Review Article

Public Health Perspectives of Geriatric Mental Health Care

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ABSTRACT

Background: In older adults (aged 60 years and above), mental health problems are gaining public health importance because of the increasing prevalence, disease burden, disability, morbidity, and mortality. Epidemiological studies on major mental health disorders such as depression and dementia in older adults have contributed to a better understanding of the distribution and determinants of these conditions. Identifying potential risk factors has stimulated interventional research on preventing these conditions under the public health framework towards their management. The increasing burden of geriatric mental health conditions like dementia in developing countries like India can contribute to significant challenges if there is no adequate strengthening of the public health response. This includes scaling up the measures of prevention, public awareness, early diagnosis, and quality health and social care equitably available to all sections of the population. The Decade of Healthy Ageing (2021–2030) provides the opportunity for concerted and coordinated initiatives to improve intrinsic capacity (physical and mental) and offer an age-friendly environment to enhance the functional ability of all older adults.

Methods: This article reviews the critical public health issues related to geriatric mental health in India.

Keywords: Public health, community geriatric psychiatry, geriatric mental health, geriatric public health

Population Ageing—Global and Indian

Population aging is the shift in the distribution of the population towards older ages. The demographic transition occurs as there is a progressive decline in the birth rate, increase in life expectancy, and decreased mortality rate. This is a global phenomenon that occurs rapidly in developing countries like India. The number of adults aged 60 and above was 900 million globally in 2015, which is projected to increase to 2 billion in 2050.[1] The life expectancy for males and females, which was 45.5 years and 48.5 years, respectively, in 1950, has risen to 68.5 years and 73.3 years in 2010–2015.[2] It is projected to increase to 74.5 years and 79.1 years, respectively, by 2050. The population of India was 1.36 billion in 2019. According to the 2011 census, adults aged 60 years and above accounted for 8.6% of the total population, amounting to 103 million persons. It is projected to increase to 319 million (19.5% of the total) by 2050.[2] The number of older adults (aged 45 years and above) in 2050 will be 690 million. There is a trend towards population aging in India. This implies that there may be more vulnerable persons and less support for them as the years progress. Although the total dependency ratio is projected to reduce by 2050, the aging index, that is, the number of persons aged 65 years and above per 100 children aged up to 14 years, is projected to increase to 74.5 by 2050 (compared to 8.4 in 1950).[2] The implications of population aging on geriatric mental health care and social care, including long-term care, are predictable based on the global and national trends over the past few decades. This requires the development and implementation of an excellent

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public health strategy for effective management of this challenge.

Diversity in the Demographic Transition

The public health approach to manage geriatric mental health problems in India requires an adequate understanding of the complexities related to the diversity in the demographic transition across the states. The stage of demographic transition has significant variation across the states. Over the last few decades, effective public health measures have contributed to the significant progress of the demographic transition towards population aging in states such as Kerala, Tamil Nadu, Karnataka, Maharashtra, and Himachal Pradesh. The states with less economic and social development, such as Bihar and Uttar Pradesh, still have a relatively lesser proportion of older adults than developed states. However, the magnitude of the problems related to aging and mental health is significantly higher across the entire country due to the population size. The Longitudinal Ageing Study in India (LASI) report has highlighted this issue, including the extent of the interstate variations in the distribution of the aging-related mental health conditions. The diversity in the demographic transition needs to be considered for the appropriate planning of the public health interventions to address this issue.

Epidemiology

The LASI is a large epidemiological study that covered 35 states and union territories of India. The reported data reveals a high level of diversity and heterogeneity between the states. According to the National Mental Health Survey, 2016, the weighted lifetime prevalence and the current lifetime prevalence of psychiatric morbidity were higher in the older adults than in the younger adults (15.1% vs. 13.4% and 10.9% vs. 10.5%, respectively).3 The difference was also evident regarding the lifetime prevalence and current prevalence of severe mental disorders (2.00% vs. 1.92% and 0.68% vs. 0.78%, respectively).[3] Higher rates of weighted current and lifetime prevalence were also seen for depressive disorders in older adults compared to their younger counterparts (6.9% vs. 5.0% and 3.5% vs. 2.5%, respectively).3 The risk factors for late-life depression were identified as female gender, urban living, unemployment, poor household income, and being "single."3 Considering anxiety disorders, the prevalence was marginally lower in older adults except for panic disorder. The NMHS covered 12 states. There is a need for wider epidemiological studies on geriatric psychiatric disorders. By 2050, the number of older adults with dementia in India will increase to 14.3 million.4 The Global Burden of Diseases, Injuries and Risk Factors (GBD) 2016 data reveal that dementia is the fifth leading cause of death worldwide and accounts for 28.8 million Disability Adjusted Life Years (DALYs).5 Given the significant negative consequences of late-life neuropsychiatric disorders, there is a need for promoting public health interventions to prevent these conditions.6 The Lancet Commission on dementia prevention, intervention, and care has reported the role of 12 modifiable risk factors that may prevent or delay the onset of 40% of dementias. They are enumerated in **Table 1.** Similarly, risk factors for late-life depression are cardiovascular disease, diabetes, stroke, loss of vision, loss of hearing, and chronic lung disease.7,8 The presence of modifiable risk factors entails benefits from effective preventive measures.

Subsyndromal Symptoms—The Hidden Part of the Iceberg

Subsyndromal symptoms or subthreshold symptoms mean clinical features that fail to meet the clinical criteria for diagnosing a disorder. Although the prevalence of syndromal depression appears to decrease with increasing age, subsyndromal depression rises with age, including a steep increase after 80 years.[9] The clinical profile of subsyndromal or minor depression in older adults is characterized by depressed mood, psychomotor retardation, poor concentration, constipation, and poor self-perception of health.[9] The LASI reports that around 30% of the older adults screened positive for depressive symptoms than 8% who had a probable major depressive episode.[2] Chronic or subsyndromal depression in cognitively normal older adults is reported to increase the risk of dementia.[10] It is also associated with a poor quality of life, increased health-care utilization costs, and complications in comorbid physical conditions.[9,11] Mild Cognitive Impairment (MCI) is a transitional stage between normal aging and dementia. The conversion rate of MCI to dementia is 10% according to a systematic review.[12] The prevalence of MCI in India has been estimated to be 14.89% and 22.14% in two hospital-based studies.[13] LASI, a community-based study, estimated the prevalence of composite cognition below the 10th percentile in older adults to be 15%, whereas it was 6% in 45–59 years.[2] The self-reported diagnosis of Alzheimer's disease and dementia was 0.7%. The discrepancy between the self-reported diagnosis and the prevalence of the same demonstrates the burden of undiagnosed illness in the community.

TABLE 1.

Modifiable Risk Factors for Dementia

1. Less education
2. Air pollution
3. Less social contacts
4. Hypertension
5. Obesity
6. Diabetes
7. Physical inactivity
8. Smoking
9. Excessive alcohol consumption
10. Hearing impairment
11. Head injury
12. Depression

Adapted from Livingston et al, 2020

The Burden of Disease and the Challenges in the Pathways to Care

The GBD study 2017 has reported the crude DALY rates for various psychiatric disorders in India. They are enumerated in **Table 2**. There appears to be a trend towards increasing DALYs from 1990 to 2017. Increasing age has influenced the burden of depressive disorders, anxiety disorders, schizophrenia, and bipolar disorder.[14] On the other hand, there is a high treatment gap. The treatment gap is defined as the number of people with active disease who are not on treatment or on inadequate treatment.[3] Treatment gap is an indicator of the quality, accessibility,

TABLE 2.

Crude DALYs per 1,00,000 Population in India

Psychiatric Disorder	Crude DALYs per 1,00,000 population (95% uncertainty interval)
Depressive Disorders	550 (390–748)
Anxiety Disorders	309 (220–414)
Schizophrenia	160 (121–198)
Bipolar Disorder	113 (71–165)

Adapted from Sagar R, Dandona R, Gururaj G, et al., 2020

TABLE 3.

Models of Prevention

Primary Prevention	Secondary Prevention	Tertiary Prevention
Universal prevention: Interventions that are targeted at the general public or to a whole population group that has not been identified based on increased risk. **Selective prevention:** Targets individuals or subgroups of the population whose risk of developing a mental disorder is significantly higher than average, as evidenced by biological, psychological, or social risk factors. **Indicated prevention:** Targets high-risk people who are identified as having minimal but detectable signs or symptoms foreshadowing mental disorder or biological markers indicating predisposition for mental disorder but who do not meet diagnostic criteria for disorder at that time.	Aimed at lowering the rate of established cases of the disorder or illness in the population through early detection and treatment of diagnosable diseases.	Interventions that reduce disability, enhance rehabilitation, and prevent relapses and recurrences of the illness.

Source: World Health Organization

and utilization of health care. A higher treatment gap indicates a higher disease burden. The NMHS 2016 reports an overall treatment gap of 83% for any mental health problem. For common mental disorders, it is 85.0% and for severe mental disorders, it is 73.6%. Major depressive disorders and anxiety disorders have a treatment gap of 85.2% and 84.0%, respectively.[3] India has two mental health workers and 0·3 psychiatrists per 100 000 population, which is very low compared to the global average.[14] Addressing the unmet needs of mental health-care delivery in India necessitates innovative and novel methods.

Existing Models and Resources for Mental Health Care Delivery of Older Adults

Mental health promotion and prevention of mental illness are two main concepts in the public health approach to mental health care. Mental health promotion activities imply creating individual, social, and environmental conditions that enable optimal psychological and psychophysiological development.[15] Mental disorder prevention aims at "reducing the incidence, prevalence, recurrence of mental disorders, the time spent with symptoms, or the risk condition for a mental illness, preventing or delaying recurrences and decreasing the impact of illness in the affected person families and the society".[15] These two are intertwined in mental health. Mental disorder prevention may use mental health promotion as one of the strategies. Mental health promotion has a secondary outcome of reducing the incidence of mental health disorders. The models of prevention are described in **Table 3**.

The WHO recommends an optimal mix of health-care services for mental health-care delivery.[16] This pyramid model is based on accessibility, effectiveness, comprehensiveness, coordination, continuity of care, equity, and respect for human rights.[16] From the pyramid model, it is evident that most of the required resources need to be focused on self-care management and informal community-based services. Mental health care at a basic level should be available at the primary health-care level. This will facilitate the integration of mental health care with physical health care. Specialist services for mental health care are required for the smaller proportion of individuals with more severe mental health conditions. There is a requirement for effective coordination and integration of care across these different levels to ensure continuity of care.

Self-Care

Prevention of many mental health conditions in older adults is possible by self-care interventions such as lifestyle modification, stress management, early recognition, and prodromal symptoms. Older adults in urban areas may have access to technologies like smartphones. Effective use of technology can help in cost-effectively delivering the self-care interventions. There is a greater need for public health interventions in rural areas to promote awareness, reduce stigma, and facilitate early intervention for mental health issues.

Informal Care

The traditional family systems in India have an essential role in the provision of mental health care. Family members can significantly influence the recognition of mental health issues and the pattern of help-seeking. Peer support from older adults and family caregivers can be beneficial in managing mental health issues in older adults. Self-help groups, senior citizen forums, caregiver support groups, etc., are important targets to promote informal care. Networking with traditional healers and effective collaboration with them can help facilitate access to appropriate mental health care. They may be the preferred source of help-seeking for many older adults. Using a task-sharing approach by training volunteers and lay counselors has been successfully demonstrated to effectively provide informal care for mental health problems. Depression in

Late Life study was conducted on older adults with subsyndromal depression. This randomized trial comprising problem solving therapy, brief behavioral treatment for insomnia, education in self-care of common medical disorders, and assistance in accessing medical and social programs on the intervention arm demonstrated a significant reduction in the incidence of depression compared to usual care. Trained graduate health workers provided the intervention with no experience in mental health.[17] As the resources and the funding for geriatric mental health care are limited, feasible and cost-effective methods like training health workers in mental health as mentioned above, providing group interventions, or training lay-counselors are options to provide informal care.[18] Daycare services and volunteer services to older adults are provided in Denmark, England, and Cuba.[19] In India, there are such services available, but not in the public health-care system. There is a need to develop such facilities in India.

Integrating Mental Health Care with Primary Health Care

An effective approach to promote mental health care in the community includes integrating mental health care with primary health care. This is likely to be remarkably effective for older adults as they are more likely to be accessing the treatment for chronic health conditions such as diabetes and hypertension in primary health care. There is a need for effective integration of the National Programme for Health Care of the Elderly (NPHCE) and the National Mental Health Programme (NMHP) to integrate mental health care with primary health care. The collaborative care approach has been successfully demonstrated to deliver mental health care in primary health centers. The MANAS trial ("promoting mental health") was a cluster-randomized trial comparing collaborative stepped care with usual enhanced care. The collaborative stepped care included providing case management and psychosocial interventions, supplemented by antidepressant treatment and supervision by a mental health specialist. Case management and psychosocial interventions were provided by Lay Health Counsellors. This study demonstrated a better six-month recovery in patients with depression and anxiety undergoing collaborative stepped care than those receiving usual care (65% vs. 52.9%).[20] This trial was conducted on a mixed-age population. The findings of this study can be extrapolated to the older adult population. However, more such studies conducted on the older adult population are required.

Delivery of Geriatric Mental Health Care Through the "Health and Wellness Centers"

"Ayushman Bharat" is the major national initiative.[21] One of the objectives is to enhance the quality of the primary health care delivered at the sub-health center or the primary health center level. The infrastructure and human resources at these levels of the primary health-care system are being transformed into "health and wellness centers" that provide health promotion and prevention of chronic conditions, including mental illness. One of the scheme's objectives is to involve the Village Health Sanitation and Nutrition Committees in screening for various disorders across age groups.[22] These centers could provide geriatric mental health services and the delivery of promotive and preventive services for chronic health conditions. Integrating mental health care with the noncommunicable diseases programs at the HWC level would be rational because mental health and physical health are interrelated and have a bidirectional effect.[18] This scheme also provides for the health insurance of the economically vulnerable, including older adults.

Training of the Primary Care Health Team in Geriatric Mental Health Care

The effective integration of mental health care with primary health care requires periodic training of the medical and nonmedical human resources in the primary health system. Training manuals on mental health care for various cadres of the primary health system such as medical officers, Accredited Social Health Activist (ASHA) workers, Auxiliary Nursing Midwifery (ANM), etc., have been developed as part of NMHP.[23] Training of ASHA workers on geriatric mental health has been demonstrated to help promote geriatric mental health literacy. Dementia Echo program using a case-based discussion approach with brief didactic sessions has been tried successfully to train primary health-care medical officers to diagnose and manage persons with Alzheimer's dementia.[24] However, the delivery of pharmacological and psychotherapeutic treatment modalities through primary care is challenging. A one-year Primary Care Psychiatry Program for primary care doctors is effective in acquiring psychiatry knowledge, skills, and retention of skills, with the translation of the same into clinical practice and a positive impact on the delivery of primary care psychiatry.[25] Such innovative approaches can address the challenges.

Home-Based Geriatric Mental Health Care

Older adults have a higher prevalence of physical and mental disability. Many of them may not be able to access health care, even in primary care. There is a need to promote home-based geriatric mental health-care services through home visits by health workers and nurses. Countries such as Denmark, Cuba, and England provide health-care services for older adults at their doorstep through national and state health services.[19] The provision for home visits has been made in the National Program for Palliative Care,[26] NPHCE,[27] and NMHP.[28] The World Health Organization has recommended the "Integrated Care for Older People" (ICOPE) to provide comprehensive, person-centered integrated health and social care for older adults.[29] However, there is a need to strengthen the human resources at the community level to provide mental health-care services at home for those who have difficulty accessing hospital-based health-care services.

Geriatric Telepsychiatry Services

Through the assistance of the health-care workers, access to specialist mental health intervention can be provided through telepsychiatry services for those who cannot access these interventions

in the hospital-based health services. The impact of the COVID-19 pandemic on the usual mental health services has necessitated the transformation to telepsychiatry services globally.[30] Older adults have relatively lesser access to technology due to various factors such as illiteracy, lack of familiarity in using gadgets for teleconsultations, cognitive impairment, and sensory impairment. However, telepsychiatry services are beneficial for many older adults who can use this service either by themselves or through the assistance of family members. Telepsychiatry services are also immensely helpful to provide mental health care to the older adults living in old age homes.

Integrating Geriatric Mental Health Care in the Formal Care Systems for Older Adults

Formal care refers to the care provided by professionals or paraprofessionals for different aspects of care needs. It is usually a paid care service.[31] A significant proportion of older adults require formal care services delivered at their homes or institutions. The prevalence of mental health problems is higher in older adults requiring formal care services. Elder abuse and the related mental health issues in the formal care systems require public health measures to promote prevention and ensure early recognition and intervention. This includes developing effective regulatory mechanisms to ensure the quality of care and training on geriatric mental health care for the human resources involved in the formal care systems. The WHO ICOPE guidelines may be used to formulate national guidelines for including geriatric health care into primary care using a person-centered and integrated approach.[29]

Policy and Legislations Related to Geriatric Mental Health Care

The following policies and legislations of the Government of India have advocated measures to promote geriatric mental health care and related services:

1. National Policy for Older Persons, 1999 [32]
2. National Policy for Persons with Disabilities, 2006 [33]
3. National Mental Health Policy, 2014 [34]
4. National Health Policy, 2017 [35]
5. The Maintenance and Welfare of Parents and Senior Citizens (MWPSC) Act, 2007 [36]
6. Mental Health Care Act, 2017 [37]
7. Rights of Persons with Disability, 2016 [38]

Status of the Most Vulnerable Population

Urbanization of the population has caused changes in the structure and functioning of Indian families. The present scenario finds many older adults in old age homes (OAHs). They represent the most vulnerable part of the already vulnerable population. There is a higher risk of them suffering from mental illnesses. An exploratory study on mental health problems in inhabitants of OAHs in Northern India reported a prevalence of 64.4%. Depression was the most common disorder, followed by anxiety disorder and dementia.[39] Another cross-sectional study conducted in five districts of Northern India reveals a prevalence of 43% of psychiatric illness in residents of OAHs.[40] Another vulnerable part of the population is the prison inmates. According to the Prison Statistics India, 2019, there are 27,193 (19.16%) convicted inmates aged above 50 years.[41] The number of prisoners under trial aged over 50 years is 35,317 (10.78%).[41] Although the age distribution of prisoners with mental illness is not available, the number of prisoners with mental illness is reported to be 7,394, of which over 50% are convicted prisoners.[41] There is one medical staff per 243 prisoners.[41] There is only one mental health professional per 21,650 prisoners.[42] It is necessary that community geriatric mental health services also cover such vulnerable populations.

The Way Forward

The expanding population of older adults and the shortage of trained mental health professionals pose several challenges to geriatric mental health care, as discussed above. These can be overcome by employing a few strategies. As discussed in the article, the efforts taken by various governmental organizations offer a ray of hope. However, given the available workforce and financial resources, such an ideal situation may be an overly optimistic assumption. Involving non-governmental organizations (NGOs) has been time-tested and proven beneficial. For example, NGOs such as HelpAge India, Geri Care, Agewell Foundation, and Dignity Foundation provide geriatric health services.[43] Engaging non-MHPs trained in mental health care (task sharing) is a feasible alternative.[17] Validated and easily administered screening tools, for example, the Hindi version of the Geriatric Depression Scale (GDS-H),[44] the Community Screening Instrument for Dementia (CSI-D), and the Picture-based Memory Impairment Screen can be administered in primary care settings.[45] Self-administered screening instruments may be used in literates. Task sharing has been proven effective in low and middle income countries for HIV, tuberculosis, and hypertension.[18] Cost-effective alternatives could be employing group interventions focusing on mental health promotion and telementoring of primary care physicians.[18] Offering domiciliary interventions would improve accessibility and acceptability.[46]

Conclusions

With the state of demographic transition that the country is undergoing, the country must prepare for managing emerging issues. As discussed above, geriatric mental health-care issues make a compelling argument for the need to strengthen the already available resources and develop resources as necessary. It is prudent to examine and review public health policies from time to time to suit the needs of the beneficiary population.

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