

# Health Challenges of the Elderly in India: A Comprehensive Literature Review

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***Abstract- India's rapidly ageing population faces multifaceted health challenges that impact quality of life and healthcare systems. This paper synthesizes literature on elderly health in India, examining demographic and socio-economic factors, key physical, mental, and social health challenges, and existing policy and programmatic responses. The review identifies gaps in mental health care, functional support, nutrition, healthcare access, and evaluation of policy interventions. It emphasizes the need for integrated, culturally sensitive, and evidence-based strategies to improve elderly well-being. Strengthening geriatric healthcare, community support, and research is critical to ensure dignity and resilience for India's older adults.***

***Index Terms- Elderly Health, Ageing Population, India, Health Challenges, Geriatric Care***

## I. INTRODUCTION

India is currently undergoing a significant demographic transformation characterized by a rapidly expanding elderly population, which presents distinct challenges to the nation's healthcare infrastructure. With increasing life expectancy and declining fertility rates, the country is experiencing a demographic transition that results in a higher proportion of older adults within the population. Recent estimates indicate that the number of individuals aged 60 and above in India is projected to reach 194 million by 2031, constituting approximately 13.1% of the total population (Government of India, 2021). This demographic shift is attributed to several factors, including advancements in healthcare, improved nutrition, and medical technology. In the Indian context, the elderly are defined as individuals aged 60 years and above, according to the Government of India's classification, which aligns with the nation's retirement age and social welfare policies targeting older adults (Khan et al., 2022). The rapid increase in the elderly population necessitates a comprehensive

examination of the health challenges faced by this demographic group. As the proportion of older adults rises, there is an urgent need to address age-related health issues, chronic diseases, and the specific healthcare requirements of the elderly. This review aims to assess the current state of elderly health in India, identify key challenges, and explore potential interventions to enhance the quality of life for older adults. By focusing on the specific health needs of the elderly population, policymakers, healthcare providers, and researchers can develop targeted strategies to ensure improved health outcomes and promote healthy aging in India (Paul & Asirvatham, 2016).

This paper aims to synthesize existing literature on the health challenges faced by elderly people in India. It seeks to explore the demographic and socio-economic factors influencing elderly health, identify key physical, mental, and social health challenges, review policy and programmatic responses, and highlight gaps for future research. To achieve these objectives, a literature review methodology was adopted, drawing on peer-reviewed journal articles, government reports, policy documents, and relevant grey literature. Sources were selected based on their relevance to the Indian context, with emphasis on recent studies that provide insights into epidemiological trends, healthcare access, social determinants, and policy interventions. The review follows a thematic approach, categorizing evidence into major health challenges, policy responses, and emerging gaps, thereby providing a comprehensive overview of the current state of knowledge on elderly health in India.

## II. DEMOGRAPHIC PROFILE OF THE ELDERLY IN INDIA

India's elderly population is experiencing notable demographic transformations, as evidenced by various statistical sources. Census data, National Sample Surveys, and the Longitudinal Ageing Study in India (LASI) offer comprehensive insights into the

evolving profile of older adults in the country. These sources indicate a consistent increase in the proportion of elderly individuals, with projections suggesting a substantial rise in the coming decades (Krishnappa et al., 2021; Saha et al., 2022). The distribution of the elderly population varies between urban and rural areas, reflecting broader socio-economic patterns in India. Rural areas tend to have a higher concentration of older adults, often due to the migration of younger generations to urban centers for employment opportunities. This urban-rural divide has implications for healthcare access, social support systems, and economic well-being among the elderly (Krishnappa et al., 2021). Gender differences in aging are prominent in India, with women generally outliving men but often facing greater vulnerabilities. Elderly women are more likely to be widowed, have lower literacy rates, and experience economic dependence. These factors contribute to gender-specific challenges in health outcomes and social support for older women (D'Mello & Devraj, 2019). Socio-economic factors play a crucial role in shaping elderly health in India. Education levels, income, occupation, and social status significantly influence access to healthcare, nutrition, and overall quality of life among older adults. Lower socio-economic status is often associated with poorer health outcomes and limited access to essential services. The demographic pressures on healthcare systems are substantial, as the growing elderly population increases the demand for specialized geriatric care, long-term support, and management of chronic diseases. This demographic shift necessitates policy interventions, infrastructure development, and healthcare workforce training to address the unique needs of older adults effectively (Ogugua et al., 2024).

### III. MAJOR HEALTH CHALLENGES OF THE ELDERLY IN INDIA

#### 3.1 Chronic and Non-Communicable Diseases (NCDs)

Chronic and non-communicable diseases (NCDs) represent a significant health challenge for the elderly population in India. The prevalence of these conditions has been steadily increasing, placing a substantial burden on the healthcare system. Hypertension is one of the most common NCDs among the elderly in India. According to the Longitudinal Ageing Study in India (LASI), approximately 45% of adults aged 60 and above have

hypertension. This high prevalence is particularly concerning as hypertension is a major risk factor for cardiovascular diseases (Chauhan et al., 2021). Diabetes is another prevalent NCD among the elderly. The International Diabetes Federation estimates that 77 million adults in India have diabetes, with a significant proportion being elderly. The LASI study found that about 27% of older adults have diabetes, with higher rates in urban areas (Chauhan et al., 2021). Cardiovascular diseases (CVDs) are a leading cause of morbidity and mortality among the elderly. The Global Burden of Disease study indicates that CVDs account for nearly 28% of all deaths in India, with a higher proportion among older adults (Jan et al., 2024). Cancer incidence increases with age, and the elderly population bears a disproportionate burden. The Indian Council of Medical Research reports that individuals aged 60 and above account for over 40% of all cancer cases in India (Ramamoorthy et al., 2022). Arthritis, particularly osteoarthritis, significantly impacts the quality of life of older adults. The prevalence of arthritis among the elderly in India is estimated to be around 20-40%, varying across different regions and populations (Akhter et al., 2011). Respiratory conditions, including chronic obstructive pulmonary disease (COPD), are common among the elderly, especially in urban areas with high pollution levels. The prevalence of COPD in older adults is estimated to be around 12-15% (Daniel et al., 2021). The burden of these NCDs on the healthcare system is substantial. They require long-term management, frequent hospital visits, and often expensive treatments. The National Health Policy 2017 acknowledges the growing challenge of NCDs and emphasizes the need for comprehensive strategies to address them, including prevention, early detection, and improved access to care for the elderly population. (Jayanna et al., 2019).

#### 3.2 Functional Decline and Disability

Functional decline and disability are significant concerns for the elderly population in India, impacting their independence and quality of life. These issues manifest in various forms, including mobility limitations, sensory impairments, and cognitive decline. Mobility issues are prevalent among older adults, affecting their ability to perform daily activities independently. The LASI study reports that approximately 20% of adults aged 60 and above have difficulty in walking or climbing stairs. This limitation can lead to reduced physical activity,

social isolation, and increased risk of falls. Vision impairment is a common sensory deficit in the elderly. According to the National Programme for Control of Blindness, about 8% of the elderly population in India is visually impaired (Chaudhuri et al., 2023). Cataracts, glaucoma, and age-related macular degeneration are the leading causes of vision loss in this age group. Hearing loss affects a significant proportion of older adults, with estimates suggesting that 30-40% of individuals aged 65 and above experience some degree of hearing impairment (Wood et al., 2011). This can lead to communication difficulties and social withdrawal. Cognitive impairment, ranging from mild cognitive decline to dementia, is a growing concern. The Dementia India Report estimates that over 4 million people in India have some form of dementia, with the majority being elderly. These functional declines often result in dependence in activities of daily living (ADL) and instrumental activities of daily living (IADL). ADLs include basic self-care tasks like bathing, dressing, and eating, while IADLs involve more complex tasks such as managing finances, using transportation, and maintaining a household. The LASI study reveals that about 10% of older adults require assistance with at least one ADL, while nearly 20% need help with IADLs. This dependence not only affects the quality of life of the elderly but also places a significant caregiving burden on families and the healthcare system.

### 3.3 Mental Health Challenges

Mental health issues among the elderly in India are prevalent but often overlooked due to various factors, including cultural stigma and limited access to specialized care. Depression is one of the most common mental health disorders affecting older adults in India. Studies suggest that the prevalence of depression among the elderly ranges from 10-25%, depending on the population and assessment methods used. Factors contributing to depression include chronic illnesses, social isolation, and loss of independence. (Sivakumar et al., 2020; Suhas et al., 2023; Tripathi et al., 2024; Verma et al., 2019) Anxiety disorders are also prevalent, often coexisting with depression. The Indian Journal of Psychiatry reports that approximately 10-20% of older adults experience significant anxiety symptoms, which can severely impact their daily functioning and quality of life. Dementia, including Alzheimer's disease, is a growing concern as the population ages. The Dementia India Report estimates that over 4 million

people in India have dementia, with numbers expected to triple by 2050. Alzheimer's disease accounts for about 50-70% of all dementia cases. Cultural stigma surrounding mental health issues is a significant barrier to seeking help. (Bhatt, 2025; Meghrajani et al., 2023) Mental health problems are often viewed as a sign of weakness or a lack of faith, leading to underreporting and under treatment. This stigma is particularly pronounced in rural areas and among less educated populations. Access to geriatric mental healthcare is limited in India. There is a severe shortage of mental health professionals specializing in geriatric care. The World Health Organization estimates that there are only about 0.3 psychiatrists per 100,000 population in India, with even fewer specializing in geriatric psychiatry. The lack of awareness about mental health issues in the elderly, both among the general public and healthcare providers, further compounds the problem (De Sousa & Lodha, 2018; Sivakumar et al., 2020). Many symptoms of mental health disorders are mistakenly attributed to normal aging, leading to delayed diagnosis and treatment.

### 3.4 Nutrition and Malnutrition

Nutrition plays a crucial role in the health and well-being of the elderly population in India, with both undernutrition and over-nutrition presenting significant challenges. Factors contributing to this include poverty, food insecurity, and lack of knowledge about nutritional needs in old age. Micronutrient deficiencies are common, particularly iron, vitamin B12, and vitamin D deficiencies. These can lead to anemia, cognitive decline, and increased risk of falls and fractures (Joy et al., 2017; Varadharajan et al., 2013; Vijayageetha et al., 2018). In contrast, over-nutrition and obesity are emerging problems among urban middle-class elderly. The Indian Council of Medical Research-India Diabetes study found that about 30-40% of urban elderly are overweight or obese. This is often associated with sedentary lifestyles and consumption of calorie-dense foods. Gender disparities in food access and nutrition are evident (Puri et al., 2007). Elderly women, particularly widows, are more vulnerable to malnutrition due to social and cultural factors that prioritize male family members in food distribution. The double burden of malnutrition, where undernutrition and over-nutrition coexist within the same population, poses a unique challenge for health policies and interventions targeting the elderly in India.

### 3.5 Access to Healthcare and Affordability Issues

Access to healthcare and affordability are significant challenges for the elderly population in India, with various barriers impeding their ability to receive adequate medical care. Physical barriers include the lack of transportation, especially in rural areas, and the absence of age-friendly infrastructure in healthcare facilities. Many elderly individuals find it difficult to navigate hospitals or clinics without assistance. Financial barriers are a major concern (Lu et al., 2022; Pan et al., 2025; Rahman et al., 2024). Infrastructural barriers include the shortage of geriatric specialists and dedicated geriatric care units in hospitals. The Indian Journal of Community Medicine highlights that there are only about 1,000 qualified geriatricians in India, severely inadequate for the growing elderly population. (Paul & Asirvatham, 2016) Public healthcare utilization is higher among the rural elderly and those from lower socioeconomic backgrounds. However, public facilities often lack specialized geriatric care services and face issues of overcrowding and long waiting times. Private healthcare, while often perceived as providing better quality care, is financially inaccessible for many elderly individuals. The high cost of private healthcare services can lead to delayed treatment or forgoing necessary medical care (Gopichandran, 2019). Health insurance schemes like the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) aim to provide financial protection to vulnerable groups, including the elderly. However, awareness and utilization of these schemes among the elderly remain limited (Lahariya, 2020; Prinja et al., 2023; Sriee G.V & Maiya, 2021)

### 3.6 Social and Cultural Determinants of Health

Social and cultural factors significantly influence the health and well-being of the elderly in India, often interacting with and exacerbating other health challenges. Social isolation is a growing concern, particularly in urban areas where traditional family structures are changing. The India Ageing Report notes that about 20% of elderly individuals live alone or with their spouse only, increasing their vulnerability to social isolation and neglect. Elder abuse, including physical, emotional, and financial abuse, is an under-reported but serious issue (Saha et al., 2022; Srivastava et al., 2021). The Longitudinal Ageing Study in India (LASI) suggests that about 5% of older adults experience some form of abuse, with higher rates among those who are dependent on others for care. Family dynamics and intergenerational relationships play a crucial role in elderly care. While traditional values of filial piety are still prevalent, urbanization and migration have led to changes in family structures, sometimes resulting in inadequate support for the elderly. Cultural beliefs and practices can influence health-seeking behaviors and treatment adherence among the elderly (Ahuja et al., 2023; Trivedi et al., 2008). For instance, some may prefer traditional or alternative medicine over allopathic treatments, potentially delaying necessary medical interventions. The intersection of these social and cultural factors with other health determinants creates a complex landscape for addressing elderly health in India, necessitating holistic and culturally sensitive approaches to healthcare and social support systems.

Table 1: Major Health Challenges of the Elderly in India

Sub-theme	Key Issues	Highlights from Literature
3.1 Chronic and Non-Communicable Diseases (NCDs)	Hypertension, diabetes, cardiovascular diseases, cancer, arthritis, respiratory illnesses	Literature highlights the growing burden of NCDs among the elderly, requiring long-term management and straining healthcare resources.
3.2 Functional Decline and Disability	Mobility limitations, vision and hearing impairment, cognitive decline, dependence in daily activities	Studies emphasize the loss of independence and increased caregiving burden linked to functional decline in old age.
3.3 Mental Health Challenges	Depression, anxiety, dementia, cultural stigma, lack of geriatric mental health services	Research shows mental health problems are often overlooked, with stigma and inadequate services compounding the issue.

3.4 Nutrition and Malnutrition	Undernutrition, micronutrient deficiencies, obesity, gender disparities in food access	Literature identifies a “double burden” of undernutrition and over-nutrition, with elderly women especially vulnerable.
3.5 Access to Healthcare and Affordability	Physical, financial, and infrastructural barriers; gaps between public and private care; limited insurance coverage	Scholars note persistent inequities in healthcare access, high costs, and inadequate geriatric services.
3.6 Social and Cultural Determinants	Social isolation, elder abuse, changing family structures, cultural health practices	Research points to the influence of social neglect, weakened traditional support systems, and cultural factors on elderly well-being.

#### IV. POLICY AND PROGRAMMATIC RESPONSES

India has introduced several policies and programmes to address the needs of its ageing population. The National Policy on Older Persons (1999) and the Maintenance and Welfare of Parents and Senior Citizens Act (2007) were early frameworks aimed at social and legal protection. In the health sector, the National Programme for Health Care of the Elderly (NPHCE) provides dedicated geriatric services at different levels of healthcare delivery. Other schemes, such as Ayushman Bharat and state-level insurance programmes, extend some coverage to older adults. In addition, non-governmental organisations and community initiatives play a role in delivering elderly care, particularly in rural areas. However, literature suggests that these efforts are often limited by inadequate infrastructure, low awareness, weak implementation, and a shortage of trained geriatric professionals.

#### V. GAPS IN LITERATURE AND FUTURE DIRECTIONS

Despite a growing body of research on ageing in India, several gaps remain. Studies often lack disaggregated data that captures differences by gender, class, caste, and region. Research has largely focused on physical health, with limited attention to mental health, elder abuse, and social isolation. There is also insufficient evaluation of existing policies and their real-world impact. Future research should adopt longitudinal and interdisciplinary approaches, integrating medical, social, and cultural perspectives. Greater emphasis is needed on community-based interventions, digital health solutions, and inclusive health insurance models to ensure accessible and equitable care for India's ageing population.

#### CONCLUSION

The literature on elderly health in India underscores a multifaceted set of challenges that extend beyond biological ageing. Chronic and non-communicable diseases, functional decline, mental health concerns, nutritional imbalances, limited access to healthcare, and adverse social determinants collectively shape the health outcomes of older adults. These issues not only diminish quality of life but also place significant burdens on families, communities, and the healthcare system. Research consistently points to the fact that ageing in India is inseparable from broader socio-economic inequalities, gender disparities, and the ongoing urban–rural divide in healthcare access.

The urgency of addressing these concerns is amplified by India's demographic trajectory, with the elderly population projected to grow rapidly in the coming decades. Without timely interventions, the burden of disease, disability, and dependency among older adults will intensify, straining an already fragile health infrastructure. The literature highlights that existing policies and programmes, while important, remain insufficient in scope, coverage, and implementation. Addressing elderly health cannot be reduced to clinical care alone; it requires an integrated approach that encompasses physical, mental, and social well-being.

Policy frameworks must prioritize geriatric healthcare as a core component of national health planning, with an emphasis on preventive measures, community-based care, and affordable insurance mechanisms. Future research should adopt interdisciplinary and longitudinal approaches to capture the complexity of ageing and to generate

evidence for context-specific interventions. In practice, strengthening grassroots health systems, investing in training geriatric specialists, and promoting age-friendly environments are critical steps.

In conclusion this literature review affirms that elderly health in India is a pressing public health and social issue. Responding effectively will require a coordinated commitment from policymakers, researchers, practitioners, and communities to ensure that ageing is not synonymous with neglect, but with dignity, resilience, and well-being.

#### REFERENCES

- [1]. Ahuja, A., Diamond-Smith, N. G., Duggal, M., Kumar, V., Bagga, R., Kankaria, A., Sharma, P., Singh, P., Hosapatna Basavarajappa, D., Liu, J. Y., & El Ayadi, A. M. (2023). A qualitative study to understand sociocultural beliefs around perinatal and neonatal health in rural areas of Mohali, Punjab, India. *Frontiers in Global Women's Health*, 4. <https://doi.org/10.3389/fgwh.2023.1147762>
- [2]. Akhter, E., Haque, U., & Bilal, S. (2011). Prevalence of arthritis in India and Pakistan: a review. *Rheumatology International*, 31(7), 849–855. <https://doi.org/10.1007/s00296-011-1820-3>
- [3]. Bhatt, J. (2025). The Dementia Dilemma in India: Addressing the Care Challenges with a Layered Interventional Model (LIM). Center for Open Science. [https://doi.org/10.31234/osf.io/uchxs\\_v1](https://doi.org/10.31234/osf.io/uchxs_v1)
- [4]. Chaudhuri, M., Bellary Pattanashetty, M. S., Hassan, Y., Bakka Vemana, P. P. S., Abdin, Z. U., & Siddiqui, H. F. (2023). Age-Related Macular Degeneration: An Exponentially Emerging Imminent Threat of Visual Impairment and Irreversible Blindness. *Cureus*, 15(5). <https://doi.org/10.7759/cureus.39624>
- [5]. Chauhan, S., Gupte, S. S., Kumar, S., & Patel, R. (2021). Urban-rural differential in diabetes and hypertension among elderly in India: A study of prevalence, factors, and treatment-seeking. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 15(4), 102201. <https://doi.org/10.1016/j.dsx.2021.102201>
- [6]. Daniel, R. A., Aggarwal, P., Kalaivani, M., & Gupta, S. K. (2021). Prevalence of chronic obstructive pulmonary disease in India: A systematic review and meta-analysis. *Lung India : Official Organ of Indian Chest Society*, 38(6), 506–513. [https://doi.org/10.4103/lungindia.lungindia\\_159\\_21](https://doi.org/10.4103/lungindia.lungindia_159_21)
- [7]. De Sousa, A., & Lodha, P. (2018). Geriatric mental health: The challenges for India. *Journal of Geriatric Mental Health*, 5(1), 16. [https://doi.org/10.4103/jgmh.jgmh\\_34\\_17](https://doi.org/10.4103/jgmh.jgmh_34_17)
- [8]. D'Mello, M., & Devraj, S. (2019). Determinants of quality of life among the elderly population in urban areas of Mangalore, Karnataka. *Journal of Geriatric Mental Health*, 6(2), 94. [https://doi.org/10.4103/jgmh.jgmh\\_23\\_19](https://doi.org/10.4103/jgmh.jgmh_23_19)
- [9]. Gopichandran, V. (2019). Ayushman Bharat National Health Protection Scheme: an Ethical Analysis. *Asian Bioethics Review*, 11(1), 69–80. <https://doi.org/10.1007/s41649-019-00083-5>
- [10]. Jan, B., Dar, M. I., Choudhary, B., Basist, P., Khan, R., & Alhalimi, A. (2024). Cardiovascular Diseases Among Indian Older Adults: A Comprehensive Review. *Cardiovascular Therapeutics*, 2024(1). <https://doi.org/10.1155/2024/6894693>
- [11]. Jayanna, K., Pujar, A., Pati, M. K., Patil, G., Swaroop, N., Mohan, H. L., Ramanaik, S., Rai, P., Aggarwal, P., Rekha, S., Madegowda, H., Chitrapu, S., Saksena, S., & Kar, A. (2019). Designing a comprehensive Non-Communicable Diseases (NCD) programme for hypertension and diabetes at primary health care level: evidence and experience from urban Karnataka, South India. *BMC Public Health*, 19(1). <https://doi.org/10.1186/s12889-019-6735-z>
- [12]. Joy, E. J., Kinra, S., Macdiarmid, J. I., Haines, A., Agrawal, S., Bowen, L., Green, R., Dangour, A. D., & Aleksandrowicz, L. (2017). Dietary patterns and non-communicable disease risk in Indian adults: secondary analysis of Indian Migration Study data. *Public Health Nutrition*, 20(11), 1963–1972. <https://doi.org/10.1017/s1368980017000416>
- [13]. Khan, M. R., Malik, M. A., Akhtar, S. N., Yadav, S., & Patel, R. (2022). Multimorbidity and its associated risk factors among older adults in India. *BMC Public Health*, 22(1). <https://doi.org/10.1186/s12889-022-13181-1>
- [14]. Krishnappa, L., Gadicherla, S., Chidambaram, P., & Murthy, N. S. (2021). Quality of life

- (QOL) among older persons in an urban and rural area of Bangalore, South India. *Journal of Family Medicine and Primary Care*, 10(1), 272–277.  
[https://doi.org/10.4103/jfmmpc.jfmmpc\\_1241\\_20](https://doi.org/10.4103/jfmmpc.jfmmpc_1241_20)
- [15]. Lahariya, C. (2020). Health & Wellness Centers to Strengthen Primary Health Care in India: Concept, Progress and Ways Forward. *Indian Journal of Pediatrics*, 87(11), 916–929.  
<https://doi.org/10.1007/s12098-020-03359-z>
- [16]. Lu, K., Xiong, X., Horras, A., Jiang, B., & Li, M. (2022). Impact of financial barriers on health status, healthcare utilisation and economic burden among individuals with cognitive impairment: a national cross-sectional survey. *BMJ Open*, 12(5), e056466.  
<https://doi.org/10.1136/bmjopen-2021-056466>
- [17]. Meghrajani, V. R., Marathe, M., Sharma, R., Potdukhe, A., Wanjari, M. B., & Taksande, A. B. (2023). A Comprehensive Analysis of Mental Health Problems in India and the Role of Mental Asylums. *Cureus*, 15(7).  
<https://doi.org/10.7759/cureus.42559>
- [18]. Ogugua, J., Muonde, M., Omotayo, O., Olorunsogo, T., & Maduka, C. (2024). Demographic shifts and healthcare: A review of aging populations and systemic challenges. *International Journal of Science and Research Archive*, 11(1), 383–395.  
<https://doi.org/10.30574/ijrsra.2024.11.1.0067>
- [19]. Pan, A. A., Betzler, B. K., Aguirre, B. A., & Singh, M. S. (2025). Financial barriers to accessing mental healthcare services among visually impaired people. Cold Spring Harbor Laboratory.  
<https://doi.org/10.1101/2025.02.01.25321516>
- [20]. Paul, N. S., & Asirvatham, M. (2016). Geriatric health policy in India: The need for scaling-up implementation. *Journal of Family Medicine and Primary Care*, 5(2), 242.  
<https://doi.org/10.4103/2249-4863.192333>
- [21]. Prinja, S., Chugh, Y., Gupta, N., & Aggarwal, V. (2023). Establishing a Health Technology Assessment Evidence Ecosystem in India's Pradhan Mantri Jan Arogya Yojana. *Health Systems & Reform*, 9(3).  
<https://doi.org/10.1080/23288604.2024.2327097>
- [22]. Puri, S., Singh, A., Swami, H., Kaur, A., Abhimanyu, A., Mangat, C., Kalia, M., & Kaur, S. (2007). Profile of diabetes mellitus in elderly of Chandigarh, India. *The Internet Journal of Endocrinology*, 4(1).  
<https://doi.org/10.5580/26a4>
- [23]. Rahman, F., Bhat, V., Ozair, A., Detchou, D. K. E., & Ahluwalia, M. S. (2024). Financial barriers and inequity in medical education in India: challenges to training a diverse and representative healthcare workforce. *Medical Education Online*, 29(1).  
<https://doi.org/10.1080/10872981.2024.2302232>
- [24]. Ramamoorthy, T., Lakshminarayana Sudarshan, K., Mathur, P., Sathishkumar, K., & Das, P. (2022). Epidemiology of human papillomavirus related cancers in India: findings from the National Cancer Registry Programme. *Ecancermedicalscience*, 16.  
<https://doi.org/10.3332/ecancer.2022.1444>
- [25]. Saha, A., Rahaman, M., Mandal, B., Biswas, S., & Govil, D. (2022). Rural urban differences in self-rated health among older adults: examining the role of marital status and living arrangements. *BMC Public Health*, 22(1).  
<https://doi.org/10.1186/s12889-022-14569-9>
- [26]. Sivakumar, P. T., Mukku, S. S. R., Manjunatha, N., Sinha, P., Phutane, V. H., Kumar, C. N., Kar, N., & Math, S. B. (2020). Geriatric Telepsychiatry: Promoting Access to Geriatric Mental Health Care Beyond the Physical Barriers. *Indian Journal of Psychological Medicine*, 42(Suppl 5), 41S–46S.  
<https://doi.org/10.1177/0253717620958380>
- [27]. Sriee G.V, V. P., & Maiya, G. R. (2021). Coverage, utilization, and impact of Ayushman Bharat scheme among the rural field practice area of Saveetha Medical College and Hospital, Chennai. *Journal of Family Medicine and Primary Care*, 10(3), 1171–1176.  
[https://doi.org/10.4103/jfmmpc.jfmmpc\\_1789\\_20](https://doi.org/10.4103/jfmmpc.jfmmpc_1789_20)
- [28]. Srivastava, S., Debnath, P., Shri, N., & Muhammad, T. (2021). The association of widowhood and living alone with depression among older adults in India. *Scientific Reports*, 11(1), 21641. <https://doi.org/10.1038/s41598-021-01238-x>
- [29]. Suhas, S., Jayasankar, P., Patley, R., Manjunatha, N., Rao, G. N., Gururaj, G., Varghese, M., & Benegal, V. (2023). Nationally representative epidemiological study of social anxiety disorder from India. *Indian Journal of Psychiatry*, 65(12), 1261–1268.

- [https://doi.org/10.4103/indianjpsychiatry.india.njpsychiatry\\_826\\_23](https://doi.org/10.4103/indianjpsychiatry.india.njpsychiatry_826_23)
- [30]. Tripathi, P., Sharma, B., Kadam, N., Biswas, M. D., Tiwari, D., Vyawahare, A., Kathrikolly, T., Kuppusamy, M., & Vijayakumar, V. (2024). Prevalence and Predictors of Anxiety and Depression in Indian Patients with Type 2 Diabetes. *Annals of Neurosciences*. <https://doi.org/10.1177/09727531241244569>
- [31]. Trivedi, J. K., Sareen, H., & Dhyani, M. (2008). Rapid urbanization - Its impact on mental health: A South Asian perspective. *Indian Journal of Psychiatry*, 50(3), 161. <https://doi.org/10.4103/0019-5545.43623>
- [32]. Varadharajan, K., Thomas, T., & Kurpad, A. V. (2013). Poverty and the state of nutrition in India. *Asia Pacific Journal of Clinical Nutrition*, 22(3), 326–39. <https://doi.org/10.6133/apjcn.2013.22.3.19>
- [33]. Verma, M., Grover, S., Tripathy, J. P., Singh, T., Nagaraja, S. B., Kathirvel, S., Singh, G., & Nehra, R. (2019). Co-existing Non-communicable Diseases and Mental Illnesses Amongst the Elderly in Punjab, India. *European Endocrinology*, 15(2), 106. <https://doi.org/10.17925/ee.2019.15.2.106>
- [34]. Vijayageetha, M., Rajaa, S., Rehman, T., Krishnamoorthy, Y., & Kumar, S. (2018). Prevalence of malnutrition and its associated factors among elderly population in rural Puducherry using mini-nutritional assessment questionnaire. *Journal of Family Medicine and Primary Care*, 7(6), 1429. [https://doi.org/10.4103/jfmpe.jfmpe\\_22\\_18](https://doi.org/10.4103/jfmpe.jfmpe_22_18)
- [35]. Wood, J. M., Cole, M. H., Boon, M. Y., Black, A. A., Kerr, G. K., & Lacherez, P. (2011). Risk of Falls, Injurious Falls, and Other Injuries Resulting from Visual Impairment among Older Adults with Age-Related Macular Degeneration. *Investigative Ophthalmology & Visual Science*, 52(8), 5088. <https://doi.org/10.1167/iovs.10-6644>