

Mainstreaming mental health with the NCD agenda using digital technology

A literature review

The global burden of mental illness is increasing rapidly. According to Global Burden of Disease Study, in 2017, 1.1 billion people were living with mental health and substance use disorders which is 10% of the total disease burden and 19% of all years lived with disability.¹ Major depressive disorders ranked in the top 10 causes of ill health in all but 4 countries worldwide.² Keeping in view of these, the United Nations High Level Summit on NCD, 2011 and World Health Assembly 2012, focused largely on the four main preventable NCDs but discussed the dire need to address the growing burden of mental health conditions.^{3,4} It was in 2018, when the UN member states expanded the focus from the four main NCDs to the more inclusive five by five approach consisting of mental health and wellbeing.⁵ Also, in 2021, WHO Executive board stressed the importance of incorporating mental health into response and preparedness plans for public health emergencies like the ongoing COVID-19 pandemic.⁶ This review article analyses the growing mental health burden and the need for integrating mental health with NCDs using digital interventions.

Methods

A literature review was conducted in May 2020-21 to identify existing articles and documents focusing on integrating mental health with NCDs and the digital technology that can be used. Search terms were developed, and both methodological and topic literature was searched. This involved a review of research papers and published reports to collect information the digital revolution and its impact on mental health and also on the integrating of mental health with NCDs. PubMed and Google scholar databases were used to search for published literature. The search combined various terms for mental health, NCDs and digital technology. No restrictions on publication date were used; however, the language was restricted to English. Reference lists of the included documents were searched to identify additional relevant articles and documents.

Current mental health burden

Mental disorders are the second leading cause of disease burden in terms of years lived with disability (YLDs) and the sixth leading cause of disability-adjusted

life-years (DALYs) in the world in 2017, posing a serious challenge to health systems, particularly in low-income and middle-income countries.⁷ Though progress has been made in reducing the global suicide rates from 12.9% per 100,000 in 2000 to 10.6% per 100,000 in 2016, however, suicide remains the second highest cause of death among people aged 15 to 29 years globally.⁸ Taken together, mental, neurological and substance use disorders exact a high toll, accounting for 13% of the total global burden of disease.⁹ However, availability of mental health workforce vary from below 2 per 100,000 population in low-income countries to over 60 in high-income countries. The global median remains at 9 per 100,000 population, or less than one mental health worker per 10,000 population which is very low.²

Mental health and its NCD interconnections

Mental disorders often affect, and are affected by, other diseases such as cancer, cardiovascular disease and HIV infection/AIDS, and as such require common services and resource mobilisation efforts. Many risk factors such as low socioeconomic status, alcohol use, tobacco use, unhealthy diet and stress are common to both mental disorders and other noncommunicable diseases and often cluster in people with mental disorders.^{10,11} Cardiovascular diseases, diabetes, cancer, and respiratory diseases commonly co-occur with both common mental disorders such as depression and anxiety disorders and severe mental illnesses such as schizophrenia and bipolar disorder. Various epidemiological studies and systematic reviews report the link between common mental disorders and diabetes, CVDs and cancer.¹²⁻¹⁴ World Mental Health Survey reports an excess mortality of about 12% in people with mental disorders due to smoking, diabetes and hypertension.¹³

Mental Health Parity in the Global Health Agenda

The World Health Organization's mental health action plan for 2013-20 emphasizes that mental health and wellbeing are central to reducing the global burden of NCDs¹⁵ and has led to an expansion in the focus of the UN member states on the big four NCDs and risk factors to a five-by-five approach that includes mental disorders and environmental contributors.¹¹

In alignment with target 3.4 of the Sustainable Development Goals (SDGs), "by 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being",¹⁶ mental health needs to be integrated into the response to NCDs. For the first

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Case Study: India's steps towards addressing the Mental health issues

Realizing the importance of addressing the mental disorders in order to reduce the total disease burden, India launched its National Mental Health Programme in the year 1982 and first National Mental Health Policy in 2014, and a revised Mental Healthcare Act in 2017, with the objectives of providing equitable, affordable, and universal access to mental health care.¹⁹ Furthermore, with the expansion of state and district mental health programmes to all states and districts, there has been a felt need for good quality data to strengthen mental health services in India. In 2021, the Government of India launched a multilingual mobile app "MANAS" which stands for Mental Health and Normalcy Augmentation System to promote mental wellbeing across age groups and with the motto "Uttam Mann, Saksham Jan" translating to healthy mind, competent people. The app is based on life skills and core psychological processes, with universal accessibility, and promoting positive attitude focusing on wellness.²⁰ In addition to this newly launched app, other initiatives to improve mental health and wellbeing including the Kiran and Manodarpan 24*7 helplines in order to cater to people in distress, pandemic induced psychological issues and mental health emergency. Recent Global health and wellness initiative of World NCD Federation with theme Play, Laugh and Grow (Indian version: Khelo, Hasso aur Hassao and Badho aur Badhao, India) has also been launched on 2nd March, 2021 which integrate NCDs with mental health.²¹

time, the promotion of mental health and well-being, and the prevention and treatment of substance abuse have been recognised as priorities within the global development agenda.¹⁷

Table 1 gives the baseline and progress values for the year 2014 and 2017 respectively for the global targets for mental health. The values indicate that we are progressing towards achieving the targets however the progress is slow and the global targets can be achieved through collective global commitment to substantial investment and expanded efforts at country level in relation to mental health policies, laws, programmes and services.

Digital interventions in mental health

Many people with mental health problems around the world have limited, chance of accessing psychological help at all.²² We are in the midst of a digital revolution and central to the digital revolution is digitally mediated communication, and the mass uptake of smartphones. As of January 2021, more than half (59.5%) of the global population have access to the internet while of this total, 92.6% accessed the internet via mobile devices.²³

Digital interventions can be a useful instrument for global mental health as it offers alternative modes of mental health care delivery when resources are scarce, and new ways to address long-standing obstacles that hinder access to care, such as transportation barriers, stigma associated with visiting mental health clinics, clinician shortages, and high costs.²⁴ There are a number of ways digital tools can be involved in mental health assessment and bring us steps closer towards measurement-based care. Studies show that some people actively choose to seek help and support from peers online via forums and social media websites while others prefer to communicate their feelings and experiences about their mental health using blogs.²⁵⁻²⁷

Digital tools are also being used to assess fluctuations in people's daily life experiences and in delivering guided self-help and health interventions. Some digital tools primarily deliver education about difficulties, which aims to provide people with accessible, systematic, structured, and interactive information that normalise, and help people cope with challenging experiences.^{28,29}

Table 1: Baseline and progress values for global targets for mental health (Mental Health Action Plan 2013-2020)^{2,18}

	Global (177 of 194 countries)		SEAR (10 of 11 countries)		AFRO (43 of 47 countries)	
	2014	2017	2014	2017	2014	2017
1. Mental health data availability and reporting	81	83	60	80	61	76
2. Government mental health expenditure per capita (US\$)	2	2.5	0.1	0.1	0.1	0.1
3. Out of pocket costs towards mental health services (%)	31	17	33	40	44	43
4. Mental health workforce per 100,000	9.0	9.0	4.8	2.5	1.4	0.9
5. Median mental health beds per100,000	6.5	11.3	2.1	2.1	1.9	2.0
6. Functioning Promotion and prevention programmes for mental health	41	71	45	75	32	48
7. Standalone mental health policies	77	79	80	90	71	72

Challenges in using digital interventions

There is an immense potential for digital technologies to improve mental health service provision but there are many challenges to overcome as well. There are concerns regarding the intrusiveness and the invasion of privacy. The digital divide across the various global regions is also a major hindrance in implementing the various information technology applications. A study reported that of 130 countries, 91 (70%) have adopted telemedicine or tele-therapy for mental health support during the COVID-19 pandemic, however, the percentage of adoption varies considerably between countries, being less than 50% in the 15 low-income countries surveyed, because of limited resources.³⁰

Discussion

Mental health has long been overlooked when NCDs are discussed and are seen as being separate disease. But the synergies across all NCDs including mental health makes it crucial to address the common risk factors and systems barriers to reduce premature and preventable suffering and death. It is now imperative that the mental health and NCD agendas are coordinated to leverage current political and funding commitments, particularly those aimed at reaching the SDGs. Recent global health and wellness initiative of World NCD Federation with theme Play, Laugh and Grow is a serious attempt to integrate NCDs with mental health.^{21,31}

Collaboration is needed between policy makers, practitioners, consumers, public health researchers, development agencies, and funding organisations to develop globally coordinated strategies. To meet the challenge of providing integrated mental health and NCD care at the primary care level, more investments are needed to strengthen health care systems, to expand the roles of traditional providers to manage multiple chronic diseases by using digital technology and to train these individuals for those roles. More explicit links between research into NCDs and SDG indicators need to be developed and consolidated, in order to attain the goal of reducing NCDs by 2030. The move to digital services is a promising start, but there is more to do. It is the time to address the digital divide, ensure equitable access across a diverse population, and identify groups for whom digital interventions are feasible and who should be prioritised for different models of service delivery.

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