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Editorial

Schizophrenia - Enhancing hope with better care & research

Schizophrenia is a disorder of the mind affecting 0.5-1 per cent of the population globally. It has been called the "greatest disabler of youth" since it affects persons predominantly between the ages of 15 and 30. The WHO ranks schizophrenia among the top ten illnesses that contribute to the global burden of disease[1]. In economic terms, this disorder can cause a huge loss on the nation's money owing to the costs of treatment and the unemployment that is often a sequel to schizophrenia. It is an untold agony to family members and caregivers imposing a huge responsibility and burden on them. In medical terms, it is a disorder that does not respond uniformly well to medication and other interventions, with around 30 per cent of persons with schizophrenia requiring treatment all their lives[2]. However, the scenario is not all bleak. Recent research has aimed at better understanding of schizophrenia. Much of this is driven to determine the aetiology. From psychological theories of causation such as faulty parenting, the focus has shifted to anatomical and functional changes in the brain. Molecular processes going aberrant in the brain have also been implicated.

The study of genetics in schizophrenia with an approximate 70 per cent heritability factor has well been part of the international explosion in human genetic research. Gene mapping efforts for schizophrenia, like for other genetically complex disorders has achieved mixed success[3]. The Genome Wide Association Studies (GWAS) have revealed several plausible risk variants, most noted among these are on the HLA region[4]. However, these do not fully account for the estimated heritability in schizophrenia. Gene mapping studies are viewed as critical for the development of newer drugs.

While genetic risk factors are well acknowledged, multiple environmental factors have also been elucidated ranging from prenatal development to obstetric complications. Advancing paternal age has been shown by genetic studies as a risk factor[5]. Prolonged delay between pregnancies and reduced maternal folate levels are other preconceptual risk factors. Living in crowded urban cities by virtue of inducing more stress, more pollution and more of high risk behaviours also seems to increase the risk to develop schizophrenia.

Neurodevelopment of the infant's brain is critical and can be affected by a variety of maternal viral infections such as herpes simplex, influenza, rubella, *etc*[6]. Nutritional deficiencies in the pregnant woman can also disrupt neurodevelopment and lead to an increased risk of schizophrenia. Maternal stress specially in the first trimester of pregnancy by causing an increased permeability of cortisol across the placenta has also been named as a risk factor[7]. An association between obstetric complications, low birth weight and a later diagnosis of schizophrenia has been observed in many parts of the world[8]. It needs to be stressed that careful prenatal and perinatal monitoring and interventions can reduce damage to the foetal brain.

The drug industry has also been active and in the last 10 years, many new generation anti-psychotics have been introduced with good efficacy on positive and negative symptoms of schizophrenia, albeit with some side effects of concern such as the metabolic syndrome. Despite the promise of biological research, interventions for schizophrenia cannot be only biological or pharmacological. Psychosocial

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interventions based in the community are an integral part in the treatment package for schizophrenia. Over the years, there has been more optimism about the outcome of schizophrenia and one facet of this is the widespread acceptance that "recovery" is not impossible in schizophrenia.

The Indian situation

Some of the earliest descriptions of a condition resembling schizophrenia in India was made by the Ayurvedic physician Charaka over 3300 years ago in the text *Charaka samhita.* These corresponded closely with the descriptions in Greek medical texts by Hippocrates[9].

Subsequently, India's contribution to schizophrenia research has not been substantive. The Madras longitudinal study is a landmark study on course and outcome of schizophrenia. The patients have been followed up from the first onset for 25 years and the study has generated a lot of information on related variables like mortality, jobs, marriage, *etc*[10]. The study of the first episode psychoses at the Schizophrenia Research Foundation (SCARF), Chennai, India, when compared with a Canadian study with a similar sample has thrown up some interesting cross cultural findings[11]. Both the studies have reiterated the need to promote awareness about the disorder which in turn will facilitate early detection and prevention of chronicity and disability.

With very limited human resources and budgetary constraints, community care is really the future. Care in the community is *per se* not an alien concept in India since over 90 per cent of the severely mentally ill live with their families. This is not only because families are willing to care for them, but also because alternative options for care are practically non existent. The number of mental hospital beds in the entire country is grossly inadequate to provide inpatient care. While some non-government organizations (NGOs) run community based centres of care and rehabilitation, these are only a few. Besides many of these are in the southern States of Tamil Nadu, Karanataka and Kerala[12]. Community based rehabilitation, essentially an off - shoot of community based medical care was first initiated in the 1980s under the impetus provided by the National Mental Health Programme of India[13]. Community care strategies involve operating mental health clinics in the community and a focus on mental health literacy in the general population.

In a recently concluded randomized control trial in India where the effectiveness of a collaborative community based care [where a community health worker (CHW) visited the home of the patient to deliver interventions] was compared with facility based care (usual care provided) for people with schizophrenia and their families, it was seen that the intervention of the CHW was acceptable and effective especially among patients who were more symptomatic and had greater disability. The feasibility of an effectiveness of delivering psychosocial interventions through CHWs was also established[14].

Critical strategies for rehabilitation have been the use of lay community volunteers trained in recognition, identification and referral of persons with mental disorders performing the first level of rehabilitation[15]. Rehabilitation has also been facilitated by networking with governmental and non-governmental organisations involved in social and developmental activities. The NGOs also embarked on community-based programmes, which although efficacious and cost-effective were always restricted by their dependency on time-limited funding[15,16]. However, collaborations with NGOs are seen as an important approach to reach out to a wide geographic area, with a shared economic commitment of the collaboration. There have also been some innovations in the delivery of community care. One of these has been the use of mobile tele-psychiatry by the Schizophrenia Research Foundation. A bus fitted with mobile equipment has been delivering mental health care to the population of a part of Pudukottai district[17] and widely accepted by the local population.

The community based programmes have suffered from poor allocation of resources, insensitivity to the needs of people with mental illness on the part of both professionals and policy planners, and indifference to mental health in general. Sustainability and continuity of programmes, especially by NGOs are largely limited as most programmes are time-bound projects, contingent upon the funding resources.

The priority in our country is to make the District Mental Health Programme (DMHP) more effective and efficient, promote more community based services reducing the dependence on big hospitals and reducing stigma. Living with schizophrenia is no easy matter for persons with the disorder and their families. Despite the introduction of many new antipsychotics in the last decade, there still remain some patients who do not respond well to medicines. Schizophrenia can also produce wide ranging disabilities and incapacities in persons. Although the mentally disabled are also eligible

for welfare benefits like other groups of disabled, this process is yet to gain uniform momentum in all States of the country.

Schizophrenia is a severe mental disorder affecting many human faculties and functioning. Advances in research hold a lot of promise, but until a wonder drug is found, we need to address the social and psychological issues in patients and families. Government policies and programmes need to be geared to enhancing facilities in the community for these persons and improve awareness about this condition which in turn will facilitate early treatment and social inclusion.

R. Thara
Schizophrenia Research Foundation
Jawaharlal Nehru Road, Anna Nagar
West Extension, Chennai 600 101, India
thara@scarfindia.org

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