Tuijin Jishu/Journal of Propulsion Technology
ISSN: 1001-4055
Vol. 44 No. 6 (2023)

Elderly TB patients in India: Situation Analysis

[1]Mr.S. Srinivasan, [2]Dr. Prabha Lama, [3]Dr.Nidhi Tyagi, [4]Dr.Kanchan Yadav,[5]Mr.Naveen Naval, [6]Ms. Swati

[1]Assistant Professor, Humanities and Social Sciences

Graphic Era (Deemed to be University), Bell Road, Clement Town Dehradun, Uttarakhand.

[2]Associate Professor, Graphic Era Deemed to be University, Dehradun, Uttarakhand

[3]Associate Professor, Graphic Era Deemed to be University, Dehradun, Uttarakhand

[4]Assoicate Professor, Graphic Era Deemed to be University, Dehradun, Uttarakhand

[5]Assistant Professor, Graphic Era Deemed to be University, Dehradun, Uttarakhand

[6]Assistant Professor, Graphic Era Deemed to be University, Dehradun, Uttarakhand

Abstract*:-The focus of this study was primarily on the elderly TB patients in India. A majority of the elderly have diabetes due to the low humanity level, resulting in an increased TB rate. In India's National TB Prevalence Survey in 2021, there were 588 cases of TB per one lakh people, significantly higher than the national average of 316. According Anupama et.al (2023): critically viewed to create and nurture age-responsive healthcare systems that ensure equitable access to person-centred care and services for all older persons and their families who are affected by Tuberculosis. As part of this study, we analyzed and analyzed the situation of elderly TB patients as they face challenges and behaviors, as well as statistical data to identify policy needs and how elderly TB patients impact social issues. It is intended to explore the implications of policy makers to create a strong policy supporting the elderly and how they can receive treatment support, care and support from their families and the government.*

Keywords*: Aging1, Elderly2, Tuberculosis3.*

1. Introduction

Tuberculosis (TB) caused by the bacterium ***Mycobacterium*** *tuberculosis* is one of the most frequent infectious diseases in the world and remains a public health problem in terms of diagnosis and treatment. Every year 10 million people fall ill with TB, and despite being a preventable and curable disease 1.5 million people die from TB each year.

Tuberculosis continues to be a world-leading cause of disease and death, particularly in low- and middle-income countries, which carry the bulk (>95%) of the global tuberculosis disease burden. Prevalence of elderly TB was 15.6% (95% CI: 13.6%-17.6%) with nearly 71% belonging to 60 - 69 age category. Sustainable goal totally 17 the agenda is a commitment to eradicate poverty and achieve sustainable development by 2030 worldwide. Its adoption was an important achievement, providing for a shared global vision towards sustainable development for all. For the sustainable goal for the 2030, end the epidemics of AIDS, Tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases. In 2030, reduce by one third premature mortality from non-communicable disease through prevention and treatment and promote mental health and well - being.TB in the elderly presents with fewer of the classical symptoms of TB, less specific radiological changes and more comorbidities than in younger patients, and it has even been proposed that TB in older adults should be considered as a different disease entity. The classical TB symptoms of cough, haemoptysis, fever, drenching night sweats and weight loss may not be as evident in older

patients. Less specific symptoms, such as weakness, dyspnoea, anorexia and mental change, are seen more frequently in older patients with TB compared with younger patients.

2. Frailty of Aging

The Frailty of Aging was a Phenomenal Character in this Category; everyone is born and dies at some point, and aging is a necessary part of life since everyone will eventually get old. In natural tendency active age group.

The age group between 60 to 75 years are young old

The age group between 75 to 85 years are old

The age group > 85 are considered the frail older population.

Tuberculosis, a highly contagious disease that continues to affect all vulnerable populations, including the elderly (age ~65 years), was very difficult to manage during the time that it was prevalent. As a research study, the frail aging group had more high risk factors that made them physically, physiologically, emotionally, socially, and economically vulnerable. Clinical and epidemiological challenges related to tuberculosis in older persons still exist. Unusual clinical signs of tuberculosis in the elderly may cause a delay in identification and treatment; unfavorably this can lead to increased rates of morbidity and death from this curable illnesses.

3. Review of Literature for International view of Elderly person with TB:

Since the early 1980s there has been concern at the increasing incidence of pulmonary tuberculosis in people over 65. Part of the concern has been the difficulty in making the diagnosis in this population' Joel Negin et.al 2014 conceptional to 2010 Global Burden of Disease estimates, the majority of tuberculosis related deaths occurred among people older than 50; most in those aged 65 and above. Older people also contribute a large proportion of Disability-Adjusted Life Years 51% of tuberculosis DALYs occurred in patients aged 50 years and older in East Asia. Tuberculosis age distributions in Africa have been severely skewed by the human immunodeficiency virus (HIV) epidemic, but emerging data suggest increasing disease burdens among older people.

As per the discussion was older adults are more likely to develop a an extra-pulmonary and atypical forms of diseases that are often harder to diagnose than conventional sputum smear-positive pulmonary Tuberculosis. Their care is complicated by more frequent drug-related adverse events and increased co-morbidity, which may prove difficult to manage.

Pauline et.al (2021) expose the view of the author most cases of tuberculosis in the elderly are linked to the reactivation of lesions that have remained dormant for several decades. The awakening of these lesions is attributable to changes in the immune system related to senescence, notably the decline in the ability to reactivate previously acquired immunity, and/or additional factors.

The second and the third highest incidences of TB cases in 2019 were for people over 65 years old and with greater incidence in women than men, though TB incidence generally is decreasing among people older than 65 years.

By 2020, there were 58 TB notifications per 100,000 of those aged 65-69; the rate increased with age and peaked at 235 notifications per 100,000 among those aged 80 and older [67]. According to the Bureau of Labor Statistics, the TB mortality rate among older adults over the age of 65 in 2020 was 13.8 per 100,000, the lowest rate since 2001.

Table: 1 Elderly Population in India

Country	Population aged 65 years or over (thousands)	Percentage aged 65 years or over	Old-age dependency ratio (65+ /20-64)	Prospective old-age dependency ratio	Economic old-age dependency ratio

Year	2019	2030	2019	2030	2019	2030	2019	2030	2019	2030
India	87 149	28877	6.4	8.6	11.0	14.1	11.5	13.5	14.1	17.8

Sources: World Population Aging, United Nations, Department of Economic and Social Affair, United Nation, New York 2019.

Table 2 Age group of (55-64) Sex Disaggregation of People with TB 2020

Country	Estimate Male	Estimate Female	Notified Male	Notified Female	Percentage Male	Percentage Female
India	2,19,000	82,000	54,782	1,47,210	67 %	67 %

https://www.stoptb.org/tb-country-data-glance

The above mentioning the table shows that age group of 55-64 Elderly TB persons in India 67 percentage male and 67 percentage female affected with TB various factors such as low huminity power here in India many Elderly have a diabetes it is a chornic diseases its easily affect with elderly persons and affecting an estimated population 33% of elderly people aged 65 and older.

Table 3 Age of 65 + Sex Disaggregation of People with TB 2020

Country	Estimate Male	Estimate Female	Notified Male	Notified Female	Percentage Male	Percentage Female
India	1,64,000	57,000	1,110,271	38,417	67 %	417 %

https://www.stoptb.org/tb-country-data-glance

4. **Challenges faced by elderly TB patients**

Delayed Diagnosis:

TB symptoms, including cough, fatigue, and weight loss, are often misinterpreted as signs of old age or other illnesses. Consequently, TB diagnoses among the elderly are frequently delayed or overlooked.

Comorbidity: Many elderly TB patients have multiple comorbidity, especially diabetes, which complicates TB management. This leads to a higher pill count and an increased likelihood of side effects, affecting treatment adherence and outcomes.

Access to Healthcare: Elderly individuals, particularly those in rural and hilly areas, struggle to access healthcare facilities due to mobility challenges. This can lead to delays in seeking medical care.

Limited Information: Older individuals may have restricted access to reliable health information, as their social networks tend to shrink with age. This lack of information hampers their ability to recognize TB symptoms and seek timely medical attention.

Economic Dependency: Most individuals over the age of 60 are retired and financially dependent on savings or family. While there are some social welfare schemes for the elderly, they often have limitations and may not provide adequate financial support.

Stigma and Mental Health: TB-related stigma is a concern among the elderly, contributing to social isolation. Many elderly TB patients experience loneliness, anxiety, and a sense of purposelessness, negatively impacting their mental health.

5. Recommendation of the study:

The purpose of this study is to analyze secondary sources based on the review of the article. In this study, we looked at the differences in demographics and treatment out come for elderly TB (60) in South India.

Participants diagnosed with TB and aged 60 years were considered as elderly TB patients. The goal of this study was to identify the issues facing the elderly so that the government could focus on them in healthcare facilities and give them priority in terms of diagnosis and treatment.to develop policies at every level of government to support and improve the lives of the elderly. to create additional welfare programs to help elderly TB patients with treatment and nutrition.

6. Conclusion

The high TB incidence obtained from our prospective cohort study highlighted the importance of active case finding among elderly in India. This research study found that aspect of Elderly TB patients in Indian Scenario how their condition. How their faced consequences and overcome for the diseases. What is the role of community volunteer how their support for the elderly TB affected persons. Researchers, scholars, and philanthropists focus on elderly TB patients in India because there's not much study done there. The elderly are most susceptible to tuberculosis. The most prevalent comorbidity was diabetes. Smokers and pulmonary tuberculosis were substantially linked. Elderly patients had poor adherence and a high rate of follow-up loss.

Reference:

[1] Anupama Srinivasan (2023): An ageing India needs age-responsive TB care. Oct 2023.https://www.thehindu.com/opinion/op-ed/an-ageing-india-needs-age-responsive-tb-care/article67369067.ece.
[2] Aula Abbara (et.al). (2019) Time to diagnosis of tuberculosis is greater in older patients: a retrospective cohort review. ERJ Open Res 2019; 5:00228-2018[https://doi.org10.1183/2312054100228-2018].
[3] Cheng (et.al) (2020)Incidence and risk factors of tuberculosis among the elderly population in China: a prospective cohort study,Infectious Diseases of Poverty (2020) 9:13 https://doi.org/10.1186/s40249-019-0614-9
[4] Joel Negin (et.al) (2014) Tuberculosis among older adults - time to take notice, International Journal of Infectious Diseases, 32 (2015) 135-137.
[5] Nehal, et,al. (2018). Tuberculosis in elderly: The Indianperspective,International Journal of Advances in Medicine, Aug;5(4):983-987, pISSN 2349-3925 | eISSN 2349-3933, DOI: http://dx.doi.org/10.18203/2349-3933.ijam20183133.
[6] Pauline et.al (2021). Tuberculosis in the Elderly, J. Clin. Med.10,5888. https://doi.org/10/3390/jcm10245888.
[7] Sandra Bernick, (et.al). Insights from CDP data to Assess Progress and drive action on the Sustainable Development Goals.
[8] Sharan Murali, (et.al). (2021) Comparison of profile and treatment outcomes between elderly and non-elderly tuberculosis patients in Puducherry and Tamil Nadu, South India. Plus one, https://doi.org/10.1371/journal.pone.0256773.
[9] Srinivasan, et.al (2023). Situation of Elderly Person with TB: A Comparative Study of
[10] Countries in the SAARC Region, International Journal for Multidisciplinary Research, E-ISSN: 2582-2160.
[11] Thomas,et.al (2001). Tuberculosis and Aging: A Global Health Problem, Aging and Infectious Diseases Invited Article, Pages 1034 - 1039, https://doi.org/10.1086/322671.
[12] https://www.undp.org/sustainable-development-goals/good-health.
[13] https://www.physio-pedia.com/Older_People_-_An_Introduction.
[14] World Health Organization. Available online: www.Who.Int/Tb/Dat (accessed on 18 October 2021).