



Viewpoint

Lessons learnt from the National Mental Health Programme (NMHP): A guide to success for the National Health Programme for Non-Communicable Diseases

The World Health Organization (WHO) defines Non-communicable diseases (NCDs) as chronic diseases, which tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors¹. The main types of NCDs are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. Although mental health problems are also chronic and non-communicable illnesses, these are excluded from the medical illnesses and treated separately from the physical illnesses. Such contrived segregation may have been done to ease the administrative issues and for equitable distribution of resources. However, such differentiation has caused disparity and skewness, leading to poor allocation of funds to mental health programmes, subsequently impeding the implementation process of the National Mental Health Programme (NMHP). In comparison, NCDs and mental illnesses are chronic disorders requiring long-term treatment, and more or less share many common risk factors². So, a critical overview of the challenges and lessons learnt from the NMHP implementation was undertaken to examine how these experiences can be incorporated effectively in implementing NCD health programmes to have successful outcome in India. Since, there exists a significant interlink between these two health programmes, a collaborative approach of NMHP and NCD health programmes will have a undeniable positive impact on overall healthcare in India.

Prevalence and magnitude of problems associated with mental illness and Non-Communicable Diseases in India

NCDs are a serious public health problem. It is estimated that the prevalence rate of diabetes is 7.7 per cent³ and high systolic blood pressure is 18.8 per cent. Additionally, NCDs contribute around 60 per cent (5.87 millions) of the overall deaths in India⁴.

Correspondingly, the global burden of disease study emphasized that mental disorders accounted for, on an average, 37 per cent of healthy years lost from disease⁵. Also, it is important to recognize that the commonly used substances such as tobacco (14.6%) and alcohol (28.6%) cause significant morbidity and mortality in NCDs and mental illnesses⁶. The prevalence of mental illness was reportedly 14.3 per cent and should be recognised as a major health problem in India⁷. Mental disorders begin at an early age and serve as an important risk factor for both the severity as well as the outcome for many NCDs and vice versa. The co-occurrence of NCDs and mental illnesses is evident from many research studies, for example, the rate of NCDs in mental illness in a cross-sectional survey conducted in south India found that NCDs have comorbid mental illness like somatization disorder (35.1%), depression (29.1%) and anxiety (19.1%)⁸. On the other hand, metabolic syndrome presented in 29.83 per cent patients with schizophrenia⁹, around 20 per cent in substance use disorder¹⁰, 44.3 per cent in depression¹¹, and it varied between 16.7 to 67 per cent for bipolar affective disorder¹². The above findings clearly demonstrate that a complex and dynamic relationship exists between mental illness and NCDs, where one could be a risk factor for the other.

Inception and Implementation of the National Mental Health Program (NMHP)

The District Mental Health Programme (DMHP) is the flagship mental health intervention programme of the government of India as part of the NMHP¹³. India was the first developing country to formulate an NMHP to ensure mental healthcare for all individuals by integrating mental healthcare through general healthcare services in 1982^{13,14}. The unit of mental health service delivery was primary healthcare (PHC) and community healthcare (CHC) which are under the

Table. Comparison of National Mental Health Programme (NMHP) and National Programme for communicable diseases

Health parameters	NMHP ^{18,19}	National Health Programme for Communicable Disorders ^{20,25}
Number of illnesses to be targeted under the programme	All psychiatric illnesses	Single defined illnesses
Defining case/diagnosis	Difficult to define the case and no laboratory test can diagnose	Defining case and diagnosis by laboratory methods is clear and specific
Treatment protocol	Many disorders, hence difficult to make one protocol for all disorders	Easy to draft and execute
Treatment duration	Duration of treatment is variable, generally long (months to many years)	Specific and duration is short (days to months)
Training of manpower	Difficult because they need to learn about all psychiatric disorders and needs long-term hand holding	Easy to train manpower and short duration of handholding
Comorbidity	Mental illnesses are comorbid with almost all communicable and non-communicable disorders	Comorbidity is less
Course, prognosis and outcome	Difficult to define course, prognosis, end of treatment and outcome	Specific and easy to define
Psycho-social-vocational rehabilitation	Integral part of management of psychiatric illness and part of NMHP	Not of much importance
Prophylaxis	Most of the cases require prophylaxis	Not require
Need for continuous availability of medication	It is required, non-availability of medicines or sudden stop of medicines usually triggers relapse	Stopping medicines can cause drug resistance

umbrella of DMHP. However, the NMHP was criticized for failing to achieve the necessary objectives and targets as compared to other national health programme initiatives in India^{15,16}.

Challenges of NMHP: It was believed that the chain of setbacks and implementation failures collectively led to its underperformance. The NMHP has been a blend of achievements and failures¹⁷. A qualitative study conducted in 2010-2011 by policymakers, programme managers and observers, indicated that the poor performance was not due to the plan itself, but political neglect, inadequate leadership at all levels, inaccessible funding, and improperly implemented delivery of services (due to poor training, lack of motivation and poor retention of staff), and depleted technical support at district as well as community level^{18,19}. Other obvious challenges were, inadequately trained mental health service providers (human resources), leading to dissolution and fragmentation of responsibilities of mental healthcare¹⁶. Importantly, poor political and bureaucratic will, impoverished the inter-ministerial coordination at the central level and inter-departmental coordination at the state level further added to the chaos and paved the way to cripple the programme¹⁷. Seventy five per cent of the DMHP districts faced difficulties in maintaining

regular availability of psychotropic drugs. In addition, reduced availability of psychological and psychosocial treatments at the PHC, CHC and district hospital level was another challenge encountered.

NMHP was the first national programme on the non-communicable diseases, with a lengthy experience of 37 years since it was initiated¹³. NMHP achievements were always measured by comparing it with national health programmes on communicable diseases without giving due consideration of the innate complex nature of mental illnesses which are different from communicable diseases. It is apparent that national health programmes on communicable diseases are disease specific, have easy to define case objective; a well-defined treatment protocol and comparably short duration of treatment as illustrated in Table. In contrast, the NMHP covers all mental disorders, there are inherent challenges in diagnosis due to periodic revision and changes in the criteria and requires trained professionals with good clinical skills to make the diagnosis, needs enormous mental health human resources, long duration of treatment and most importantly availability of continuous medication is a big challenge^{14,20}. Severe stigma and discrimination in developing countries like India, further fueled above challenges by interrupting the help-seeking behavior in NMHP²⁰.

Box 1: Recommendations for successful implementation of National Mental Health Programme (NMHP) based on the experience in XI five year plan

- (i) Monitoring and evaluation: continuous monitoring and evaluation using independent auditing to enable course correction, if necessary, during the life of the programme.
- (ii) To curb the deficiency of the manpower by revitalizing trained human resources in mental health by upgrading existing mental health institutions/hospitals and increase the intake capacity for post graduate training in mental health in medical institutes²³; Training and handholding the trainees for long-duration is the key to success in chronic illnesses
- (iii) Provision of a new cadre of community mental health workers based at the PHC level to help in identification of persons with mental illness, help people access the necessary treatment, provide basic counselling and help in accessing social benefits
- (iv) Supply of medicines: there should be centralized drug procurement and distribution systems to ensure adequate supplies at all levels.
- (v) Right to access mental healthcare; there is a legal recognition of the right to access mental healthcare under the Mental Healthcare Act, 2017 which has been playing a crucial role to increasing coverage and improves access to mental healthcare; This law needs to be implemented in true spirit.
- (vi) Integrating partnerships with academic institutions, medical colleges and voluntary organizations at district and State level may yield rich dividend.
- (vii) Operational research and other forms of research including participatory action research (PAR) will be of support to fine tune the implementation of the DMHP in relation to differing state and district contexts;
- (viii) Leveraging technology to implement, monitor, mentor, communicate and to conduct research in public mental health do play a crucial role.

Strengths of NMHP: DMHP is the operational arm of the NMHP. Dedicated DMHP staff are assigned to execute the NMHP²¹. All mental disorders are included under NMHP. The NMHP revolves around integrating mental healthcare to the existing primary care services. While the spirit of the programme was initiated with bold and well-meaning objectives, numerous problems continue to thwart the implementation of its objectives²¹. Concurrently, to address the issue of increasing mental health needs which is in tandem with the growing population, it was recommended to increase the number of mental health professionals and specialists, relaxing the educational requirement for specialists, and provision of more number of courses to strengthen the supporting team (psychiatric nurses and social workers)²². Furthermore, to date, more than 517 districts have received funding for the implementation of DMHP¹⁷. Despite poor mental health human resources, DMHP was implemented using available resources both at both the PHC and CHC level. NMHP has multimodal and multidimensional approach involving such as school mental health programmes, life skills training programmes, de-addiction, disaster management, suicide prevention and stress management¹⁷. It involves, engaging various stakeholders such as health workers, ASHA (Accredited Social Health Activist) workers, anganvadi workers, community nurses and elected representatives which have been tried in southern States²³. Based on the lessons learnt from the XIth five-year plan²¹ recommendations for the successful implementations of NMHP were proposed (Box 1). These recommendations can be modified and

adapted as necessary, which could enhance success rate of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) programme.

To address the challenge of escalating burden of NCDs, the Government of India, in earnest initiated the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) during 2010-2011²⁴⁻²⁶. The focus of NPCDCS was on the promotion of healthy lifestyles, early diagnosis and management of diabetes, hypertension, cardiovascular diseases and common cancers. Financial allocation for the total plan of the programme between 2012-2017 was Rs. 8096 crore²². It is important to note that the potential challenges of the NPCDCS were similar to those faced during the NMHP (Box 2).

The NPCDCS has distinct advantages compared to other mental health programmes. In NPCDCS, the disease entities are well defined, easier to identify and less demanding to implement. Also the bias is generally at the resource allocation level for physical illnesses, hence success in the implementation of NPCDCS is more achievable. Lessons learnt from the implementation of NMHP and inculcating the strengths and avoiding the weaknesses, will further strengthen this programme.

Conversely, NPCDCS programme can help to improve the outcomes in NMHP. By drawing

Box 2: Potential challenges of National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) which were similar to NMHP

- (i) The success of the NPCDCS lies in the coordinated action between government health sectors and other national health programmes, including NMHP mended with regular monitoring and evaluation of the performance²⁷.
- (ii) Primary health centres are the heart of operational centers for NCD programmes and so are the community health workers. However, there is a deficiency of trained human resources, functional laboratories and well-stocked pharmacies in primary care facilities²⁸.
- (iii) In lower- to middle-income countries (LMIC) the community health workers are underutilized despite existing evidence indicating their role as effective, particularly in tobacco cessation, blood pressure and diabetes control²⁹.
- (iv) Studying behaviour management strategies for modifying risky behaviours is needed along with investment in research and development and adapting interventions for managing specific NCDs and their risk factors³⁰.
- (v) The present allocated human resource is inadequate, over-burdened, and does not have the required specific skills. Furthermore, lack of evidence-based application of the information that is made available³¹ is a prevalent challenge.
- (vi) There is an immediate need to strengthen the healthcare delivery system to generate awareness for the prevention, early detection, cost-effective management, and rehabilitation of patients with diabetes³².

insight developed from the NPCDCS program, it is recommended that instead of treating the entire spectrum of mental illnesses as one entity, it is better to break it down into broader categories such as psychotic, mood, developmental and substance use disorders and design an individual programme for each of these broad category disorders separately under the umbrella of NMHP. This may ensure smooth and successful implementation. In addition, due to broader similarities in the need and high co-occurrence of NCDs and mental illnesses, unifying these under a single umbrella is an effective way of addressing the problem. This could help reduce the stigma of the mental illness, improve help-seeking behaviour and also ensure treatment coverage in the rural community. However, integrating the NCDs and NMHP depends on political will which plays a vital role in the evidence-based implementation of social strategies such as developing research infrastructure, experience sharing, and contributing towards effective leadership decisions in the respective communities³³. Importantly, be it in NMHP or NPCDCS, the community health workers play a crucial role in health promotion, treatment adherence and follow ups which are important core interventions in the control and prevention of chronic diseases. This community-based model of working has proved successful in LMICs (lower- and middle-income countries) such as Sri Lanka³⁴. Nonetheless, public awareness programmes, integrated management and a strong monitoring system would be required for the successful implementation of both these programmes and making services universally accessible in the country. The WHO declared that there is ‘no health without mental health’¹⁹ and without doubt there is an urgent need for integration of mental healthcare with general healthcare and NCDs programmes². The

effective implementation and strengthening of NMHP can be ensured by incorporating it under the umbrella of NCDs as a ‘horizontal programme’¹⁷. In view of addressing this unified approach, mental health Gap Action Programme (mhGAP) launched by the WHO aimed at ‘scaling up’ services for mental, neurological and substance use disorders in LMICs by providing improvement of care, psychosocial assistance, and treatment availability, targeting major disorders such as schizophrenia and suicide^{19,33}. Another initiative where both programmes will benefit is from the modern software tool ‘OneHealth Tool’ designed to inform national strategic health planning in LMICs which help monitor the resource needs, costs and health impacts of scaled-up health service delivery (<https://avenirhealth.org/software-onehealth.php>). Various measures have been adopted to integrate these programmes smoothly such as the drafting of new - the National Mental Health Policy, 2014³⁵ and the enactment of rights-based legislation Mental Healthcare Act, 2017³⁶. The New Mental Healthcare Act, 2017 Section 18 articulates that ‘every person shall’ have a right to access mental healthcare and treatment from mental health services run or funded by the appropriate government. If the government fails to provide the right to access mental healthcare to everyone, then it is the responsibility of the government to reimburse the costs of treatment according to section 18, 5 (f)³⁷. This combination of both soft law (policy) and hard law (legislation) has given enormous impetus to the mental health service delivery in India and made State governments more accountable. Strong law and successful implementation of programmes like NPCDCS and NMHP can go a long way in making the nation healthier and happier.

Conflicts of Interest: None.

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References

1. World Health Organization. *WHO package of essential noncommunicable (PEN) disease interventions for primary health care*. Geneva: WHO; 2020.
2. Ivbijaro G. Mental health as an NCD (non-communicable disease): The need to act. *Mental Health Fam Med* 2011; 8 : 131-2.
3. Thomas N, Jeemon P. India State-Level Disease Burden Initiative Diabetes Collaborators*. The increasing burden of diabetes and variations among the states of India: The global burden of disease study 1990–2016. *Lancet Glob Health* 2018; e1352-e1362.
4. World Health Organization. *Action plan for the global strategy for the prevention and control of noncommunicable diseases 2008-2013*. Geneva: WHO; 2013.
5. Wang PS, Aguilar-Gaxiola S, Alonso J, Angermeyer MC, Borges G, Bromet EJ, et al. Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. *Lancet* 2007; 370 : 841-50.
6. National Drug Dependence Treatment Centre. All India Institute of Medical Sciences, New Delhi. *Magnitude of Substance Use in India (2019); 2019*. New Delhi: Ministry of Social Justice and Empowerment, Government of India; 2019.
7. Sagar R, Dandona R, Gururaj G, Dhaliwal RS, Singh A, Ferrari A, et al. The burden of mental disorders across the states of India: The Global Burden of Disease Study 1990 to 2017. *Lancet Psychiatry* 2020; 7 : 148-61.
8. Kulkarni V, Chinnakali P, Kanchan T, Rao A, Shenoy M, Papanna MK. Psychiatric Co-morbidities among patients with select non-communicable diseases in a coastal city of south India. *Int J Prev Med* 2014; 5 : 1139-45.
9. Ganesh S, Ashok AH, Kumar CN, Thirthalli J. Prevalence and determinants of metabolic syndrome in patients with schizophrenia: A systematic review and meta-analysis of Indian studies. *Asian J Psychiatr* 2016; 22 : 86-92.
10. Bathla M, Singh M, Anjum S, Kulhara P, Jangli S IIIrd. Metabolic syndrome in drug naïve patients with substance use disorder. *Diabetes Metab Syndr* 2017; 11 : 167-71.
11. Grover S, Nebhinani N, Chakrabarti S, Avasthi A. Prevalence of metabolic syndrome among patients with depressive disorder admitted to a psychiatric inpatient unit: A comparison with healthy controls. *Asian J Psychiatr* 2017; 27 : 139-44.
12. Grover S, Malhotra N, Chakrabarti S, Kulhara P. Metabolic syndrome in bipolar disorders. *Indian J Psychol Med* 2012; 34 : 110-8.
13. Murthy RS. National mental health programme in India (1982-1989) mid-point appraisal. *Indian J Psychiatry* 1989; 31 : 267-70.
14. Roy S, Rasheed N. The national mental health programme of India. *Int J Curr Med Appl Sci* 2015; 7 : 7-15.
15. Singh OP. District Mental Health Program - Need to look into strategies in the era of Mental Health Care Act, 2017 and moving beyond Bellary Model. *Indian J Psychiatry* 2018; 60 : 163-4.
16. Goel D. Why mental health services in low-and middle-income countries are under-resourced, under-performing: An Indian perspective. *Natl Med J India* 2011; 24 : 2011.
17. van Ginneken N, Jain S, Patel V, Berridge V. The development of mental health services within primary care in India: Learning from oral history. *Int J Ment Health Syst* 2014; 8 : 30.
18. Prince M, Patel V, Saxena S, Maj M, Maserko J, Phillips MR, et al. No health without mental health. *Lancet* 2007; 370 : 859-77.
19. Math SB, Chandrashekar C, Bhugra D. Psychiatric epidemiology in India. *Indian J Med Res* 2007; 126 : 183.
20. District Mental Health Programme. *XII plan district mental health programme by policy group*. Available from: <https://mhpolicy.files.wordpress.com/2012/07/final-dmhp-design-xii-plan2.pdf>, accessed on March 18, 2020.
21. Gupta S, Sagar R. National mental health programme-optimism and caution: A narrative review. *Indian J Psychol Med* 2018; 40 : 509-16.
22. Ministry of Health and Family Welfare. Other National Health Programmes. In: *Annual report of Department of Health and Family Welfare for the year 2015-2016*. Available from: <https://main.mohfw.gov.in/sites/default/files/78963256452123365785.pdf>, accessed on March 18, 2020.
23. Khurana S, Sharma S. National mental health program of India: A review of the history and the current scenario. *Int J Community Med Public Health* 2016; 3 : 1-9.
24. Siegel KR, Patel SA, Ali MK. Non-communicable diseases in South Asia: Contemporary perspectives. *Br Med Bull* 2014; 111 : 31-44.
25. Ngo VK, Rubinstein A, Ganju V, Kanellis P, Loza N, Rabadan-Diehl C, et al. Grand challenges: Integrating mental health care into the non-communicable disease agenda. *PLoS Med* 2013; 10 : e1001443.

26. Pati S, Sinha R, Mahapatra P. Non-communicable Disease Risk Reduction Teaching in India: A curricular landscape. *Front Public Health* 2019; 7 : 133.
27. Krishnan A, Gupta V, Ritvik, Nongkynrih B, Thakur J. How to effectively monitor and evaluate NCD programmes in India. *Indian J Community Med* 2011; 36 : S57-62.
28. Pakhare A, Kumar S, Goyal S, Joshi R. Assessment of primary care facilities for cardiovascular disease preparedness in Madhya Pradesh, India. *BMC Health Serv Res* 2015; 15 : 408.
29. Jeet G, Thakur JS, Prinja S, Singh M. Community health workers for non-communicable diseases prevention and control in developing countries: Evidence and implications. *PLoS One* 2017; 12 : e0180640.
30. Mathur P, Shah B. Research priorities for prevention and control of noncommunicable diseases in India. *Indian J Community Med* 2011; 36 : S72-7.
31. Panda R, Mahapatra S, Persai D. Health system preparedness in noncommunicable diseases: Findings from two states Odisha and Kerala in India. *J Family Med Prim Care* 2018; 7 : 565-70.
32. Shrivastava U, Misra A, Gupta R, Viswanathan V. Socioeconomic factors relating to diabetes and its management in India. *J Diabetes* 2016; 8 : 12-23.
33. Munir KM. An analysis of convergence of global mental health and non-communicable disease frameworks: Separate is not equal. *Dusunen Adam* 2015; 28 : 1-7.
34. Ranasinghe P, Mendis J, Hanwella R. Community psychiatry service in Sri Lanka: A successful model. *Sri Lanka J Psychiatry* 2011; 2 : 3-5.
35. Wig NN, Murthy SR. The birth of national mental health program for India. *Indian J Psychiatry* 2015; 57 : 315-9.
36. Mental Health Act. Available from: <https://egazette.nic.in/WriteReadData/2017/175248.pdf>, accessed on March 18, 2020.
37. Math SB, Gowda GS, Basavaraju V, Manjunatha N, Kumar CN, Enara A, *et al*. Cost estimation for the implementation of the Mental Healthcare Act 2017. *Indian J Psychiatry* 2019; 61 : S650-9.