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Probing the mental health of a nation

**A new study will shed light on mental illnesses here**

**By Chong Siow Ann & Mythily Subramanian**

The American poet Carl Sandburg depicted Chicago at the beginning of the last century as the “City of the Big Shoulders”, “Tool maker” and “Hog Butcher to the World” – epithets befitting its place in the first half of that century as the hub manufactured goods, the city of steel mills and the world’s largest animal stockyard.

The latter was made infamous by Upton Sinclair’s 1906 novel *The Jungle*, with its stomach-churning description of the condition there.

The city of Chicago then was also a melting pot of different nationalities. It was a magnet for Eastern Europeans, Irish, Mexicans and blacks from the South who, seeking to escape poverty, poured into the city seeking employment.

Falling back on the comfort and familiarity of a shared language, culture and religion, they coalesced into tightly knit ethnic communities.

The clash of the different communities and cultures and the teeming growth of its population made Chicago the most studied city by social scientists in America, if not the world.

In 1929, a couple of social scientists, Dr Robert E.L. Faris and Dr H. Warren Dunham, published a classic study of psychosis in Chicago, titled *Mental Disorders In Urban Areas*.

They hypothesised that the inner city, with its relative social isolation, poverty and disorganization, was causative of mental disorders.

Using a model developed earlier by a colleague – who mapped the zones of city development and urban organization as concentric circles like the rings of a cross-section of a tree, with the ghettos and inner city at the epicenter and the more affluent residential areas at the outer zones – they found a clustering of mental illness within the inner rings.

Subsequent studies in other American cities and in Western Europe indicated that urban life – urbanicity usually defined either as the number of residents per sq km or the number of inhabitants within a defined location (for example, capital, city, or town) – is associated with an approximately twofold increase in the risk for psychosis.

There are usually two explanations for this: The first is that mental disorders impair occupational and social functioning, resulting in a downward spiral of socioeconomic status commonly known as “social drift”.

The second explanation is that individuals living in socially disadvantaged situations are exposed to more hardship, poor living conditions and adverse life events than those in more advantaged environments. The depressed environment is seen as “breeding ground” for eventual mental illness.

Finding clusters of disease within a geographical area would lead people to look for a causative factor that is found within that same locale.

The surgeon and writer Atul Gawande has written about these phenomena in cancers and the tendency to attribute the seemingly high rate of cancer in a place or neighbourhood to some putative exposure, such as to groundwater contaminated by pesticides.

Unlike outbreaks such as the cluster of a rare form of pneumonia among gay men in Los Angeles in 1981, which subsequently led to the identification of HIV infection, or the surge of limb deformities and neurological deficits among babies born to Japanese women living in Minamata City, which was found to be caused by mercury poisoning in contaminated fishes, the identification of a cause of cancer clustering in a community has not been that successful.

There might be a tendency to see a cause where there is none - a cognitive error called the Texas Sharpshooter Fallacy, after the fabled marksman who fires his gun randomly at the side of a barn, then paints a bull’s eye around the spot where the most bullet holes cluster.

Cancer is a complex disorder. There is no single cause but rather a cell turns cancerous after sustaining a number of “hits” which may come from some genetic defect and/ or other environment exposures such as radiation and toxins.

This, too, applies to a number of severe mental illnesses which are similarly complex disease – often the consequences of a genetic vulnerability upon which a series of “hits” (which may be as myriad as a maternal viral infection during pregnancy, malnutrition, childhood trauma, drug abuse or other adverse life events) had been inflicted, a process that starts from conception and carries on in later life.

There is often a tangle of possible links, and shifting through the quagmire of artefacts and false clues to find a vital casual relationships with a disease or its outcomes is the specialised field of epidemiology – a term derived from the Greek terms *epi*, meaning “upon, among”; *demos*, meaning “people, district”; and *logos*, meaning “study”.

A somewhat simplified definition would be that epidemiology is concerned with the rate and distribution of disease in populations and, where possible, studying the relationships between exposures such as alcohol, smoking, stress, poverty or toxins to disease states.

However, it is a discipline that requires the requisite domain expertise, technical capabilities and analytical tools.

While certain types of epidemiological studies seek to clarify these complex dynamics of interconnected social, political, economic, cultural and biological factors, epidemiology is not all about discovering possible causes of diseases. It is an integral part of public health.

Of more immediate application and policy implications are those epidemiological studies that set out to establish the rates of diseases in a population.

The Ministry of Health has in the past years carried out a series of National Health Surveys which assessed the physical health of the population, including the rates of diabetes and hypertension.

Such data is important for the tracking of the pattern and trend of disease that is essential to the development of better programmes and interventions, and also better allocation of scarce resources.

While we are reasonably well-informed of the behaviours of major physical illnesses in Singapore, we know far less of mental illnesses.

The World Health Organisation has declared that there can be no health without mental health.

Mental health is also closely linked with physical illness: Stress and anxiety predisposes to myocardial infarction, and depression is often associated with chronic illnesses like diabetes mellitus.

A mentally unwell parent can have a detrimental effect on the health and development of children. The magnitude and ramifications of mental health are great and far-reaching.

An article in medical journal The Lancet reports that each year, up to 25 per cent of the world's population has some form of mental disorder. It is also a cause and consequence of injury and violence.

Every year, about 800,000 people commit suicide worldwide, of whom more than half are aged between 15 and 44.

Of those who are mentally ill, at least two-thirds receive no treatment, even in highly developed countries.

And while some people will succeed in finding help, others will not, due to a variety of reasons.

In Singapore, we have yet to make a comprehensive and detailed study of the rates of the myriad of mental illnesses and their protean consequences.

The Singapore Mental Health Study is a national epidemiological study on the Singapore population, which will shed light on these issues.

The study will provide a wealth of hitherto unavailable information on the rates of mental illnesses, and the social and economic impact of such disorders in Singapore, and on the help-seeking behaviours of those with mental illness.

The findings will tell us the state of our mental health as a nation, how many of the mentally ill are receiving help, and the consequences of being mentally ill in Singapore.

The findings will have wider ramifications on health policies and the way we treat those with mental illness.

**Associate Professor Chong is vice-chairman of the medical board (research) of the Institute of Mental Health (IMH), while Dr Mythily is IMH's assistant director of the research division. Both are investigators in the Singapore Mental Health Study.**