

Psyche in the Lab: Celebrating Brain Science in Canada

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Psychiatric illnesses are traditionally classified into 2 major categories, namely organic and functional. This distinction derives from the observations of eminent 19th century neuropathologists, like Alzheimer, Broca and Wernicke, who examined the brains of patients at autopsy. Diseases were termed organic if there were anatomically identifiable lesions in the brain, while those lacking these features were called functional. After this period, research into psychiatric illnesses became stagnant. This was partly due to the complexity of the brain and the slow maturation of neuroscience when it lacked sophisticated technological tools for investigation. But it was also due to the long-held doctrine of a mind-body dichotomy and the transient separation from biological medicine in the mid-20th century, when the psychoanalytic model dominated psychiatric practice. Psychiatry was stigmatised as the Cinderella specialty in medicine, and regarded as being without rigorous scientific foundation. Treatments like spa therapy, malarial fever cures, insulin coma therapy etc. came on and then off the stage and sank into oblivion due to the lack of sound scientific evidence supporting them.

With the serendipitous discovery of psychopharmacology, the establishment of clinically validated and objective diagnostic criteria and the recent advances in neuroimaging and genetic studies, there has been a quantum leap in the understanding of the psyche, the brain and therefore the psychiatric illnesses. Eric R Kandel, a psychiatrist and the Nobel Laureate in Medicine in 2000, stated that the distinction between organic and functional categories is outdated and no longer tenable. The basis of the new intellectual framework for psychiatry is that all mental processes are biological with functions of the mind reflecting functions of the brain. Embracing neuroscience and genetics will surely help unveil the mysteries of mental illness, which will in turn benefit patients. The book, *Psyche in the Lab: Celebrating Brain Science in Canada*, which commemorates the 25th anniversary of the Canadian Psychiatric Research Foundation, echoes their vision and unflinching efforts toward researching the science of the mind in the psychiatric field.

This book is based on a series of interviews with scientists, philanthropists and those who have experienced mental illness. The book is divided into 2 parts. Section I depicts the stories of researchers. Though scientific facts and figures abound in the text, the foreword is reserved for personal stories of ambition, hardship and triumph in psychiatric research. The research encompasses a diverse

range of topics such as inflammation and dementia, memory and neuroimaging, depression and mindfulness-based cognitive therapy, seasonal affective disorder and light therapy, autism and genetic study, to name a few.

Section II is devoted to benefactors and beneficiaries. It comprises the experiences of research fund donors as well as recipients of mental health services. It is inspiring to read first person accounts of how they have struggled, fought back and finally recovered from or learned to live with their mental illnesses with dignity and integrity. For instance, Michael, who was once entrapped by schizophrenia with low self-esteem, depression and a sense of isolation, finally manages to walk out of the shadow and find new meaning in life via art work (Chapter 18). And, despite the waxing and waning of her psychotic symptoms, Marier tries her best to keep on donating a portion of her earnings from sales of her work to psychiatric research (Chapter 27).

Patient's views of treatment and recovery do not always concur with medical opinion and criteria. As therapists, we tend to focus on symptom control, and time and again, consciously or unconsciously neglect (or at best forget?) the issues surrounding our patients' quality of life and their acceptance of treatment. Mr Taylor, who suffers from bipolar affective disorder, stated that, "For me, recovery was and is managing my illness, education about my illness, a diagnosis that makes sense and a good psychiatrist. But recovery is also work, income, volunteering, stable housing, socialising outside therapy..." (Chapter 20). These personal narratives remind us that examining the concept of recovery from a patient's perspective will surely shed more light on the recovery process than can be found in treatment manuals or guidelines.

Canadian researchers also voice their difficulties raising funds and conducting psychiatric research, which are, in fact, problems all over the world. The economic toll exerted on society by mental illness is enormous and escalating. Remi Quirion, head of the Institute of Neuroscience, Mental Health and Addiction at the Canadian Institute of Health Research, stated that mental health research attracts less than 5% of Canadian health research dollars, yet mental illness directly affect 20% of Canadians (Chapter 12). Misconceptions about and stigmatisation of mental illness are major obstacles contributing to the disproportionate financial input into psychiatric research. Stigma has been underrated and under-recognised. Apart from research allocations and priorities, stigma also exerts its far-reaching hands over policy-making, access to care,

insurance, employment and quality of life of mentally ill people. Recognising and reframing mental illness as a disease of the brain instead of a patient's own character flaw or personal weakness can serve as an important step to help eradicate discrimination and prejudice.

Recently, some prominent psychiatrists have called for redefining the foundation of psychiatry as a clinical neuroscience discipline by incorporating basic knowledge of brain science and genetics in training programmes to meet future specialty developments and challenges. Until now, the aetiologies behind many psychiatric illnesses remain elusive. Psychiatric treatments still mainly focus on symptoms rather than the core pathology and the classification of mental disorders is still largely based on phenomenology. Integrating psychiatric research with neuroscience, genetics and related disciplines will help elucidate the biological underpinnings of mental illness, which, in turn, will lead to the emergence of more specific and effective treatments as well as scientifically valid and aetiologically based classifications.

This book, consisting of individual stories from

researchers, fund donors and those who suffer, provides new insight for clinicians on how to perceive and view mental illness. As a psychiatrist myself, the words of Dr Guttman, "The actual experience of mental illness can be a strong driving force in research so that clinicians who deal with patients daily seem to do more relevant research than non-clinicians, even though their time is more limited" (Chapter 9), serve as an inspiration and an important reminder for me of the potential role, advantage and contribution of clinicians in research. As well, humility towards our patients should always be uppermost, as they are an invaluable source of timely feedback and insight into our understanding of psychiatric illness and its proper management, which we should not, and must not, ignore.

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