



OPEN ACCESS

ORCID numbers: Atul Goel 0009-0006-4664-4495; Bhavuk Garg 0000-0002-5090-7220; Shalini Kelkar 0009-0008-8337-6586; Suvriti Goel 0009-0000-6991-8328

Correspondence to: Bhavuk Garg, Associate Professor, Department of Psychiatry, Lady Hardinge Medical College
Address: New Delhi-110001, India
E-mail: dr.bhavukgarg@lhmc-hosp.gov.in

Contributors: Atul Goel was involved in the development of article concept and supervised its writing. Bhavuk Garg carried out the literature search and wrote significant part of the text. Shalini Kelkar contributed the figures related to District Mental Health Programme and contributed some part of the text. Suvriti Goel contributed to review and editing. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

Informed consent statement: Not required

Funding: None

Competing interests: The authors declare no conflict of interest

Ethical approval: Not required

Data sharing: The data that support the findings of this study are available from the corresponding author (Bhavuk Garg) upon reasonable request.

Acknowledgments: Ministry of Health and Family Welfare, Government of India

Manuscript source: Unsolicited manuscript

Country/Territory of origin: India

This is an Open Access article distributed in accordance with the terms of the Creative Com-

Public mental health – the Indian perspective

Atul Goel, Bhavuk Garg, Shalini Kelkar, Suvriti Goel

Atul Goel, Director General of Health Services, Ministry of Health and Family Welfare, Government of India, Nirman Bhawan, New Delhi-110011, India

Bhavuk Garg, Associate Professor, Department of Psychiatry, Lady Hardinge Medical College, New Delhi-110001, India

Shalini Kelkar, ADG, Mental Health Division, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, Nirman Bhawan, New Delhi-110011, India

Suvriti Goel, Post Graduate Psychology Trainee, Indira Gandhi National Open University, Maidan Garhi, New Delhi-110068, India

ABSTRACT

The global burden of mental disorders is already substantial and increasing disconcertingly each year. In India, the prevalence of mental disorders is estimated to be 10.6%. There is a significant treatment gap and a limited number of mental health professionals. Every country needs a robust public mental health system to address this burden. India has developed a comprehensive public mental health infrastructure across all levels of healthcare. The National Mental Health Programme, which has evolved since its inception in 1982, is a key component of this system. Additionally, India has a National Mental Health Policy and a Suicide Prevention Strategy. The recently introduced National Tele Mental Health Programme has transformed mental healthcare in the country. Ayushman Arogya Mandirs, located at Primary Health Centres and Sub Health Centres, are providing comprehensive primary health care, including mental health services. Despite these advancements, India faces several challenges in mental healthcare, including population size, geographical diversity, cultural variations, stigma, multiple stakeholders, a shortage of mental health professionals, and budget constraints. Efforts are ongoing to address these issues. New areas such as Artificial Intelligence, climate change, and perinatal mental health are being explored. The public mental health setup in India could serve as a model for other countries.

Key Words: programmes; mental illness; public health; challenges; mental health

Citation: Goel A, Garg B, Kelkar S, Goel S. Public mental health – the Indian perspective. *The BRICS Health Journal*. 2024;1(1):87-95.
<https://doi.org/10.47093/3034-4700.2024.1.1.87-95>

Introduction

Mental disorders are highly prevalent. According to the Global Burden of Disease study, mental disorders have risen to become the 6th leading cause of health loss worldwide, up from 9th place in 1990 [1]. In 2021, 13.9% of the global population experienced mental disorders. Depressive and anxiety disorders are among the top causes of Disability-Adjusted Life Years (DALYs), ranking 12th and 23rd, respectively. These conditions also show the most significant increase in DALY rates from 2010 to 2021. The global age-standardized suicide rate was 9.0 per 100,000 population in 2019¹. In India, the suicide rate is 12.4 per 100,000 population².

The prevalence of depressive disorders in BRICS nations is 4.09%, exceeding the global average of 3.91%. In terms of absolute numbers, India, China, Brazil, and Russia rank 1st, 2nd, 4th, and 6th respectively for the highest number of individuals affected by depression. Collectively, BRICS nations account for approximately 44% of the global burden of depression [2].

According to the National Mental Health Survey [3], 2016, the estimated prevalence of mental disorders among individuals over the age of 18 in India, excluding tobacco use disorders, was 10.6%. The lifetime prevalence of these disorders in the surveyed population was 13.7%.

Treatment gap and limited mental health professionals

Between 76% and 85% of individuals with mental, neurological, and substance use conditions do not receive adequate care, with the treatment gap exceeding 90% in many low- and middle- income countries³. In India, the National Mental Health Survey [3] revealed a treatment gap of 28% to 83% for mental disorders and 86% for alcohol use disorders.

Globally, there are 1.7 psychiatrists and 1.4 psychologists per 100,000 population⁴. In India, however, the median number of psychiatrists is just 0.2 per 100,000 population, significantly below the required levels. The number of psychologists is even lower, at only 0.03 per 100,000 [4].

Sustainable development goal and mental health

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries – developed and developing – in a global partnership. Goal 3 is related to health – Ensure healthy lives and promote well-being for all at all ages⁵. Within the health-related sustainable development goals, two targets are directly related to mental health and substance abuse:

Target 3.4 “By 2030, reduce by one third premature mortality from Non communicable diseases through prevention and treatment and promote mental health and well-being”⁵.

¹ Suicide worldwide in 2019: global health estimates. Geneva: World Health Organization; 16 June 2021. Accessed August 5, 2024. <https://www.who.int/publications/i/item/9789240026643>

² Accidental Deaths & Suicides in India 2022. New Delhi; National Crime Records Bureau; 2022. Accessed July 4, 2024. <https://data.opencity.in/dataset/6af5e9d7-9de5-4689-9fe3-3418790bb0d5/resource/493c904b-d83b-48bc-bf55-678594ffffff/download/170161156012adsi2022publication2022.pdf>

³ mhGAP operations manual: mental health Gap Action Programme (mhGAP). Geneva: World Health Organization; 8 January 2018. Accessed August 5, 2024. <https://www.who.int/publications/i/item/mhgap-operations-manual>

⁴ Mental health ATLAS 2020. Geneva: World Health Organization; 8 October 2021. Accessed August 5, 2024. <https://www.who.int/publications/i/item/9789240036703>

⁵ Sustainable Development Goals. The United Nations: Department of Economic and Social Affairs. Accessed August 5, 2024. <https://sdgs.un.org/goals>

Table 1. Objectives and components of the District Mental Health Program

Objectives	Components	
1. To provide mental health services including prevention, promotion, and long-term continuing care at different levels of district healthcare delivery system	Service Provision	Management of cases of mental disorder and counselling at various levels in district
2. To augment institutional capacity in terms of infrastructure, equipment, and human resource for mental healthcare	Capacity Building	Manpower training and development of prevention, early identification, and management of mental disorders
3. To promote community awareness and participation in the delivery of mental health services.	Awareness Generation	Information, Education and Communication (IEC) activities for early identification and reducing stigma
4. To broad-base mental health into other related programs		

Target 3.5: “Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol”⁶.

From the discussion above, it is evident that mental health should be a major concern for BRICS nations. Various service delivery models exist for managing mental disorders, with the Public Health Delivery model being particularly significant. In this article, the authors outline the Public Mental Health system in India, which could serve as a model for other countries.

The public mental health setup in India

India was one of the first nations in the world to have a National Mental Health Programme (NMHP) which was launched in 1982 with the following objectives:

- To ensure the availability and accessibility of minimum mental health-care for all in the foreseeable future, particularly to the most vulnerable and underprivileged sections of the population;
- To encourage the application of mental health knowledge in general healthcare and in social development; and
- To promote community participation in the mental health service development and to stimulate efforts towards self-help in the community⁷.

The model of service delivery in NMHP was through Primary Health Centres and Community Health Centres. However, this was not successful. It was later felt that District will be a better unit to provide mental health serves. The District Mental Health Program (DMHP) was launched under NMHP in the year 1996⁸. The main goal of DMHP was to provide Community Mental Health Services and integration of mental health with General health services through decentralization of treatment from Specialized Mental Hospital based care to primary health care services. The DMHP has objectives and components presented in Table 1.

As per DMHP Guidelines⁸, one psychiatrist, one clinical psychologist, one psychiatric social worker, one psychiatric nurse, one community nurse, one monitoring and evaluation officer and case registry assistant and one ward assistant are the staff of the District Mental Health Pro-

⁶ Sustainable Development Goals. The United Nations: Department of Economic and Social Affairs. Accessed August 5, 2024. <https://sdgs.un.org/goals>

⁷ National Mental Health Programme (NMHP). Ministry of Health and Family Welfare, Government of India. Accessed August 6, 2024. <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1043&lid=359>

⁸ District Mental Health Programme. Accessed September 1, 2024. https://mohfw.gov.in/sites/default/files/56464578341436263710_0_0.pdf

Table 2. The service provision at various levels as per District Mental Health Program

Primary health centre	Community health centre	District hospital
• Outpatient department • Counselling • Pro-active case finding • Mental health promotion • [Manpower: 2 community health workers]	• Outpatient department • Inpatient for emergency psychiatry cases • Counselling • [Manpower: +1 medical officer, clinical psychologist/psychiatric social worker]	• Outpatient department • Inpatient ward – 10 bedded facility • Outreach services • Sensitization & training of health personnel

gramme Team. The DMHP has currently been approved for 767 districts across the country. Under DMHP, the service provision at various levels is as described in Table 2.

There is also a public private partnership model in DMHP. It is being utilized for following activities:

- Advocacy and local Information, Education and Communication in districts & states.
- Day care/residential/ long term residential continuing care centres.
- Supplementation of innovative mental health services.
- Training/sensitization of health workers.
- Hiring of private psychiatrist/ clinical psychologist/psychiatric social worker psychiatric nurse on contract.
- Ambulance services.

The NMHP was re-strategized in 2003⁹ to include two schemes as tertiary care component, modernization of state mental hospitals and up-gradation of psychiatric wings of medical colleges/general hospitals. 25 Centres of excellence have been sanctioned to increase the intake of students in Post graduate departments in mental health specialties as well as to provide tertiary level treatment facilities. Further, the government has also supported 19 government medical colleges/institutions to strengthen 47 Post graduate departments in mental health specialties.

Achievements of District Mental Health Programme in 2023-24

- Outpatient department (OPD) services: 9,495,530 patients were catered in mental health OPDs in the districts during April 2023 to March 2024.
- Inpatient services: 319,065 patients admitted for mental health disorders in district hospitals.
- Outreach activities/OPDs conducted by DMHP teams: 45,995 outreach activities were conducted by DMHP Teams
- Patients attended through Outreach activities and OPDs: 1,190,804 patients/ beneficiaries were attended through outreach activities or OPD sessions.
- Let's talk campaign was initiated in schools and colleges on occasion of world suicide prevention day on 10th September 2023.

Some best practices followed by the states in India

Telangana. The state has adopted integration of perinatal mental health as part of comprehensive Ante Natal Care (ANC). Screening tools by Auxiliary Nurse Midwife (ANM) are introduced in the mother and child protection card and the MCH portal has included the indicators of the same for reporting. ANC counselling cards integrated with elements on mental health.

⁹ National Mental Health Programme. Ministry of Health and Family Welfare, Government of India. Accessed August 6, 2024. https://dghs.gov.in/content/1350_3_NationalMentalHealthProgramme.aspx

Tamil Nadu. "Mental Health Thursdays," known as "Mana Nala Viyazhan." Dedicated to raising awareness about mental health among the health care workers on a regular (weekly) basis through messages shared on WhatsApp.

Odisha. Mobile Mental Health Units (MMHU) for providing doorstep mental health care services to the Persons with Mental Illness (PwMI). Fixed day visits to CHC, PHC, HWC for providing mental health care services.

Karnataka. Various initiatives undertaken by the state are as follows:

- Mano-chaitanya program: Super Tuesday clinics, a fixed day strategy for mental health services across all public health facilities;
- Manasa-dhara program: day care program for those recovering from mental illness being run under a registered NGO;
- assisted home care/care at doorsteps for psychiatric disorders by community volunteers.

India also has a separate National Mental Health Policy¹⁰ which was released in October 2014 with the following goals:

1. To reduce distress, disability, exclusion morbidity and premature mortality associated with mental health problems across lifespan of the person.
2. To enhance understanding of mental health in the country.
3. To strengthen the leadership in the mental health sector at the national, state and district levels.

The policy calls for universal access to quality services, equitable distribution, community participation, rights-based approach, intersectoral coordination, use of appropriate technology and a holistic approach to mental health.

It is fully implemented, and its principles have been incorporated in the National and District Mental Health Programmes and Mental, Neurological and Substance Use Package of services at Ayushman Bharat Health & Wellness Centres.

In 2022, the National Tele Mental Health Programme (Tele MANAS) was also launched with the following aim and objectives¹¹.

Aim: to provide universal access to equitable, accessible, affordable and quality mental health care through 24x7 tele-mental health counselling services as a digital component of the NMHP across all Indian States and Union Territories with assured linkages.

Objectives:

- To exponentially scale up the reach of mental health services to anybody who reaches out, across India, any time, by setting up a 24x7 tele-mental health facility in each of the States and UTs of the country.
- To implement a fully-fledged mental health service network that, in addition to counselling, provides integrated medical and psychosocial interventions including video consultations with mental health specialists, e-prescriptions, follow-up services and linkages to in-person services.
- To extend services to vulnerable groups of the population and difficult to reach populations.

As of July 23, 2024, 36 States/ UTs have set up 53 Tele MANAS Cells and have started telemental health services¹². The service is available in

¹⁰ National Mental Health Policy of India. Ministry of Health and Family Welfare, Government of India. October 2014. Accessed August 6, 2024. https://nhm.gov.in/images/pdf/National_Health_Mental_Policy.pdf

¹¹ National Tele Mental Health Programme of India. Ministry of Health and Family Welfare, Government of India. Accessed August 6, 2024. <https://telemahas.mohfw.gov.in/aimobjectives>

¹² Mental health programmes. Press Information Bureau. Ministry of Home Affairs. Accessed August 6, 2024. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2039067#:~:text=As%20on%2023.07,handled%20on%20the%20helpline%20number>

20 different languages. More than 1 million calls have been handled on the helpline number since inception with an average of 3500 calls per day¹³.

The Government of India also rolled out Comprehensive Primary Health Care¹⁴ under the Ayushman Arogya Mandir approach. The approach covers Mental, Neurological and Substance use disorders. As per the guidelines¹⁵ of the same, a five-pronged approach is being used to enable the integration of mental health care in primary health care:

1. Community level health promotion interventions and improving mental health literacy that enables an understanding of mental health, common symptoms, risk factors/causes of disorders, treatment, reduction of stigma and discrimination, and of techniques such as psychological first aid, and self-care.
2. Early identification, referral to community health officer for screening and home & community based follow up by frontline worker team.
3. Screening by community health officer through the use of a standard screening tool, psychosocial management and enabling referral.
4. Diagnosis and initiation of treatment by the medical officer at the primary health centre (PHC) levels.
5. Reduction of treatment gap (psychosocial and pharmacological) by facilitating access to treatment by referral to higher level centres (PHC and other referral centres), initiation of treatment and ensuring regular supplies and treatment adherence.

In addition to the above programmes, India also has a National Suicide Prevention Strategy¹⁶ which has the following objectives:

- Reinforce leadership, partnerships and institutional capacity in the country.
- Enhance the capacity of health services to provide suicide prevention services.
- Develop community resilience and societal support for suicide prevention and reduce stigma associated with suicidal behaviors.
- Strengthen surveillance of suicide and evidence generation.

India has a strong legislative mechanism with regards to mental health. The Mental Health Care Act of India, 2017 is a progressive act and follows a rights-based approach in line with the United Nations Convention on the Rights of Persons with Disabilities¹⁷. The Rights of Persons with Disabilities Act, 2016 also covers mental illness as a disability¹⁸.

Challenges in Indian mental healthcare setup

Mental health service delivery in India faces numerous challenges, many of which are also encountered by other nations. These challenges are listed below.

1. Population. With a population of 1,210,854,977 as per the 2011 census, India's large numbers strain the healthcare system, including mental health services. The demand for healthcare often overwhelms the available resources.

¹³ In a significant milestone achieved under the National Tele Mental Health Programme of India, the Tele-MANAS Helpline receives over 10 lakh calls since its launch in October 2022. Press Information Bureau. Ministry of Health and Family Welfare. Accessed August 6, 2024. <https://pib.gov.in/PressReleasePage.aspx?PRID=2022057>

¹⁴ Comprehensive Primary Health Care. National Health Systems Resource Centre. Accessed August 6, 2024. <https://nhsrindia.org/practice-areas/cpc-phc/comprehensive-primary-health-care>

¹⁵ Operational Guidelines Mental, Neurological and Substance Use (MNS) Disorders Care at Health and Wellness Centres. Accessed September 1, 2024. https://aam.mohfw.gov.in/download/document/Final_MNS_Operational_Guidelines_-_Web_Optimized_PDF_Version_-_19_11_20.pdf

¹⁶ National Suicide Prevention Strategy. Ministry of Health and Family Welfare, Government of India; 2022. Accessed September 1, 2024.

¹⁷ The Mental Healthcare Act, 2017. Accessed September 1, 2024. https://mohfw.gov.in/sites/default/files/Mental%20Healthcare%20Act%2C%202017_0.pdf

¹⁸ The Rights of Persons with Disabilities Act, 2016. Accessed August 6, 2024. <https://depwd.gov.in/acts/>

2. Geography. India's vast expanse, with its numerous states and districts, complicates the management of national health programs from a centralized location. Additionally, many areas are situated in difficult and remote terrains, making service delivery more challenging.
3. Cultural Variation. India's cultural diversity adds complexity to mental health care. Cultural differences, even within small geographical areas, and the presence of over 1,500 'mother tongues' make it challenging to tailor mental health programs to meet diverse cultural needs effectively.
4. Lack of mental health professionals. As highlighted earlier, the low per capita number of mental health professionals poses a significant challenge to effective service delivery.
5. Stigma. Mental health conditions are often stigmatized, with cultural explanations leading people to seek help from faith healers rather than mental health professionals. Myths and misconceptions about mental health disorders and their treatment further exacerbate this issue.
6. Disintegration of the Family System and Westernization. The traditional Indian family system, which provided substantial support, is shrinking. The decline of joint families and the increasing influence of Western lifestyles have led to higher stress levels and diminished support systems. This shift has resulted in more individuals with severe mental illness being institutionalized, with challenges in community reintegration.
7. High expectations and Pursuit of material success. The pursuit of material success has also increased stress and reduced focus on personal health. Expectations, self-imposed and from external sources, lead to over ambition. The constant exposure to social media creates unrealistic benchmarks for success and happiness. All this leads to increased stress and burnout, creating a base for mental disorders. The Indian society is currently struggling with these issues as well.
8. Skewed Multidisciplinary Approach. Effective mental health care requires a multidisciplinary approach involving psychiatrists, psychologists, psychiatric social workers, and psychiatric nurses. Biopsychosocial model is the best model to understand and manage mental disorders. However, there is an over-reliance on psychiatrists and the medical aspects of mental health, with insufficient emphasis on other professionals. Training and educational programs for these other roles are also lacking.
9. Budgetary Challenges. Mental health funding constitutes about 1% of the total health budget. As per a 2019 article [4], the approximate conservative estimated total cost on government to implement the Mental health care Act is 94,073 crore rupees. On a positive note, there has been an upward trend in budgetary allocation
10. Multiple Stakeholders. The mental health sector involves numerous stakeholders, including various ministries (health, social justice, education, women and child development), non-governmental organizations, human rights commissions, and professional bodies. Coordinating among these diverse groups for planning and implementing mental health initiatives can be complex and challenging.

Steps taken to overcome the challenges

1. Including mental health in the Comprehensive Primary Health Care¹⁹ approach ensures services reach all areas of the country, including remote regions far from hospitals. Community frontline workers, such as

¹⁹ Comprehensive Primary Health Care. National Health Systems Resource Centre. Accessed August 6, 2024. <https://nhsrcindia.org/practice-areas/cpc-phc/comprehensive-primary-health-care>

Multi-Purpose Workers and Accredited Social Health Activists, can address cultural issues effectively.

2. Integrating traditional medicine systems (Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa, and Homeopathy) into mental healthcare has increased community acceptance. Yoga, in particular, has gained widespread acceptance both in India and globally.
3. The Tele MANAS provides services to remote areas of the country. Any region with phone access can now connect with a mental health professional.
4. E-Sanjeevani, the National Telemedicine Service of India, promotes digital health equity to achieve Universal Health Coverage. It facilitates quick and easy access to doctors and medical specialists via smartphones, including psychiatric services.
5. The hub-and-spoke telehealth model in mental health allows centrally located providers to offer specialized care to medically underserved areas through telehealth.
6. Various programs, such as NMHP and DMHP, focus on awareness activities aimed at reducing stigma and dispelling myths and misconceptions related to mental health.
7. To address the shortage of psychiatrists and psychologists, efforts are ongoing to train Medical Officers, Nurses, Social Workers, and Counsellors in mental health under the DMHP and Ayushman Arogya Mandirs-PHC & Sub Health Centres. Innovative approaches like Digital Training are also being implemented.
8. The National Medical Commission of India, the regulatory body for medical education, has significantly increased the number of post-graduate seats in Psychiatry over the last few years.

Way forward

These are important times for mental health in India. The Ministry of Health and Family Welfare has steadily increased its focus on mental health. Various societal groups, including NGOs, celebrities, professional organizations, and human rights associations, have been advocating for advances in mental health service delivery. The dialogue on mental health has gained momentum across different sections of society.

India has embraced technology wholeheartedly. The widespread availability of internet connectivity, smartphones, and affordable mobile connections has led to innovative approaches in service delivery and training. The country had the world's second-largest internet population at over 1.2 billion users in 2023. Of these, 1.05 billion users accessed the internet via their mobile phones. Estimates suggest that this figure would reach over 1.2 billion by 2050²⁰. Artificial Intelligence is also being explored as a tool for enhancing mental healthcare. Chatbot based tools are being developed. Various mental health smartphone apps have been developed providing mental health screening and diagnostic tools, counseling services, health promotion and consultation services [5].

There has been a steady shift from hospital-based mental healthcare to community-based care, with efforts towards 'de-institutionalization.' Many mental hospitals have moved beyond the colonial mindset and approach. The rights of persons with mental illness are being given due importance, and rehabilitation services, such as halfway

²⁰ Basuroy T. Mobile internet users in India 2010-2050. Statista, Jul 18, 2023. Accessed August 6, 2024. <https://www.statista.com/statistics/558610/number-of-mobile-internet-user-in-india/>

homes, skill development, and employment opportunities, are being expanded.

The focus has also shifted to a lifespan approach. The mental health of children and adolescents is being specifically addressed, with the School Mental Health Programme being strengthened [6]. The geriatric population is included in various mental health care approaches. Women's mental health, especially perinatal mental health, has become a focus area [7]. Various corporate organizations are also addressing the mental health of their employees. Additionally, the mental health aspects of climate change and disasters are being prioritized.

The authors would also like to emphasize the restoration of family as a support system as an important strategy to promote mental health as well enhance care for persons with mental illness. The family provides buffer, guidance and support to its members going through stress. The sharing of resources and emotional availability plays a huge preventive role. Further, if one develops a mental disorder, the family provides support, ensures adequate treatment and helps the person recover from their problems.

Further, efforts should be made to create community based self-help groups. These groups provide a supportive network where individuals can share experiences, offer mutual support, and work collectively towards better mental health. Such groups can be instrumental in reducing stigma, normalize the mental health issues, promote empowerment and self-efficacy, build social connections, provide an emotional outlet and complement the professional help, all this in a very accessible cost-effective manner.

India still has a long way to go to achieve the goals envisioned in various programs, but efforts are increasing every year. It is believed that India's Public Mental Health Model can serve as a guide for other nations.

References

1. GBD 2021 Diseases and Injuries Collaborators. Global incidence, prevalence, years lived with disability (YLDs), disability-adjusted life-years (DALYs), and healthy life expectancy (HALE) for 371 diseases and injuries in 204 countries and territories and 811 subnational locations, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet*. 2024;403(10440):2133-2161. doi: 10.1016/S0140-6736(24)00757-8.
2. Mehta A, Kumar Ratre Y, Sharma K, et al. Interplay of nutrition and psychoneuroendocrine-immune modulation: relevance for COVID-19 in BRICS nations. *Front Microbiol*. 2021 Dec 17;12:769884. doi: 10.3389/fmicb.2021.769884.
3. Gautham MS, Gururaj G, Varghese M, et al. The National Mental Health Survey of India (2016): Prevalence, socio-demographic correlates and treatment gap of mental morbidity. *International Journal of Social Psychiatry*. 2020;66(4):361-372. doi:10.1177/0020764020907941.
4. Math SB, Gowda GS, Basavaraju V, et al. Cost estimation for the implementation of the Mental Healthcare Act 2017. *Indian J Psychiatry*. 2019;61(Suppl 4):S650-S659. doi: 10.4103/psychiatry.IndianJPsychiatry_188_19
5. Singh S, Sagar R. Time to have effective regulation of the mental health apps market: maximize gains and minimize harms. *Indian J Psychol Med*. 2022 Jul;44(4):399-404. doi: 10.1177/02537176221082902.
6. Raman V, Thomas S. School Mental Health Program in India—Issues and Possible Practical Solutions. *Indian J Psychol Med*. 2023 May;45(3):283-288. doi: 10.1177/02537176231165033. Epub 2023 Apr 17.
7. Kalra H, Tran T, Romero L, Sagar R, Fisher J. National policies and programs for perinatal mental health in India: A systematic review. *Asian J Psychiatr*. 2024 Jan;91:103836. doi: 10.1016/j.ajp.2023.103836. Epub 2023 Nov 17.