

Health and Economic Burden Due to Bidi Smoking

SIKKIM FACT SHEET - 2023

Objectives

The current study was conducted with the objective of estimating the absolute number of Deaths, Disability Adjusted Life Years, Premature Years of Life Lost, Years Lived with Disability and the corresponding economic implications as a result of bidi consumption in India, various Indian states and Union Territories.

Methodology

A meta-analysis was conducted to account the data from all published studies concerning disease occurrence as a result of bidi consumption. For estimating the proportion of health burden due to risk factors of bidi consumption, meta-analysis was done and pooled OR values were calculated to determine population attributable fraction (PAF) using the formula:

$$PAF = Pe. \frac{(OR - 1)}{OR}$$

The PAF value was applied to the total number of deaths, DALY, YLL, and YLDs obtained from the global burden of disease data for India and various states, to obtain the estimates of morbidity and mortality specifically attributable to bidi consumption.

Furthermore, as the total DALYs lost are equivalent to loss of 'n' number of productive years of the population lost, thus, potential annual economic losses were calculated by equating the annual DALYs lost with the GDP per capita of the selected region.

Study Highlights :

Prevalence of Bidi Use (State): **3.0%**

Number of Users: **20 Thousand**

Population Attributable Fraction for Oral Cancer: **0.32**

Population Attributable Fraction for Lung Cancer : **0.39**

Population Attributable Fraction for IHD : **0.17**

Population Attributable Fraction for COPD : **0.19**

Population Attributable Fraction for TB: **0.20**

Key Findings :

Total Deaths attributable to Bidi smoking : **191.07**

Total Disability Adjusted Life Years attributable to Bidi smoking : **4,936.09**

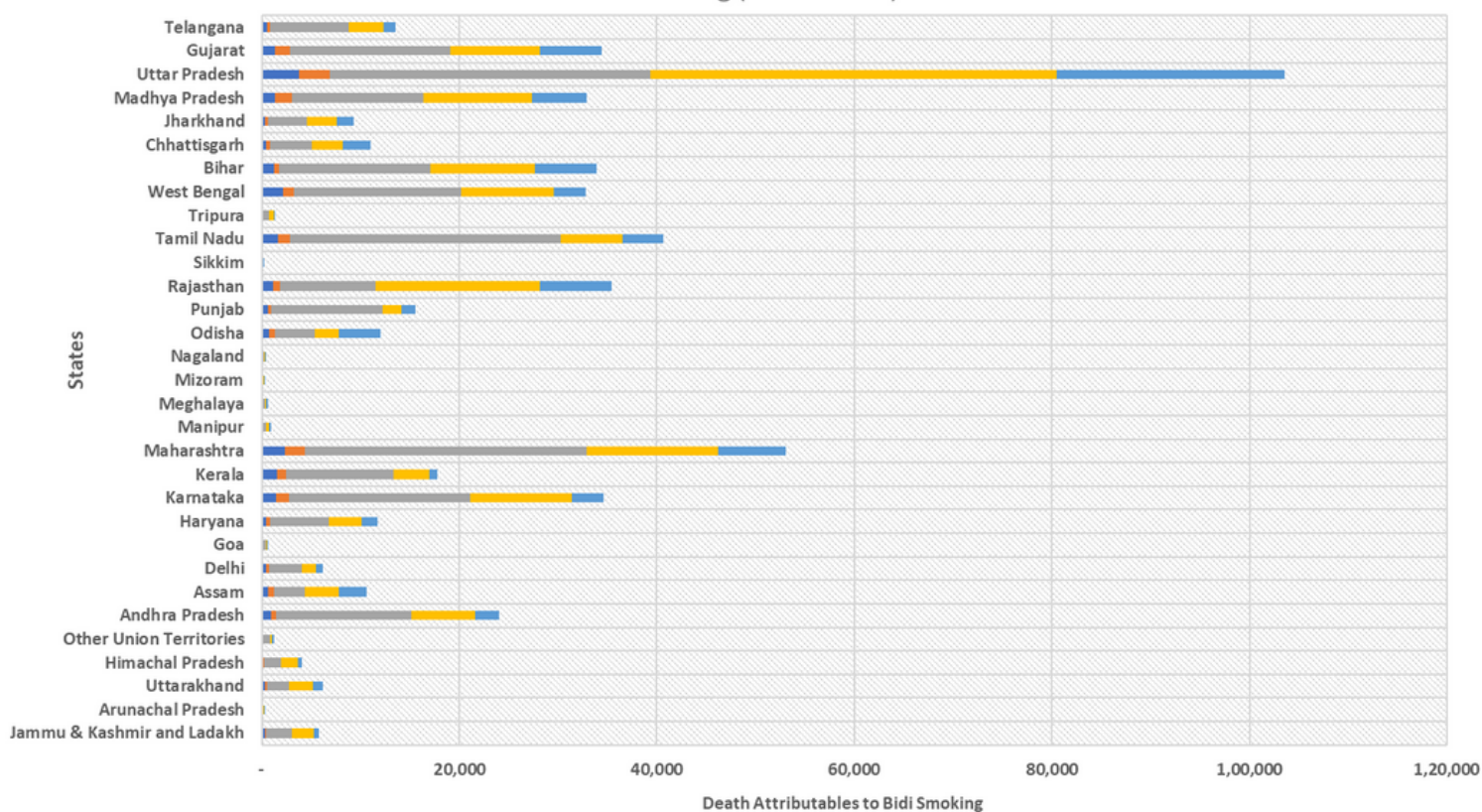
Total Years of Life Lost attributable to Bidi smoking : **4,309.86**

Total Years of Healthy Life Lost attributable to Bidi smoking : **626.23**

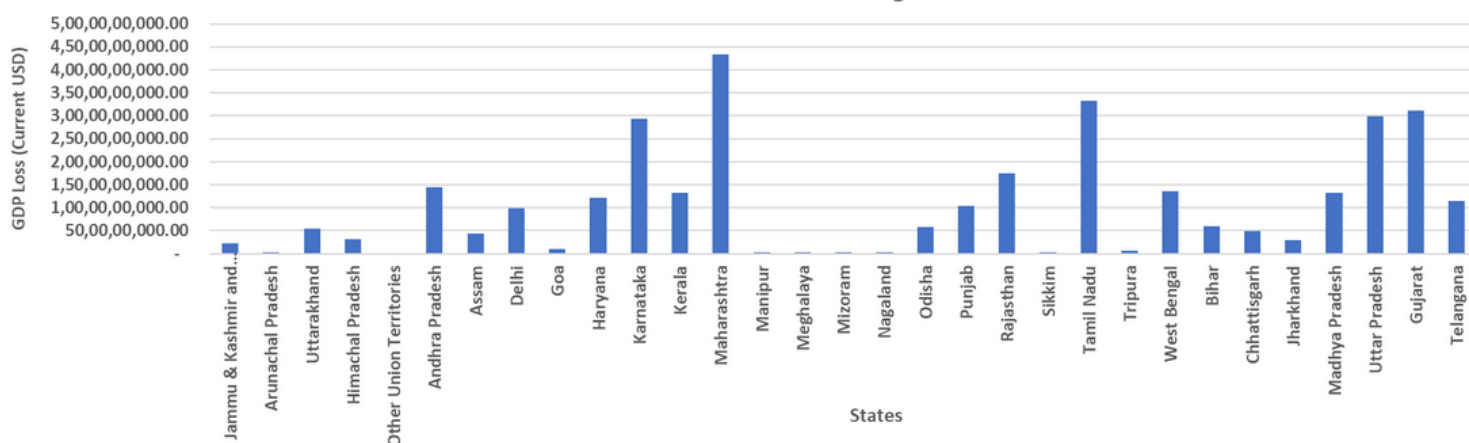
**Total GDP loss to the State due to bidi consumption
INR 3.16 crores**

Percentage of annual state GDP lost : 0.73%

Deaths due to Bidi Smoking (State-Wise)



Economic Loss due to Bidi Smoking



Recommendations:

- Looking into the staggering health and economic burden to the country due to bidi consumption, reconsideration of the status of bidi industry from a cottage industry along with the numerous levied tax and regulatory exemptions.
- Reduce supply and demand through stricter regulations on bidi production, distribution, sale and marketing while ensuring improved compliance of taxation policies and tobacco control act, especially on graphic health warning on bidi packages.
- Establish an improved surveillance system at national, sub national and medical college level, to monitor bidi-related diseases along with intensive and targeted public awareness campaigns for health risks associated with bidi smoking.
- Considering increased taxes on bidis to reduce affordability and discourage consumption and allocation of revenue generated from increased taxes to fund tobacco control programs and public health initiatives.
- Strengthening and expansion of the tobacco cessation programs to provide accessible resources and support tailored for bidi smokers willing to quit.
- Vocational rehabilitation to non-tobacco related livelihoods for assisting the workers employed by the bidi industry in transitioning to alternative products or diversifying into other sectors, within the existing skill development initiatives.

