

Fetal Gender Determination and its Social Implications

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ABSTRACT

INTRODUCTION: Intense economic and social pressures act to make sons much more desirable than daughters in many parts of Nepal. This study has been conducted to determine the prevalence of fetal gender determination [FGD] and to analyze the social parameters.

METHODS: This prospective study was conducted from January to June 2010. Mothers who have come for ultrasound were interviewed by the same investigator after consent.

RESULTS: Sixty percent were ready to give birth to female fetus while thirty percent were decided to abort the female fetus. Only ten percent thought that the girl child should be encouraged.

CONCLUSION: Only a change in the attitude of society, perhaps accomplished through efforts that raise the social and economic status of women, will decrease the use of FGD and subsequent female feticide.

Key words: Ultrasound; Gender; Preference; Factors

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INTRODUCTION

Intense economic and social pressures act to make sons much more desirable than daughters in many parts of Nepal. Despite government regulations, ultrasonography and amniocentesis have been used extensively for this purpose in India^[1,2]. Some desperate couples even travel to India for amniocentesis, which is minimally invasive procedure. This prospective study has been conducted to determine the prevalence of fetal sex determination by interviewing prospective mothers who have come for ultrasound. The social parameters were analyzed.

MATERIALS AND METHODS

A prospective study was conducted from January to June 2010 at the author's institution. Mothers who have come for ultrasound were all interviewed by the same investigator after her consent had been obtained. The mother's socioeconomic status, education, and other social parameters were considered.

RESULTS

Fetal gender determination [FGD] in hundred cases was performed by ultrasonography. Majority of the mothers were in the age group of 21-25 years, constituting as much as 70 percent. Twenty and ten percent were from the groups of 26-30 and 31-35 years respectively. Ninety percent of the subjects were housewives and ten percent were office bearers.

Educational status consisted of fifty percent who had secondary education. Ten percent were uneducated. Primary and higher secondary education were obtained by remaining ten and thirty percent respectively.

According to religion, ninety percent were Hindu and ten percent were Buddhist. Seventy percent came from nuclear family and thirty percent from joint family. According to ethnic group, forty percent were from Brahmin, twenty percent from Newar, and ten percent

each from Chetri, Sherpa, Ranamagar and others.

Fifty percent were from Kathmandu valley, thirty percent from hilly areas and ten percent each from the mountain and Terai area. Fifty percent were from the town area, thirty percent from city area and twenty percent from the village area.

Majority (forty percent) were married at the age of 16-18 years. Thirty percent were married at the age group 19-21 and twenty percent were married at the age group of 22-24 years. Fourty percent had their first child born between 1-2 years of marriage. Thirty percent had their child within one year of marriage. Similar percentage had within 2-3 years of marriage. Almost seventy percent of the subjects already had one child before the study. Only twenty percent had two children. Thirty five percent had less than 3 years gap between the two pregnancies. Similar percentage had less than 2 years gap between the two pregnancies.

Majority (seventy percent) wanted gender determination because they wanted son and eighty seven percent already had daughter in their family. Ten percent thought son was important to expand the name of the family. Only ten percent wanted daughter because they already had a son. However, twenty percent thought females were more important in the society. Sixty percent were ready to give birth to female fetus. While thirty percent were decided to abort the female fetus. Only ten percent thought that the girl child should be encouraged. Forty percent thought this should be done by financial incentives to improve the economic condition.

DISCUSSION

The sex ratio at birth of those children born at the hospital was in the normal range (101-106 boys per 100 girls) until the mid 1980 s. In 1993 the sex ratio at birth was 132 boys per 100 girls in India^[1]. Sex ratio (proportion of male to female) at any given time represents biological, social and health conditions as well as discriminatory behaviour in society.

Use of FGD was less common during pregnancy with a first born child than that with a higher birth order child. Most FGD were done by mothers who already had at least one daughter. The presence of even one son greatly reduced the enhancing effect of a daughter. Because of the growing pressures to limit family size to two children, intense desire for at least one son is not surprising. The presence of even one son in the family greatly decreased the likelihood of FGD having been done.

The initial studies reported that fetal sex could be determined with considerable accuracy only after 16 weeks' gestation. In two large series of fetuses greater than 16 weeks' gestation, the external genitalia could be successfully visualized in 61% to 83.5% of fetuses. In fetuses of 16 to 20 weeks' gestation in which the genitalia could be visualized, the accuracy of FGD was 86% to 92.7%. In one of the studies the accuracy for male fetuses was 90 % and for female fetuses 100%^[2,3].

In spite of legal restrictions, the use of ultrasonography for FGD has become widely practised since the demand is great. The procedure is safe, relatively inexpensive, and not technically difficult. Amniocentesis for FGD has been available for many years, but the cost, invasiveness, and technical expertise required have limited its wide spread use^[4]. Sperm sorting and pre-implantation genetic diagnosis and chorionic villus sampling are additional methods.

Mid -- trimester abortions require more aggressive methods than those performed earlier and are associated with increased morbidity and mortality. If female feticide continues, the ultimate effect on the sex distribution of the population will be profound. Ironically, this

may increase the status of women by creating a shortage of them^[5].

In the study performed by Booth, Verma and Beri^[6], infants seen at a large hospital as newborns, in patients, and outpatients, FGD was reported by the mothers for 13.6% of boys and 2.1% of girls. The large difference probably reflects abortion of fetuses that were detected to be female. This suggests that most families that are willing to have FGD are planning to abort fetuses that are found to be female. The higher rate of FGD among inpatient boys may reflect a subpopulation of children who are more valued by their families.

Gender discrimination is a key demographic feature of South Asia. In 2007, sex ratio at birth in China and India was 117, in contrast to the normal ratio of 102-106^[7]. In Nepal it was found to be 114 at birth^[8]. In Nepal too, preference for sons is very strong, due to the country's longstanding patriarchal social structure. Over the years, total fertility rate is declining in all developmental regions of Nepal, literacy rate is improving and access to medical care is increasing at least in urban Nepal^[9].

According to this observational study, majority (seventy percent) wanted gender determination because they wanted son and eighty seven percent already had daughter in their family. Only ten percent wanted daughter because they already had a son. However, twenty percent thought females were more important in the society. Thirty percent were decided to abort the female fetus. Only ten percent thought that the girl child should be encouraged.

Sons bring income, honor, continue the family lineage, provide security for their parents in old age and perform religious rites at times of death. The need for dowry for female children, and the ability to demand a dowry for boys exerts considerable economic pressure on families, who view girls as liabilities and often use extreme measures to avoid having them^[10]. Alteration in sex ratio at birth from biological norms will have serious implications. The family composition and patterns will change. Increased migration of unmarried men, trafficking in women, demand for commercial sex with increase in sexually transmitted disease and gender based violence are feared scenarios, Additional dangers are decreasing female participation and political weight^[11].

A survey cited by experts has revealed that the longstanding South Korean preference for sons over daughters has finally shifted amid changing social trends. They surveyed 2,078 households before the mothers gave birth from April to July 2008 and asked couples expecting a child whether they wanted a daughter or a son. Some 38 percent of expectant mothers said they wanted a daughter, 31 percent wanted a son and the rest had no preference. Among fathers-to-be, 37 percent wanted a daughter and 29 percent a son while the remainder had no preference. They mentioned that it marked the first time in South Korea, formerly a strongly patriarchal society, that a preference for baby girls over boys was confirmed in a nationwide survey. There was a growing trend for old people to rely on previously unavailable social safety networks rather than moving in with a son. Many parents prefer a baby girl to a baby boy as they believe a daughter will bring them greater happiness and family unity than a son. The ratio of baby boys to girls peaked at 116.5 to 100 in 1990, apparently indicating that female fetuses were aborted. The ratio has since been falling steadily to 106.4 boys for every 100 girls in 2008^[12].

Worldwide, there are already 100 million girls 'missing' due to sex-selective abortion and female infanticide, according to the Lancet. Fifty million of these girls are thought to be from China. What will happen in future decades when boys grow up and look for wives? Among other things, such a situation would exacerbate the growing problem of sexual trafficking, which will surely have its hardest effect on the most vulnerable in the developing world as

China grows richer^[13].

China tops the list with a skewed sex ratio [SRB] at birth with just 100 females for every 120 males. India follows going by the country's 2001 census; which revealed that SRB had fallen to 108 males per 100 females. Experts worry that unless action is taken, Nepal may soon have skewed SRBs. Countries like Pakistan and Bangladesh are already beginning to follow Asia's largest countries with people resorting to medical technology to do away with the girl child at the foetal stage. A continued unhealthy SRB trend could lead to increased violence, migration and trafficking as well as greater pressures on women^[14].

'Son preference' is a deep-seated, widespread problem in many cultures. A larger study is recommended with increase in sample size and with inquiry regarding multiple social parameters.

CONCLUSION

To avoid demographic catastrophe and geopolitical instability, the value of the girl-child should be encouraged and 'son preference' should be erased. Although stricter enforcement of the appropriate laws may help, only a change in the attitude of society, perhaps accomplished through efforts that raise the social and economic status of women, will decrease the use of FGD and subsequent female feticide.

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