Writing...
FACTS, OPINIONS & IDEAS
Published in *Dancing in the Rain* in 2015 by Future Leaders (www.futureleaders.com.au)

Mental Health — the Forgotten NCD

Janie Maxwell and Grant Blashki

No health without mental health.[1]

Most of you will know someone with mental illness. How long did it take for them to receive help? How does it affect their lives and those around them? How do you personally feel about mental health? This chapter endeavours to paint a picture of mental health around the globe: the burden, the challenges and the opportunities. But, as we meander through the worlds of policy, epidemiology and stigma, try to keep this someone you know in mind, for it is their story that is echoed in these pages.

Global health agendas

In reading this book you will have read much about NCDs, the little three-letter abbreviation that has captured the attention of public health and global health advocates around the world.[2] As you will probably know by now, it stands for 'noncommunicable diseases' and refers to a cluster of 'lifestyle diseases', including cardiovascular disease, respiratory disease, cancer and diabetes. The change in focus from traditional infectious diseases to NCDs has been driven by a widespread recognition that NCDs are responsible for significant disability and almost two-thirds of deaths (some 35 million deaths annually[3]), many of which are premature and preventable.[4] Yet, while the world progressively

recognises the spectre of NCDs, mental health is falling in its shadow.[2] It is critical that the conceptualisation of NCDs is broadened to encompass mental health. The economic, human rights and health arguments for greater recognition and investment in mental health are compelling.[5] This chapter argues that this will not only help to address the burden of mental health but will also lead to stronger gains in addressing other NCDs.

It is useful to take a step back and look at the global health agenda. Many of you will have heard of the Millennium Development Goals (MDGs). These were a lofty set of United Nations endorsed targets adopted by 189 countries in 2000 to reach by 2015. There were eight targets, including health, education, poverty, equity and environmental sustainability.[6] Neither mental health nor NCDs were included in the MDGs.[7] Critics of the MDGs have argued that this represents a failure of global health leaders to recognise the evolving epidemics of NCDs and mental illness.[8]

Fast forward 15 years to today: the MDGs are being assessed and new goals — the Sustainable Development Goals (SDGs) — are being set. There have been calls for a 'grand convergence' of health between rich and poor countries, and a broader approach to health.[9] While emerging agendas recognise mental health and NCDs, there is still concern that current approaches do not adequately, holistically or synergistically, address both of these challenges.

Let's consider, for example, the World Health Organization's (WHO) approach to mental health. A WHO critical guiding document, *The Global Action Plan for the Prevention and Control of Non-Communicable Diseases,* acknowledges that mental health is often overlooked and recognises that it contributes significantly to the global NCD burden.[10] Yet, rather than integrating mental health in the NCD document, the WHO has developed a separate guiding document for mental health, the *WHO Global Mental Health Action Plan 2013–2020*. While it is positive that the WHO has

developed a dedicated mental health action plan, some mental health advocates are concerned that mental health might be forgotten if it does not have a seat on the NCD bus. Mental health is frequently the poor cousin of physical health, and the true burden of mental illness is not widely appreciated. This lack of recognition is compounded by stigma that pervades society; communities and policymakers are often more comfortable dealing in the currency of tangible physical diseases.

So, how is mental health faring in this next round of goals, the SDGs? Current drafts of the SDGs do mention mental health, which is a great start, but only in terms of reducing premature mortality, mostly in relation to suicides. Mental illness forms a spectrum of severity, and only acknowledging suicides and deaths overlooks the suffering of the broader population with mental illness. The conceptualisation of mental illness impacts needs to consider long-term disability, loss of capacity and reduced quality of life. Mental health advocates argue that goals directed at reducing disability and achieving universal health coverage for mental illness need to be explicitly incorporated into the SDGs to optimise equity and sustainable socioeconomic development.[11]

These three letter acronyms that litter our public health discourse ('NCDs', 'MDGs', 'SDGs') actually matter more than you might imagine. They aren't purely academic and they tend to set the compass for policymakers, philanthropists and governments. Like the incessant voice of a Google map navigator, once the destination is set, they determine our course along the global health highway.[6]

The interplay of NCDs and mental health

Fortunately, there are many synergies between mental health and NCDs that make tackling them together more effective and efficient. Let's explore some of the reasons why it is simpler and smarter to consider them in tandem.

Cause and consequence

It is well established that physical illness and mental illness are closely associated. This means that where you find one, you are more likely to find the other. It is also evident that both quality of life and life expectancy are worse for those with concurrent physical and mental illness.[3] What is less clear, however, is whether this association also indicates a reciprocal causal relationship, that is, that physical and mental illness can cause and exacerbate each other.

First, let's look at the impacts of mental health on physical diseases. The general consensus is that some mental illnesses may contribute to the development of a physical illness, and contribute to a worse outcome.[12] The strongest links so far are emerging between depression and cardiovascular and cerebrovascular disease (strokes and heart attacks), diabetes, and some cancers[13] — many of the NCDs. For example, a person with depression who has a heart attack (or who becomes depressed after a heart attack) is much more likely to die earlier and have a lower quality of life than someone who has just had a heart attack.[2] This is likely the result of complex interactions between physical and psychological biology, moving beyond the simple additive effect of multiple illness. Health systems are beginning to recognise the interlinkages between physical and mental health. Cardiovascular disease is one of the first areas where practitioners are explicitly screening for and treating depression to mitigate poor physical outcomes.

What about the other way around? Are people with physical illness more likely to have mental illness? The answer is a clear yes.[14] This is especially the case for chronic diseases. This is not surprising, given that for many, managing illness is a psychological roller-coaster. You will probably know someone who has been left shocked, worried, disempowered or uncertain along the path of diagnosis and treatment. For people with chronic illness, learning how to strike a balance that recognises vulnerabilities and health needs, yet maintains resilience and independence, can be challenging.

Research exploring the mechanisms for these interrelationships has a long history. There are several large fields of research spanning physiology, psychology and sociology. One reason for their close association is that they share many risk factors, such as smoking, inactivity, stress and substance abuse. These risk factors can have a significant influence on both the development and outcomes of physical and mental health.[3] Other factors and behaviours can impede recovery: low health literacy and self-esteem, delay in accessing care and non-compliance with treatment. Those with mental illness are less likely to access health services or complete treatment plans for both psychological and physical illness.[3] In depression, non-compliance rates are up to three times higher.[15] This is dangerous, especially for NCDs, where long-term treatment is essential to prevent complications (such as blindness, kidney failure or nerve damage in diabetes).

Biological explanations highlight the role of the immune and hormonal systems;[14] in particular, the role of neurotransmitters in the hypothalamic-pituitary-adrenal axis (HPA). The HPA is like the body's control room, which manages stress and mood, alongside tasks of physical wellbeing ranging from reproduction and gut function, to the balance of sugars, salt and energy in our body. Physical and mental health are clearly enmeshed on a biological level.

Synergies in systems

Addressing mental health together with NCDs not only makes sense in terms of prevention and risk factor reduction but also in terms of management. NCDs and mental illness share similar treatment principles that can be integrated into health systems design. Their strong roots in biological, social and psychological contexts mean that NCDs and mental illness both require holistic and multidisciplinary care. Furthermore, they frequently follow a chronic and relapsing course, which does not respond well to reactive health care models that focus on episodic, curative and specialised care.

The burden of mental illness

So, why should the world pay attention to mental illness? Maybe these policy-setting bodies are correct in leaving mental health on the sidelines while they address issues of poverty reduction and physical disease? There are several good reasons why mental health should be a high priority. Beyond its interconnectedness with physical disease, mental illness poses a considerable burden in its own right, both in absolute terms and relative to other illnesses.[14]

Disability and mortality

When considering the impact of illness it is important to consider suffering and disability as well as deaths. Epidemiologists and public health academics have developed a measure called the DALY (disability adjusted life year) to quantify the levels of disability and premature mortality caused by various diseases. Using the DALY, policymakers can ascertain which illnesses are causing the greatest loss of good quality life in a community or, in epidemiology speak, the 'burden of disease'. As the context for global health is changing, so is the spectrum of illnesses and types of burdens. These shifts include: population ageing, migration and urbanisation; changed lifestyles and diets; and improved access to and coverage of medical services. Generally, rates of mortality are falling and much of the burden of disease is increasingly attributable to the complications of acute illness or from chronic diseases.

The global burden of disease survey

To get an idea of the impact of mental health, we will look at the results of the 2010 Global Burden of Disease survey. This survey is the result of an ongoing international collaboration collecting data from more than 183 countries; it is one of the most comprehensive epidemiological studies ever done. It found that among mental illnesses, depression causes the greatest disability (42%) followed by substance dependence (17%), anxiety (15%) and schizophrenia (7%). Meanwhile, substance dependence causes the

greatest mortality (86%) followed by schizophrenia (7%).[16] When this disability is combined with mortality (as in the DALY measure), depression, anxiety and substance dependence cause the greatest overall burden to society of the mental illnesses.

When compared with other illnesses, the survey found that mental illness contributes one third of global disability.[17] When premature death is measured alongside disability, mental illness contributes a smaller amount (9% for low-income countries and 27% for high-income countries).[14,18] This is because mental illness causes less death and more long-term disability, and each country has a different spectrum of diseases that can contribute to death rates. Among NCDs, mental illness contributes 19% of the overall burden, between cancer (14%) and cardiovascular disease (22%).[19] One of the reasons that mental illness has such a big burden relative to other diseases, including NCDs, is that it commonly has an earlier onset in life with ramifications during key productive and formative years, affecting many domains including relationships, education and employment.

Measuring mortality

It is important to note that all these estimations of overall burden of mental illness depend on rates of mortality that are grossly underestimated. This is for two reasons. The first we have discussed already: that mental illness is associated with worse outcomes and higher death rates of physical illnesses. Indeed, if diagnosed with a mental illness, one's life expectancy is estimated to fall by 10–20 years overall.[20] Second, in the Global Burden of Disease study, deaths from suicide were considered separately, categorised among injuries. If we were to add suicide rates to the mental health death toll, we would need to add 800,000 deaths per year, an astonishing figure.[5] Yet it pays to look below the surface – for every completed suicide there are 10–20 people who attempt suicide. Living with the spectre of self-harm or suicidal ideation places enormous stress on individual families and friends.

This taboo subject plays like a deep, yet almost inaudible, double bass note in our public health symphony. It's extraordinary that this figure does not get more attention.

The prevalence of mental illness

It is clear that mental illness has a considerable impact, but exactly how many people have a mental illness at any one time? A number of definitional issues creep into discussion about mental illness prevalence. Notably, where is the line between normal life stress and a mental disorder? What is the language of distress and perception of mental health in different contexts? In response to this and other dilemmas, classification systems have been developed to describe mental disorders. While this can improve consistency and minimise subjectivity in mental health diagnosis, it does not solve many of the socio-cultural barriers to recognition and epidemiological monitoring.

Definition and recognition

The two most widely used classification systems for mental illness are the DSM V and ICD 11 systems. The classification systems are generally thought to be quite conservative, erring on the side of under-diagnosis. Patients must fill specific symptom criteria that have been present for some time (often months) and be experiencing significant dysfunction in several areas of life. Yet, considerable suffering and disruption can be experienced when an individual does not tick all the diagnostic boxes. Space does not allow elaboration of the details of these classifications, but it is notable that even with the latest iterations of these classification systems, they do not concur even with each other! This underlines the fact that there are ongoing debates about the best way to classify and subcategorise mental disorders.[14] This diagnostic uncertainty combines with several other factors to compound the risk that prevalence rates of mental illness are underestimates. Other factors include sociocultural context,

scarcity of trained mental health workers, barriers to accessing care and somatisation (the expression of psychological distress as physical symptoms).

These challenges in recognising and defining mental illness filter down from clinicians to individuals and their families. Clarity around when 'normal' stress and sadness transitions into mental 'disorder' remains elusive. The distinction is blurred by the trajectory of disease, which can start insidiously, follow an unpredictable, relapsing and remitting course, and manifest in a multitude of ways. The subtlety and confusion around mental illness can mean that individuals and their communities may erroneously interpret mental illness as a failure to cope with normal stressors. This has negative implications for individual self-esteem, which can compound both the underlying mental illness and the likelihood of help-seeking. Finally, mental disorders' ultimate recognition depends on individual and societal knowledge, norms and attitudes.

Prevalence and vulnerable populations

Despite variable community perceptions about mental health around the world, surveys consistently find that mental illness is very common. Indeed, for most readers, simply thinking about your own network of family and friends will bring to mind someone with a mental illness. The lifetime risk of having a mental illness varies from 18–36%![21] At any one time, at least 5% of the global population is affected by a severe mental illness (for example, psychosis, substance dependence or severe depression). This is calculated using the most conservative estimates and corresponds to at least 300–400 million people severely affected at that point.[22] With regards to the big three (anxiety, depression and substance dependence), the World Mental Health Survey found that anxiety had the highest number of cases per year (approximately 10% of the population), followed by mood disorders (approximately 6%) and substance dependence (approximately

3%).[21] Importantly, there are less common but often more destructive mental disorders, such as schizophrenia and bipolar disorder. These disorders pose a challenge for resource-strapped mental health services and can devastate individuals and families.

These are the general rates of mental illness; however, some people are at increased risk, such as the elderly, adolescents and women; minority groups; refugees, displaced persons and asylum seekers; and those affected by disaster or trauma. Surveys estimate that almost one-quarter of immigrants and almost half of refugees suffer depression or anxiety.[23] For this group, it can be difficult to ascertain the influence of migration, loneliness, acculturation and racism among other influences on mental health. Women are at a greater risk of mental illness due to an array of factors, including poverty, disempowerment, domestic violence, patterns of response to stress, and a multiplicity of social roles.[14] For adolescents, global estimates of rates of mental illnesses range from 10–20%.[24] Unlike NCDs, some mental illnesses emerge at a very early age — some of the anxiety disorders (separation anxiety, phobias and impulse control disorders) can affect those young as 7–15 years of age. Contrastingly, depression, substance dependence and other anxiety disorders (generalised anxiety, panic disorder and PTSD) typically develop later at 18–50 years of age.[25]

Challenges for mental health

Mental illness is clearly prevalent and poses significant threat to a full and healthy life. While progress in mental health is gathering momentum, it faces several challenges along the route, including: poor mental health literacy and under-recognition; high stigma; inadequate mental health services; and narrow conceptualisation of determinants of mental health.

Mental health literacy

The significance of mental illness is under-recognised for many reasons, including global public health agendas and the aforemen-

tioned definitional, diagnostic and epidemiological reasons. Of overarching relevance is mental health literacy, a phrase used to describe knowledge and beliefs about mental illnesses that aid their recognition, prevention and management.[26] Low mental health literacy can compound challenges in recognition, treatment and outcome for mental illness. This is all deeply embedded within the socio-cultural context, creating a multiplicity of complex and profoundly different experiences and interpretations of illness.[27] This is relevant for physical illness but more strikingly for mental illness. Culture affects perception and symptoms of illness; expectations of outcome; coping, treatment and healing strategies; causal attribution; and social and functional ramifications.[14] It is essential to appreciate socio-cultural factors when addressing mental health literacy in order to develop specific and appropriate reform and to avoid imposing Western paradigms and values on notions of health and wellbeing.

Stigma

In many parts of the world, mental illness is associated with high levels of shame and stigma for both the patient and their family. People with severe mental illness experience human rights abuses, neglect and discrimination.[5] Stigma can be understood to originate from problems with knowledge, behaviour and attitude that manifest as ignorance, discrimination and prejudice.[14] Stigma can be debilitating, not only by exclusion, rejection and inequity, but through the burden of anticipated stigma, where a person's confidence is eroded.[28] Thus, it is crucial that anti-stigma efforts address not only systemic, institutional and external factors, but also self-esteem and empowerment. Furthermore, to ultimately enshrine human rights for stigmatised groups (such as those with mental illnesses), governments need to reflect on the three aspects of promoting human rights: respect, protection and fulfilment.[29] Given that mental health literacy is generated largely from human interactions and the media, these channels should be utilised to

address stigma. Research argues that to be effective, anti-stigma campaigns need to focus on the human face and experience of mental illness, rather than merely on the scientific facts, meanwhile debunking myths and negative messaging. Some argue that interaction with people affected by mental illness is the most effective and powerful form of education, but this can be tough for those with mental illness as it requires the confidence to disclose their diagnosis.[14]

Mental health services

As alluded to earlier, mental health care is complex and requires continuity and integration. While we have effective psychological and medical treatments and a good understanding of the types of health systems that work, there is ongoing inequity in access to mental health services.[22] Research suggests that 80% of people with mental illness in the world get no access to mental health services.[30] Even in the most well-resourced countries and for the most severe mental illnesses, up to 50% of families can suffer alone; this figure can climb to 90% in low-resource settings.[22] This is for a raft of financial, geographical and socio-cultural reasons, and is not only an issue for low- and middle-income countries. It is acknowledged that the current burden of mental illness can only be reduced by substantial investment in treatment and service coverage.[31]

Part of the difficulty is that the number of mental health specialists is grossly inadequate to match the needs of the vast numbers of people who would benefit from mental health services. Take, for example, India, which has only 3,500 psychiatrists for 1.2 billion people,[32] and most of these are working in urban areas. Not everyone needs to see a psychiatrist in their lifetime, but even if only a small proportion of the estimated 18–36% of people who get a mental illness did need a psychiatrist, that is still a lot of patients! The story is not dissimilar for psychology services. In Australia, we have the luxury of limited

subsidised visits to see psychologists and psychiatrists, but financial and geographical barriers still have an impact.

To address this gap in access, many public health leaders around the world are advocating that we rethink how we structure our health systems.[2] Key focuses are prevention, collaboration and task-sharing.[33] Ideal models are able to manage multiple illnesses in the primary care setting. A fundamental step is 'task-shifting' and 'task-sharing' between traditional and non-traditional health providers, including community and lay health workers. There is increasing evidence that treatments such as cognitive behavioural therapy and motivational interviewing can be effectively applied in low- and middle-income countries, especially when simplified.[2] Successful models of shared, collaborative, primary mental health care exist in several low- and middle-income countries, such as India, Chile and Uganda, but are not widespread.[2]

Social and environmental determinants of health

Human physical and mental health is anchored in the socio-cultural, economic and natural environment. Accordingly, low social capital (poor or few relationships), poverty and environmental stressors are strong risk factors for mental illness. Yet, just as increasing income does not exponentially lead to increasing happiness (or the absence of mental illness), poverty does not always correlate with poor mental health. One factor is 'relative deprivation' or the degree of inequity in society. This means that there are generally lower rates of mental illness in a more equitable society, irrespective of the standard of living.

Any change to this socio-cultural, economic and natural web can destabilise or bolster human health. A few recent changes stand out; in particular, the emergence of globalisation. Globalisation has influenced what we eat and where our food comes from; how we work and the type of work we do; the goods we buy and levels of consumption; how we move around the world and how we communicate. Beyond the benefits of globalisa-

tion, there is considerable disquiet on the effects on both physical and mental health in both low- and high-income countries. Urbanisation and community segregation undermine human resilience as they disrupt traditional support systems, identity and culture.[34] Urbanisation also increases the exposure of ageing populations to NCD risk factors such as sedentary lifestyles, poor diet and substance abuse.[2] Finally, globalisation poses a risk of exploitation, illness and injury in low-income countries due to few trade barriers and low occupational health, safety and environmental standards. Beyond globalisation, conflict and political instability, environmental stress and natural disasters and the increasing impact of climate change cause disruption to livelihoods, ecosystems and social systems, threatening the very pillars of human physical and mental health.

Avenues for change

As always, the future poses several challenges and threats to physical and mental health. From a positive perspective, the synergies in systems of physical, mental and social wellbeing make it easier to achieve progress in many spheres simultaneously. Recognition of this complexity is essential in navigating a path forward.

We are at a unique crossroad in public health: outstanding developments have dramatically reduced the toll from 'traditional' illness and disease; meanwhile, changes to human lifestyles and life expectancy have ushered in an era of increasing NCDs and mental illness. Both the health and sustainability of our societies are calling for a review of the way in which we choose to live and approach health.

NCDs and mental health share a profoundly complex and new set of needs. We need to respond by addressing root causes and by targeting barriers to better outcomes such as stigma and under-investment. As health systems grapple with escalating costs and demands, it is important that principles of prevention and equity are at the core of holistic and multidisciplinary services. We

need to maintain a nuanced approach where morbidity and disability are considered alongside mortality. Communities, clinicians, researchers and policymakers all have a role and need to be cognisant of their own biases to Western medical and mental health paradigms when approaching global health reform.

Food for thought

Health can be envisioned as a tree: the leaves and fruit represent vitality and productivity, and the roots form a network of resilience, anchored in a stable natural and human environment. The tree is only as healthy and strong as its roots and foundation. Furthermore, its health cannot be compartmentalised. To this end, mental and physical health needs to be considered holistically, and as a product of context.

Among all the policy speak and grand plans for reform, it is easy to forget that mental illness is an intimate experience for the individual. Few illnesses cause such suffering, alter one's identity and affect the course of one's life more than mental illness. It is our hope that mental health will take its proper place among other priority health issues to ensure that it is not the forgotten NCD.

Acknowledgements

Thank you to Professor Vikram Patel, Associate Professor Harry Minas and colleagues for their excellent book, *Global Mental Health: Principles and Practice*, which helped inform this chapter.

Endnotes

1 S Saxena and S Skeen, 'No health without mental health: challenges and opportunities in global mental health', *African Journal of Psychiatry,* vol. 15, no. 6, 2012, pp. 397–400.

2 VK Ngo et al., 'Grand challenges: Integrating mental health care into the non-communicable disease agenda', *PLoS Medicine*, vol. 10, no. 5, 2013, p. e1001443.

3 WHO, 'Access to non communicable diseases medicines', retrieved from http://www.who.int/medicines/areas/policy/access_noncommunicable/en/

4 R Beaglehole et al., 'Priority actions for the non-communicable disease crisis', *Lancet,* vol. 377, no. 9775, 2011, pp. 1438–1447.

5 H Minas et al., 'Comprehensive SDG goal and targets for non-communicable diseases and mental health', *International Journal of Mental Health Systems,* vol. 9, 2014, p. 12, retrieved from http://www.ijmhs.com/content/9/1/12

6. United Nations, *The Millennium Development Goals Report 2014*, retrieved from http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf

7 JJ Miranda and V Patel, 'Achieving the Millennium Development Goals: Does mental health play a role?', *PLoS Medicine*, vol. 2, no. 10, 2005, p. e291, retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1201694/

8 JJ Miranda and V Patel, 'Mental health in the Millennium Development Goals:authors' reply', *PLoS Medicine*, vol. 4, no. 1, 2007. p. e57, retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1796644/

9 G Yamey et al., 'Achieving a "grand convergence" in global health by 2035: Rwanda shows the way: Comment on "Improving the world's health through the post-2015 development agenda: perspectives from Rwanda"', *International Journal of Health Planning and Management* [Internet]. 2015, retrieved from http://globalhealth2035.org/sites/default/files/journal-articles/rwanda-shows-the-way.pdf

10 WHO, *Global Action Plan for the Prevention and Control of NCDs 2013–2020*, retrieved from http://www.who.int/nmh/events/ncd_action_plan/en/

11 J Eaton et al., 'A position statement on mental health in the post-2015 development agenda', *International Journal of Mental Health Systems*, vol. 8, 2014, p. 28.

12 R Gillen et al., 'Depressive symptoms and history of depression predict rehabilitation efficiency in stroke patients', *Archives of Physical Medicine and Rehabilitation,*vol. 82, no. 12, 2001, pp. 1645–1649.

13 MR Von Korff et al., *Global perspectives on mental-physical comorbidity in the WHO World Mental Health Surveys*, New York, Cambridge University Press, 2009.

14 H Minas et al., *Global mental health: principles and practice,* Oxford University Press, 2013.

15 MR DiMatteo et al., 'Depression is a risk factor for noncompliance with medical treatment: meta-analysis of the effects of anxiety and depression on patient adherence', *Archives of Internal Medicine,* vol. 160, no. 14, 2000, pp. 2101–2107.

16 HA Whiteford et al., 'Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010', *The Lancet*, vol. 382, no. 9904, 2013, pp. 1575–1586.

17 CD Mathers and D Loncar, 'Projections of global mortality and burden of disease from 2002 to 2030', *PLoS Medicine,* vol. 3, no. 11, 2006 p. e442.

18 CD Mathers and D Loncar, Updated projections of global mortality and burden of disease, 2002–2030: data sources, methods and results, Geneva, WHO, 2005, retrieved from http://www.who.int/entity/healthinfo/statistics/bodprojectionspaper.pdf
19 CJL Murray et al., 'Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010', *Lancet,* vol. 380, no. 9859, 2012, pp. 2197–2223.
20 K Wahlbeck et al., 'Outcomes of Nordic mental health systems: life expectancy of patients with mental disorders', *British Journal of Psychiatry,* vol. 199, no. 6, 2011, pp. 453–458.
21 RC Kessler et al., 'The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys', *Epidemiologia e Psichiatria Sociale,* vol. 18, no. 1, 2009, pp. 23–33.
22 V Patel, 'Why mental health matters to global health', *Transcultural Psychiatry,* vol. 51, no. 6, 2014, pp. 777–789.
23 M Alvarenga and D Byrne, *Handbook of psychocardiology*, Singapore, Springer-Verlag, retrieved from http://www.springer.com/us/book/9789812872050
24 C Kieling et al., 'Child and adolescent mental health worldwide: evidence for action', *Lancet*, vol. 378, no. 9801, 2011, pp.1515–25.
25 RC Kessler et al., 'Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative', *World Psychiatry,* vol. 6, no. 3, 2007, pp. 168–176.
26 AF Jorm, 'Mental health literacy: public knowledge and beliefs about mental disorders', *British Journal of Psychiatry,* vol. 177, 2000, pp. 396–401.
27 LA Kiropoulos et al., 'Managing mental illness in patients from CALD backgrounds', *Australian Family Physician,* vol. 34, no. 4, 2005, pp. 259–264.
28 A Jacoby, 'Felt versus enacted stigma: a concept revisited. Evidence from a study of people with epilepsy in remission', *Social Science & Medicine,* vol. 38, no. 2, 1994, pp. 269–274.
29 The Universal Declaration of Human Rights, retrieved from http://www.un.org/Overview/rights.html
30 KS Jacob et al., 'Mental health systems in countries: where are we now?', *Lancet,* vol. 370, no. 9592, 2007, pp. 1061–1077.
31 D Chisholm et al., 'Reducing the global burden of depression: population-level analysis of intervention cost-effectiveness in 14 world regions', *British Journal of Psychiatry,* vol. 184, 2004, pp. 393–403.
32 DC Sharma, 'India's new policy aims to close gaps in mental health care', *The Lancet,* vol. 384, no. 9954, 2014, p. 1564.
33 D Chisholm et al., 'Cost of scaling up mental healthcare in low- and middle-income countries', *British Journal of Psychiatry*, vol. 191, 2007, pp. 528–535.
34 L Swartz, 'Globalization and mental health: changing views of culture and society', *Global Social Policy,* vol. 8, no. 3, 2008, pp. 304–308.