

Situation of Elderly Person with TB: A Comparative Study of Countries in the SAARC Region

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Abstract:

SAARC has adopted WHO's Global Stop TB partnership strategy which envision a TB-free world and elimination of TB by 2050. This research study mainly focused on the situation of Elderly Person with TB in the SAARC region. The main moto of the research to assess the SAARC regions situation of elderly persons with TB. This research goes to focused on prevalence of TB burden in SAARC region. Elderly people who are vulnerable it is easily affect with TB. Along with the elderly population's growth in numbers, there has been an increase in the number of Tuberculosis (TB) cases among elderly people. The research study emphasized on South Asian Association for Regional Cooperation elderly people trend and scenario for the elderly Persons and living condition, Treatment adherence, Treatment Supporter, Government Scheme. Several Studies report contrasting data about poorer tolerance of TB drugs in this population. Adherence to anti-tuberculosis treatment is a fundamental issue for the outcome of treatment. Decreased completeness of treatment was shown in older people as well as a higher risk of treatment failure. This study used a qualitative research approach, descriptive analysis, and the study's primary method to analyze multiple research studies, find any discrepancies, and subsequently address this qualitative analysis. This study will contribute positively and provide a critical view of scholars and aging professionals in relation to the phenomenon of trends. The rate of population increase of the elderly in SAARC Countries is more than the overall population growth rate. The resulting ever increasing size of older people are likely to raise demands for several specific social services including medical facilities, financial support, family care and improved public infrastructure.

Keywords: SAARC, Elderly, Person with TB.

Introduction

Over the next three decades, the global number of older persons is projected to more than double, reaching over 1.5 billion persons in 2050. All regions will see an increase in the size of their older population between 2019 and 2050. The largest increase (+312 million persons) is projected to occur in Eastern and South-Eastern Asia, growing from 261 million in 2019 to 573 million persons aged 65 years or over in 2050.

- India’s elderly population is growing rapidly, with a decadal growth rate of 41%
- By 2050, over 20% of India’s Population will be elderly.
- The elderly population in India will surpass the population of children (0 to 15 years old) by 2046.
- The population of people aged 80+ years is expected to increase by around 279% between 2022 and 2050.

Tuberculosis (TB) is an old disease – studies of human skeletons show that it has affected humans for thousands of years. The cause of the diseases remained unknown until 24th March 1882, when Dr. Robert Koch announced his discovery of the bacillus responsible, subsequently named Mycobacterium tuberculosis. The disease is spread when people who are sick with TB expel bacteria into the air (e.g. by coughing). TB typically affects the lungs (pulmonary TB) but can also affect other sites (extra pulmonary TB). About a quarter of the world’s population is infected with M. tuberculosis, equivalent to about two billion people. A relatively small proportion (5–10%) will develop TB disease during their lifetime. However, the probability of developing TB disease is much higher among people living with HIV, and among people affected by risk factors such as under nutrition, diabetes, smoking and alcohol consumption. By 2030, end the epidemics of AIDS, TB, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases. In 2019, Thee SAARC area accounted for 37% of the global burden of TB incidence, with an estimated yearly incidence of 3.7 million cases, or 203 cases per 100 000. Out of the 30 high burden countries, three of the eight SAARC member states have high TB and high MDR-TB burdens. In terms of global TB cases, India accounted for 26%, Pakistan for 5.7%, and Bangladesh for 3.6%. In the region, TB mortality were expected to have reached 0.5 million (30 cases per 100 000) in 2019.

Global TB targets set in the SDGs, End TB Strategy and political declaration of UN high-level meeting on TB, SDG goals deadline of 2030

SDG Target	By 2030, end the epidemics of AIDS, TB, malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases
WHO End TB Strategy	80% reduction in the TB incidence rate (new and relapse cases per 100 000 populations per year) by 2030, compared with 2015 2020 milestone: 20% reduction; 2025 milestone: 50% reduction
	90% reduction in the annual number of TB deaths by 2030, compared with 2015 2020 milestone: 35% reduction; 2025 milestone: 75% reduction
SAARC TB Elimination Strategy	No households affected by TB face catastrophic costs by 2020 50% reduction in the TB incidence rate (new and relapse cases per 100 000 populations per year) by 2025, compared with 2015.

	75% reduction in the annual number of TB deaths by 2025, compared with 2015
	By 2025: reduction of catastrophic cost due to TB to the TB-affected families to 0%.
	By 2027: elimination of TB epidemic from the SAARC Region
UN high-level meeting on TB, 2018	40 million people treated for TB from 2018 to 2022, including: <ul style="list-style-type: none"> • 3.5 million children • 1.5 million people with drug-resistant TB, including 115 000 children
	At least 30 million people provided with TB preventive treatment from 2018 to 2022, including: <ul style="list-style-type: none"> • 6 million people living with HIV • 4 million children under 5 years of age and 20 million people in other age groups, who are household contacts of people affected by TB
	Funding of at least US\$ 13 billion per year for universal access to TB prevention, diagnosis, treatment and care by 2022
	Funding of at least US\$ 2 billion per year for TB research from 2018 to 2022

Aging and Health

Key facts:

- All countries face major challenges to ensure that their health and social systems are ready to make the most of this demographic shift.
- In 2050, 80 % of older people will be living in low – and middle-income countries.
- The pace of population aging is much faster than in the past.
- In 2020, the number of people aged 60 years and older outnumbered children younger than 5 years.
- Between 2015 and 2050, the proportion of the world’s population over 60 years will nearly double from 12% to 22%.

Challenges in responding to population aging

Older people are often assumed to be frail or dependent and a burden to society. Public health professionals and society as a whole, need to address these and other ageist attitudes, which can lead to discrimination, affect the way policies are developed and the opportunities older people have to experience healthy aging. Globalization, technological developments (e.g., in transport and communication), urbanization, migration and changing gender norms are influencing the live of older people in direct and indirect ways. A public health response must take stock of these current and projected trends and frame policies accordingly. (Aging and Health, 1 October 2022.)

Review of Literature of the Elderly Persons with TB:

TB affects people of both sexes and age groups, but the heaviest burden is in adult men, who accounted for 56% of all TB cases in 2019; by comparison, adult women accounted for 32% and children for 12% the male: female ratio of incident TB cases for all ages ranged from 1.3 in the WHO eastern Mediterranean Region to in the European and Western Pacific regions. Among all TB cases, 8.2% were among people living with HIV.

Concerning TB incidence according to age, the group with the greatest percentage of TB cases has an age range of 25 to 54 years. However, in the WHO regions of the Eastern Mediterranean, South-East Asia and Western Pacific, the TB epidemic is most prevalent in the elderly with a progressive increase in the notification rate with age, and a peak among those aged 65 years or over. Specifically, in France in 2019, the percentage of declared cases of tuberculosis disease was 17.5% in subjects >65 years old, 9.8% in >75 years and 6.3% >80 years. 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.

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.

HIV and TB in the Elderly

In France, 20% of new HIV diagnoses were 50 years old or older in 2016, the vast majority being in the 50-59 years old group 73%. However, 60 to 69 years-olds represented 23% and those aged 70 and over 4%. In addition, older people were more likely to have discovered their HIV status at an advanced state of infection than 25 to 49 years olds (38% vs. 26%, p< 0.0001) when tuberculosis is a leading cause of death and hospitalization in people living with HIV.

Table: 1 Elderly Population in SAARC Region:

SAARC Region	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	
	2019	2030	2019	2030	2019	2030	2019	2030	2019	2030
Region, development group country or area										
Afghanistan	995	1508	2.6	3.1	6.1	6.3	8.2	7.5	5.9	6.0
Bangladesh	8 446	13 332	5.2	7.4	8.9	12.1	8.1	8.5	9.3	12.6
Bhutan	47	66	6.1	7.8	10.3	12.3	7.3	7.5	11.6	13.5
India	87 149	128877	6.4	8.6	11.0	14.1	11.5	13.5	14.1	17.8
Maldives	19	35	3.6	6.7	5.1	9.9	4.1	5.2	7.9	14.4
Nepal	1 654	2 362	5.8	7.1	10.8	11.6	12.4	11.7	12.8	13.1

Pakistan	9 361	13 697	4.3	5.2	8.5	9.8	9.6	10.6	9.2	10.4
Sri Lanka	2 311	3 397	10.8	15.4	18.9	27.4	13.7	18	19.9	29.2

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

Table:2 SAARC Countries Population in 2020

Countries	Population (2020)
Afghanistan	41,128,771
Bangladesh	1,64,689,383
Bhutan	771,612
India	1,380,004,385
Maldives	540,542
Nepal	29,136,808
Pakistan	220,892,331
Sri Lanka	21,413,350

Among the three countries, China has superior TB treatment strategy, as indicated by the higher treatment rate of approximately 0.5422 and treatment success rate (1 – p) of approximately 93%.

Table:3 Age group of (55-64) Sex Disaggregation of People with TB 2020

SAARC Region	Estimate Male	Estimate Female	Notified Male	Notified Female	Percentage Male	Percentage Female
Afghanistan	3,600	3,800	1,847	2,558	49 %	71 %
Bangladesh	39,000	23,000	33,263	19,252	85 %	84 %
Bhutan	Nil	Nil	Nil	Nil	Nil	Nil
India	2,19,000	82,000	54,782	1,47,210	67 %	67 %
Maldives	11	6	6	3	50 %	50 %
Nepal	7,100	3,100	2,585	1,140	36 %	37 %
Pakistan	36,000	25,000	19,161	14,320	53 %	57 %
Sri Lanka	1,800	680	1,057	470	59 %	69 %

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

Age group 55-64 Sex Disaggregation of TB Patients Bangladesh 85 % male and 84% female their high level booming the aging trend low level country of the SAARC nation aging trend Nepal 36 % male and 37 % female it is quite difficult to measure the percentage it could be the SAARC India is over population they might have booming the Elderly TB population.

Table: 4 Age of 65 + Sex Disaggregation of People with TB 2020

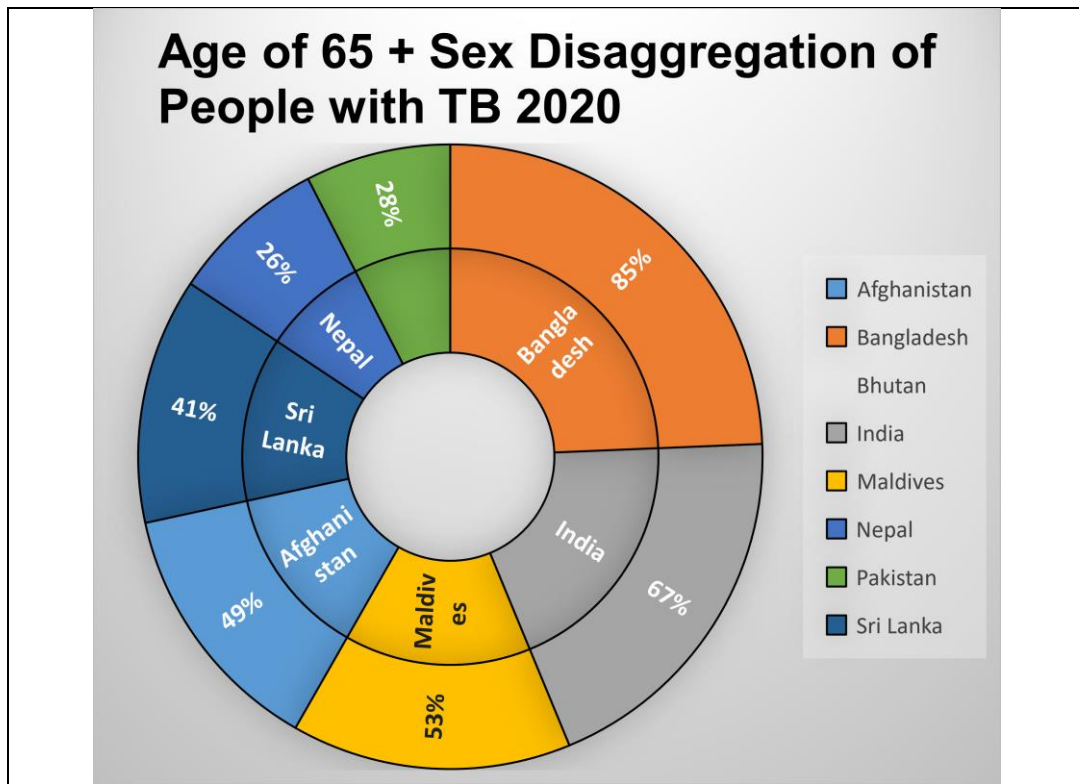
SAARC Region	Estimate Male	Estimate Female	Notified Male	Notified Female	Percentage Male	Percentage Female
Afghanistan	4,600	3,900	2,265	1,781	49 %	46 %
Bangladesh	44,000	16,000	37,608	13,366	85 %	84 %
Bhutan	Nil	Nil	Nil	Nil	Nil	Nil
India	1,64,000	57,000	1,110,271	38,417	67 %	417 %

Maldives	15	2	8	1	53 %	50 %
Nepal	12,000	5,300	3,125	1,479	26 %	28 %
Pakistan	64,000	44,000	17,843	11,278	28 %	26 %
Sri Lanka	2,400	1,100	987	485	41 %	44%

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

Biologic age refers to changes in the body that commonly occur as people age. Because these changes affect some people sooner than others, some people are biologically old at 65, and others not until a decade or more later. However, most noticeable differences in apparent age among people of similar chronologic age are caused by lifestyle, habit, and subtle effects of disease rather than by differences in actual aging. (MSD Manual). Age 65 < sex wise disaggregation of people with TB 2022 highest percentage country Bangladesh 85% male and female are 84%, the lowest countries are Nepal have 26 percentage male, Pakistan low percentage of TB cases above 65 elderly persons with TB 26 percentage are female.

Diagram: 1



The above diagram makes it abundantly clear that the number of aging TB patients is on the rise in Bangladesh (85%), India (67%) and the Maldives (53%). The government will take the necessary steps to strategically eliminate the elderly who are infected with TB.

Elderly Population have person with TB Review in SAARC Region:

Table :5 India TB Case Notification - 2022

TB Case Notification - 2022			
India	Target TB patients expected to be notified	TB patients notified (Achievement against target %)	TB case notification rate

Type of Notification	Public	Private	Total	Public	Private	Total	Public	Private	Total
India	1952750	1041580	2994330	1446701 (74%)	689129 (66%)	2135830 (71%)	104	49	153

Above the table mentioned that SAARC region one of the highly population country India Total TB patients expect to be notified public and private, TB patient notified form the year 2022 public 74% and private are 66 % it is more than that alarming condition in India.

Table: 6 Global Perspective high-burden countries Countries in the three global lists of high-burden countries for TB, HIV – associated TB and MDR/RRTB to be used by WHO in the period 2021-2025

Country	TB (High Burden)	TB/HIV (High Burden)	MDR/RR –TB (High Burden)
China	✓	✓	✓
Democratic Republic of the Congo	✓	✓	✓
India	✓	✓	✓
Indonesia	✓	✓	✓
Mozambique	✓	✓	✓
Myanmar	✓	✓	✓

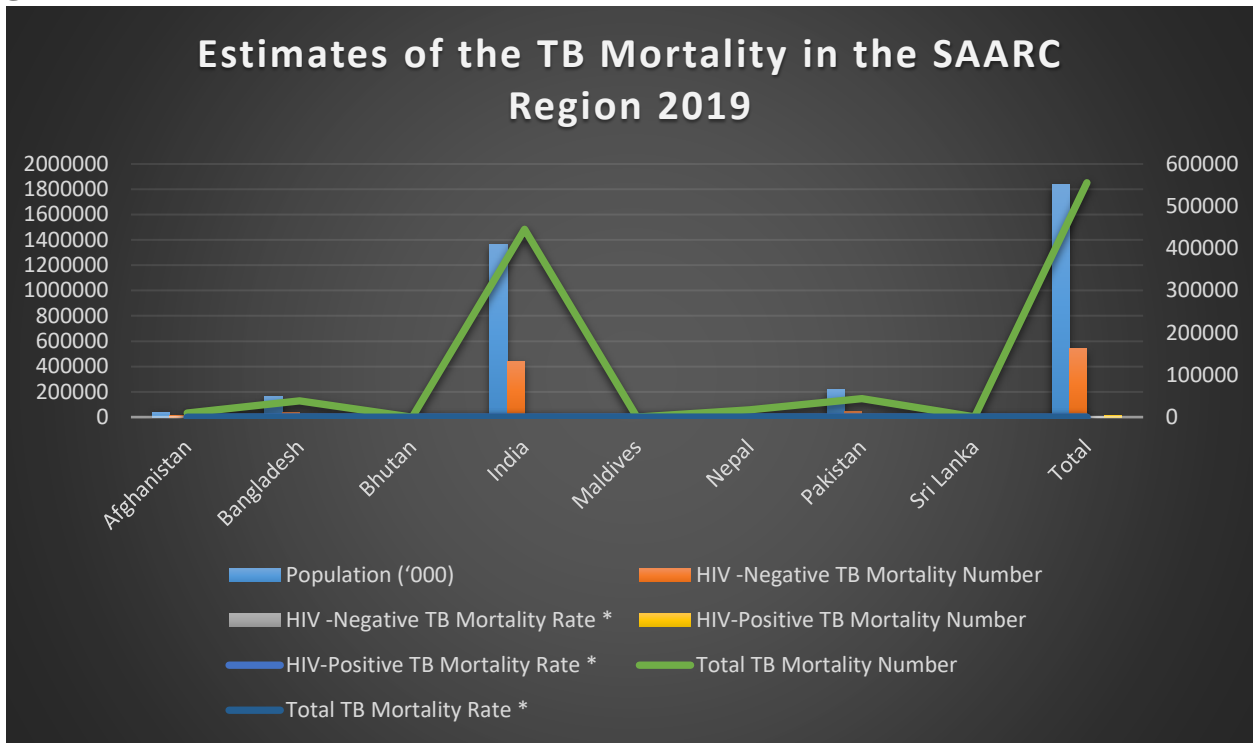
The table's header said that all developing nations had a high risk of TB patients with severe illness, HIV-associated TB, and MDR/RR TB. Due to the overpopulation and the concomitant diseases like TB, the trend was increasing every year.

Table: 7 Estimates of the TB Mortality in the SAARC Region 2019

Country	Population ('000)	HIV -Negative TB Mortality		HIV-Positive TB Mortality		Total TB Mortality	
		Number	Rate *	Number	Rate *	Number	Rate *
Afghanistan	38000	9800	26	120	0.32	9920	26
Bangladesh	163000	38000	24	150	0.09	38150	23
Bhutan	760	140	18	1	0.1	141	19
India	1366000	436000	32	9500	0.69	445500	33
Maldives	530	11	2	0	0	11	2
Nepal	29000	17000	58	220	0.77	17220	59
Pakistan	217000	42000	19	1900	0.9	43900	20
Sri Lanka	21000	770	3.6	4	0.02	774	4
Total	1835290	543721	30	11895	0.65	555616	30

Source: WHO Global Tuberculosis Report 2020, * Rates are per 100 000 population

Diagram: 2



Source: WHO Global Tuberculosis Report 2022, * Rates are per 100 000 Population

The diagram above replicates the estimates of TB mortality in the SAARC area for 2019. HIV Negative TB mortality was clearly on the rise, with an India, Pakistan, Bangladesh, and Afghanistan showing an increase in TB death.

Recommendation and Conclusion:

This research deal with situation of Elderly person with TB. A further challenge is the other health problems that older people lives with in addition to TB. The link between HIV and TB and older people is now understood and is being researched further. The WHO has been working on the International Standards of Tuberculosis Care (ISTC). The focus is on looking at TB control approaches in remote and resource-limited settings. Realizing the magnitude of global TB burden, the WHO and other agencies working to control TB understand that the medical fraternity needs active support from other parts of the community, government, NGOs, etc...

Maintaining health and activity in old age is one of the key concerns. Morbidity levels rise with age, and an aging population is linked to a significant rise in the need for and demand for health care. The support base for older people has been declining with population ageing in SAARC countries just like it has in other parts of the world, in fact, more quickly and noticeably due to the more rapid speed of population ageing trends. In order to keep the aging population out of poverty, these countries must pay close attention to this issue and make sure that social security and welfare programs are expanded to include more people. In order to understand the condition of elderly tuberculosis, additional study is required. By focusing on qualitative and quantitative research, we can identify the gaps in feature endower that need to be filled by policy makers. It implies that social workers, non-governmental organizations, and the government should focus on conducting more research on TB constant study as well as aging.

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