Mental health in 2016: Current events and clinically-actionable insights from neuroscience

Yasmeen Mansoor, BSc(Hons)[1]; Jordan W. Squair, MSc[1,2]
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"Mental health" is an essential component of holistic health and well–being, and is defined by the World Health Organization as "a state of well–being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."[1] In the absence of mental health, "mental illness" refers to diagnosable disorders in which "alterations in thinking, mood, or behaviour (or some combination thereof) [are] associated with significant distress and impaired functioning."[2] The most common forms of mental illness include depression, anxiety, dementia, and schizophrenia. Mental illness can range in nature from subclinical to severe, and in length from single episodes to chronic disorders.[3] It is important to note that the definition of being mentally healthy does not limit itself to the absence of mental disorders or disabilities.[4] In addition, the definition of mental health varies across cultures and personal, subjective assessments.[5] The effective promotion of mental health in society is essential in order to mitigate mental illness, and to improve quality of life among those living with a mental illness as well as those without.[6]

It has been well–established that mental illness, like many other forms of disease, arises from a complex interaction of biological, psychological, and social factors.[5] Unlike other diseases, however, classical imaging and blood tests have limited utility in the detection of mental illnesses. It is no surprise, then, that the complexity of the etiology and presentation of mental illnesses has brought about challenges in diagnosing, treating, and preventing mental illness. However, exciting advances in genetics, neuroimaging, and neurophysiology in the past decade have greatly impacted our ability to investigate and treat these disorders. Specific genes for disorders such as schizophrenia and post–traumatic stress disorder are being uncovered, neural circuits for depression are being identified, and neurotransmitter systems implicated in addictions, such as the dopaminergic system, are being analyzed with greater sophistication.[7] Paired with an increasing understanding of the social determinants of health and their roles in precipitating mental illness, we are slowly working toward becoming more knowledgeable about and being better equipped to prevent and treat these disorders.[8]

Mental health has also gained considerable attention in recent years in Canada. In 2006, a review by the Standing Senate Committee on Social Affairs, Science, and Technology identified that mental health was a heavily underserved sector in Canada.[9] In response, the first mental health strategy for Canada was announced in 2012, officially marking Canada's commitment toward not only providing treatment, but also promoting positive mental health and preventing mental illness on a nation-wide scale.[6] As our society becomes more vocal about these issues, it is becoming more clear how deeply mental health issues have impacted society. In fact, there has been an increase in the use of health services for mental illness among children and adolescents by up to 44% from 1996 to 2010, and nearly one in four individuals aged 80 and over were shown to use health services for a mental illness.[3] As such, constant discussion on this evolving topic is critical for the medical field, particularly given the pace with which neuroscience is adding to our understanding of the underlying mechanisms, but also due to the unique populations that have very specific considerations with respect to their mental health.

In light of recent events such as the Syrian refugee crisis, there is a need to recognize populations who are not often at the forefront of the media for their struggles with mental health. Since November 2015, Canada has been in the process of accepting 25,000 Syrian refugees.[10] The United Nations (UN) defines a refugee as:

> [An individual who,] owing to well–founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.[11]

A considerable proportion of the Syrian refugee population has faced several forms of psychological trauma, through displacement, isolation, violence, and loss. In fact, the UN High Commissioner for Refugees categorized 43% of refugees in 2013 and 2014 under the Survivor of Violence and/or Torture category.[12] As such, addressing the mental health needs of the incoming Syrian population will be essential to assisting their transition to life in Canada. Outside of this unique immigrant population, Canada continues to have over 200,000 new immigrants per year, and current evidence suggests that this population is at increased risk for developing mental health disorders.[13]

In addition to the ongoing Syrian crisis, in February of 2016 the Supreme Court of Canada decriminalized medical assistance in dying (MAID) for "grievous and irremediable medical conditions."[14] The Supreme Court's decision was made in the Carter v. Canada ruling and arose from a series of pleas from Canadians who supported the right for gravely ill individuals to end their lives with the aid of a doctor.[14] Since then, the legislation governing MAID has been carefully articulated by decision–makers. The implementation of this new legislation will have a broad array of implications on healthcare providers, patients, and families alike. In the context of healthcare, the impact of MAID from the caregiver perspective has received relatively little attention. Furthermore, even in states and countries where MAID has been approved, there is little evidence on the impact these life and death decisions have on physicians.

In this issue of the University of British Columbia Medical Journal (UBCMJ), we explore the arising complexities of mental health

[1]Vancouver Fraser Medical Program, Faculty of Medicine, University of British Columbia
[2]MD/PhD Training Program, Faculty of Medicine, University of British Columbia

Correspondence to
Yasmeen Mansoor (yasmeen.mansoor@alumni.ubc.ca)
Jordan Squair (jordansquair@gmail.com)

on various forefronts. Dr. Lynn Raymond highlights exciting advances in the bridge between psychiatry and neurology, and how an increased understanding of underlying physiological mechanisms is leading to improved outcomes in neuro–psychiatric disorders. Furthermore, we are pleased to have Dr. Hal Siden discuss some of the issues around one of the most hotly contested topics in medicine: MAID. As medical director of Canuck Place Children's Hospice, Dr. Siden provides unique insight into this topic and discusses the potential implications of this recent legislation on pediatric palliative care. In addition to these critically important topics, recent evidence suggests medical students are at an increased risk of developing mental health issues. On the other hand, medical students are positioning themselves as physicians to be abundantly exposed to patients suffering from a wide variety of mental health concerns. A feature article by Dr. Claudia Krebs and Dr. Claire Beasley includes an important discussion on the role medical education plays in raising awareness of mental health among medical students. Lastly, Andrea Jones, Taylor Willi, and Dr. William Honer present a discussion of mental health in the Downtown Eastside of Vancouver, providing insight into the most recent advances to understanding some of the social determinants of mental health. We hope that this latest issue of the UBCMJ sheds light on the complexities of mental illness and engages the readership on such a significant topic in our society.

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