

Preface

The theme of this Special Issue is the population of India. There is a resurgence of interest in the population of our country for two major reasons. Firstly, in spite of the existence of a family planning programme for several decades, we have recently hit the one-billion mark. The demographic growth rate has not shown any notable decline, but there has been a decline in the infant mortality rate and an increase in life expectancy at birth. The burden of growing numbers impacts significantly on our environment, epidemiological profile, nutrition, food security and development. Secondly, thanks in part to a major paradigm shift that has occurred in human genetics, isolated ethnic populations of India have recently attracted international attention, the hope being to map genes for complex diseases using linkage disequilibrium statistics.

An evaluation of family planning in India reveals the main drawbacks in the programme. We have attempted to provide 'state of the art' information on fertility control methods and a critical evaluation of how successful they have been. R S Sharma, M Rajalakshmi and D Antony Jeyaraj indicate the current status of fertility control methods in India; it is discouraging to see that male participation is almost nil. Usha Natraj discusses future prospects of finding better contraceptives, both male- and female-based, based on newer knowledge. At the level of individual couples one cannot ignore the other side of the coin, namely infertility, which is a social stigma in our country. A critical examination of contemporary immunocontraceptive approaches, the real reason behind the failure of population control in India and a possible solution to the problem are provided in articles contributed by A J Rao. P B Seshagiri describes the current understanding of the reasons for infertility in both males and females. M D Gupte, Vidya Ramachandran and R K Mutatkar provide an historical overview of epidemiological trends in the context of an increasing population. P S Ramakrishnan provides an overview of the Indian environment, once again with special attention to the impact of an increasing population. Shobha Rao also discusses the impact of numbers, this time on nutritional status.

The two articles by V N Misra and P P Majumder deal with the evolution of humans and human populations in India from archaeological and genomic perspectives. In contrast to the classical Fisher-Wright model of population genetics that assumes constancy of population size over generations, recent population genetics models allow for the more realistic assumption of varying demographic parameters over generations. The evolutionary histories of ethnic populations are critical to the evaluation of the usefulness of studying isolated populations for linkage-disequilibrium mapping. The articles by Misra and Majumder indicate that India harbours some of the most ancient populations in the world and provide glimpses of how these populations may have evolved.

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