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## **Ideal-family-size and Sex-composition Preferences among Wives and Husbands in Nepal**

*Sharon Stash*

*This study tests the hypothesis that, in Nepal, measures of ideal family size mask an underlying preference for sons, making some people willing to have families larger than their ideal. Existing evidence suggests that men are likely to have stronger preferences for sons than are women. This research uses empirical evidence to examine the hypothesis that husbands are more willing than their wives to pursue the birth of sons at the cost of an increasingly large completed family size. A Multiple-response Fertility Preference Scale was developed to test these propositions among a sample of couples. The methodology was successful in demonstrating differential patterns of decision making between husbands and wives that are otherwise obscured by more simplistic, single-response measures (for example, ideal family size). The results indicate that husbands are consistently more willing than their wives to pursue the birth of sons at the expense of larger family sizes, and that the birth of daughters is not pursued to a similar degree by wives or husbands. (STUDIES IN FAMILY PLANNING 1996; 27,2:107-118)*

*Interviewer:* If you could choose for yourself, how many children would you have had in your lifetime?

*Respondent:* Things don't just happen because you want them to! If you have only one or two children then life wouldn't be very pleasant, would it? There is not really that much difference between two and four children anyway, is there?

*Interviewer:* So, how many children would you have wanted?

*Respondent:* I had exactly what I wanted. I finished having children when I wanted to. This is exactly how many births I had. I had two daughters at first. When you have two daughters at first ... well, I had two daughters, so what did I need to have? I needed to have sons, didn't I? Then I gave birth to one son. Well, I thought, if anything should happen, one son would not be enough. So I had another son. Then my soul was satisfied. Only then did I go (for an operation).

(Response of a 32-year-old mother of four to a question on ideal family size taken from preliminary in-depth interviews.)

In Nepal, women's reported ideal family size is currently low. In a recent national survey, the 1991 Nepal Fertility, Family Planning and Health Survey (NFHS) [A] (NIV Joint Ventures, 1993), the mean ideal number of children was 3.1, indicating a substantial increase in the preference for smaller family size. However, this major survey overlooked an important underlying relationship by failing to collect information on sex-composition preferences. In countries that exhibit a strong preference for sons, such as Nepal, this omission can produce a misleading understanding of respondents' fertility-related attitudes, and ultimately of their relationship to contraceptive use and fertility outcomes.

A strong preference for children of one sex can be a constraint on fertility decline if couples who have achieved their preferred family size continue childbearing until they achieve their desired number of sons or daughters. This report proposes that, in Nepal, measures of ideal family size mask a preference for sons that makes some people willing to have families larger than their stated ideal.

Although far from new to the demographic community, this hypothesis has renewed relevance in research settings that exhibit a strong preference for one sex, and where fertility increasingly is coming under voluntary control (Bairagi and Langsten, 1986; Chowdury and Bairagi, 1990; Nag, 1993). In situations where effective means of family planning are available, couples can decide when and if to limit their fertility, and whether such limiting should occur after the birth of a certain number of children, or a certain number of sons or daughters. A systematic test of this hypothesis has implications for future fertility studies in Nepal, as well as in neighboring countries in South Asia, where son preference is strong and where contraceptive use is increasingly prevalent.

A well-developed, but underutilized, body of literature suggests that people's fertility motivations are better understood when they are asked a series of attitudinal questions rather than more simplistic, single-response questions such as what their ideal family size is. Most notably, the Coombs Scale has been used successfully to understand people's preferences with regard to sons and completed family size (Coombs et al., 1975; Coombs and Fernandez, 1978). However, in the course of an extended period of fieldwork, the Coombs Scale proved to be difficult to administer to respondents in a study site in rural Nepal. Moreover, a simpler methodology was thought potentially to address more closely the study's principal research question: What is more important to

respondents, their preferences regarding overall family size or their preferences for a certain number of sons (or daughters)? A picture flip chart, the Book of Children, was developed and tested on a sample of wives and their husbands. The results of this test are summarized in a Multiple-response Fertility Preference Scale (MRFP Scale).

Similar to the Coombs Scale, the MRFP Scale places respondents in an artificial decision making environment. Respondents are asked to choose between families of different sizes and compositions. Their decisions become more difficult as respondents are offered a choice of families that are increasingly in excess of their ideal family size, but that more closely represent their desired number of sons (or daughters). Patterns that emerge in the choice people make provide indirect evidence of individuals' decision-making priorities. They demonstrate at which point family-size goals prevail over sex-composition preferences. The MRFP Scale tests the extent to which respondents are willing to accept family sizes larger than their ideal to satisfy their desire for sons (or daughters); conversely, the MRFP Scale tests the extent to which respondents are willing to have fewer than their desired number of sons (or daughters) to prevent having births in excess of their ideal family size. Some initial results of the MRFP Scale are presented here.

As with most research on fertility, studies on sexcomposition preferences have been limited largely to married women (Lloyd, 1993; Mason and Taj, 1987). These studies are based on the assumption that women's responses represent those of married couples. Relatively few data exist to test this assumption within the context of South Asia, a region of strong patriarchal family organization wherein the fertility-related attitudes of women and men may differ. Although women play central roles in parturition and child care, their involvement in decisions about their own fertility is subject to the powerful influences of husbands and senior kin. Because the sample for this survey was composed of wives and their coresident husbands, evidence of differential fertility preferences between married men and women is explored.

Existing evidence suggests that men are likely to have stronger preferences for sons than are women, although the matter is far from resolved (Coombs and Fernandez, 1978; Knodel and Prachuabmoh, 1976; Williamson, 1976). These differences could emerge in conflicting fertility goals. However, simple "ideal" measures are prone to capture normative expectations. Differences between husbands and wives may be more likely to emerge when respondents are placed in a decision-making environment where they are asked to make choices—a situation that more closely imitates real-life fertility decision-making. Therefore, at issue are both the ideal number of children and the ideal number of sons (or daughters) wives desire in comparison with the ideal numbers that

their husbands desire, and the extent to which women and men are willing to exceed their family-size preference to obtain their desired number of sons (or daughters).

In situations where husbands' preferences for sons are stronger than those of their wives, husbands may be more willing to accept larger family sizes to achieve their desired number of sons. Where husbands' preferences are likely to prevail over their wives', they may result in lower levels of contraceptive use and higher levels of fertility than would have been predicted by observing women's attitudes alone. This situation could occur even where ideal family size and sex-composition preferences appear to be similar for men and women.

Contemporary social research on Nepal tends to emphasize daughter preference as a factor mitigating the otherwise strong effects of son preference. A series of well-known ethnographies from Nepal and other parts of South Asia have documented a strong preference for male children (Bennett, 1983; Levine, 1982; Miller, 1984). These findings from anthropologists have been corroborated through the application of the Coombs Preference Scale within the context of a Value of Children study in a western region of Nepal (Karki, 1982 and 1988). However, the same study revealed a preference for at least one daughter-although, for the majority of respondents, the birth of more than one daughter was seen as undesirable. More recent ethnographic work in Nepal suggests that the desire for at least one daughter may be even stronger than previous studies had indicated, and may bolster higher levels of fertility (Folmar, 1992). The MRFP Scale does not assign in advance an assumed preference for sons over daughters. All series of questions that test the extent to which respondents will accept larger family sizes to have their desired number of sons are immediately followed by an equivalent series of questions testing their desire for daughters. Therefore, empirical data are used here to compare how far respondents are willing to go to satisfy their desire for sons versus their desire for daughters.

## **Data and Methodology**

This study is part of a larger research project in Chitwan District of Nepal. Chitwan is located in the *terai* (plains region) in the southern part of the country, bordering India. Among other rural districts in Nepal, Chitwan stands out as a region with a high level of social and economic development. Two major roads transect the district, the Prithivi Highway and the Mahendra Highway. Some industrial development has occurred in the district along these highways, but occupations remain predominantly agricultural. In the study population, 78 percent of women and 64 percent of men list agriculture as their primary occupation. People in the district do, however, have improved access to

schools and health services. This access is reflected in higher-than average levels of literacy among women (22 percent of women aged 15-49) and of contraceptive prevalence (48 percent of currently married women aged 15-49).

The Chitwan project was completed during an extensive period of fieldwork, from August 1993 to August 1994, which consisted of three consecutive stages: (1) initial exploratory qualitative interviews, pretests of survey questions, and the development of an interview guideline for subsequent in-depth interviews; (2) a standardized fertility survey questionnaire administered to a cluster sample of women and their coresident husbands; [B] and (3) qualitative follow-up in-depth interviews in the survey sample clusters, with a sample of all cases of unmet need and a random sample of couples currently practicing family planning. The principal investigator was resident at the field site throughout this period and was actively involved in all stages of data collection and supervision. The survey team achieved a response rate of 99.5 percent.

The analyses of survey data in this paper are drawn primarily from three sub-samples of the original survey data: (1) a sub-sample of currently married women (N = 769), and matched samples of (2) 601 wives who had husbands coresident at the time of interview, and (3) their 601 coresident husbands.

## **MRFP Scale**

In the initial in-depth interviews, respondents' fertility goals were seen to be driven to some extent by their preference for certain family compositions. The question of which preference tends to drive people's fertility decision making, a preference for a certain number of children or for a certain number of sons, became a subject for research. Based on these initial field experiences, a series of questions was designed to elicit information on the relationship between the respondents' preferences for relatively small family sizes and their preferences for certain numbers of sons and daughters. This series of questions was formalized, and a decision was reached to develop a picture flip chart. Pretests of the flip charts' content, design, and graphics, and in-depth debriefing of respondents were used to refine the instrument for inclusion in a standardized survey. The flip chart was then incorporated into a fertility survey in Chitwan District. This picture flip chart not only helped the interviewers ask a complicated series of questions but also was useful in engaging respondents in the survey questionnaire.

The final version of this flip chart was called the *Balbacha kitab* or the Book of Children. Only respondents with an ideal family size of one, two, or three children (85 percent of the combined sample of married women and their coresident husbands) were tested

using the flip chart. People were asked to choose between a series of two-family pairs: (1) a family that depicts their ideal family size but not their preferred number of sons (or daughters) and (2) a family that satisfies their desire for sons (or daughters) but that exceeds their ideal family size. One of the two families presented to respondents holds ideal family size constant and allows the number of sons (or daughters) to vary in reference to ideal number of sons (or daughters). The second family holds ideal number of sons (or daughters) constant and allows completed family size to vary. Respondents are asked, "Which of these two families would you like to give birth to and raise?" In this manner, respondents were tested for the extent to which they were willing to accept completed family sizes in excess of their ideal in order to satisfy their desire for sons (or daughters); conversely, respondents were tested for the extent to which they were willing to have fewer than their desired number of sons (or daughters) to prevent having births in excess of their ideal family size.

By means of a series of three to six questions, respondents were tested to discover how far they would go to achieve their preferred number of sons (or daughters) at the cost of having an increasingly large family size. For example, respondents with an ideal family size of two and a preference for one son and one daughter were first asked to choose between: (1) a two-child completed family size without their preferred number of sons (a two-girl family) and (2) a family with one more than their ideal family size ( $IFS+1 = 3$ ) that satisfied their desire for one son. If the respondent chose the larger family size, she (or he) was then asked to choose between: (1) a two-girl family and (2) a completed family size twice as large as her ideal family size ( $IFS \times 2 = 4$ ) with her preferred one son. If the respondent once again chose the larger family size, she was then asked to choose between: (1) a two-girl family and (2) a completed family size of six ( $CFS = 6$ ), a hypothetical "large" family size (only 1 percent of all respondents expressed an ideal family size of six or more children) with her preferred one son. An example of choices from the flip chart are shown in Figure 1.

Figure 1: Pages from the survey flip-chart, the Balbacha Kitab or Book of Children, used to determine the extent to which respondents are willing to accept completed family sizes in excess of their ideal family size in order to satisfy their desire for sons or daughters, Nepal, 1993-94.

ZZ IFS without sons	Z Z S IFS + 1 with INS
ZZ	ZZZ

IFS without sons	S IFS x 2 with INS
ZZ IFS without sons	ZZZZZ S CFS = 6 with INS

Z= Female S= Male

IFS = Ideal family size. INS = Ideal number of sons. CFS = Completed family size.

Note: The three sets of pictures above are used to test respondents with a reported ideal family size of two children (IFS = 2) with one son (INS = 1) and one daughter (IND = 1). Respondents are asked to choose between their IFS without sons and increasingly large family sizes (IFS + 1, IFS X 2, and CFS = 6) with their desired one son. Respondents are then presented with a similar set of questions asking them to choose between their IFS without daughters and larger family sizes (IFS + 1, IFS X 2 and CFS = 6) with their desired one daughter.

As mentioned earlier, the MRFP methodology did not assign in advance an assumed preference for sons. Therefore, the same respondent was tested to discover the extent to which she (or he) was willing to go to achieve her preferred number of daughters. A similar series of three questions were asked, although in this series the respondent was always given the choice between a two-son family and a larger family (IFS + 1, then IFS x 2, then CFS = 6) that contained her desired one daughter.

A variant of these questions was also asked of respondents. Previous questions forced respondents to choose between their ideal family size with no sons and larger family sizes. Admittedly, this is an extreme test because, in situations of strong son preference, some respondents find it difficult to consider a family without sons. Therefore, a second series of questions offered respondents their ideal family size with one fewer than their desired number of sons. Respondents were asked to choose between: (1) a family that depicted their ideal family size but that contained one fewer than their ideal number of sons (INS - 1) or daughters (IND - 1), and (2) completed family sizes that successively exceeded their ideal family size (IFS + 1, IFS x 2, and CFS = 6) with their ideal number of sons (or daughters).

## Analyses of Data

The analyses here that use data produced by the MRFP methodology primarily involve comparisons between sample proportions, for example comparisons between the proportions of wives and husbands choosing a particular completed family size with sons in excess of their IFS without sons. Because all questions comprising the MRFP Scale involve a choice between two families, the data conform to a binomial distribution. In the presentations of data from the MRFP Scale, comparisons between groups are made by tests of the  $H_0: P_1 = P_2$  for binomially distributed response variables, where

$$Z = (P_1 - P_2) / \sqrt{\{P_1(1 - P_1)/N_1 + P_2(1 - P_2)/N_2\}}$$

and where the distribution of the test statistic is approximately standard normal, and where  $\alpha = 0.05$ .

This test overlooks a dependence in the sample between wives and their coresident husbands. However, when the results among a sub-sample of matched husband-wife pairs were compared with those among a sub-sample of singleton spouses (couples where one spouse did not complete the Book of Children), little difference was found between the two. Furthermore, the results among both sub-samples of matched husband-wife pairs and singleton spouses support the main findings of the study. The similarity between the findings from matched husband-wife pairs and singleton spouses justifies the presentation of the pooled data and allows use of the test for differences in proportions of binomially distributed response variables described above. [C]

Some implicit overlap exists in the MRFP Scale between the (IFS + 1), (IFS X 2), and (CFS = 6) completed family-size options presented to respondents; for example, when IFS is equal to 1, (IFS + 1) and (IFS X 2) both equal 2. Similar overlaps occur between groups that expressed an ideal family size of three children. Here, the overlap occurs between (IFS X 2) and (CFS = 6) completed-family-size options. Therefore, within the context of the analyses presented here, comparisons between groups are made within each family-size option-(IFS +1), (IFS X 2), and (CFS = 6).

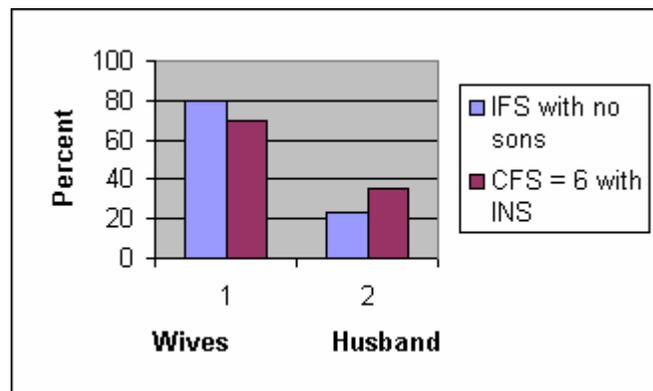
## Results

### *Measures of Fertility Preferences*

Direct data on the preferred sex composition and ideal number of children were collected from married women and their coresident husbands. All respondents were asked a commonly used question about ideal family size: "If you could choose for yourself, how many children would you like to have in your lifetime?" The wording and translation of this question conformed to the question included on the NFHS questionnaire in Nepal. This question was followed by two more: "How many sons would you like to have?" and "How many daughters would you like to have?" For these three survey questions, a response category "other" was provided for nonnumeric responses (for example, "up to God"), and interviewers were instructed to write the exact responses in spaces provided on the interview form. In this report, these questions are referred to as ideal family size (IFS), ideal number of sons (INS), and ideal number of daughters (IND).

Figure 2 Percentage distributions of ideal family size, ideal number of sons, and ideal number of daughters, among coresident wives and husbands, Nepal, 1993-94]

### Sheet3



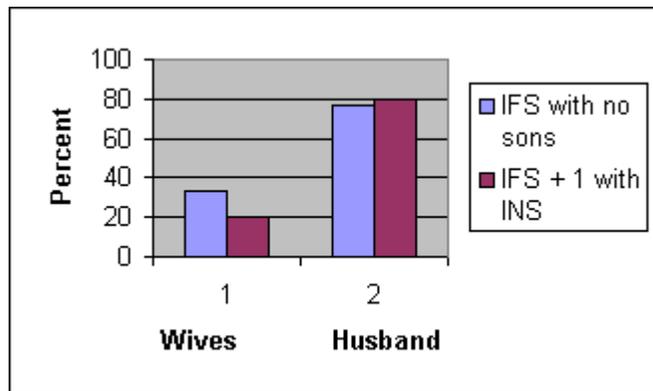
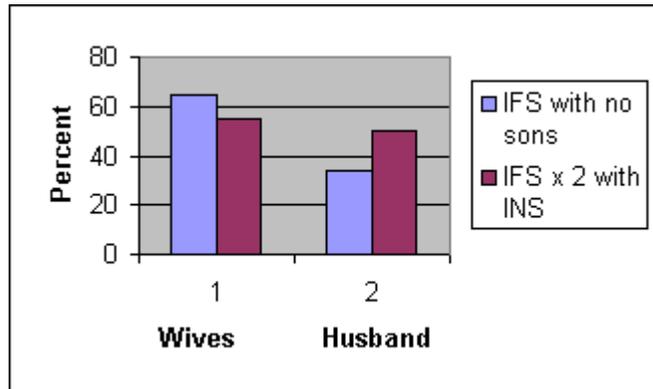


Figure 2 describes the percentage distributions of ideal family size, ideal number of sons, and ideal number of daughters among coresident wives and husbands. Preferences regarding ideal family size are remarkably uniform, and indicate a preference for smaller family sizes, a recent occurrence in Nepal, which has had relatively little impact to date on continuing high fertility rates (NIV joint Ventures, 1993). Distributions with regard to ideal family size for coresident wives and husbands are statistically indistinguishable. More than 50 percent of the sample responded that their ideal family size was two children and more than 30 percent said their ideal family size was three children. The next-largest group was composed of respondents with an ideal family size of four children, embodying 10 percent and 13 percent of coresident wives and husbands, respectively. All other family-size categories contained either fewer than 3 percent of respondents or a combined 6 percent of the overall sample. Nonnumeric responses to the question on ideal family size were infrequent among women respondents and were not given at all by male respondents. [D]

One way to observe the prevalence of desires for certain numbers of children of one sex is to compare the percentage distributions of ideal number of sons and ideal number of daughters. The vast majority of respondents expressed a desire for either one or two sons. Responses were nearly equally divided between a preference for one son and a preference for two sons, although there is some indication that coresident wives and husbands may prefer two-son families over one-son families. The majority of respondents (74 percent of coresident wives and 71 percent of coresident husbands) appear to want at least one daughter, although they rarely want more than one. Notably, 14 percent of both coresident wives and husbands favored families with no daughters at all, whereas fewer than 1 percent of coresident wives and no coresident husbands preferred family compositions with no sons. Overall, no significant difference was found between coresident wives and husbands regarding ideal number of sons or of daughters.

The extent to which certain family compositions underlie stated ideal-family-size preferences can be observed by looking at the percentage distribution of ideal family size and sex composition, as shown in Table 1. Once again, a remarkably consistent pattern emerges. Differences between the distribution for coresident wives and husbands are statistically insignificant. Responses cluster in two-family composition groups, two-child families with one son and one daughter (40 percent of the overall sample of married women and coresident husbands), and three-child families with two sons and one daughter (29 percent of the overall sample). The next two most prevalent preferred family compositions are four-child families with two sons and two daughters (10 percent of the overall sample), and two-child families with two sons (9 percent of the overall sample).

An additional way to detect the extent of preference for children of one sex over the other is to calculate sex-preference ratios (ideal number of sons to ideal number of daughters) by ideal family size. These ratios are presented in Table 2 (Table 2 is missing).. All ratio are greater than one, indicating a preference for sons over daughters irrespective of ideal family size. Among respondents with ideal family sizes of two, three, or four children (categories with the greatest weight of respondents), sex-preference ratios range from 1.14 to 1.94 among coresident women and 1.11 to 1.91 among coresident men. However, the magnitude of the sex-preference ratio is clearly dependent upon ideal family size. Note that ideal family sizes of even numbers are characterized by lower ratios, while ideal family sizes of odd numbers are characterized by higher ratios. Respondents with a preference for odd-numbered family sizes often want the odd child to be a boy, particularly if they express a preference for a one-child family. Respondents with preferences for even-numbered family sizes are more likely to desire a balanced family, with an equal number of sons and daughters, although the ratios for these categories continue to register a substantial preference for sons.

Finally, average sex-preference ratios were calculated for entire samples. Standardized sex-preference ratios were also calculated, using the distribution of ideal family size for the combined sample of coresident women and husbands. This standardization allows direct comparison across groups, adjusting for differences in the distributions of ideal family size. The observed sex-p reference ratios are relatively high compared with similar ratios calculated from other countries using DHS data (Arnold, 1991), indicating that son preference is indeed strong in Chitwan. Overall, for every daughter that is desired, coresident wives would like 1.59 sons, and coresident husbands would like 1.51 sons. Once again, little difference is seen between wives and husbands in the sample.

*Results of the MRFP Scale*

The MRFP Scale was administered to all respondents who expressed an ideal family size of one, two, or three children, a group of respondents who, from the start, preferred to have relatively small families. These respondents were divided into groups according to their ideal-family-size and sex-composition preferences. Respondents were then asked a series of questions that pertained to their particular ideal family size and sex composition. In the graphics presented in Figures 3, 4, and 5, data have been collapsed over ideal-family-size and sex-composition groups so that comparisons can be drawn more easily.

Figure 3 Percentage of coresident wives and husbands who chose completed family sizes in excess of their ideal family size in order to ensure an ideal number of sons, compared with those who chose their ideal family size with no sons, Nepal, 1993-94.



In this and following figures, IFS = ideal family size; INS = ideal number of sons; and CFS = completed family size.

**Note :** The figure includes respondents whose IFS = 1, 2, or 3 and whose INS  $\geq$  1.]

Figure 3 presents the findings of the MRFP Scale with regard to the relationship between ideal family size and ideal number of sons. In this figure, all respondents choose between: (1) a completed family size that conforms to their reported ideal family size, without any sons, and (2) completed family sizes increasingly in excess of their ideal family size (IFS + 1, IFS X 2, and CFS = 6) that include their ideal number of sons. For the purposes of comparison, only data from coresident wives and husbands are presented. Although data were collected from all currently married women in the sample, the distributions of responses for all currently married women and for coresident wives are similar, and support the major findings of the study. In all further presentations of the MRFP Scale findings, only data from coresident wives and husbands are presented.

In Figure 3, many respondents clearly express a willingness to accept a family size in excess of their ideal in order to satisfy their desire for sons. The first graph in Figure 3 shows that high proportions of respondents, 66 percent of coresident wives and 79 percent of coresident husbands, chose a family size of (IFS + 1) children over a family with no sons. In the next graph, we see that 34 percent of coresident wives and 47 percent of coresident husbands chose a family of (IFS X 2) children over a family with no sons. In the graph at the bottom of the page, we see the percentages of coresident wives and their husbands choosing a completed family size of six children over their ideal family size with no sons. Given that all respondents in Figure 3 had ideal-family-size preferences of one, two, or three children, the percentages of respondents who chose our hypothetical "large family" (CFS = 6) are substantial. In fact, 21 percent of coresident wives and 33 percent of coresident husbands chose a family size of (CFS = 6) children over a family with no sons. These findings indicate that sex-composition preferences override many people's family-size preferences a substantial amount of the time, although their willingness to accept larger family sizes does decrease as completed family size increases.

In an additional analysis not presented here, the results shown in Figure 3 were examined when stratified into ideal-family-size and sex-composition categories (for instance, an example of an ideal-family-size and sex-composition group is two children, one son and one daughter). The results within each family-size and sex-composition group were highly consistent with the results presented in Figure 3. However, some additional findings should be noted. Respondents with a preference for two sons were more likely to accept families in excess of their reported ideal family size than were respondents with a preference for one son. Respondents who said they preferred all-son

families were least likely to sacrifice sons in order to achieve their ideal family size. Finally, respondents who expressed an initial preference for a balanced family composition were most likely to accept their ideal family size in the absence of their preferred number of sons.

The results presented in Figure 3 show differences between husbands and wives that are statistically significant for all completed-family-size options. [E] The results of this comparison of data from wives and husbands are strikingly consistent across ideal-family-size and sex-composition groups (not shown). In all instances, a higher proportion of husbands than wives chose completed families of (IFS + 1), (IFS X 2), and (CFS = 6) with sons over their IFS without sons. These findings clearly indicate that although husbands and wives may initially prefer similar family sizes and sex compositions, husbands are more inclined to exceed their family-size goals in order to have sons. Moreover, these data suggest that where husbands' preferences tend to prevail over wives, larger families may result. Clearly, the MRFP Scale reveals greater differences between wives and husbands than did the more simplistic but commonly used, single-response measures of fertility preferences that may be more heavily influenced by normative expectations.

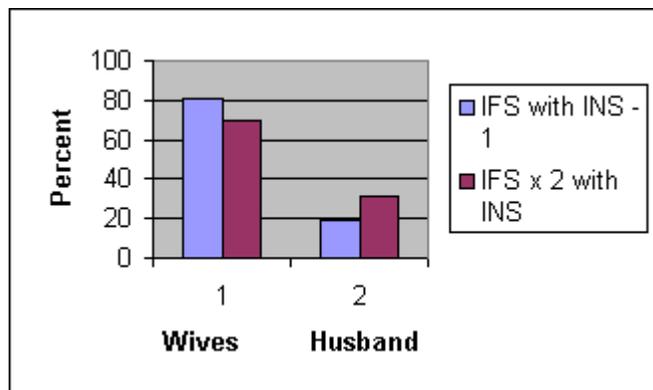
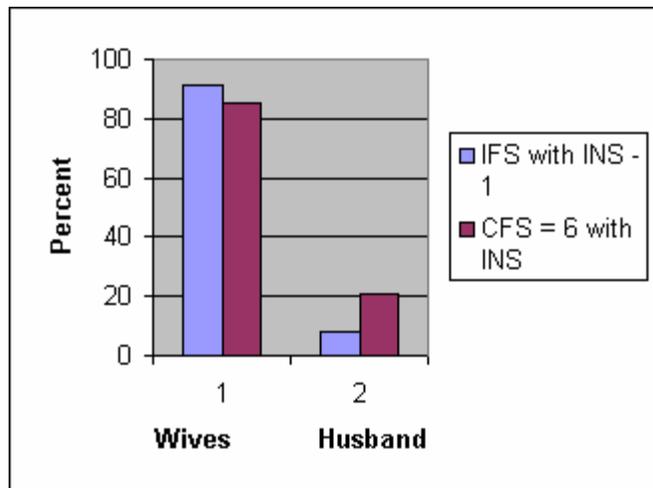
Respondents that were most likely to favor larger family sizes to keep their ideal number of sons intact were: (1) respondents who stated a preference for family compositions with two or more sons, and (2) husbands. Respondents least likely to choose families larger than their ideal were: (1) respondents with an initial stated preference for a balanced family of one son and one daughter, and (2) wives.

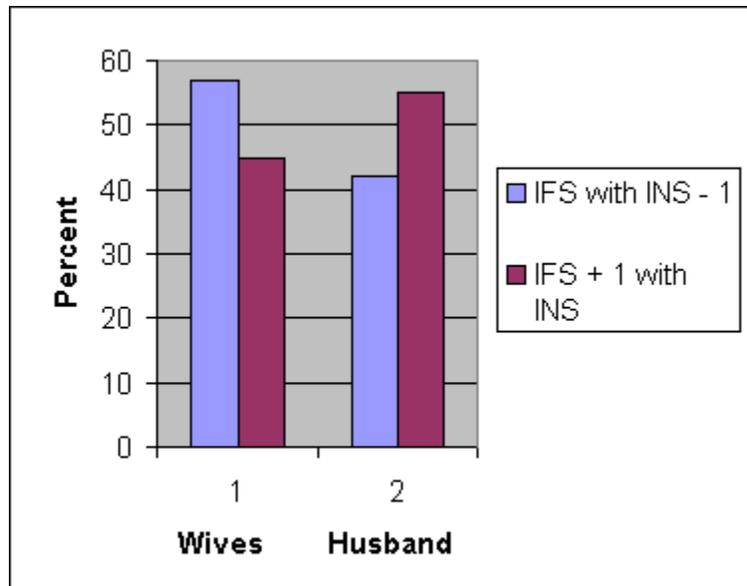
### *Additional Comparisons*

The proportions presented in Figure 3 represent respondents' choices between families in excess of their ideal family size over families with no sons. This is clearly an extreme test of how far respondents will go to achieve their desired number of sons, given the option of no sons. A less extreme option would be to offer respondents the opportunity to choose between increasingly large family sizes and one fewer than their ideal number of sons (INS - 1). Figures 3 and 4 present comparable data from coresident wives and husbands with regard to: (1) the total proportion of married women and their coresident husbands who chose families in excess of their ideal family size (IFS + 1, IFS X 2, CFS = 6) including their ideal number of sons versus their ideal family size with no sons, and (2) the total proportion who chose families in excess of their ideal family size (IFS + 1, IFS X 2, CFS = 6) including their ideal number of sons versus their ideal family size with one fewer than their ideal number of sons (INS - 1).

**Figure 4** Percentage of coresident wives and husbands who chose completed family size in excess of their ideal family size in order to ensure an ideal number of sons, compared with those who chose their ideal family size with one fewer than their ideal number of sons (INS-1), Nepal 1993-94

**Sheet 1**





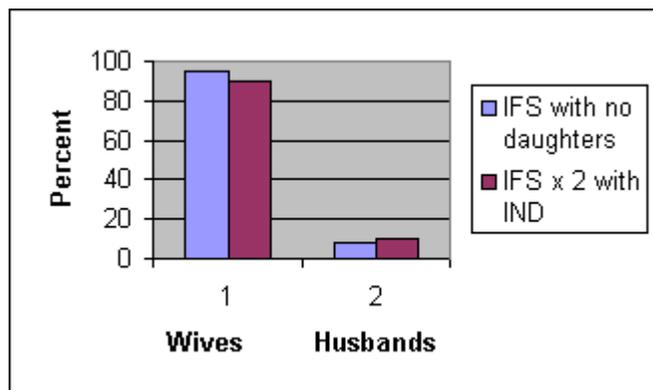
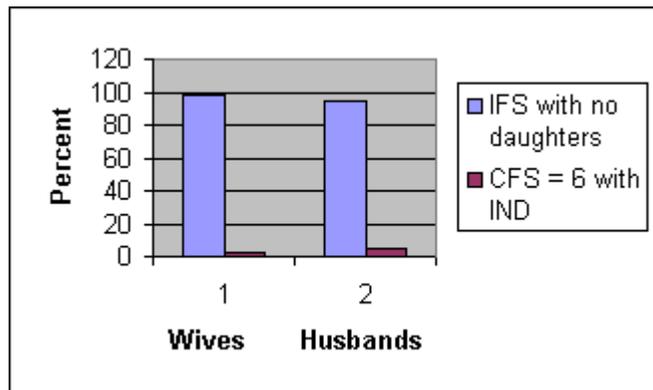
**Note :** The figure includes respondents whose IFS = 1, 2, or 3 and whose  $INS \geq 1$ .]

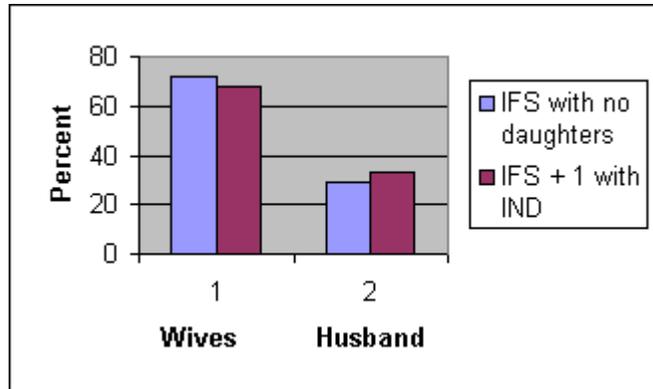
To a large extent, the observations from Figure 3 hold true for [Figure 4](#). Across the three graphs presented for Figure 4, we see that sizable proportions of wives and husbands chose completed family sizes in excess of their ideal family size with one fewer than their ideal number of sons. However, the proportions of respondents choosing the larger family-size options do, indeed, decrease between Figures 3 and 4. When given the opportunity to sacrifice one desired son rather than accept larger completed family sizes, a significant proportion of respondents choose their IFS with (INS - 1). All comparisons between Figure 3 and Figure 4 within husband-and-wife samples are statistically significant. However, more wives are willing to give up one son in the name of a smaller completed family size than are husbands. As in Figure 3, the differences between husbands and wives are statistically significant for all completed-family-size options. [F]

As mentioned earlier, ethnographic and demographic studies in Nepal remind us that even in a context with a strong preference for sons, people do, in fact, commonly state a preference for at least one daughter ([Karki, 1982](#)). This desire may bolster higher levels of fertility if couples continue childbearing until they achieve their desired number of daughters. As has been noted, the MRFP Scale asks equivalent questions to test for son and daughter preference. [Figure 5](#) presents the total proportions of respondents who chose families in excess of their IFS to have their desired number of daughters, collapsed across ideal-family-size groups.

**Figure 5** Percentage of coresident wives and husbands who chose completed family size in excess of their ideal family size in order to ensure their ideal number of daughters (IND), compared with those who chose their ideal family size with no daughters, Nepal, 1993-94.

**Sheet3**





Note: This figure includes respondents whose IFS = 1, 2, or 3 and whose IND  $\geq 1$ .]

As shown in Figure 5, most respondents are clearly not willing to have their desired number of daughters at the cost of an increasingly large completed family size. Fewer than one-third of respondents chose a completed family size of (IFS + 1) with their desired number of daughters over their ideal family size with no daughters. This proportion is low in comparison with the 66 percent of coresident wives and 79 percent of coresident husbands that chose a family size of (IFS + 1) to have their desired number of sons (see Figure 3). All comparisons between Figures 3 and 5 within husband-and-wife samples are statistically significant. Moreover, the proportion of respondents who chose families larger than their ideal in order to have their ideal number of daughters rapidly decreases as completed family size is increased from (IFS X 2) to (CFS = 6). Only 6 percent of coresident wives and 9 percent of coresident husbands chose families of (IFS X 2) children over their ideal family size with no daughters. Even fewer, 4 percent of coresident wives and 5 percent of coresident husbands, will accept (CFS=6) over their ideal family size with no daughters. When faced with family sizes in excess of their ideal, the vast majority of respondents do not appear to be daunted by the prospect of having no daughters. Finally, wives and husbands seem to be similar in their willingness to pursue the births of daughters, although the data suggest that husbands may be slightly more willing to accept larger family sizes. However, within the confines of the relatively small sample size, no significant differences between husbands and wives emerge. [G]

### *Sterilization and the Sex Composition of Living Children*

Thus far, this report has addressed the relationships between various measures of fertility-related attitudes. A consideration of data that relate actual family compositions (that is, living children and sons) to fertility-related behaviors is also useful.

Sterilization is by far the most common method of family planning both in Nepal and in the sample considered here (73 percent of contraceptive users). Clearly, a couple's decision to be sterilized precludes the birth of additional sons or daughters. Therefore, the family size and sex composition that exist when a decision is made to terminate childbearing provide some indication that desired family size has been reached or that the desire for sons and daughters has been satisfied. Because attitudinal data indicated so clearly that a desire for a certain number of sons underlies stated ideal-family-size preferences, looking at these data by the number of living children and living sons is appropriate.

In Table 3, (Table 3 is missing) the pattern that emerges is remarkably consistent. The proportion of couples having sterilization operations increases monotonically with regard to their number of living sons at the time of the sterilization operation, across all completed family sizes except one-child families. This proportion increases even in situations where the couples have no living daughters, for example in "two children, two sons" and "three children, three sons" categories. Despite the absence of even one living daughter, 60 percent of respondents with two sons only and 84 percent of respondents with three sons only chose to be sterilized. Summing across all living children categories, 22 percent of coresident couples with one son have been sterilized, whereas 49 percent of couples with two sons have been sterilized. Within this sample, it appears that although a preference for only one son is not uncommon, couples are more likely to have had sterilization operations when they have two living sons.

## **Conclusion**

A substantial body of literature suggests that peoples' fertility-related attitudes affect their family planning practice and, ultimately, their fertility (Bongaarts, 1991; Freedman et al, 1975; Lightbourne, 1985). More important, our understanding of fertility preferences in Nepal, and other countries in South Asia, could be misleading if a pervasive and strong preference for sons is not taken into account. The mechanism linking son preference to fertility and contraceptive use is logical: A strong preference for children of one sex can be a constraint on fertility decline if couples who have achieved their preferred family size continue childbearing until they have achieved their desired number of sons or daughters. A test of this hypothesis now in South Asia is timely, because recent evidence suggests that fertility is coming increasingly under conscious control by means of effective family planning methods. The findings of this study clearly indicate that a preference for one and sometimes two sons is a prevalent

consideration at work in couples' fertility decision making in Nepal, a country that bears many similarities to other countries in South Asia.

However, the extent to which son preference can affect fertility is limited. In any given population, many couples' desires for sons are fulfilled by biological chance, a circumstance dependent on two factors: the number of sons desired and the number of chances the couple has to fulfill that desire. Where smaller completed family sizes are seen as desirable, the number of chances people have to achieve their desired number of sons is also smaller. Therefore, the relationship between son preference and fertility outcomes is further affected by two related factors: the strength of a couple's motivation for sons (or the extent to which individuals are willing to adjust the number of sons they want in the circumstance of an increasing number of births), and the extent to which women's fertility is subject to effective means of regulation. For this reason, the effects on fertility of a strong preference for children of one sex are exacerbated in social environments where both contraceptive use and smaller family sizes are increasingly popular. In these situations, son preference has the potential to bolster higher rates of fertility and lower rates of contraceptive use (Chowdury and Bairagi, 1990; Nag, 1991).

Recent theoretical developments in the demographic community stress couple dynamics and the role of men in fertility decision making. These developments are often at odds with the women-only fertility surveys that have dominated the field for the past few decades (Lloyd, 1993; Mason and Taj, 1987). Frequently the argument has been made that, because a substantial level of agreement often exists between wives and husbands with regard to factors that affect fertility, the marginal gain stemming from interviews with men does not justify the cost of their inclusion in fertility studies. However, where women and men are likely to have differing attitudes toward contraceptive use and family size, and especially in situations where one sex wields considerable power over the other, a theoretical model that incorporates the attitudes of both can make a substantial contribution. A secondary purpose of this study, therefore, was to compare the fertility-related attitudes of wives and their husbands using a more sophisticated methodology than is currently employed in large-scale, multinational studies such as the DHS.

Where should differences between women and men be expected to occur? The literature states that men place a greater emphasis on having sons than do their wives. This study clarifies that this difference depends upon relative differences in the numbers of sons desired by wives and husbands and the extent to which individuals are willing to increase their family's size to have those sons. Descriptive comparisons of single-response measures of fertility preferences, ideal family size and ideal number of sons and daughters, did not result here in statistically significant differences between

wives' and husbands' responses. However, data produced through the use of the MRFP Scale consistently indicated such differences. Husbands systematically express a willingness to accept larger completed family sizes than their wives do to secure their desired number of sons. This effect was seen across all ideal-family-size and sex-composition-preference groups. When administered the Book of Children, clear differences emerge between husbands and wives that were obscured by the more commonly used but simplistic, single-response fertility-preference measures, such as ideal family size and ideal number of sons and daughters. Analyses of sterilization acceptors by their number of living children and sons added some support to the findings from the MRFP Scale. Additional tests of the effects of living children, living sons, and living daughters on the adoption of contraception await further analysis of the survey data.

## Notes

[A] The Nepal Fertility, Family Planning and Health Survey used a questionnaire similar to that of the DHS, with minor modifications. The NFHS also received technical assistance from DHS.

[B] The survey sample is composed of a multistage cluster sample of Chitwan District. Within this district, a random sample of 20 clusters (or wards, geographic and administrative units in Nepal) was selected. The survey team block-listed all households in each cluster. Within each cluster, a sample of 40 households was then selected using a random start and a sampling interval (the total number of households in the ward divided by 40). All eligible ever-married women (N = 801) and their coresident husbands (N = 601) were interviewed within each sampled household. Coresidence was defined at the time of interview. Of the 200 ever-married women without coresident husbands, 32 were widowed or divorced at the time of the survey, 163 women had husbands who were not living at home at the time of the interview (the majority of cases involved temporary labor migration), and the remaining five husbands were absent when the interview team visited.

[C] These tests overlook that the samples of wives and husbands are dependent because they are, in fact, married. Moreover, comparisons of aggregate measures between samples of wives and husbands may mask differences occurring between marital partners that have the potential to influence couples' fertility behavior. Differences between married wives and husbands can be tested for by using McNemar's test (Agresti, 1990). This test was applied to the universe of matched husband-wife pairs where both spouses have an ideal family size of one, two, or three children (N = 434

married couples), and where both spouses were, consequently, administered questions from the Book of Children. The results largely confirm the previous findings. Fairly large proportions of wives and husbands said they were willing to have families in excess of their ideal family size in order to have their preferred number of sons. As in previous tests, husbands are significantly more likely than their wives to accept families in excess of their ideal to satisfy their desire for sons at all three completed-family-size options. These findings from the sub-sample of matched husband-wife pairs were also compared with those of the sub-sample of singleton spouses (or, husbands and wives with an ideal family size of one, two, or three children, but whose spouses expressed an ideal family size of more than three children, and who were, therefore, not administered questions with the Book of Children). Differences between matched husband-wife pairs and singleton spouses, for the most part, failed to achieve statistical significance. Moreover, the results for singleton spouses confirmed the major findings of the study. The similarity between the findings from married couples and those from singleton spouses justifies the presentation of the pooled data from married couples and singleton spouses in Figures 3, 4, and 5.

[D] Only three wives and no husbands (see Table 1) (Table 1 is missing). gave nonnumeric responses (for example, 'up to God') to this question on ideal family size. However, 14 husbands and no wives gave nonnumeric responses (for example, either sex') to the subsequent questions on ideal number of sons or daughters. These respondents were excluded from a series of subsequent survey questions, including those pertaining to the Book of Children, and they were excluded in the analyses.

[E] Differences between husbands and wives were tested using the formula for binomially distributed response variable shown in the text.

[F] See note 5 above.

[G] See note 5 above.

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