

# Twin Registries: The Neglected Population Resource

Sir,

Psychiatry has undergone a major paradigm shift, from concentrating on what is in the mind to what is in the brain. Major strides in finding the neurobiological basis of mental illnesses have been possible due to the fundamental building blocks of genetic epidemiological studies including family studies, twin studies, linkage and chromosomal analysis, which have shown an elusive promise to bring out psychiatry from the realms of scientific obscurity to the reigns of modernity.

Twinning has been known to humankind since its inception. Twins have been ubiquitous in all regional mythological tales often represented as the significant another aspect of the self. Twins constitute around 1.8% of the adult population.<sup>[1]</sup> Galton was the first person to recognize their value for studying the heritability of traits to tease out the relative effects of nature versus nurture.<sup>[2]</sup> In the field of mental health, such studies have been instrumental in the search for allelic variants responsible for Alzheimer's, depression, schizophrenia, autism, attention deficit hyperactivity disorder, etc., and also in establishing the genetics of traits such as neuroticism, intelligence and aggression. This has been made possible by a number of twin registries which have provided the required population cohorts for research.

Twin registry is a collection of data pertaining to twins often maintained at a national level or at a research center. The developed world has a number of twin registries, especially in USA, Australia, UK, Sweden and Finland, with many being involved in mental health research. However, there is a dearth of representation from the lower and middle-income countries, with only a few registries in Nigeria, Guinea-Bissau, Mongolia, and Cuba. Sri Lanka and Thai twin registries are the only representations from the WHO-SEAR countries.<sup>[3]</sup>

India is conspicuous by its glaring absence from this scene despite the huge population resource of the country. Although India has a lower twinning rate (7.2/1000), the sheer number of twin births (2685 in 1996–2006) provides an untapped potential

for genetic epidemiological studies.<sup>[4]</sup> So far there is only one such registry in India - The Chennai twin registry, which was established in July 2008. No studies have yet been published from this, though proposals have been accepted. Twin studies in mental health from India are scarce with only three published case reports of mental disorders in identical twins.<sup>[5]</sup>

As Tim Spector, founder of the UK twin registry rightly sums up "Twin studies are the only real way of doing natural experiments in humans." The absence of such studies from India shows a lack of impetus for genetic research. Population is our abundant natural resource and initiatives for its adequate utilization in research need to be undertaken. The government can aid this by utilizing the existing infrastructure of primary health care for registration of twin births and by providing research grants for conducting such studies. Tertiary institutes and big universities need to take the first steps toward this much needed endeavor.

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## Conflicts of interest

There are no conflicts of interest.

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