## The alarming "gender gap"

Editor - While we were pondering over the widening gap between the numbers of girls and boys in our newborn unit, we came across the thought-provoking article of R. Hussain et al. (1).

The "gender gap" is gradually increasing in many developing countries, and India is no exception. In India, over the last fifty years, the number of females per thousand males has gone down from 1053 to 972 (2); in our newborn unit it is presently 918 . The UN report launched on World Population Day, 11 July 2000, also draws attention to imbalance in the sex ratio in India.

Preference for a son and its influence on reproductive behaviour, as described by Hussain and colleagues, is common in many Asian countries including India and Nepal. The epics of Sanskrit literature depict the birth of a son as the sole purpose of marriage. There are a number of factors that contribute to the widening gap between boys and girls: neglect of the girl child, female feticide, etc. Even though antenatal sex determination has been made legally punishable in India, it may be one of the contributory factors, if not a major one.

In a vast country like India, with over 1000 million inhabitants, population control campaigns are incentive-led. In addition to a sizeable benefit to the couple, financial incentives are offered to health professionals who fulfil targets for terminal methods of contraception. The sex of the surviving child determines to a great extent the subsequent reproductive intention (3). Tubectomy, vasectomy, medical termination of pregnancy, intrauterine devices and other methods of contraception offset the natural balance of sex proportions in society.

A preference for sons influences the timing of a couple's decision to use contraception, as they will be more likely to stop having children if they already have one or two sons. With only girls, they may decide to try again for a boy. The timing of the contraceptive decision is vital and has not received the attention it deserves. We believe that if incentives for a terminal method
of sterilization are given to couples after they have given birth to girls, the balance between the sexes may improve over time. This is in addition to changing social attitudes towards the girl child.

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## The completion of the human genome nucleotide sequence raises privacy concerns

Editor - Recently, many scientific journals $(1-3)$ and the mass media have reported the completion of a rough draft of the human genome nucleotide sequence. This is an astonishing and monumental achievement that opens a new frontier in medicine. Sequence information from the public Human Genome Project and the private sector promises to revolutionize the treatment of many human diseases, including different forms of cancer, Alzheimer disease, asthma, and Parkinson disease, to name a few. However, accompanying the clinical benefits are potential problems related to privacy and discrimination. For example, dangers exist that insurance companies and employers may discriminate against individuals if they have access to their genetic data.

It is estimated that more than 4000 diseases, including Huntington disease, some types of leukaemia, cystic fibrosis and sickle-cell anaemia, are related to
defective genes inherited from one or both parents. With improvements to the access of sequence data, how will it be possible to ensure that all individuals have equal rights to employment and health insurance? A 1989 survey of 400 firms conducted by Northwestern National Life Insurance in the United States found that $15 \%$ of employers surveyed planned, by the year 2000 , to check the genetic status of prospective employees and their dependents before making employment offers (4). The problems do not stop there. It is also not clear how issues related to racial discrimination will be resolved.

Although potential difficulties are evident, I believe the completion of the Human Genome Project will result in dramatic benefits to human health. However, governments must be willing and able to put in place effective legislation to protect human rights and privacy.

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