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Review Article

India's path towards better mental health in a pandemic

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ABSTRACT

COVID-19 has wide-ranging effects on population health including mental health, particularly in low-and-middle-income countries (LMICs). Outbreak and interventions such as quarantine and isolation against it have contributed to psychosocial adversities. We aimed to review the state of India's mental healthcare planning, identify the gaps in the health systems and policies, and present cost-effective and scalable solutions. Necessary background information was triangulated through an iterative literature review of the policy, preprint, and peer-reviewed research literature. We focused on the following themes-a) health system capacity, policy, and law for India, b) psychological impact of COVID-19 outbreak in India, c) psychological impact of interventions against COVID-19, and d) best practices across countries for mental health management during the pandemic. We used qualitative synthesis to identify health systems and policy gaps to generate short- and long-term solutions supported by high-grade evidence for effectiveness, cost-effectiveness, and adaptation feasibility in India. The Indian health system has several shortcomings in its mental health care that became pronounced during the current COVID-19 pandemic. To overcome these, long-term goals should include increased public financing, increased human resources production, integration of health emergency and mental health policies and legislation. Immediate needs could be met by scale-up of task-shifting initiatives and telepsychiatry services in rural regions. In the ongoing pandemic, employing school-based psychosocial interventions, public awareness campaigning, subverting misinformation through broadcast legislations, and stigma reduction for general mental illnesses are pertinent. These solutions can help bridge the gaps in mental health care in India.

Keywords: COVID-19, Mental health, India, Health policy, Health systems, Pandemic

INTRODUCTION

Impact of covid-19 on mental health in india

The psychological impact of the COVID-19 outbreak

Coronavirus disease-19 (COVID-19) is having wide-ranging effects on population mental health, imposing substantial demands on healthcare and pushing the fragile and fragmented health systems in low-and-middle-income countries (LMICs) to their limits. Several factors have resulted in anxiety around COVID-19, including the risk of infection, unforeseen complications, the anticipation of detrimental long-term effects, lack of standardized treatment guidelines, and an overall unprepared infrastructure.[1] The spread of coronavirus infodemic has added to people's fears and anxiety.[2] For social media users at higher odds of anxiety and depression, the current infodemic can further worsen an unrecognized or pre-existing condition.[3] In India, compared to community samples before the pandemic, a significantly higher percentage of people reported being more irritable (37.1%), depressed (24.7%), suffering altered sleep cycles (33.1%), being worried about their future (57.8%)

and the financial loss they are likely to incur (69.6%). The respondents reported a perceived alteration in mental status and an increasing need for professional help.[4] A pandemic can also exacerbate distressing routine behaviors for people with pre-existing conditions. For instance, people with obsessive-compulsive disorders (OCD) frequently check for fever and engage in repeated hard swallowing to look for throat pain and obsessive hand-washing while patients with generalized anxiety and somatization disorder misinterpret harmless bodily symptoms as evidence of acquiring the disease.[5] Mental health is also a significant concern among healthcare workers, with doctors depicting an increase in stress, depression, and anxiety since the pandemic's wake. Threats due to assault, eviction, stigmatization, and ostracization add to the mix of stressors, including the pain of separation from family and inadequate hospital supply of personal protective equipment, thus contributing to the alarming rise in suicides due to depression.[6] During the pandemic, India also witnessed an increase in incidents of xenophobia against North-Eastern communities and religious minorities such as the Tablighi Jamaat (a religious congregation for people of Islamic faith, proved to be a cluster in the spread of the disease).[7] These scapegoating acts could push the victims into self-imposed or forced isolation, adversely impacting their psychosocial outcomes and resulting in poor health-seeking behaviour.

The psychological impact of interventions against COVID-19

Along with the outbreak, prevention and management strategies have also contributed to psychosocial adversities. For instance, case identification, contact tracing, social distancing, quarantine, and isolation are previously known to have a significant psychological impact.[8] Mass quarantine and lockdown can cause increased irritability, mass hysteria, anger, confusion, frustration, loneliness, denial, anxiety, depression, insomnia, despair, leading to post-traumatic stress disorder (PTSD) and suicide in extreme cases. For instance, PTSD in isolated suspect patients has also been positively associated with the quarantine duration.[9]

Forced, prolonged proximity with family can stress relationships, resulting in domestic abuse and violence, particularly towards women and children. School, park, and playground closures cause children to become more demanding, impatient, and irritable. Such behaviour might incite physical and mental violence from overly-pressurized parents. Stressors, such as monotony, home confinement, lack of in-person contact with peers and teachers, insufficient personal space at home, familial financial losses during the lockdowns have worsened the situation.

Evidence also points towards the geriatric population being at higher risk of worse outcomes, escalated social withdrawal, fear, anxiety, irritability, and emotional lability.[10]

Past evidence speculates an increase in suicides in the post-lockdown period, specifically considering the financial insecurity in the background of low utilization of physical and mental health services. The situation is particularly bothersome given that there is a known positive association between common mental disorders and adverse economic circumstances (poverty, inequality, and financial debt) and social inequalities among different social groups (gender, education, race, income, language, customs, and traditions, and areas of residence).[11] Single, unskilled, illiterate daily wage labourers with higher years of migration and lack of housing and sanitation, a population known to be the worst hit in India, are at greater risk for poor mental health.[12] Stay-at-home as a preventive measure against COVID-19 is an irony for the homeless, a large portion of whom already suffer from severe mental illnesses like schizophrenia, bipolar disorder, and substance abuse.[13]

The public health interventions against the COVID-19 pandemic have disrupted the delivery of mental health services either due to stringent movement restrictions and emergency-only admissions at hospitals and healthcare centres, resulting in abrupt disruption and discontinuation of counselling schedules, cutting off access to psychiatric medications and refills, little room to implement psychosocial interventions due to restricted number of companions per visit. The damage is more severe among the vulnerable psychiatric populations and socioeconomically disadvantaged communities that rely on public transport to reach hospitals.[14] In the case of patients with substance abuse disorders (SUD), altered sensorium, either as a consequence of partially treated SUD or complicated withdrawal, when presenting to the emergency with an unreliable history and uncertain COVID-19 status will pose a significant clinical management challenge. Due to lockdown, closure of rehabilitation centres has resulted in patients being discharged prematurely, with partially-treated SUD patients at higher risk of relapse or overdose. All the sources of distress mentioned above will most likely continue to persist a long time after the end of the pandemic aggravating India's extant mental health crisis.

SOLUTIONS TO TACKLE INDIA'S MENTAL HEALTH CRISIS

Modifying and enacting policies and legislations

To address India's mental health burden, the national mental health policy (NMHP) was introduced in 2014, followed by a rights-based and patient-centric Mental Health Care Act (MHCA) 2017, replacing its predecessor from 1987.[15] NMHP and MHCA aim to provide equitable, just, affordable universal access to evidence-based mental health care. Mental health is also covered under other multi-pronged policies on social security and

disability. For instance, the child health program (Rashtriya Kishor Swasthya Karyakram) under the national health mission and the national adolescent health programme addressing child, and adolescent mental health are few such policies. Despite these, current policies, programs, and acts do not directly address the acute rise in mental healthcare needs during emergencies like a pandemic. There is an urgent need to adapt and integrate the mental health component of NMHP and MHCA to account for COVID-19 and potential future pandemics and public health emergencies.

While mental health policies have failed to account for pandemics, disaster management policies did not cater to rising mental healthcare needs. India's pandemic response has relied on the disaster management act, 2005 (DMA) and the epidemic diseases act, 1897 (EDA).[16] The DMA categorically deals with natural and human-made disasters with no provisions for public health emergencies. It was invoked for implementing lockdowns and other containment measures. On the other hand, the EDA is a 123-year-old act that fails to define a "disease" or quantify an outbreak, let alone a pandemic, does not describe the role of the government. It is also outdated regarding the inclusion of modes of disease transmission and social movements that govern disease spread. This colonial act focuses on the government's 'powers' while ignoring its duties to prevent and control the epidemic. Also, there is no underlying delineation of the human rights that need to be upheld during the implementation of public health emergency measures, including quarantines and lockdowns.[17] The public health bill drafted in 2017 that could replace the EDA (Prevention, control, and management of epidemics, bio-terrorism, and disasters) needs to be accelerated from table to legislation as part of the response to the ongoing pandemic.[18]

Laws should cater to current needs and allow for customized responses to evolving emergencies to avoid loss of lives and livelihoods. Disaster management laws need to incorporate a mental health component that permits targeted emergency scale-up of finances and services. For instance, in Ireland, the emergency measures in the public interest (COVID-19) act, 2020 was passed as early as 27th March to address mental health care, among other needs during the ongoing pandemic.[19] Indian legislature needs to make similar provisions proactively.

Increased financing to meet the burden

As of 2017, India had 197.3 million or one-in-seven people living with mental disorders.[20] The contribution of mental disorders to the total disease burden has doubled since 1990, with a greater prevalence of adult-onset diseases in urbanized southern states and childhood-onset disorders in the northern states.[20] Among mental disorders of adulthood, the crude prevalence of depression and anxiety disorders were each around 3.3%, while bipolar disorder stood at 0.6% and schizophrenia at 0.3%. Among disorders of childhood, the crude prevalence was 4.5% for IDID (Idiopathic developmental intellectual disability), 0.8% for conduct disorder, 0.4% for ADHD (attention deficit hyperactivity disorder), and autism spectrum disorders each.[20] The national survey on extent and pattern of substance use in India revealed that 5.2% or 57 million Indians were afflicted with harmful or dependent alcohol use.[21]

According to the mental health ATLAS 2017, India's per capita mental health expenditure stands at 4 INR (less than 0.50 USD), with a majority of people paying mostly or entirely out-of-pocket (OOP) for treatment. The government's total expenditure on mental health is 1.30% of the total health expenditure, which is in turn 1.15% of the gross domestic product, thereby provoking the treatment gap ranging from 70 to 92% across different states, as noted by the national mental health survey (NMHS).[22] In 2020, while the healthcare budget saw a 7% increase, mental health allocation remained at 0.05% of the total healthcare budget.[23] Previously, in the financial year 2019, the budget allocated to the national mental health programme (NMHPro) was brought down to Rs. 400 million (5.3 million USD) from FY-18's Rs. 500 million (6.7 million USD).[23] Further, the funds allocated do not always translate to the funds spent, as a mere Rs. 50 million (0.7 million USD) was spent on mental health issues.[23] Poor public spending has led to high OOP expenditure for treating three major disorders (depression, schizophrenia, and alcoholism) estimated as Rs. 6980 million (94 million USD) that contribute to treatment gaps.[22] The annual loss incurred by the treatment gap and unemployment of persons with mental illnesses (PMI) is estimated at Rs. 3,430,200 million (46,101 million USD).[24] The social losses can be countered by implementing the rights-based mental health care act (MHCA 2017) with an influx of Rs. 940,730 million (about 12,600 million USD).[24] Hence, public financing of MHCA could be a highly cost-beneficial investment.

The Ayushman Bharat (Healthy India) initiative launched in 2018 aims to provide comprehensive primary health care and expansive insurance coverage for non-communicable diseases, including mental disorders. The Pradhan Mantri Jan Arogya Yojana (PMJAY) includes seven treatment packages for organic, schizophrenia, schizotypal and delusional, neurotic, stress-related, and somatoform disorders, mood-affective disorder, mental and behavioural disorders due to psychoactive substance use, ranging from Rs. 1500 to 10000 (20 to 135 USD). However, these mental health service packages are currently only available in 11.7% (2,513 of 21,451) of the impaneled hospitals and clinics, thereby having geographically skewed and limited coverage. Alongside rapid empanelment during COVID-19, PMJAY should enhance coverage of mental health disorders expanding to evidence-based psychosocial treatments.[25] While PMJAY caters to in-patient needs, this coverage has low utility, given that 0.6% of all mental health patients require

admission annually.[24] PMJAY's cost coverage does not include the long-term, out-patient, and follow-up treatment costs that can create a significant economic burden for patients. For instance, assuming that the major post-discharge costs involve outpatient visits at a public hospital (Rs. 100 or 1.3 USD per person per visit), the annual estimated cost would be at least Rs. 160,000 million/year (2150 million USD).[24] The OOP expenditure can be reduced significantly by including post-discharge costs under PMJAY. In the long term, coverage should account for productivity losses of patient households.

Influx of psychiatric and psychosocial human resources

Due to allocation and spending limitations, fundamental issues with long-term mental healthcare implications are overshadowed by immediate measures. For a population of over 1.3 billion, the country houses only 25,312 mental health professionals, making the mental health worker per 100,000 people a mere 1.93, of which the density of psychiatrists stands at 0.29 and that of child psychiatrists at <0.01, thus failing the promise of mental-healthcare access to every person under the MHCA.[26] Only 14 states and union territories (UTs) offer diplomas in psychological medicine, adding up to a total of 132 seats while MD courses in the psychiatric speciality are available in all but nine states/UTs with a total of 716 seats. These numbers enunciate the reason for inadequate mental health worker density and its continued scarcity in the years to come. Hence, India needs an additional 30,000 psychiatrists, 37,000 psychiatric nurses, 38,000 psychiatric social workers, and clinical psychologists each to achieve a target of 3 mental health workers per 100,000 population India would need h.[27] A cost-estimation analysis that worked out the deficit and the required years to correct this deficit as per current human resource production rates revealed that to reach the mental health resource requirement of 1 per 10,000 population (international standards) it will take 171 years (deficit of 0.12 million) for psychiatrists, 256 years for psychiatric nurses (0.130 million), and 258 years each for psychiatric social workers and clinical psychologists (deficit of 0.13 million each).[24]

This unmet need demands an increase in psychiatry specialization seats (degree and diploma) for MBBS graduates. To up-scale these numbers, it would warrant a significant expenditure, given that the cost of training one psychiatrist amounts to Rs 10 million (0.1 million USD).[28] On the other hand, the costs of training one psychiatric nurse, social worker, and clinical psychologist are not known. However, going by Section 31 (3) of the MHCA 2017, the government should achieve internationally accepted standards for mental health professionals within ten years of its commencement, which would call for an annual expenditure of Rs 30,000 million (403 million USD).[24]

Another useful asset would be providing psychiatry/clinical psychology bridge courses for Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (AYUSH) graduates can channel 800,000 AYUSH practitioners in mental healthcare.[29] Apart from these, short courses for other nurses, paramedics, accredited social health activists (ASHAs), auxiliary nurse midwives (ANMs), and other non-specialized healthcare workers can help bridge the human resource shortage.

Implementing task-shifting initiatives

Programs aimed at fostering task-shifting initiatives from specialists and physicians to non-specialist mental health providers and informal community care providers could be developed to improve mental health service provision. The WHO mental health gap action programme (mhGAP) guidelines for providing mental health care in non-specialized settings in LMICs include the revival of social networks and participation in community activities as a part of treatment and care for patients with depression, anxiety, and psychosis. In India, utilizing the existing provisions for community leaders' training under the district mental health programme (DMHP) and improving community participation in the program is crucial.[30] For instance, to reduce the COVID-19 related stigma faced by health workers, Karnataka's government launched the 'Anti-stigma and discrimination', which provided training to over 300 health workers and doctors. These front-line workers, in turn, trained other health workers, government employees, education department staff, police personnel, ASHA (Accredited social health activist), and Anganwadi workers, thus enabling 'trickle-down' task-shifting.[31] Previous studies have depicted significant clinical efficacy for improving psychiatric and social outcomes and high cost-effectiveness of intervention packages (psycho-education, case management, interpersonal psychotherapy, and/or antidepressants) delivered by lay health workers. Given India's acute shortage of mental health specialists, task-shifting is the only way to radically improve mental healthcare access in the short and long terms. This approach will be crucial in ensuring that interventions are sustainable, ethical, and meet the drastic surge for mental healthcare in the wake of the pandemic.

Employing psychosocial interventions

An umbrella review of meta-analyses of LMIC-based studies found that psychosocial interventions (non-pharmacological or physical interventions, comprising structured psychotherapies like cognitive-behavioural therapy (CBT), social skills training, exercise, and art therapy) have a clinically relevant effect on improving social functioning.[32] Adults with depression and PTSD and children with conduct disorders and PTSD benefited from these interventions, delivered mostly by non-specialist healthcare providers, alone or in collaboration with specialist providers. For instance, in India, the MANAS (MANashanti Sudhar Shodh, or project to promote mental health) trial trained lay health workers to

effectively provide evidence-based psychosocial interventions as part of primary care.[33] Scale-up of this cost-effective intervention can suffice some health service gap created by the shortage of mental health specialists. There is strong evidence that stepped collaborative care interventions delivered by non-specialists, comprising structured pharmacotherapy, psychoeducation, adherence support, and structured psychotherapy, have moderate effects on improving social functioning up to 12 months from the start of treatment.[32] Essential psychosocial support and medications for psychosis cost 0.1-0.5 USD per person, 0.1-0.5 for bipolar disorder, 0.05-0.10 for anxiety, and<0.05 for depression. Hence, cost-effectiveness ratios (cost of implementation to healthy life years gained) for anxiety and depression are 100-500, 500-1000 for psychosis, and 1000-5000 for bipolar disorder.[34]

Strengthening telepsychiatry services

With the urgency of pandemic response serving as a catalyst, the telemedicine society of India and the Indian psychiatric society in collaboration with the national institute of mental health and neuro-sciences (NIMHANS) have provided the telepsychiatry operational guidelines to assist, educate and guide psychiatrists in setting up, implementation, administration and provision of telepsychiatry services as part of routine clinical practice. These guidelines focus mainly on interactive videoconferencing-based service delivery, although telemedicine practice Guidelines also recognize text- and audio-based consultations.[35] Similarly, several organizations have used both specialist and non-specialist workers and devised digital mental health applications for screening, management, referral, and treatment of mental health disorders among rural populations via their primary health centres. Previously, a retrospective analysis found that telepsychiatry services (Rs. 137.2 or 1.84 USD) were less expensive than the other models of service delivery (Rs. 6047.5 or 81.24 USD clinic visits, Rs. 577.1 or 7.75 USD for a home visit by psychiatry team).[36,37]

The telepsychiatry-based model also had increased access to health care, faster treatment, reduced waiting and consultation times, and improved medication adherence. The evidence to date on the cost-effectiveness of telepsychiatry is positive, with studies demonstrating reduced costs and gains in quality-adjusted life-years (QALYs) compared to face-to-face (FTF) consultations.[38] Although, vulnerable sections of women and children suffering violence, pregnant, post-abortion, and lactating women, have lesser access to telepsychiatry. Furthermore, the scant access among the elderly in the background of limited technological dexterity makes telepsychiatry's utility questionable for this population. More help-line numbers targeting older people might improve their access to mental health services. Equipping gram panchayats and Anganwadis with telephone services and internet facilities, thus enabling telepsychiatry access, might prove to be a rapid and cost-effective measure to counter the problem of reduced accessibility.

Integrating school-based interventions

As suggested by WHO, it is essential to implement targeted health education (psychoeducation about normative reactions and coping strategies) that integrates disease prevention and control in daily activities and lessons, while ensuring that the content is age-, gender-, ethnicity-, and disability-responsive and the activities are built into existing subjects. The adults need to be authentic about some of the pandemic's uncertainty and psychological challenges without overwhelming children with their fears.[39] Evidence-based universal school-based socio-emotional learning (SEL) programs should be aggressively scaled up to improve social and emotional functioning in exposed children and adolescents. As per WHO-CHOICE, the SEL implementation cost is <0.10 USD per person-year with an average cost-effectiveness ratio of 1000-5000 in LMICs.[34] For high-risk children, targeted and indicated interventions that promote coping skills, resilience, and cognitive skills training have helped prevent the onset of anxiety, depression, and suicide in high-income countries (HICs).[40] These would require more significant investment for LMIC implementation and collaboration between schools and local pediatric and regular mental health workers. With the help of parents, school authorities can use home-based activities such as exercise, relaxation, yoga, and music-listening of known psychosocial effectiveness to ensure the mental well-being of children and adolescents in the pandemic and post-pandemic phases.

Building public awareness

Mental health awareness through information, education, and communication (IEC) and promotion of mental well-being can help prevent mental illnesses, and it can be instrumental in reducing prejudice. A broad understanding of identifying everyday stressors and associated symptoms and preventing risk factors is useful, such that people can recognize mental health concerns for timely care-seeking.[41] Such an understanding could be developed through campaigns informing the public about the common stress responses and recommendations on countering stress like sleep hygiene, activity schedule, exercising, improving social connections, avoiding social media forwards, and practicing yoga-based relaxation techniques. The public awareness component should be strengthened through culturally appropriate communication and community engagement to promote mental health initiated through local-level collaborations with civil society organizations, women's self-help groups, village health, sanitation, and nutrition committees, and residents welfare associations.[42] Existing groups such as youth organizations, sports clubs, and child-support groups can be repurposed for mental health awareness activities.

Subverting misinformation

Unique to the COVID-19 pandemic is the use of the internet and social media for increased connectedness and information flow. The deluge of disinformation that has surfaced from the pandemic has made the disambiguation of truth from falsehood difficult for the layperson. Unlike countries like France, currently, India lacks strong and dedicated laws to fight the COVID-19 infodemic.[43] However, existing legal provisions (Section 54 of disaster management act, 2005, Section 505(1) of Indian penal code, 1860, and section 66D of information technology Act) cater to penalizing the creation of false content and its malicious distribution. Although many states like Maharashtra, Odisha, and Punjab have arrested individuals for making fraudulent claims concerning the pandemic, the problem is still widely prevalent.[44] These measures, however, faced criticism for doing little to definitively stave off the spread of misinformation while obstructing the fundamental rights of citizens. Apart from legislation, creating helplines and forums for fact-checking information can help curtail the spread of misinformation. With about 300 million active Indian users, a practical example is WhatsApp's Coronavirus information hub developed by the United Nations development programme, WHO, UNICEF, and international Fact-checking network that works to curb 'viral' misinformation and disinformation spread.[45]

Wrestling the stigma surrounding mental illnesses

Recurrent themes surrounding stigmatizing portrayals of mental illness and electroconvulsive therapy in the Indian media hinder health-seeking behaviour.[46] Currently, no laws specifically direct or censor the distorted portrayal of mental illnesses in the media. In the long term, scientifically informed depictions are needed to promote de-stigmatization among the larger masses. For instance, the Australian Stigma-Watch program has been effective in curbing the inaccurate media reporting depiction of depression and mental health issues in general.[47]

In public perception, mental illness and violence remain inextricably intertwined, which is further augmented by the media which sensationalizes violent crimes committed by persons with mental illness. This societal bias contributes to the stigma faced by those with a psychiatric diagnosis, which in turn contributes to non-disclosure of the mental illness and decreased treatment-seeking and also leads to discrimination against them. Attempts to resolve these issues must begin with an acceptable operational definition of violence, and clear distinctions between various types (towards self/others, verbal/physical, intended/actual, etc.) for more consistent and reliable reporting. Adequate educational interventions can further decrease self-stigma and improve compliance with therapy. A meta-analysis of public stigma-reduction interventions that included educational programs showed decreased stigma related to mental illness.[48] In another meta-analysis of interventions using some form of personal contact to reduce stigmatization of people with a mental illness, contact-based education was superior to other more traditional educational approaches in bringing about change.[49] However, in the more rigorous RCTs, the effect of conventional didactic education in changing attitudes was weak compared to the large effect of contact-based education. Cost-effectiveness of long-term, multilevel, national-scale anti-stigma efforts have been estimated for improved intended behaviour toward people with mental illness at 3-6 USD per person for a large-scale program named 'Time to Change' in the UK.[50] Despite these results, it is crucial to understand that stigma as a construct is based on socio-cultural differences intrinsic to a community. Thus, models to eradicate stigma in HICs cannot be translated to LMICs without cultural adaptation. Community-level qualitative studies should inform the stigma-reduction trials that, in turn, can generate necessary evidence for recommendations.

CONCLUSIONS

The current COVID-19 pandemic has exposed several shortcomings in the mental health care delivery of the Indian health system. To overcome these, long-term goals should include increased public financing, increased human resources production, and integration of health emergency and mental health policies and legislation. Immediate needs could be met by scale-up of task-shifting initiatives and telepsychiatry services in rural regions. In the ongoing pandemic, employing school-based psychosocial interventions, public awareness campaigning, subverting misinformation through broadcast legislations, and stigma reduction for general mental illnesses are pertinent. These solutions can bridge the gaps in mental health care in India.

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