Religion and Gender Bias: An Exploration of Hindu-Muslim Differences in Son Preference in India

Extended Abstract

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INTRODUCTION

While the existence of son preference in India is well-known in the literature, a key gap in our understanding of the determinants of son preference relates to potential differences that may exist between religious groups. This paper examines data from two waves of the nationally-representative National Family and Health Survey, 1998-99 and 2005-06 to determine if and to what extent does son preference differ between Hindus and Muslims, the two largest religious groups in India. The analysis of two indicators of son preference is proposed: the first is latent son preference, measured by women's self-reported preferred sex composition of children. For the final paper at PAA, a second indicator is proposed, namely revealed son preference, measured by parity progression ratios, conditional on sex of any previous children, indicating actual son-targeting fertility behaviors. Thus we will be able to compare and contrast differences between Hindus and Muslims related to both latent preferences and actual behaviors.

The preliminary analysis of latent preferences shows that Muslim have lower son preference compared to Hindus. The effect of religion remains strongly significant after controlling for known socioeconomic determinants of son preference, suggesting that religious identity, beliefs and practices especially among the majority Hindus may be a key cultural explanation for the persistence of son preference. Differences between the two groups in terms of parity progression ratios which is proposed to be analyzed will provide an interesting comparison as the effects of higher total fertility seen among Muslim households will be accounted for.

The role of religion as a key cultural explanation for the persistence of son preference may also be a means of understanding the limitations that development programs may have in addressing strong, latent fertility preferences. Policies on the issue of son preference have focused on gender equity information campaigns and laws banning prenatal sex determination and sex-selective abortions, overlooking the deeper roots of son preference in religion-influenced practices and beliefs.

LITERATURE

The presence of a preference for sons over daughters in a number of countries of Asia including India is well-established in the literature (Arnold, Choe, & Roy 1998; Gupta et al. 2003; Clark 2000). The reasoning behind sons being more important and valuable for parents and families than daughters is recognized to lie in the belief that sons are likely to be of more financial and material help than daughters to aging parents. This is so by virtue of living with the parents even after marriage and by bringing in dowry at the time of marriage (Miller 1981; Das Gupta 1984), and by providing greater social status and strength to the family (Caldwell, Reddy and Caldwell 1989).

The history and philosophy of a religion whether stated explicitly in historical scriptures or based on the interpretations of religious leaders, informs and guides social norms and gender relations, and consequently there are important faith- or religion-based utilities that sons are believed to provide a family. Overall in India, the preference for sons relates to customs or social traditions whereby aging parents can expect to live with and be taken of by their sons. Traditionally sons do not set up a separate household after marriage but continue to live with parents, whereas daughters usually leave the parental home and live with the husband and his family after marriage. Research indicates that this patrilineal nature of kinship in India is thus associated with a greater value for sons, but it rigidity in India and other countries of South- and South-East Asia explains the heightened son preference not found in other countries with similar norms of kinship and inheritance (Das Gupta 2009). The authors also explain that village clans that characterized traditional society and many parts of rural India even today, are strictly exogamous where women from other clans who are married into these clans but where men constitute the social order. Sons constitute and continue a family's lineage in such a system, whereas daughters move out of their parental homes upon marriage and get absorbed within their husbands' lineage.

Amongst followers of the Hindu faith, sons are important for parents since a person's soul can reach heaven only if a son and in his absence a grandson or another male member of the family lights the funeral pyre and sons are also believed to be able to enable the souls of deceased parents to achieve salvation by performing various rites such as distributing alms and food to the poor and to the priests (Arnold et al. 1998). Since traditional Hindu marriages involve the payment of a dowry by the bride's family to the groom's, daughters are often associated with high economic costs for the parents (Das Gupta et al. 2003).

Previous research examining fertility differences between Hindus and Muslims has also explored if the higher overall fertility levels of Muslims can be attributed to the lower autonomy or empowerment that Muslim women enjoy in their households, relative to their Hindu counterparts. Women's empowerment and son preference are expected to be inversely related and as a result one may expect son preference to be fairly high among Muslim households (Bhat and Zavier 2005). Previous studies conducting multivariate analysis of ideal family size in 1998-99, and in particular the proportion of sons reported

in the ideal family size, have shown that controlling for standard of living, urban and rural residence, work status, and number of living as well as dead children, Muslims show a lower level of son preference (Bhat and Zavier 2003). On the other hand, marriages for Muslim couples usually involve the paying of a bride price by the bride's family to the groom's family, and tend to be more consanguineous, thereby lower the disadvantageous status of daughters in Muslim families (Nasir and Kalla 2006).

Previous studies have also examined differences in son preferences as a factor in explaining Hindu-Muslim child mortality differences (Bhalotra, Valente, & van Soest 2010; Bhat & Zavier 2005). In particular, the studies hypothesize that the lower child mortality seen in India among Muslim households may be attributed to a lower disadvantageous status of daughters compared to those in Hindu households, compensating for the overall lower socioeconomic status and women's empowerment in Muslim households that may increase mortality relative to Hindus. However, these studies do not find evidence that differences in son preference can explain the lower Muslim child mortality levels. Guillot and Allendorf (2010) explore the issue further and find that girls in Muslim families are discriminated against less than girls in Hindu families if the girl is the first child or when the family already has sons. On the other hand, if the family already has daughters, girls are discriminated against more in Muslim families than in Hindu families. The authors conclude that while son preference differences can be ruled out in the explanation of Hindu-Muslim mortality differentials, the idea that son preference may be lower among Muslim households needs to be understood better.

From an economic perspective, sex preference for children may relate to parents' perceived utility from children as well as returns from human capital investments in children. Rosenzweig and Schultz (1982) study intra-family resource allocation in rural India, and find that parents seek to maximize household utility when making resource allocation decisions and investments in children, and therefore sons who are perceived to have greater income-earning potential receive a proportionately greater share of family resources. Previous studies show that higher expected earnings are likely to motivate greater human capital investments in daughters relative to sons, and that intra-household equality brought on by working women's contribution to household income may equalize expenditures on sons and daughters (Behrman et al 1999; Kingdon 2005). Son preference differences between Hindu and Muslim may thus relate to differences between the two groups in terms of wealth, as well as women's labor force participation.

Research suggests that women's autonomy plays a role in their desired family size, but the relationship with the sex preference of children is less clear. In a study of total fertility differences among religious groups in India, Bhat and Zavier (2005) propose that one hypothesis regarding the relatively higher fertility of Muslim women compared to Hindu women is that in general, Muslim women enjoy lower levels of educational and financial achievements and have less of a say in household decision-making and healthcare utilization compared to Hindu women. When the authors examine if this hypothesis extends to son preference as well, they find that while women's autonomy

affects their total fertility, there is no evidence to indicate that lower levels of autonomy among Muslim women affects a preference for sons or daughters.

Overall therefore, it is not clear if and to what extent does son preference vary between Hindus and Muslims. While previous studies shed important light on the reasons for son preference among Hindus and Muslims, they are inconclusive regarding the magnitude and direction of differences between them, a knowledge gap this study seeks to fill. The specific aim of this paper is to describe and analyze Hindu-Muslim differences in self-reported ideal number of children, using data from the National Family and Health Surveys of 1998-99 and 2004-05. Based on the known differences between Hindu and Muslim households in marriage and family formation, the hypothesis is that while Muslim women on average have lower levels of son preference.

DATA

This study uses data from two waves of the women's questionnaire of the Demographic and Health Surveys in India, called the National Family Health Surveys (NFHS) conducted in 1998-99 and 2005-06 by the International Institute of Population Sciences, Mumbai. Both surveys are nationally representative and interviewed women in the age-group of 15-49 years. NFHS-II (1998-99) interviewed a total of 89,199 ever-married women across all 26 states, whereas NFHS-III (2005-06) interviewed 124,385 women in all 29 states. I pool data from the two waves, restricting the sample from NFHS-III to ever-married women for the purpose of uniformity with NFHS-II. The sample is limited to women who report their religion as Hindu or as Muslim, for this is the key difference this study seeks to examine, and to women who reported being *de jure* residents of the household units sampled. The final analytical sample for this study includes 157,050 women, comprising of 76,593 women in NFHS-II and 80,457 women in NFHS-III. All regression models control for the survey wave.

Dependent Variable 1

The presence of son preference can be discerned in a number of ways, and the first dependent variable this paper assesses is women's self-reported preference for an ideal number and sex composition of children, which is measured in the NFHS by the question, "If you could back in time to the time you did not have any children and choose exactly the number of children to have in your own life, how many would that be?" Women who gave a numerical response to this question were asked a follow-up question: "How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?" In NFHS-II, 94.7% of Hindu and Muslim women gave a numerical response to the survey question, whereas the numerical response rate in NFHS-III was even higher at 97.4%. Only women with a numerical response are included in the final analytical sample.

The dependent variable related to the sex preference for children is coded as an ordinal categorical variable with three categories: son preference: more sons preferred to daughters, daughter preference: more daughters preferred to sons, and no preference. The third category of no preference is calculated from the number of women who reported no preference for sons or for daughters for their ideal number of children, combined with women who reported an even number of ideal children and then an equal number of sons and daughters. Conceptually therefore we operationalize son preference as women reporting that of their ideal number of children, they prefer a majority of sons. This approach is consistent with previous literature on desired fertility and son preference (Lin 2009; Chung and Das Gupta 2007; Pande and Astone 2007; Bhat and Zavier 2003). The advantage of coding the dependent variable with three categories is that we maximize the information available related to women's preference. Related to our hypothesis about Muslim women having lower son preference compared to Hindu women, we are able to ask additionally whether Muslim women would have lower son preference because they have greater preference for daughters or because they are more likely to be indifferent between sons and daughters.

A limitation of using desired fertility as a dependent variable is that it is likely to have been affected by ex-post rationalization (Pritchett 1994). If women's current actual family size is greater than their ideal desired level, then they may adjust the average ideal number of children upwards so that their existing children do not appear to be "undesired". Women may also desire to have more children of a particular sex if their previous children of that sex have died, or on the other hand want fewer children of a particular sex if they associate that sex with a greater likelihood of mortality. Women in larger families in general may also be inclined to go either way with their own desired children – perhaps associating children with additional responsibilities and demands on household resources or on the other hand, being more receptive to the idea of a number of children. In order to account for these effects, the analysis includes control variables for the existing number of children, number of deceased sons and daughters and the woman's family size.

Dependent Variable 2

The manifestation of son preference in actual son-targeting fertility behaviors can be studied using parity progression ratios, or the number of women with a particular number of children – differentiated by number of sons and daughters – who go on to have another child. In the absence of a complete birth registration system in India, and the absence of any data by religion in the Sample Registration System, I rely on the NFHS for constructing birth histories of all children born during 1990-1998 from the NFHS-II and 1995-2005 from NFHS-III. Following the methodology adopted by Guilmoto (2012), I compute son preference as the ratio of the parity progression ratio without a previous son to the parity progression ratio with a previous son. I propose to compute these ratios by ratio and separately for Hindu and Muslim women.

Independent Variables

The main explanatory variable of interest is whether the women's self-reported religion is Hindu or Muslim. The distribution of Hindus and Muslims varies across India. Hindus are a majority group in all but five states. Of these, Hindus constitute 37% and Muslims are the majority at 60% in Jammu & Kashmir, while Punjab has 43.3% Hindus with Sikhs being the majority religious group at 53%. Three states in the North-east of India, Meghalaya, Mizoram, and Nagaland have a majority Christian population, ranging from 66% in Meghalaya to 93.5% in Mizoram. We can speculate that the concentration of a any particular religious group visavis others may affect the fertility preferences of its members. This may be particularly true in some states like Punjab and Haryana in the North, and Gujarat and Maharashtra in the West, which have experienced a sharper decline in the child sex ratios in the past three decades. A third factor that may affect son preference differentially is the overall total fertility rate, and significant differences in TFR can be seen between states. In 1998-99, all four states of South India with the exception of Andhra Pradesh had reached TFR levels below the replacement level of 2.1 children per woman (International Institute of Population Sciences and ORC Macro 2000). By 2005-06, states in West India with the exception of Gujarat had also reached below replacement-level fertility (International Institute of Population Sciences and Macro International 2007).

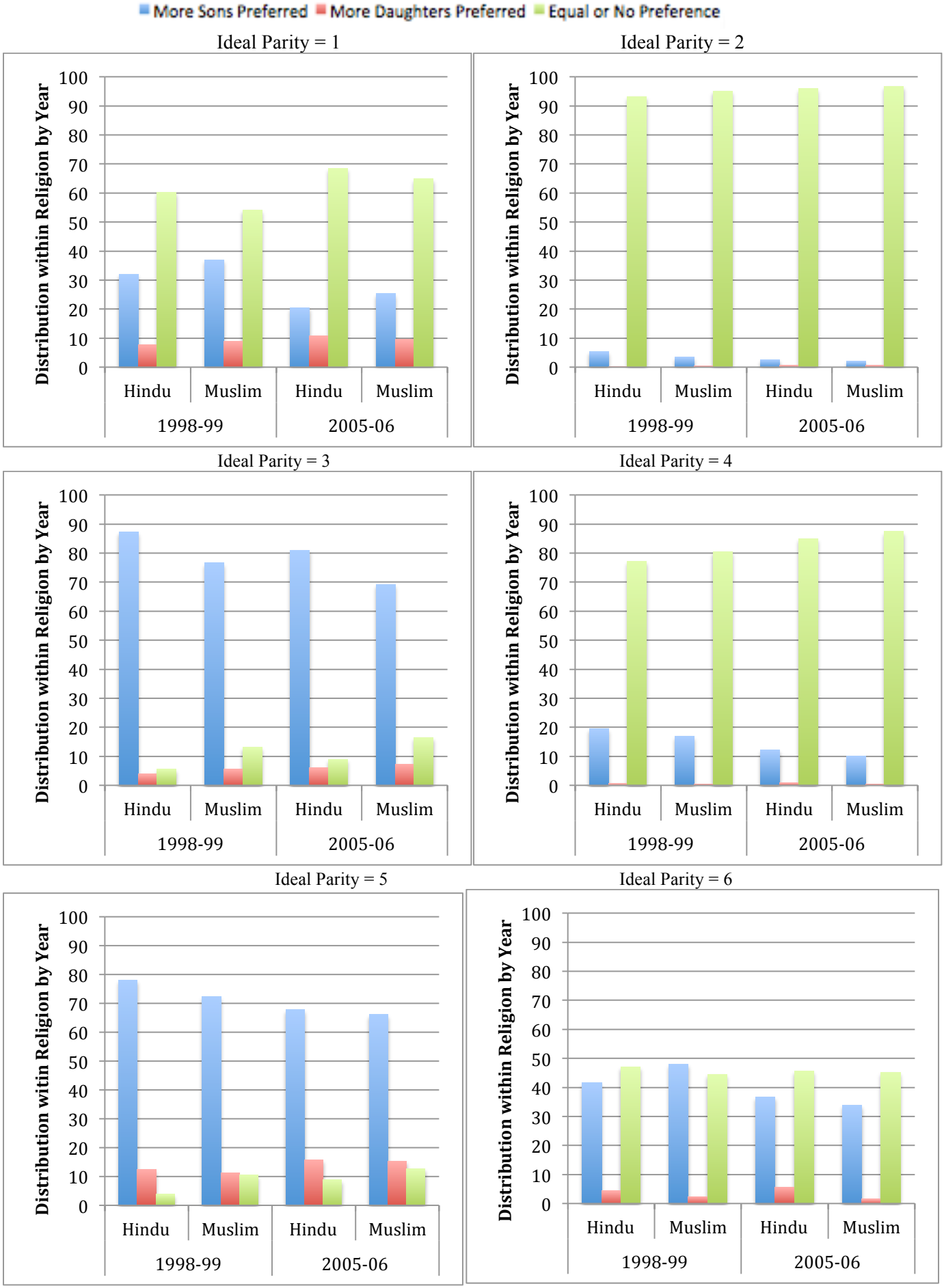
In order therefore to account for unobserved state-level clustering of fertility preferences, I perform state-fixed effects analysis. Any analysis without accounting for state-level clustering would lead to results where standard errors would be too low, and *p*-values would be too low leading to a greater likelihood of committing a Type-1 error.

Current Parity: Previous research has shown that the existing number of sons has a strong positive association with the preferred number of sons whereas the presence of a daughter marginally reduces the reported preference for sons (Bhat and Zavier 2003). We have also noted earlier that the number and sex composition of children already born may influence women's responses related to their ideal parity. In order to control for differences due to this, I control for the number of sons and daughters ever born to the mother. Analysis conducted with existing children classified into two categories – deceased and surviving – does not add further explanatory power to the key explanatory variables of interest.

In addition, I also account for educational achievement, household wealth, women's empowerment indicators found in the data, access to media, along with sociodemographic background characteristics such as age, age at marriage, family size, urban/rural residence.

Methods

Figure 1: Sex Preference for Ideal No. of Children reported by Women aged 15-49 in India, 1998-99 and 2005-06.



For the preferred sex composition of children, the dependent variable is coded as a categorical variable with 3 categories, son preference, daughter preference and no preference, I use multinomial logistic regression comparing women with son preference, and women with daughter preference to the reference category of women with no preference. This specification will allow us to determine not only if Hindu and Muslim women differ in terms of son preference but also allow us to fully utilize the variance in sex preference of children by comparing son and daughter preference to the large category of women reporting no or equal preference at ideal parities of one, two, and four children.

RESULTS

Preferred Sex Composition of Children

Multinomial logistic regression models yield conditional odds of son preference among Muslim women compared to Hindu women across all ideal parities. Our models confirm the hypothesis that Muslims have lower levels of son preference than Hindus. The effects are statistically significant for our full sample not stratified by ideal parity, as well as ideal parities of 2-4, which represents about 90% of the total sample, remaining robust across the models, and even after the inclusion of sociodemographic, schooling, wealth, media exposure and empowerment covariates.

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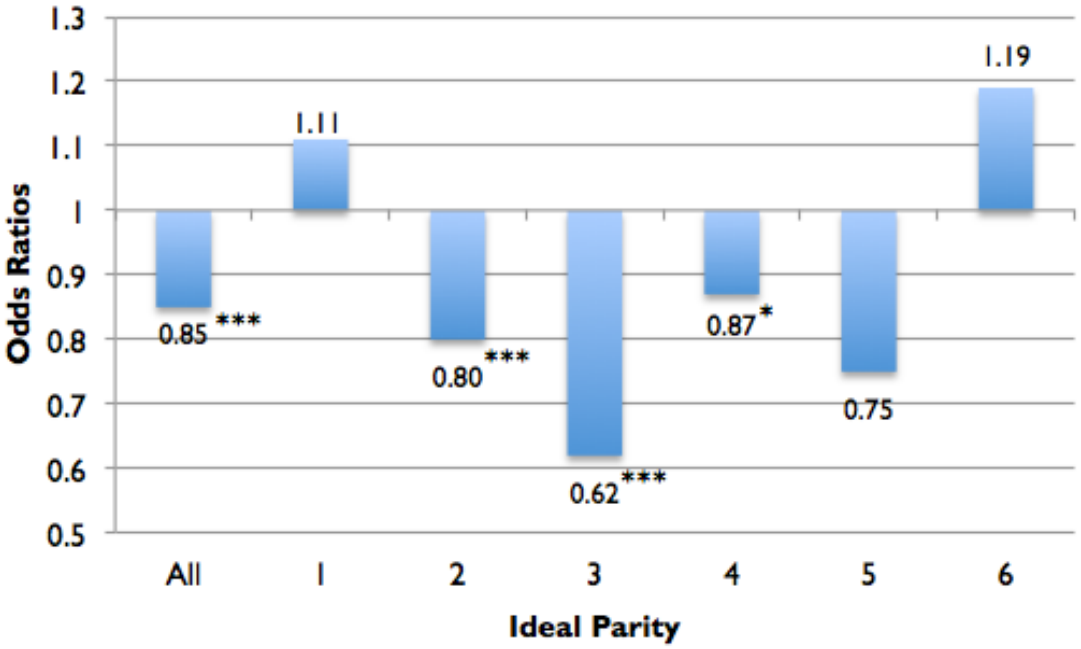
Figure 2: Results of Multinomial Logistic Regression Models Predicting Son Preference for Muslim Women in India, 1998-99 and 2005-06



Note: Figures Indicate Conditional Odds Ratios. Reference Category: Hindu Women
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$
Source: National Family and Health Survey 1998-99, 2005-06
Note: Results of Final State-fixed Effects Models. Models control for age, family size, number of sons and daughters ever born, education, household wealth, employment status, urban residence, media exposure, household empowerment, survey wave, and (for the complete model) total ideal number of children.

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