When learning about the brain gets personal

Claudia Krebs, MD, PhD[1]; Clare Beasley, PhD[2]
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When students learn about their patients, they strive to understand where illness originates, how it manifests throughout body systems, and how to develop a therapeutic approach. Over the course of their education, students develop clinical reasoning strategies to approach various illnesses.[1] Psychiatric disorders are often particularly challenging as there is significant heterogeneity in symptomatology and course,[2,3] and treatment is typically complex.[4-6] Furthermore, while current thinking posits that psychiatric disorders result from dysfunction of brain circuits,[7] the precise etiology and pathophysiology is not yet fully understood.[8,9] This is in contrast to neurological disorders in which focal lesions are typically present. A lack of knowledge regarding mental illness may lead to misconceptions: that mentally ill individuals are dangerous, violent, or lazy, that they are responsible for their own illness, or that psychiatric disorders are not amenable to treatment. Misconceptions likely contribute to the stigma associated with these disorders,[10] and consequently create barriers to accessing healthcare.[11]

Many facets need to be explored when approaching a curricular framework on psychiatric disorders. Despite the challenges of dealing with complex non–linear networks and the limitations of our current understanding, students need to receive up–to–date knowledge regarding the neuroscience underpinning these disorders. They also need to consider the impact of psychiatric disorders on the lives of patients. Over the years, we have developed an integrated approach to teaching about psychiatric disorders within the Brain and Behaviour block of the University of British Columbia MD undergraduate program, and more recently, within the renewed MD curriculum.[12] Our aim is to provide students with a foundational knowledge base designed to facilitate parallel clinical experiences. Week–long case-based learning (CBL) cases bring to life a patient's experience with mental illness. CBL sessions allow inquiry and clinical reasoning to be practiced in small group settings and provide a venue for discussion of relevant issues, such as biopsychosocial factors and a holistic approach to patient care. Lectures accompany the cases, helping students to focus their understanding of the major psychiatric disorders, underlying biological processes, and treatment options. In addition, large group discussion sessions provide an opportunity to consider the broader impact of mental illness on society. Neuroanatomy labs complement learning by emphasizing current understanding about how the brain creates emotions and behaviours. The approach to the neuroanatomy labs is that of a flipped classroom, where didactic knowledge is acquired before the session, and in–class time is used to apply knowledge to clinical cases. This approach has been shown to facilitate better integration and retention of content.[13] Finally, we are extremely fortunate to have people with lived experience of mental illness come into the classroom to talk about how their lives have been impacted. This is a powerful teaching tool. We learn through their experiences and stories; when a patient talks about the distress caused by akathisia resulting from an antipsychotic medication, questions surrounding the mechanism of action of psychotropic medications and their side effects become more immediate and real.

Learning about neuroanatomical pathways—how these interact to define our mental state and how disruptions in these networks lead to psychiatric disorders—is interesting and also personal. Every time we learn about the anatomy of our bodies, we learn about ourselves, as well as our patients.[14] When we learn about the anatomy of the brain, we learn how neural connections define our behaviour, our personality, and our humanity. When we look at the networks that define our behavioural output, we see our own patterns—we understand how the act of pushing the snooze button three times every morning is actually defined by neural connections.[15] When we learn about the neurobiology of stress, we ourselves may be experiencing stress. When we learn about the neurobiology of mood and anxiety disorders, we may be feeling sad or anxious. In this way, we can appreciate how psychiatric disorders represent one end of a spectrum of behaviours we exhibit ourselves.

While psychiatric disorders represent one end of a spectrum of everyday emotions and behaviours, it needs to be recognized that these disorders are highly prevalent: almost everyone knows someone who is dealing with a mental health issue. In any given year, one in five Canadians will experience a mental health or addiction problem.[16] Health care professionals are not immune. Suicide is considered an occupational hazard for physicians.[17] Medical students also experience significant rates of depression and suicidality, with a recent meta–analysis reporting rates of depression of 33% in first year medical students.[18] Yet evidence suggests that depression is undertreated in this population, perhaps due to concerns regarding a negative impact on the student's future career, poor insight, lack of time, or stigma.[18] Greater knowledge of psychiatric disorders may contribute to reducing stigma, bringing down barriers to accessing health care, and improving mental wellness, not only for our patients, but also for ourselves.

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[1]Professor of Teaching, Department of Cellular and Physiological Sciences, Faculty of Medicine, University of British Columbia, Vancouver, BC
[2]Associate Professor, Department of Psychiatry, Faculty of Medicine, University of British Columbia, Vancouver, BC

Correspondence to
Claudia Krebs (ckrebs@mail.ubc.ca)