Exploring the Influence of Gender Preference on Fertility, Demographic Factors, and Contraceptive Practices in Delhi's Khatik Community

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Abstract

Prospective and current parents often possess preferences concerning the gender of their offspring, reflecting a broad spectrum of inclinations. This study explores the patterns of gender preferences among women from the Khatik community residing in Delhi.Utilizing a semi-structured interview schedule encompassing both qualitative and quantitative components, face-to-face interviews were conducted. Data was collected from 400 women aged between 15 and 45 years. The study revealed a prevalent preference for sons among Khatik women, with a majority expressing a desire for male offspring over daughters. Approximately 72.4% of respondents favoured sons, while 27.6% expressed a preference for daughters. Notably, 9.3% of women preferred sons as their first child, 4.1% preferred daughters as their initial offspring, and 86.7% reported no specific preference. Primary reasons cited for favoring male children within the community included the perpetuation of the family name, caretaking of parents, and contribution as an earning member of the family.

Introduction

In India, envisioning a future without children is unimaginable, as they are seen as the cornerstone of society. However, there is a prevalent cultural emphasis on having at least one male child (Hesketh, T., et al, 2011). Numerous studies indicate a strong preference for sons over daughters among Indian couples (Carranza, E, 2012). Prospective parents often harbor specific desires regarding the gender composition of their offspring (Pörtner, C, 2015). This gender bias and son preference significantly influence demographic dynamics, shaping both child-rearing practices and population structures. Moreover, gender preferences impact fertility rates, with some couples opting to continue having children beyond their desired family size, leading to elevated fertility rates (Aksan, A. M, 2021). Conversely, instances of low fertility arise when couples selectively abort female fetuses in pursuit of a male heir.

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Since the 1980s, advancements in medical technology have transformed the expression of parental son preference. The widespread availability of affordable and reliable ultrasound scans has empowered parents to determine the sex of their unborn child and terminate pregnancies if the fetus is female. Globally, the annual incidence of such sex-selective abortions surged from virtually zero in the late 1970s to 1.6 million per year in the period of 2005-2010 (World Bank, 2021).

Medical studies have demonstrated a correlation between specific fertility practices, such as recurrent and closely spaced pregnancies, and elevated incidences of anemia, as well as heightened risks of maternal mortality and morbidity. A substantial body of scholarly literature substantiates the prevalence of these practices among women who have exclusively borne daughters and aspire to conceive again with the intention of having a son (Filippi, V., et al, 2006).

As industrialization and urbanization have progressed, there have been alterations in the desire for sons on a global scale. Western societies, in particular, have experienced a decline in son preference (Kabátek J &Ribar D.C, 2020). In areas where the bias toward sons was historically strong, it is possible that a novel preference for the sex of children has emerged to supplant the traditional preference for males.For instance, the proportion of Taiwanese women expressing a preference for more sons than daughters sharply decreased, declining from 48% in 1973 to 12% in 2002 (Lin T.C., 2009).While in the context of India, sex ratio at birth experienced a reduction from about 115.6 in the early 1990s to 113 male births per 100 female births by the early 2000s, it has persisted at elevated levels as of 2016 (United Nations Population Fund, 2020).

Given the aforementioned realities, this study was undertaken among Khatik Scheduled Caste women, with the aim to understand preference for son and to assess the impact of this preference on fertility and contraceptive use of the women.

Rationale of the Study

This study among Khatik Scheduled Caste women in Delhi/NCR aims to explore their prevalent gender preferences regarding offspring, revealing a significant preference for sons over daughters. By documenting these preferences, the study addresses a critical gap in understanding the socio-cultural dynamics within the community, highlighting how patriarchal norms influence family dynamics and societal roles. The findings underscore the need for targeted interventions to promote gender equality and address socio-economic disparities, thereby contributing to more informed policies and initiatives aimed at improving the welfare of Khatik women and their families.

Multiple studies indicate that individuals belonging to the Khatik scheduled caste community tend to belong to a lower socio-demographic category compared to other scheduled caste groups. Limited data regarding their demographic profile was available, whereas there is no valuable data available regarding their reproductive health. Keeping this in mind, the present study was conducted among 400 married Khatik Schedule caste women of Delhi/NCR.

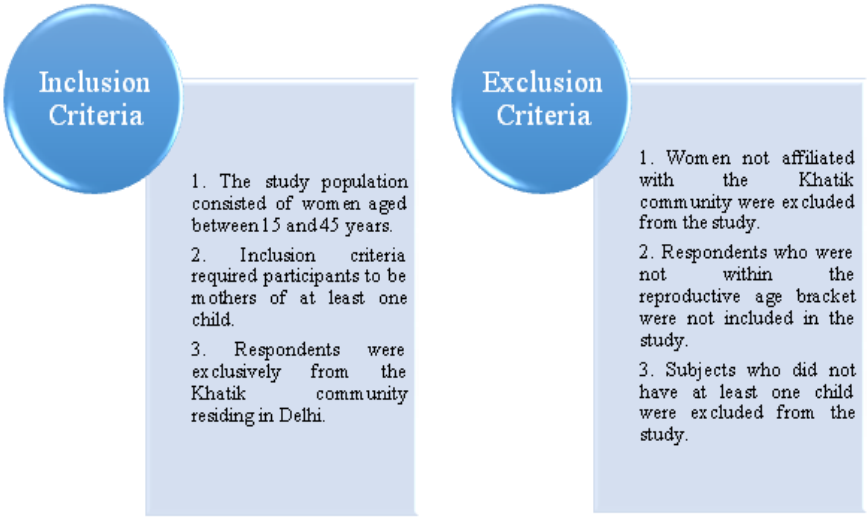
Material and Methods

A cross-sectional investigation was carried out within the Khatik community of North East Delhi. The data for the present study was collected from 400 married Khatik schedule caste group women (15-45 years) from Delhi. The sample size of 400 was calculated using online sample size calculator http://wwwraosoft.com/samplesize.html (Raosoft) giving prevalence estimate with 95% confidence level and within 5% confidence interval for total number of Schedule Caste population in Delhi i.e.529470 as per census 2011 (Census of India, 2011). Participants were included in the study subsequent to obtaining their consent.

The semi-structured interview schedule included total number of male and female live births, usage of family planning methods, total number of conceptions, desire for a greater number of children (desire of number of sons, desire for number of daughters), preference of Sex (whenever women are expecting a child), reason behind child preference for a particular gender, however respondents were not comfortable in answering such a hypothetical question. Saleem, Sheikh. 2020, Kuppuswamy's Socio-Economic Scale (SES) was used to determine the socio-economic status of the Khatik women (Houq MN, 2020).

The women chosen through purposive sampling were given written and spoken information about the research. These ladies were advised that participation was optional and that they had the ability to quit at any moment without consequence. During data coding, validation of results, and dissemination of aggregated data, they were assured of anonymity and confidentiality. All of the ladies that were chosen gave their written informed permission.

Figure 1: Present Inclusion and Exclusion Criteria for the Study



Descriptive statistical analyses, including mean and standard deviation for continuous variables and count percentage for categorical variables was performed. Normality of the data was checked by ShiparoWilk test. Independent t-test and was used to compare continuous variables between two groups whereas ANOVA test was used to compare more than two groups. Karl's Pearson correlation was applied to determine the extent of linear relationship between two continuous variable. All the reported p-values was two sided and p-values <0.05 was considered to indicate statistical significance. Univariate and Multivariate logistic regression was done to determine the significant factors of participant's contraceptive use and respondent's future fertility intention. All the data entries and statistical analyses was done using Microsoft Excel and SPSS ® Version 23.0 software.

Results

Socio-Demographic Profile of the Respondent's

In the current investigation, the mean age of the women was determined to be 34.27±6.54 years. The average age at marriage and cohabitation was noted as 20.48±2.68 and 20.52±2.69 years, respectively. The mean age at menarche for these women was found to be 13.88±1.36 years. A significant majority (72.4%) of the women expressed their desire to have a son.

Table1: Socio-economic Characteristics of the Respondents (N=400)

Characteristics	Frequency	Percentage
Education		
Illiterate	73	18.2
Primary School Certificate	24	6
Middle School Certificate	77	19.2
High School Certificate	79	19.7
Intermediate or Post High School diploma	53	13.3
Graduate or Post Graduate	81	20.3
Profession or Honours	13	3.3
Occupation		
Unemployed	363	90.7
Elementary occupation	4	1
Skilled Agricultural & Fishery Workers	16	4
Skilled Workers and Shop & Market Sales Workers	5	1.25
Professionals	12	3
Socio-economic class		
Upper Middle	14	3.5
Lower Middle	34	8.5
Upper Lower	276	69
Lower	76	19

Furthermore, it was observed that a considerable proportion of respondents (20.3%) possessed either graduate or postgraduate qualifications, while 18.2% were classified as illiterate. Approximately 91% of the women were unemployed, with only 1% engaged in elementary occupations. The majority of families (69%) were categorized as belonging to the upper lower class, whereas only 3.5% of families were classified as upper middle class (see Table 1).

Impact of Son Preference on Fertility

The analysis revealed significant negative correlations (p-value < 0.001) between the desired number of children (sons and daughters individually) and the total number of pregnancies/live births. Specifically, a mild negative correlation was observed between the number of pregnancies and the desired number of sons (r = -0.415) and daughters (r = -0.305). Similarly, a moderately negative correlation was found between total live births and the desired number of sons (r = -0.515) and daughters (r = -0.374). All correlations were statistically significant (p-value < 0.001), indicating a robust relationship between the variables.

These findings suggest that the desired number of children, especially sons, is associated with fertility levels, influencing the total number of pregnancies/live births. The negative correlation implies that as the desire for a higher number of children, particularly sons, decreases, the actual number of pregnancies/live births tends to increase. Therefore, preferences for the number of sons compared to daughters play a crucial role in fertility dynamics, ultimately impacting overall fertility levels (Table 2).

Table 2: Presents Correlation between Desired Number of Children/Sons/Daughters/ and Number of Pregnancies/Live Birth

Variables:	Total number of conception	P-value	Total live births	P-value
Number of children desired	-.469**	<0.001*	-.580**	<0.001*
Number of sons desired	-.415**	<0.001*	-.515**	<0.001*
Number of daughter desired	-.305**	<0.001*	-.374**	<0.001*

***. Correlation is significant at the 0.01 level (2-tailed).*

The study assessed the impact of son preference on fertility by examining differences in the mean number of pregnancies and live births among women based on their expression of son preference. Findings revealed a higher proportion of women desiring sons compared to those who did not express such preferences. Moreover, the mean total number of conceptions and live births were significantly greater among women desiring sons (2.68 and 2.47, respectively) compared to those not desiring sons (1.64 and 1.24, respectively). These results suggest that son preference within the Khatik Women population influences their fertility behavior.

To quantify son preference, the proportion of women desiring sons was calculated based on their expressed ideal number of sons and daughters, converted into the ideal proportion of sons. Furthermore, the mean number of conceptions and live births were

calculated concerning women's desires for sons, categorized as less than or equal to 0.5, and more than 0.5. The analysis revealed statistically significant differences in mean values between these categories, indicating that a desire for sons is associated with a higher number of conceptions and total live births (Table-3).

Table 3: Mean Conception and Live Birth in Relation to the Number of Son and Proportion of Son Desired by Khatik Schedule Caste Women (15-45 years of age)

Dependent variable	Son desired	No. of women	Mean	Std. Deviation	P-value
Total number of conception	Yes	303	2.68	1.026	<0.001*
	No	97	1.64	.793	
Total live births	Yes	303	2.47	.938	<0.001*
	No	97	1.24	.658	
Dependent variable	Proportion of son desired	Number of son desired	Mean	Std. Deviation	P-value
Total number of conception	<=0.5	322	2.61	1.045	<0.001*
	>0.5	78	1.68	.830	
Total live birth	<=0.5	322	2.37	1.006	<0.001*
	>0.5	78	1.35	.599	

Impact of Son Preference on Contraceptive Use

The univariate logistic regression analysis, as depicted in Table 4, highlights several significant factors associated with contraceptive use among Khatik women. Firstly, women aged 35 years or older demonstrated significantly higher odds of contraceptive use (UAOR=1.511, 95% CI=1.014-2.252). Additionally, having a son as the last child was significantly associated with greater likelihood of contraceptive use compared to having a daughter as the last child (UAOR=0.882, 95% CI=0.585-1.33). Furthermore, educational attainment emerged as a significant factor, with women having primary education (UAOR=0.458, 95% CI=0.273-0.769) and illiterate women (UAOR=0.733, 95% CI=0.318-1.691) exhibiting lower odds of contraceptive use compared to those with secondary education or higher.

However, in the multivariate logistic regression analysis, illiterate women (AOR=2.074, 95% CI=0.391-3.611) were more likely to use contraceptives compared to women with primary and secondary education levels when adjusted for other covariates. When age was adjusted with other variables, the odds ratio remained significant at 1.497. Notably, having only one child did not significantly impact contraceptive use (p=0.543). Adjusting for the sex of the last child revealed that women with a son as the last child were significantly more likely to use contraceptives compared to those with a daughter as the last child (AOR=0.163, 95% CI=0.04-0.661).

In the binary logistic regression analysis of future fertility among the Khatik women population (Table-4), several significant associations were observed. Families with a daughter as the last child had significantly higher odds of desiring another child compared to families with a son as the last child (UAOR=1.73, 95% CI=1.102-2.7214).

Women aged 35 years or older had lower odds of desiring another child compared to younger women (AOR=0.870, 95% CI=0.374-0.912). Moreover, the sex composition of the present children influenced the desire for more children, with families having only boys showing decreased desire compared to families having only girls (AOR=18.487, 95% CI=8.195-38.176 and AOR=53.172, 95% CI=21.377-137.309, respectively), when adjusted for the number of children and other variables.

Table 4: Binary Logistic Regression Analysis of Respondent's Contraceptive Use (Yes/No) and Future Fertility Intention

Independent Variable		P-value	Unadjusted O.R	95% CI	P-value	Adjusted O.R	95% CI
Contraceptives Use							
Age	<35		1				
	≥35	0.0425*	1.511	1.014-2.252	0.005*	1.497	1.306-2.808
Education	Secondary		1				
	Illiterate	0.4665	0.733	0.318-1.691	0.598	2.074	0.391-3.611
	Primary	0.0032*	0.458	0.273-0.769	0.01*	1.295	0.496-0.983
Number of children	≥One		1			1	
	One	<0.0001*	51.328	25.183-104.617	0.033*	41.779	21.134-101.145
	None	<0.0001*	18.984	5.53-65.178	0.242	12.326	4.565-59.572
Sex Composition	Both		1			1	
	Only boys	<0.0001*	20.491	9.133-45.974	0.015*	18.487	8.195-38.176
	Only girls	<0.0001*	60.273	25.388-143.09	0.007*	53.172	21.377-137.309
	None	<0.0001*	57.375	14.53-226.564	0.002*	51.049	19.254-135.186
Sex of last child	Boy		1			1	
	None	0.001*	7.721	2.283-26.11	0.018*	5.678	3.384-21.197
	Girl	0.0173*	1.732	1.102-2.7214	0.011*	1.294	1.1195-2.4512

Discussion

The study sought to examine the correlation between the preference for sons and various demographic factors influencing contraceptive utilization and fertility behavior. Notably, current contraceptive practices were found to be significantly associated with women's age, education level, number of living children, and the sex composition of the surviving children within the families. Interestingly, the presence of only sons in the family was associated with a decreased desire for additional children compared to families with only daughters. Moreover, the strong preference for sons was found to impact the number of pregnancies and total live births, ultimately leading to a higher number of conceptions and live births.

In our study, educational attainment emerged as a notable determinant of contraceptive usage among Khatik women. Specifically, respondents with primary-level education and illiterates exhibited a significantly lower likelihood of contraceptive use compared to those with a secondary level of education or higher. This finding aligns with prior research, where similar trends were observed indicating higher rates of contraceptive utilization among educated women. Additionally, studies have shown that women with the highest level of education have a substantially lower preference for sons compared to others, underscoring the influence of education on reproductive preferences (Yadav AK., et al., 2020)

Univariate analysis in our study further demonstrated that women whose last child was a son were significantly more inclined to utilize contraceptives compared to those whose last child was a daughter. This finding is consistent with previous research conducted by Dey et al, 2021, which reported similar results. Specifically, their study revealed that couples with four or more children were more inclined to adopt modern contraceptive methods if they had at least one son and one daughter. Conversely, couples without any daughters were more likely to use contraceptives. These findings underscore the influence of offspring gender composition on contraceptive behavior among couples.

Son preferences remain prevalent in society, yet many parents aspire for a balanced gender composition among their offspring, ideally including at least one boy and one girl. Notably, the desire for an additional child was notably higher in families with only daughters. Moreover, the likelihood of desiring another child increased with increased parity, underscoring the strong preference for a son. These findings are consistent with the research conducted by V. Kumar et al, 2021, highlighting the enduring influence of son preference on fertility desires and reproductive decision-making within families. Consistent with prior research, our study yielded similar findings indicating that families with a girl as the last child exhibited a significantly higher desire for another child compared to families with a boy as the last child. This underscores the persistence of son preference in Indian society. Notably, over 80% of couples with only daughters expressed a mutual desire for additional children. In contrast, in families with only sons, the likelihood of a subsequent pregnancy was inversely associated with the number of sons. These findings underscore the enduring influence of strong patriarchal settings, compounded by cultural and socioeconomic factors, on the persistence of sex preference in India, as previously documented by Kastor and Chatterjee (2018).

Son preference in India is influenced in part by the morbidity and mortality rates of adult women. Research by Annamaria Milazzo (2018) suggests that having a first-born girl can lead to higher fertility rates, shorter birth spacing, and an increased risk of anemia for subsequent pregnancies. Furthermore, evidence indicates that with each subsequent female birth, these adverse outcomes exacerbate. Milazzo's findings also suggest that women with a first-born girl have lower survival rates. Similarly, in Kyrgyzstan, transitions to third and subsequent children are significantly influenced by the sex composition of children already born to a woman. Specifically, women with at least one boy exhibit a lower likelihood of transitioning to higher parities compared to those without any boys (Kazenin, 2021).

However, a study conducted by Harihar Sahoo and R. Nagarajan (2019) suggests that the acceptance of daughters is gradually increasing, particularly among younger, educated, urban, and wealthier couples. This trend signifies a weakening of rigid patriarchal norms and son preference in certain regions. Additionally, the prevalence of daughter-only families among sterilized couples varies significantly between regions with high and low son preference. For instance, in high son preference states such as Punjab, Haryana, and Maharashtra, the prevalence of daughter-only families is notably lower compared to states with lower son preference, such as Kerala, Tamil Nadu, and West Bengal. These findings suggest a nuanced shift in societal attitudes towards gender preference, with implications for reproductive decision-making and family dynamics.

Conclusion

The present study underscores the existing preference for sons over daughters among Khatik women, with motivations ranging from perpetuating the family name to perceived economic advantages and caregiving expectations in old age. Interestingly, a substantial minority express an interest in having daughters, often associating them with bringing good luck to the family. While son preference exerts a minor influence on fertility outcomes. Contraceptive practices are notably influenced by the sex composition of children, the number of offspring, and the sex of the last child. Additionally, education and age emerge as significant factors shaping contraceptive utilization, highlighting the importance of addressing socioeconomic determinants in reproductive health interventions. The study recommends, that there is a need to intensify efforts aimed at challenging and mitigating patriarchal norms to foster a more equitable environment for women by organising public campaigns promoting gender equality and the value of sons and daughters alike. This should be expanded to foster societal acceptance of gender diversity.

Relevance of the Study

The findings of this study hold relevance for family planning initiatives in India, offering insights to personalize family planning counselling and interventions for individuals and communities.

Author's Contribution

The conceptualization and primary work were undertaken by the first author, while the second author contributed to data analysis and manuscript preparation.

References

Hesketh, T., Lu, L., & Xing, Z. W. (2011). The consequences of son preference and sex-selective abortion in China and other Asian countries. *Canadian Medical Association Journal, 183*(12), 1374–1377.

Carranza, E. (2012). Islamic inheritance law, son preference and fertility behavior of Muslim couples in Indonesia. World Bank Policy Research Working Paper.

Pörtner, C. (2015). Sex-selective abortions, fertility, and birth spacing. World Bank Policy Research Working Paper No. 7189.

Aksan, A. M. (2021). Son preference and the fertility squeeze in India. *Journal of Demographic Economics, 87*(1), 67–106.

World Bank. (2021). Gender preference: Why we should care about it.

Filippi, V., Ronsmans, C., Campbell, O. M. R., Graham, W. J., Mills, A., Borghi, J., Koblinsky, M., &Osrin, D. (2006). Maternal health in poor countries: The broader context and a call for action. *The Lancet, 368*(9546), 1535–1541.

Jan Kabátek& David C Ribar, 2021. "**Daughters and Divorce**," The Economic Journal, Royal Economic Society, vol. 131(637), pages 2144-2170..

Lin, T. C. (2009). The decline of son preference and rise of gender indifference in Taiwan since 1990. *Demographic Research, 20*, 377-402. doi:10.4054/DemRes.2009.20.16

United Nations Population Fund. (2020). Sex ratio at birth in India: Recent trends and patterns.

RaoSoft. Sample Size Calculator. Retrieved from http://www.raosoft.com/samplesize.html

Ministry of Home Affairs, Government of India. (2011). Census of India.

Saleem, S. (2020). Modified Kuppuswamy socioeconomic scale updated for the year 2020.

Mohammad NazmulHoq. (2020). Influence of the preference for children on contraceptive use in Bangladesh: A multivariate analysis. Available online 7 October 2020.

Yadav, A. K., Anand, A., Singh, R. A., &Jungari, S. (2020). Sex composition and son preference in India and major states: Evidence from the national family health survey-4 (2015-16). *Clinical Epidemiology and Global Health, 8*(4), 1140–1146.

Dey, A. K., Acharya, R., Tomar, S., Silverman, J. G., & Raj, A. (2021). How does the sex composition of children affect men's higher ideal family size preference relative to women and contraceptive use patterns among couples? A cross-sectional analysis of dyadic couple's data in India. *SSM Population Health, 15*, 100835. doi:10.1016/j.ssmph.2021.100835

Kumar, V., Singh, K. K., Kumar, P., &Singh, P. (2021). Does family composition drive future fertility desire and contraceptive use? An evidence based on national family health survey (2015–2016), India. *Children and Youth Services Review, 121*, 105860. doi:10.1016/j.childyouth.2020.105860

Kastor, A., & Chatterjee, S. (2018). IMPACT OF SEX COMPOSITION OF LIVING CHILDREN AND COUPLES' AGREEMENT ON SUBSEQUENT FERTILITY IN INDIA. *Journal of biosocial science*, *50*(5), 666–682. https://doi.org/10.1017/S0021932017000578

Milazzo, A. (2018). Why are adult women missing? Son preference and maternal survival in India. *Journal of Development Economics, 134*(C), 467-484. DOI: 10.1016/j.jdeveco.2018.06.009

Kazenin, K. (2023). Son preference, gender asymmetries and parity progressions: The case of Kyrgyzstan. *Asian Population Studies*Vol. 19, no 1, p. 5-21. DOI: 10.1080/17441730.2021.1992858.

Nagarajan, R., &Sahoo, H. (2019). Increasing Acceptance of Daughter in India: Trends, Regional Differentials and Determinants. *Journal of Population and Social Studies, 27*(2), 106–123. DOI: 10.25133/JPSSv27n2.007.