

Tuberculosis Burden of Disease by Gender in Turkey Between 1990-2019: A Joinpoint Regression Analysis Study

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INTRODUCTION

Tuberculosis (TB) is an infectious disease that is the leading cause of ill health and one of the leading causes of worldwide death. Until the coronavirus (COVID-19) pandemic, TB was the leading cause of death from a single infectious agent, ranking above HIV/AIDS. About 85% of people who develop TB disease can be successfully treated with a 6-month medication regimen. Even with safe and effective drugs available, TB continues to be a concern, especially in developing countries such as Turkey.

OBJECTIVE

“ The study aimed to evaluate the trends for tuberculosis burden of disease by gender in Turkey between 1990-2019.

RELATED LITERATURE

Global tuberculosis report 2021. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. Tanrikulu, A. C., Acemoglu, H., Palanci, Y., & Dagli, C. E. (2008). Tuberculosis in Turkey: high altitude and other socio-economic risk factors. Public Health, 122(6), 613-619.

METHODOLOGY

Tuberculosis burden data between 1990-2019 except for Tuberculosis with HIV for all age groups by gender were obtained from the Global Burden of Disease study. For assessment of disease burden, DALY per 100,000 population and standard error were calculated. The trends were analyzed with Joinpoint Regression Analysis using Joinpoint Regression Program version 4.9.0.0. Statistical significance was accepted as $p < 0.05$.

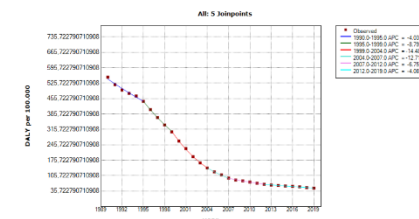
RESULTS

- In Females, DALY per 100,000 population for all age groups was 233.11 in 1990 and 89.23 in 2019. Average Annual Percent Change (AAPC) was -6.8 [$p < 0.05$, 95% CI; (-7.1) , (-6.4)]. Four joinpoints out of five were statistically significant (1995, 1999, 2003, 2007).
- For males, DALY per 100,000 population for all age groups was 552.62 in 1990 and 48.44 in 2019. AAPC was -8.0 [$p < 0.05$, 95% CI; (-8.4) , (-7.5)]. Five joinpoints were statistically significant (1995, 1999, 2004, 2007, 2012).

CONCLUSION

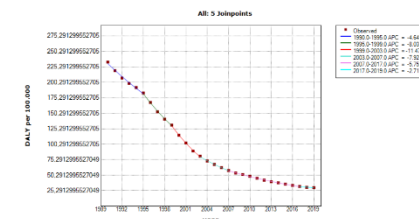
The tuberculosis burden has decreased throughout the years. The decrease was more evident among males than females, so much so that females' tuberculosis burden has surpassed that of males in recent years. Even with the national tuberculosis control program implemented and widespread tuberculosis drug usage, the tuberculosis burden of disease remains a primary concern in Turkey.

ANALYSIS



*Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level. Final Selected Total: 5 Joinpoints.

Tuberculosis DALY per 100,000 males trends between 1990-2019



*Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level. Final Selected Total: 5 Joinpoints.

Tuberculosis DALY per 100,000 females trends between 1990-2019



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4th MC meeting & 3rd WG meeting

