

Impact and Determinants of Gender Preference in Duhavi VDC of Eastern Nepal

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ABSTRACT

Introduction: Gender equality has been a priority area of demographic research. One of the major reasons for high fertility and low acceptance of family planning is the prevalence of gender preference among couples. The objectives of this study were to identify the determinants and examine the extent of gender preference on fertility.

Methods: This is a cross-sectional study carried from June 2008 to July 2009 in Duhavi VDC of Sunsari district of Nepal. Three hundred and five randomly selected ever-married women of 15 - 49 years, who had at least one child were the subjects of the study. A questionnaire covering the areas on gender and fertility preference and methods and use of contraception was given and filled up.

Results: The study showed that 42.6 % of the ever-married women belonged to the 25 - 29 years age group. Around 92 % of women whose last child was a male were using family planning methods whereas only 40 % of women whose last child was a female were using family planning methods. This difference was statistically significant ($P < 0.0001$).

Conclusions: The contraception use among the women having a female child was low, showing a desire for a male child which is one of the factors in the increase of family size in our society. Due to the patrilineal society, women are discouraged in the practice of contraception. Effective intervention programs need to be planned and conducted to rectify this situation.

Keywords: Determinants, Duhavi VDC, gender preference, impact, Nepal

INTRODUCTION

One of the major reasons for high fertility and low acceptance of family planning is the prevalence of gender preference among couples. This is believed to have powerful effects on the numbers of additional children desired by the couples. Desired gender preference thus is an important factor in population growth.^{1, 2}

As sons are believed to be the carriers of lineage, women tend to stop childbearing only after they have given birth

to the desired number of sons.³ It was revealed from the study of Malhi P *et al.* from India that the percent of women, at each parity, using contraception tends to increase with the number of living sons, suggesting a preference for sons.⁴

According to a rural and urban survey data from 1979, the ideal family size among all respondents was, on

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average, three children, with two sons and one daughter, the preferred gender composition for about 90 percent of all respondents. The mean number of living sons was higher than the mean number of living daughters. Most couples have at least one son before they adopt contraception and respondents had, on average, three to four births before adopting contraception.⁵

METHODS

This is a cross-sectional study conducted from June 2008 to July 2009. The study area was Duhavi Village Development Committee (VDC) of the Sunsari district eastern Nepal. Duhavi VDC was chosen purposively as it is one of the teaching districts of the BPKIHS. Based on 25 % prevalence¹ of son preference on the use of modern methods of contraception among ever-married women aged 15 - 49 years for a village setting and considering 20 % of probable error at 95 % CI, the sample size was estimated as 300 ever-married women of aged 15 - 49 years. To overcome non response error, 5 more cases were added in the calculated sample, and eventually the sample size required for this study was 305 ever-married women of reproductive age who had at least one child.

An ever-married women of 15 - 49 years who had at least one child was taken as one sample unit and each unit was randomly selected. A junction of the roads and the direction to advance the survey were chosen randomly. The interviews of the women of the households were taken continuously towards the direction and the periphery till the required sample size was reached.

A semi-structured questionnaire was used for data collection. The questionnaire was translated into Nepali language. The questionnaire covered the areas on socio-demographic, gender and fertility preference and methods and use of contraception.

The study was approved by the Ethical Review Board of the Research Committee of B.P. Koirala Institute of Health Sciences, Dharan, an institution authorized by the Nepal Health Research Council. Verbal consent was taken from each individual after informing him or her about the purpose of the study. They were also provided assurance of anonymity and confidentiality of data. Any person who did not agree to participate was excluded from the study. The confidentiality of each respondent was maintained.

The raw data was edited on the same day of data collection to detect errors and omissions. A master chart was prepared and the collected data was entered into Microsoft Excel. The data was analyzed using SPSS version 14.0 and percentages and means were calculated and the statistical tests (Chi square, Student -t test) were applied.

RESULTS

The demographic characteristics of the study sample are shown in Table 1. It shows that 42.6 % of the woman belonged to the 25 - 29 years age group, followed by 23.3 % in the age group of 20 - 24 years. About 98.5 % of study population had heard about family planning methods (Fig. 1) Almost 80 % had used family planning methods during some period of their life time.

Table 1. Socio-demographic characteristics of ever-married Women in Duhavi

Characteristics	Participants (%)
Age group (Years)	
15-19	4 (1.3 %)
20-24	71 (23.3 %)
25-29	130 (42.6 %)
30-34	49 (16.1 %)
35-39	27 (8.9 %)
40-44	20 (6.6 %)
45 and above	4 (1.3 %)
Age of marriage (Years)	
< 20 years	208 (68.2 %)
20 and above	97 (31.8 %)
Age of 1st pregnancy (Years)	
< 20 years	120 (39.3 %)
20 and above	185 (60.7 %)
Family type	
Nuclear	267 (87.5 %)
Joint	38 (12.5 %)
Religion	
Hindu	254 (83.3 %)
Islam	35 (11.5 %)
Kirat	11 (3.6 %)
Others	5 (1.6 %)

Table 2. Gender of the last child and use of family planning

Sex of last child	Currently Using FP		Total	Odd ratio	95 % CI
	Yes	No			
Male	91.5 %	8.5 %	142	16.33	8.36-31.90
Female	49.9 %	60.1 %	163		
Total	63.9 %	36.1 %	305		

Chi-Square = 87.874, df = 1, p - value = 0.000

The gender composition of the last living children and the use of family planning methods is shown in Table 2. The gender preference clearly indicated the gender pattern of the last child in the family and because of this many women were giving birth to large numbers of children to deliver their selective child. Ninety two percent of the women whose last child was a male were using family planning methods whereas only 40 % of women whose last child was a female were using family

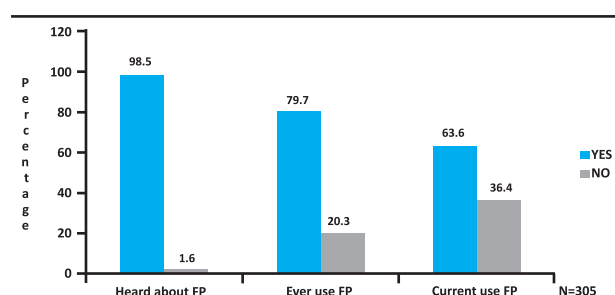
Table No. 3. Characteristics of ever married women and mean number of desired children

	Characteristics	N = 305	Mean desired male	mean desired female	P-Value
Education	Illiterate	72	1.44	1.06	0.000
	Primary	166	1.13	1.05	0.004
	Secondary and above	67	1.18	1.00	0.159
Religion	Hindu	254	1.15	1.04	0.000
	Islam	35	1.43	1.06	0.000
	Kirat	11	1.09	1.00	0.341
	Others	5	1.20	1.00	0.374
	Brahmin	27	1.00	1.00	-
	Chhetri	51	1.04	1.02	0.497
	Tharu	59	1.22	1.02	0.01
	Muslim	35	1.44	1.06	0.000
	Hill Janajati	18	1.11	1.00	0.163
	Terai origin caste	34	1.21	1.12	0.303
Ethnicity	Terai Adivasi	48	1.27	1.04	0.02
	Dalit	33	1.06	1.06	-
	Agricultural	21	1.52	1.00	0.02
	Skill/craft I Labour	18	1.17	1.06	0.254
	Business	17	1.24	1.29	0.013
Occupation	Service	10	1.00	1.00	-
	Housewife	223	1.14	1.02	0.000
	Others	16	1.31	1.07	0.128
Income	< 1\$/day	286	1.19	1.04	0.000
	> 1\$/day	18	1.00	1.00	-

Table No. 4. Females proceeding to next child by gender of the previous child

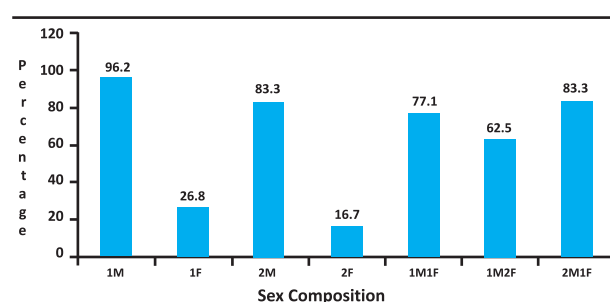
Sex	2nd child	3rd child	4th child	5th child	6th child
Male	69.0 %	43.4 %	28.6 %	28.6 %	25.0 %
Female	59.1 %	32.1 %	42.1 %	36.9 %	80.0 %

planning methods. The less use of family planning the women having a girl as the last child shows a greater desire for a male child.

**Figure 1.** Family Planning user among of Ever-married women under reproductive age of study population.

A similar trend was found among the women having two children. Eighty three percent of women having two male children were using contraception, whereas only 16.7 % women having two female children were using contraception. This further substantiates the gender preference in the Terai region of Nepal. Among the mixed-child composition also, women having more male children in the family used more contraception as compared to women having more female children,

showing gender preference for males (Fig. 2)

**Figure 2.** Number of living children by gender and use of family planning methods (N = 305)

Among illiterate women, the mean desire for male children was 1.44, which was significantly higher than the mean desire for female children, with 1.06. A comparable trend was observed in women with primary education where the mean desire for a male child was 1.13, which was significantly higher than that for a female child with 1.05 (Table 3).

Religion has been one of the most influential factors for any dimension of social life in a traditional society. This is further substantiated by our study where the mean

desire for male children was significantly higher (1.15) among Hindu women than their mean desire for females (1.04). Muslim women had the mean desire for a male child at 1.44 and for a female child at 1.06, which was highly significant with the p-value at less than 0.01 (Table 3). This may be due to the strict adherence to religious norms and values in the Muslim community where the male has a very dominant role defined by religion and women are restricted from innumerable activities.

The practice of having a further child depending on the gender composition of the previous child among the women with more than one child was also analysed in our study to find out the pattern of gender preference. The women's desire of pregnancy shows an increase in parents who have a female child even after the birth of the third female child, whereas it shows a decline in parents who have a male child. Hence, there is a less chance of continuing childbearing after the third child if it is a male child.

DISCUSSION

Nepal is a developing country with its social structures deeply rooted in culture and religion. A people in Nepal have a high value and regard for their customs and for their social and religious traditions. Even though the signs of change are being seen in urban areas, most of the rural people are still reluctant to give away their traditional views though they do not try to disclose their openly. Due to the gender preference, women are producing more children, especially in developing countries. Considering their fact, this study was conducted to know the pattern of gender preference in the Duhavi VDC of Sunsari district of eastern Nepal.

The socio-economic and the cultural norms, values and belief systems of a society affect the attitude of the people towards family formation and family preferences⁶. Young mothers could be expected to have a lesser degree of male child preference than the elder ones because of the various modernization influences including the concept of the small family⁷.

Acceptance of family planning largely depends on knowledge and awareness of family planning methods. Knowledge of contraception methods is an important precursor to their use. Ever use refers to use of a methods at any time, with no distinction between past and present use. Current use is defined as the proportion of women who reported the use of family planning methods at the time of the interview⁸.

In our study, about 98.5 % of the women had heard about family planning methods. Almost 80 % had used family planning methods during some period of their life. The most popular method among the ever

used was found to be the injectable Depo provera. According to Nepal Demographic Health Survey 2006⁸, sixty eight percent of currently married women used a method of contraception during some time of their life, among which 65 % had used some modern method. Nearly one in two currently married women (48 %) was using a method of family planning among which 44 % were using modern family planning methods. The data of Duhavi is slightly better than the national data on contraceptives use.

Contraceptive use varied widely according to gender composition. Gender preference can be a constraint on fertility decline if couples who have already reached their desired family size continue childbearing until they achieve the desired gender composition of children⁹. Son preference can also affect family planning behavior. In our study we have compared contraception use with the gender of the last child. We found that almost ninety two percent whose last child was a male were using family planning methods while females only with a female child were doing so, which was highly significant ($\chi^2 = 87.874$, $P=0.000$). This shows that there is a very high male gender preference among the women of Duhavi VDC which has affected the use of contraceptives.

The study of Rajaretnam T. *et al.*¹⁰ conducted in South India shows that most of the women were using contraception after birth of a male child as compared to women with birth of a female child. A similar study carried out by Leone T *et al.* in Nepal in 2003 found that contraception use was much higher after giving birth of the last male child as compared to the female (64 % vs. 36 %).¹ The present study supports the findings of both these studies. This indicates that strong male gender preference exists in the present context in developing Asian countries like Nepal.

Our study showed that among women who had only one male child, 96.2% were using contraceptives as compared to 26.8 % women having one female child, which is statistically significant. Again, this trend was found among women having two children with about 83.3 % with two male children using contraception whereas only 16.7 % of women with two female children were using contraception. This difference was highly significant ($P < 0.01$) (Fig. 2). A similar finding was observed in the study of Malhi P. *et al.*⁴ from rural Punjab showing that women with sons only desired fewer children and were more likely to use contraception. The study by Niraula BB *et al.*¹¹ showed that the odds ratio between two sons and two daughters was 5.5 times greater but 8.8 times greater if there were one son and one daughter.

Our study also showed that people desired son not

exclusively but that more number of male children was more acceptable to them as compared to female children. Among the females having mixed child composition, the data shows that women prefer to use more contraceptives when they have more male children than female children. Ahmed Kabir *et al.* in their study showed that women who had more female children were less interested in using family planning methods which further supports the male gender preference.¹² Similar findings was also shown by the study done by Bairangiet R¹³ *et al.* where women with more sons were more likely to use contraception than those who have more daughters.

The numerous factors affecting son preference are the socio-economic setup of the society, cultural beliefs, literacy, occupation, cultural restrictions on women, family size, males' dominance and income of the family. Our study also shows the association between socio-demographic factors and gender preference. The desirable composition in the family (gender of the children) is as important as desirable family size. Hence we asked the respondents' desirable number of children and respective gender and calculated the mean desired number of children (the mean desired male child and the mean desired female child) and co-related there with various demographic variables like educational status, religion, ethnicity, occupation and income.

Our study showed that the mean desire for male children was significantly higher than the mean desire for female children among illiterate women. Furthermore, the mean desire for males was significantly higher than the mean desire for females among women irrespective of their religion. In the study of Dabral S *et al.* education, religion and economic factors were associated with effect on the desired family size.¹⁴

In our study, women's desire of pregnancy increased in parents who had a female child even after the birth of the third female child whereas it declined in the parents who had a male child (Table 4). The study done by De Silva WI¹⁵ shows that women who had at least 3 children, at least one of whom was a son, and did not want more children were more likely to progress to the next parity than those with no sons (39.6 % for 1 son and 33.9 % for 2 sons vs. 19 %).

The Nepal Demographic Health Survey 2006⁸ shows that three out of five women and men preferred an ideal family size of two children with only 8 % of women and 6 % of men favoring less than two children.

CONCLUSIONS

Literacy and religion are the most important determinants of fertility as identified by the present study. Due to the patrilineal society, women are discouraged in practicing contraception until they give birth of a male child. In this situation, gender preference has an effect not only on contraception use and increasing fertility level but also on the progress of fertility decline. Our study shows strong relationship between a gender preference and contraception use. Ninety two percentages of women whose last child was a male were using contraceptives whereas only 40 % of women whose last child was a female were using contraceptives. We have found that contraception use is very low among the women having a female child indicating a high gender preference for a male child. Gender preference is an important barrier to the increase of contraception use and decline of fertility in the country and its impact will be greater as the desired family size declines. To add on this, gender preference is also one of the major facts for population growth. If we seriously consider this matter and focus it to develop intervention programs, we may further dramatically reduce the fertility levels Duhavi VDC as well as in all VDCs in Eastern Nepal.

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