal number = Number of living children, and want no more	17.7
Ideal number < Number of living children and want no more	37.9
Ideal number > Number of living children and want more	30.5
Total	86.1
Inconsistent Responses	
Ideal number = Number of living children and want more	1.6
Ideal number > Number of living children and want no more	7.5
Ideal number < Number of living children and want more	4.8
Total	13.9
Grand Total	100.0

Source: Field data.

#### b. Size and Sex Preferences

As stated earlier, in this study two measures of fertility preferences are being used, namely the desired family size and the ideal family size. Along with asking questions on the total size of the preferred family its preferred gender composition was also probed. As Table 3 shows, the majority of the women idealise a family with four children followed by those preferring three. Very few women preferred more than five children. However, the non-numerical response, which included answers like, "up to God", "does not matter", and "not sure", is quite high (21.5 per cent). As van de Walle (1992) points out, numeracy about children and the norm of an ideal family are prerequisites for fertility decline. Such a high non-numerical response means that many respondents had not yet started thinking in terms of a concrete family size. But this does not imply that these respondents had no preferences regarding the number of children they thought they would like to have. Many women who gave non-numerical responses were undecided about several possible family sizes and were unable to give only one response to the question. They had different family preferences for different life situations, social, economic and demographic, which they thought they might go through (for those who did not have any children currently) or might have gone through (for those who had children). This was understandable considering that ideal family size was a hypothetical number in which women with children were also made to think back in time to when they had not started child bearing. This argument gains strength by the fact that for the other fertility preferences measure, the desired family size, the rate of non-numerical response was much lower (8.1 per cent, as Table 4 shows) as it involved less conceptual thinking.

Table 3

Percentage of Respondents by Ideal family Size, and Ideal

Number of Sons and Daughters

Fam	ily size	Dau	ghters	S	ons
Ideal number of children	% of respondents	Ideal number of daughters	% of respondents	Ideal number of sons	% of respondents
0	0.0	0	2.8	0	0.0
1	0.0	1	44.3	1	15.4
2	18.3	2	29.7	2	50.4
3	24.0	3	1.6	3	8.9
4	28.0	4	0.0	4	1.6
5	5.7	5	0.0	5	0.8
6	0.8	6	0.0	6	0.8
<b>7</b> <sup>+</sup>	1.6	<b>7</b> <sup>+</sup>	0.0	<b>7</b> <sup>+</sup>	0.0
Non-num.	21.5	Non-num.	21.5	Non-num.	21.5
Total	100.0	Total	100.0	Total	100.0

Source: Field data.

Note: Non-num: non numerical responses.

Table 3 also shows the preference of respondents for sons. While for 2.8 percent of the respondents, an ideal family can be without a daughter there was not even a single woman who thought the same for sons. At the other extreme, the highest number of daughters that are preferred by a proportion of respondents is three, whereas for sons this goes up to six. The most preferred number of daughters was one, but for sons the number was two. For example, one of the respondents who was pregnant and had one living son said, "If I give birth to a son I'll get the operation (sterilisation) done. But God forbid, if I don't give birth to a son then I'll have another child. One son is not enough". Previous studies in Pakistan have also found strong preference for sons among married couples [Ali, (1989); Sathar, (1987); Mahmood, (1992); Khan and Sirageldin, (1977)].

The other measure of fertility preference, the desired family size, also presents similar trends, as Table 4 shows. Of those respondents who did not have a daughter 10.2 per cent did not desire to have one either, but for boys this proportion declines to a small 1.2 per cent. A majority of the women desired two sons followed by those who

wanted three sons. In the case of daughters, a majority of the women wanted a single daughter, followed by those who wanted two. Table 4 shows that for the last two categories, 6 and 7<sup>+</sup>, the preference is higher for daughters than for boys. It is not actually the desire but only reflective of the current number of children of those women. These women already had more than six sons and daughters, and did not desire for any additional children making their current number of children also their desired number of sons and daughters.

Table 4
Percentage of Respondents by Desired Family Size, and
Desired Number of Sons and Daughters

Fan	nily size	Dau	ghters	S	ons
Desired number of children	number of respondents		% of respondents	Desired number of sons	% of respondents
0	0.0	0	10.2	0	1.2
1	2.4	1	30.1	1	19.5
2	11.0	2	24.8	2	35.8
3	17.1	3	14.6	3	21.1
4	22.8	4	7.3	4	10.2
5	17.5	5	1.6	5	2.4
6	10.2	6	2.0	6	0.8
<b>7</b> <sup>+</sup>	10.9	<b>7</b> <sup>+</sup>	1.2	<b>7</b> <sup>+</sup>	0.8
Non-num.	8.1	Non-num.	8.1	Non-num.	8.1
Total	100.0	Total	100.0	Total	100.0

Source: Field data.

Note: Non-num: non-numerical responses.

#### c. Desire for additional children

The proportion of women who do not want any more children is considered a useful indicator of the extent of the desire to stop child bearing [UN, (1987); NIPS, (1992)] as it indicates that there is an awareness of the need to regulate fertility behaviour. Lightbourne (1987), however, points out that responses to the "desire for more" children can be at times misleading because some of the women who respond "no" to the question may in fact be wishing to postpone births rather than stop child bearing entirely. To avoid this confusion respondents were specifically asked to give their response irrespective of the time frame, i.e., "would you ever in future like to have more children". The informal way of interviewing, used in this study, further helped to clarify any such confusion.

Table 5 shows, 60.6 per cent of the women did not desire to have additional children. The desire to have more children declines with age, indicating that fertility desires are strongly affected by the life cycle stage of a woman. Field data shows that the mean number of children ever born and children still living generally increase with age. It could, therefore, be inferred that the number of living children also has a negative relationship with the desire for more children.

Table 5
Desire for more children by age of the respondents

Age groups	Yes	No	Not sure	Total
15-24	72.4	18.2	9.1	100.0
25-29	38.9	50.0	11.1	100.0
30-34	26.7	66.7	6.7	100.0
35-39	20.8	70.8	8.3	100.0
40-44	7.5	90.0	2.5	100.0
45-49	11.1	72.2	16.7	100.0
Total	31.3	60.6	8.1	100.0

Source: Field data.

The negative relationship between the desire to have more children and the total number of living children is also affected by the number of living sons and daughters. The findings of the present study showed that sex preference exerts a strong influence on fertility. The proportion of women who wanted to stop child bearing increased once their sex preference was achieved. This result accords with the observation made by Williamson (1983) and Cain (1982) that strong sex preferences are likely to stall any decline in fertility even if the population experiences a reduced desire for children. The ideal family size has an ideal sex composition which is not necessarily matched by the actual births. In order to achieve the preferred number of children of a particular sex women could continue child bearing, thus leading the desired family size to be larger than the ideal family size.

The desire for having no more children increases with an increase in the number of living children, as Table 6 shows. Comparing the desire for additional children with respect to number of living sons and daughters provides an insight as to how the number of living sons affects women's desire for additional children. Only 13 per cent of the women who did not have a son wanted to stop child bearing, while 51.5 per

cent of the women with no daughter desired to have no more children. Once the women had three sons the desire for no more children becomes very pronounced. But in the case of daughters the "no more' response is less strong with increasing numbers, and it also fluctuates. This suggests that the presence of daughters does not provide enough motivation to women to stop bearing children as does the presence of sons.

Table 6
Percentage of women desiring no more children by total number of living children, and number of sons and daughters

Famil	ly size	Daug	hters	So	ons
Number of	% desiring	Number of	% desiring	Number of	% desiring
living	no more	living	no more	living sons	no more
children	children	daughters	children		children
0	0.0	0	51.5	0	13.0
1	16.0	1	57.8	1	47.5
2	39.3	2	72.7	2	76.6
3	64.9	3	81.6	3	91.1
4	80.5	4	80.0	4	90.5
5	81.4	5	40.0	5	85.6
6	81.4	6	80.0	6	100.0
<b>7</b> <sup>+</sup>	88.9	<b>7</b> <sup>+</sup>	66.6	<b>7</b> <sup>+</sup>	100.0

Source: Field data.

Though Table 6 quite clearly shows that presence of sons in the family is a predictor for a woman to stop child bearing but it presents a picture without taking into account the overall sex composition of the number of living children a woman has which, as stated earlier, can affect the desire for additional children. Table 7 presents the respondent's desire for additional children, controlling for current family size and its sex composition. It can be seen that the proportion of women wanting no more children generally increases with increasing number of living children they have, however, the number of sons has a greater impact. As the number of "All boys" and "More boys" in the number of living children increases the desire for having additional children decreases, much more, compared to the increasing number of "All girls" and "More girls" in the family. For example, of those women who had four living children of which there were more sons (i.e., three sons and one daughter) 32.4 per cent did not desire to have more children, compared to only 16.2 per cent of the cases where there were three daughters. Conversely, in a family of four living children, as the lower half of the Table 7 shows, the desire for having more children is

higher when there are "More girls" or "All girls" in the family. The relationship is summarised in the "grand total" of Table 7. Fourteen per cent of the respondents had only sons and of these 8.3 per cent did not want to have more children, while 5.9 per cent desired to have more children (i.e., 58.6% of the respondents having only sons did not want additional children). Conversely, 10.3 per cent of the respondents had only daughters, of which only 1.5 per cent did not want more children, while 8.8 per cent wanted more children (i.e., 14.3% of the respondents having only daughters did not want additional children).

Table 7
Respondents' desire<sup>1</sup> for additional children by number of living children and sex composition of the family<sup>2</sup>

Total no. of			Sex co	mpositio	n					
Living	Total	All boys	All girls	Equal	More boys	More girls				
children				_						
	Per cent who wanted no more children									
1	17.4	13.1	4.4	na	na	na				
2	47.8	30.4	4.4	13.1	na	na				
3	68.6	8.6	2.9	na	37.2	20.0				
4	89.2	5.4	0.0	35.4	32.4	16.2				
5	85.4	0.0	0.0	na	43.9	41.5				
6	94.5	5.3	na	31.6	31.6	26.3				
$7^+$	92.3	3.9	na	7.7	42.3	38.5				
	<b>72</b> 0	0.0		44.0	20.4	22.1				
All family	73.0	8.3	1.5	11.8	29.4	22.1				
sizes	(149)	(17)	(3)	(24)	(60)	(45)				
		er cent who		ore child	ren					
1	82.6	39.1	43.5	na	na	na				
2	52.2	0.0	21.8	30.4	na	na				
3	31.4	2.9	5.7	na	11.4	11.4				
4	10.8	0.0	2.7	2.7	2.7	2.7				
5	17.1	2.4	4.9	na	2.4	7.3				
6	5.3	0.0	na	0.0	0.0	5.3				
<b>7</b> <sup>+</sup>	7.7	0.0	na	0.0	0.0	7.7				
All family	27.0	5.9	8.8	3.9	2.9	5.4				
sizes	(55)	(12)	(18)	(8)	(6)	(11)				
<b>Grand Total</b>	100.0	14.2	10.3	15.7	32.3	27.5				
	(204)	(29)	(21)	(32)	(66)	(56)				

Source: Field data.

Note: 1. Only those who gave numeric responses.

<sup>2.</sup> Including women who had at least one child.

<sup>3.</sup> Number of respondents in parenthesis.

<sup>4.</sup> na- Not applicable.

To establish this relationship further, correlation and multiple regression analyses were also carried out taking age of the women and the number of living children they had as the variables explaining the desire for additional children. Instead of taking number of living children on the whole, number of living boys and girls were taken into account separately. Results of the correlation analyses, as shown in Table 8, suggest that the number of living sons was most strongly related to the desire to have more children. The more the number of sons a woman had the less was her desire to have additional children. The number of girls, though having a similar kind of relationship, differed in degree. An increase in the number of girls did not have that strong a response among women to stop child bearing as did an increase in the number of boys.

Table 8
Correlation coefficients of the desire for additional children and the age of the women, and the number of living sons and daughters

Variables	Desire for additional	Significance		
	children			
Age of the woman	452	.000		
Number of living sons	571	.000		
Number of living daughters	309	.000		

Source: Field data.

To capture the relationship between the desire to have more children and the sex composition of the living children partial correlation coefficients were calculated by controlling the total number of children a woman had. The results strengthened the finding of sex preference even further. The partial correlation coefficient for the desire for more children and living number of boys was -.2622 (with a significance of .000), and for the living number of girls it was .2622 (with a significance of .000). Though the relationship is not very strong it shows that controlling the living number of children a woman has, her desire for additional children is stronger if she has more daughters, while more living sons encourage her to stop child bearing.

The multiple regression analysis also presents similar results, as can be seen in Table 9. The number of boys and girls a woman had explains 39 per cent of the variance in her desire for having additional children, with the number of living boys being the more important explanatory variable. The "stepwise" technique of multiple

regression analysis was used so that variables not having any significant explanatory value are not included in the model. The variables excluded by stepwise elimination included women's educational and occupational status, child mortality and wasted pregnancies experienced by her, and the type of her household economy. Age of the woman was correlated<sup>2</sup> with the number of boys and girls<sup>3</sup> she had, therefore it was not included in the model to avoid multicollinearity. The multiple regression model was:

Desire for more children  $Y=\beta_0+\beta_1$ Number of sons +  $\beta_2$ Number of Daughters +  $\beta_3$ Wife's education +  $\beta_4$ Wife's work participation +  $\beta_5$ Child mortality +  $\beta_6$ Wasted pregnancies +  $\beta_7$ Type of household economy

Table 9
Multiple regression analysis of desire for additional children and the selected variables

<b>Explanatory variables</b>	Regression coefficients	T- significance
Number of living boys	0.174 (10.35)	.000
Number of living girls	0.076 (4.79)	.000
Intercept	1.189	
$\mathbb{R}^2$	0.389	

Source: Field data.

Note: T-statistics in parenthesis.

The importance attached to having sons evident from the discussion above can be best summarised by what one of the respondents said: "As soon as we are married it is our wish to have sons as soon as possible. They are our only form of insurance in old age. All other forms of economic security like land, savings or earnings are completely insignificant".

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<sup>&</sup>lt;sup>2</sup> The correlation coefficient for age of the women with the number of boys was .4147 (with a significance of .000) and with the number of girls it was .4559 (significance of .000).

<sup>&</sup>lt;sup>3</sup> Number of boys and girls was not correlated to the each other. The correlation coefficient between them was .089, with a significance of .1086.

# IV. Socio-economic and Demographic Differentials in Fertility Preferences and Behaviour

### a. Women's current age and number of living children

Table 10 shows that the mean ideal number of children remains almost constant for women in different age categories. Since the desired number of children is related to the current number of living children of women it is not unexpected to find that with increasing age the desired number of children increases, adjusting their preferences with their changing life situations. More than age, it is the number of living children that has a stronger influence on desired fertility.

The slightly lower MCEB and MCSL for the age group 45-49 years in Table 10 give an impression that the oldest women had lower fertility levels, which would not be true. The problem that any micro study can face due to comparatively fewer cases in each category, as compared to a large study, is the basic reason for these low values. There were three women in this age group (45-49 years) who had fewer children, and because of them the mean value for this age category is slightly lowered.

Table 10

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by women's current age and age at marriage

Age groups (years)	Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL						
All women (246)	3.4	4.4	4.3	3.7						
Age groups (years)										
<b>15-24</b> (44)	3.5	3.2	1.5	1.3						
<b>25-29</b> (36)	3.1	3.2	3.3	2.6						
<b>30-34</b> (60)	3.5	4.5	4.5	4.0						
<b>35-39</b> (48)	3.5	5.0	5.4	4.7						
<b>40-44</b> (40)	3.4	5.4	6.0	5.2						
<b>45-49</b> (18)	3.4	4.9	5.7	4.8						
	Women's age at m	narriage (years)								
<b>Under 14</b> (25)	3.5	5.2	5.4	4.6						
<b>15-19</b> (154)	3.6	4.4	4.4	3.8						
<b>20-24</b> (58)	3.0	4.0	3.8	3.3						
<b>25- above</b> (9)	3.0	3.6	2.6	2.1						

Source: Field data.

Note: 1. Only those giving numeric responses.

2. Number of cases in parenthesis.

The influence of the number of living children on the preferred family size is apparent in Table 11 too. The ideal number of children a woman thinks she would like to have tend to slightly increase with increasing number of living children. Women having only one living child had a mean ideal family size of 3.1, while those with seven or more living children idealised a mean family size of 3.7. The main reason for this is the rationalisation of births by some of the respondents having more of living children, though not by all.

Table 11
Ideal number of children the respondents would like to have by number of living children (%)

Number				Idea	l numb	er of cl	hildre	n		
of living	Mean <sup>1</sup>	Mean <sup>1</sup> Percentage								
children		1	2	3	4	5	6	7+	Non- numeric	Total
0	3.1	0.0	30.4	30.4	30.4	4.3	0.0	0.0	4.3	100.0
1	3.1	0.0	20.0	28.0	36.0	0.0	0.0	4.0	12.0	100.0
2	3.4	0.0	28.6	21.4	25.0	3.6	0.0	0.0	21.4	100.0
3	3.4	0.0	16.2	27.0	27.0	2.7	0.0	2.7	24.3	100.0
4	3.5	0.0	17.1	22.0	26.8	7.3	0.0	2.4	24.4	100.0
5	3.6	0.0	11.6	20.9	32.6	11.6	0.0	0.0	23.3	100.0
6	3.6	0.0	13.6	9.1	27.3	9.1	4.5	0.0	36.4	100.0
7+	3.7	0.0	14.8	33.3	18.5	3.7	3.7	3.7	22.2	100.0
Total	3.4	0.0	18.3	24.0	28.0	5.7	0.8	1.6	21.5	100.0

Source: Field data.

Note: 1 Including only numeric responses.

#### b. Age at marriage

Nuptiality patterns are of great demographic importance, particularly for countries having high fertility levels. Women tend to marry quite early in the study villages with the mean age being 17.8 years (median age was 17 years), thus prolonging their exposure to reproduction and potentially increasing the probability of conception. As Table 10 shows, there is a consistent downward trend in the fertility preferences and behaviour as the age at marriage increases. This decline is due to both natural and behavioural factors. If the initial age at marriage is very young women are more likely to come under the domination of her husband and his family, which may cripple her ability to regulate fertility even after the desired number and sex of children is attained. She might also feel more secure by producing as many children, especially male, in the absence of any other kind of social and economic security. In the study villages it was found that after marriage, motherhood was considered the best means

of security by the respondents, especially by those who were married at early ages. Cain (1982), Ahmed (1991) and Mahmood and Khan (1985) found similar results for their studies in different developing countries.

#### c. Educational attainment

The impact of education may operate through many different paths to reduce fertility levels. These factors include delayed age at marriage, increase in woman's individuality and aspirations for the quality of children, increased opportunities for personal advancement, awareness of social mobility, and most importantly a desire for a reduced number of children and a greater exposure to knowledge of means to regulate fertility [Oppong, (1983); Mahmood and Khan, (1985); Mahmood, (1992); Sathar, (1984); Caldwell, (1981)]. In the study villages a substantial proportion of the respondents (61%) and their husbands (31%) had never been to school. Relatively more educated respondents were younger in age compared to the older respondents most of whom had never been to school. Similar conclusions could also be drawn with respect to the educational attainment of their husbands, indicating a possible upward trend in educational levels in Pakistan.

It is obvious from Table 12 that there was a strong negative association between fertility preferences and education, and that the impact of wife's education was stronger than that of the husband. The initial three years of women's schooling did not seem to have any significant impact on the fertility preferences and behaviour. But after "4-5" years of schooling there was a significant decline in the number of children ever born and living, and also the desired and ideal number of children the women would like to have. The mean number of children ever born to women who had never been to school was 4.6, which reduces to 2.0 for women who have been to school for nine years or more. A similar pattern is visible for women's education in Table 12 for other indicators of fertility preferences and behaviour.

Husband's education, as Table 12 shows, has a weaker effect on the couple's fertility behaviour, and it is only after "6-8" years of schooling that it shows a consistent

declining trend. Other studies, such as those by Yusuf (1988) and Mahmood (1992), also found husband's education not to be a powerful net predictor of women's fertility.

Table 12

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by educational attainment of respondents and their husbands

Years of schooling		Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL			
Wife's educational attainment by years of schooling								
0	(150)	3.48	4.82	4.64	3.95			
1-3	(50)	3.42	4.52	4.24	3.80			
4-5	(27)	3.25	4.00	3.44	2.96			
6-8	(16)	3.19	3.73	2.88	2.81			
9+	(3)	2.67	2.33	2.00	1.67			
	Husband's educational attainment by years of schooling <sup>2</sup>							
0	(70)	3.64	4.69	5.00	4.16			
1-3	(30)	3.64	4.40	4.53	3.84			
4-5	(35)	3.33	4.46	4.43	3.97			
6-8	(63)	3.23	4.09	3.86	3.57			
9-10	(18)	3.06	4.06	3.63	3.18			
11+	(10)	2.50	3.70	3.10	3.10			

Source: Field data.

Note: 1. Including only those giving numeric responses.

- 2. As stated by their wives.
- 3. Number of cases in parenthesis.

Another interesting finding from the field data in this regard was that none of the women with nine years or more of schooling gave a non-numerical response when asked about their "ideal number of children". This was also the group that had lowest fertility preferences and the lowest number of births. On the other hand, from among the women who had never been to school 21.3 per cent gave non-numerical responses. This again supports van de Walle's hypothesis (1992) that numeracy about children is a pre-condition for fertility decline.

#### d. Family type

In traditional cultures like that of Pakistan strong kin relationships and influence of other family members on fertility decisions are very important. Nuclear living arrangements are generally associated with a desire for fewer children than those in joint households because nuclear families are considered to be more egalitarian, conjugally oriented and more close to a western pattern of family organisation [Mahmood, (1992)]. But Burch and Gendell (1971) believe the relationship is not that

simple and this is confirmed by the figures in Table 13. Respondents having nuclear living arrangements had more mean children ever born, living and desired, as compared to their counterparts in joint families.

Table 13

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by family type

Family type	Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL
Extended	3.4	4.1	3.4	3.1
Nuclear	3.3	4.8	5.4	4.5

Source: Field data.

Note: 1. Including only those respondents who gave a numeric response.

As Table 14 shows, the proportion of women living nuclear families increases with an increasing number of CEB, a trend not exactly replicated in the extended households. The reason for this trend is that young couples in the study villages did not form their own households immediately after marriage and continued to live with the parents of the husband. Specific fertility situations later led to the formation of nuclear households. Couples with higher fertility usually had to break away from the extended living arrangement because of space constraints, forming a nuclear family, explaining the high fertility figures for nuclear families in Table 13 and Table 14.

Table 14

Percentage of respondents living in extended and nuclear households by the number of children ever born

Children ever born	Fami	ly type
	Nuclear	Extended
0	0.9	15.0
1	3.8	10.7
2	4.7	14.3
3	9.4	15.7
4	17.0	13.6
5	17.9	9.3
6	16.0	8.6
<b>7</b> <sup>+</sup>	30.2	12.9
Total	100.0	100.0
	(118)	(128)
Mean number of CEB	4.8	4.1

Source: Field data.

The above discussion, however, does not intend to show that nuclear living arrangements does not encourage smaller family size as is generally believed. Even the present study in a way supports this association between nuclear family and lower fertility preferences. As Table 13 shows, respondents living in nuclear families, despite having larger MCEB and MCSL and desired number of children, idealise a slightly smaller family size as compared to those living in extended families. It may be inferred that once they start living in a nuclear set-up they realise the advantages of having a smaller family. This is what one of the respondents, who had 9 children and was now living separately after 19 years with her in-laws, implied when she said, "I wish I had fewer children. With so many children how can I afford to give good education to my sons or find a good match for my daughters. I wish my husband had not been under the control of his mother, who kept pressurising him to have more children".

It must be added here that because of the strong kin ties women living in nuclear families were also not completely free to make their own decisions regarding their fertility. The influence of family elders, especially the females, affected their fertility preferences and behaviour despite living separately from them.

#### e. Women's work participation

The kind of inverse relationship found between female employment and fertility in developed countries is either absent or very weak in developing countries. As found by United Nations (1985) and Kazi and Sathar (1993), more than employment by itself, it is the type of employment that determines its impact on reproductive intentions and behaviour. In the study villages all the women involved in any income generating activity in the study villages were employed in low paying informal activities. It is, therefore, expected to find that these women had higher MCEB and MCSL, accompanied by higher fertility intentions as compared to those who were not working (Table 15). The causation for this nature of association was that most of the women involved in any income generating activity were mostly doing it because of economic constraints, which were magnified by their large number of children.

Table 15

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by wife's work participation

	Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL
Works (48)	3.6	4.6	4.6	3.9
Does not work (198)	3.4	4.3	4.2	3.7

Source: Field data.

Note: 1. Including numeric responses only. 2. Number of cases in parenthesis.

Women who were working in the study villages were mostly involved in low status occupations which did not have a lowering effect on their fertility, as also found by Sathar and Kazi (1989).

## f. Economic status of the household

The occupation of the husband, the type of household economy and land ownership are taken as proxies for economic status in this study. Husband's occupation was not found to have any significant influence on the women's fertility intentions and behaviour. As Table 16 shows, except for the "professional/salaried" and "unemployed" categories which had consistently lower fertility preferences and behaviour all other occupations seem to show similar trends. Since most of the husbands in the "professional/salaried" category were working in nearby urban centres like Rawalpindi and Islamabad it must have been the influence of urban thinking which affected their attitudes and behaviour. The unemployed men were generally more educated, with a mean of 6 years of schooling as compared to the total mean of 4.5 years of schooling for the male population in the study villages. They were more selective in the type of occupation they adopt, which in cases led to their unemployment.

Different types of household economies also did not have widely different effects on fertility preferences and behaviour, although the respondents from "non-agriculture" households had slightly lower mean number of children ever born and still living, and the mean ideal and desired family size than the other two types of household economies (Table 16). But the difference between the fertility patterns of "non-agriculture" households was not that different from the "agriculture" households, as

can be seen in Table 16, therefore it cannot be said that agricultural based economy is the main cause of high fertility in the study villages in particular, and Pakistan in general.

Table 16

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by selected economic characteristics

Characteristics	Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL					
Husband's occupation <sup>2</sup>									
Professional/salaried (36)	3.2	4.2	3.8	3.5					
Business/self-employed (29)	3.3	4.5	4.8	4.1					
Farmer/landholder (45)	3.3	4.6	4.8	4.2					
Agriculture labourer (21)	3.8	4.3	4.2	3.3					
Skilled labourer (44)	3.5	4.1	4.1	3.5					
Unskilled labourer (31)	3.5	4.8	4.6	4.2					
Retired (1)	3.4	5.0	5.0	5.0					
Preacher (2)	3.5	5.5	5.3	4.7					
Unemployed (17)	3.5	3.4	3.0	2.3					
	Household econ	omy							
Agriculture-farming/livestock (41)	3.5	4.3	4.3	3.7					
Non-agriculture (41)	3.3	4.2	4.3	3.6					
Agri. cum non-agriculture (111)	3.4	4.4	4.3	3.8					
Landholding (acres)									
$Landless = 0^3 (60)$	3.4	4.2	4.3	3.5					
Less than 1 (34)	3.2	4.0	4.2	3.8					
<b>1-2.5</b> (55)	3.7	4.3	3.8	3.4					
<b>2.6-5.0</b> (36)	3.6	4.3	4.2	3.5					
<b>5.1-7.5</b> (24)	3.1	4.8	4.8	4.3					
<b>7.6-12.5</b> (18)	3.4	4.8	4.9	4.1					
<b>12.6-25.0</b> (10)	3.0	4.7	5.0	4.7					
<b>25.1-50.0</b> (5)	3.8	4.4	4.6	4.4					
<b>50.1-150.0</b> (4)	2.0	5.3	4.0	4.0					

Source: Field data.

Note: 1. Including numeric responses only.

- 2. As reported by their wives.
- 3. Including those agricultural households relied on livestock rearing but had no land.
- 4. Number of cases in parenthesis.

A similar absence of any strong association is visible from the fertility intentions and behaviour by the size of the landholding of a household. However, households with less than five acres of land had a comparatively lower MCEB and MCSL, compared to those having more land. These results accord with those found by Khan and Sirageldin (1979) in which income of the household and land owned by it were not important factors in determining the desire for children by rural women in Pakistan.

#### g. Urban exposure

For countries like Pakistan where the majority of the population still lives in rural areas, differentiation is usually made between the fertility patterns of rural and urban areas. It is usually the urban areas [FBS, (1991); NIPS, (1992)] which are found to have lower fertility both in terms of behaviour and preferences. Since the present study was conducted only in rural areas, the rural-urban differential in fertility was gauged on the basis of urban exposure of the respondents. The respondents were classified as lifetime rural residents and those who had spent at least the first ten years of their lives in any urban area. An exposure to urban living makes a striking difference in the fertility patterns of the respondents as Table 17 indicates. Women with urban exposure had fewer MCEB and MCSL, aspired for fewer additional children, and their mean ideal family size was also smaller than those who have always lived in rural areas.

Table 17

Mean ideal and desired family size, and mean number of children ever born (MCEB) and mean children still living (MCSL) by inter-spousal communication and respondent's place of residence in the first ten years of her life

Characteristics	Mean Ideal <sup>1</sup>	Mean Desired <sup>1</sup>	MCEB	MCSL				
Wife's residence in first ten years of her life								
<b>Rural</b> (203)	3.5	4.5	4.5	3.8				
Urban (43)	3.2	3.8	3.2					
Inter-spousal communication								
<b>Yes</b> (137)	3.2	4.2	4.3	3.8				
<b>No</b> (109)	3.8	4.6	4.2	3.6				

Source: Field data.

Note: 1. Including numeric responses only.

2. Number of cases in parenthesis.

This conforms with the general argument that urban living and its social environment inculcates values and attitudes which are conducive to smaller family size. The mean ideal family size for women with urban exposure was 3.2 while those living in villages all their lives idealised a mean family size of 3.5 (Table 18). The maximum ideal number of children for any woman with urban exposure was five. On the other hand lifetime rural residents went beyond seven children as their ideal family size. In addition, the proportion of non-numerical answers were much lower for women with urban exposure, indicating their idea of numeracy. Education was also a factor that explained the better numeracy of urban exposed women, as their mean years of

education was almost double (2.6 years) compared to the lifetime rural residents (1.4 years). But urban exposure had its impact because an urban exposed woman with specific years of schooling was more likely to give a numeric answer as compared to a woman with similar years of schooling who has always lived in a village.

Table 18

Respondents' ideal number of children by place of residence in the first ten years of their lives

	Mean		Percentage							
		1	2	3	4	5	6	7+	Doesn't matter	Total
Urban	3.2	0.0	23.3	30.2	37.2	2.3	0.0	0.0	7.0	100.0
Rural	3.5	0.0	17.2	22.7	26.1	6.4	1.0	2.0	24.6	100.0
Total	3.4	0.0	18.3	24.0	28.0	5.7	0.8	1.6	21.5	100.0

Source: Field data.

#### h. Inter-spousal communication

Inter-spousal communication can help improve relations between the sexes and help converge their ideas and attitudes on important household decisions, of which fertility is the most important. Most marriages in the study villages, as in the rest of the country, were arranged by parents. This meant that rapport between spouses, which can be a source of strength for women, took some time to develop, if it developed at all. The situation was worsened by the presence of age difference between spouses which further inhibited women from communicating with their husbands. In the study villages 55.7 per cent of the respondents said they talked about family planning with their husbands while the remaining 44.3 per cent did not.

As Table 17 shows, the existence of inter-spousal communication has a definite declining effect on fertility preferences. Women who discussed family planning with their husband had a smaller mean ideal size of family as compared to those who did not talk. Despite having higher number of MCSL women who communicated with their husbands had lower mean desired number of children. This means that the mean number of additional children wanted by those who communicate is less (0.44) than those who do not talk with their husbands (0.94), leading to lower desired family size. Lack of impact on fertility behaviour could mean that inter-spousal communication was an outcome of already high fertility. The research question inquired only about

their present status of communication, and the couple could have started discussing family planning matters only after they already had a large family.

#### V. Concluding remarks

The study shows that despite the preferred fertility levels of the respondents being quite high the actual reproductive behaviour still exceeded the preferred levels. Son preference was found to be a major reason for women to continue child bearing. Only when the desired number of sons, rather than the overall family size, was achieved did women consider stopping child bearing. Lack of communication between spouses also led women to continue having children as a majority of them were not sure about the fertility preferences of their husbands, and without their consent they could not use any fertility regulating method. Economic back ground of the respondents did not seem to affect the fertility preferences and behaviour of the respondents. On the other hand, the educational attainment of women, increased age at marriage, and their urban exposure were found to have a lowering effect on both, their fertility preferences and fertility behaviour, as compared to those who had never been to school, were married younger, and were lifetime rural residents, respectively.

The need to lower fertility levels in Pakistan cannot be overstressed, and for this there is a need to investigate the reasons that are keeping it high. Though the findings presented in this report are derived from a study conducted in two villages of a specific region of Pakistan, and may not be generalised for the whole country, it could however be premised that given similar social, cultural, demographic and normative characteristics, the fertility preferences and behaviour of women in other regions would not be very different. So as the findings of the study show, removal of illiteracy among women should be the top priority to help lower the existing high levels of fertility in the country. There is also a need to broaden the employment opportunities available to women. Further these opportunities should not be confined to low paying informal sector activities, as they are not found to have any significant effect on the status of women of their fertility levels.

There is a need to create an atmosphere of gender equality, which can help to reduce the existing son preference, and also the high fertility levels in Pakistan. In patriarchal societies, like that of Pakistan, where women generally receive social status only as bearers of children, especially of sons, women themselves uphold high fertility norms. Kabeer (1994) confirms that a correlation exists between national fertility and selected indicators of women's status showing that the reproductive behaviour is most likely to change in conditions of equity regarding gender. And for this the first step should be to make a break from what Caldwell (1981) refers to as the "patriarch-patriliny-patrilocality" system.

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#### **ABSTARCT**

Demand for high number of children is believed to be a major reason for high fertility levels in Pakistan. The present report, based on a micro-study, investigates the fertility preferences and fertility behaviour of the women, and how they vary with differences in their socio-economic and demographic characteristics, in two villages in the Punjab province, Pakistan. The study found that despite the preferred family size being quite high, it was exceeded by the actual family size. The actual number of children the women had was not a product of her personal choices and decision alone but an outcome of interaction among a complex set of factors, including social, cultural, economic, religious and demographic aspects of life. The factors that affected the fertility preference and behaviour most were the educational level of the women, and her preferred number of sons. Based on the findings of the study, this report suggests an emphasis on female education and promotion of gender equity as means to lower the existing high levels of fertility in the country.