

Abstract

Background: This study aimed to appraise the monetary value of human life losses associated with COVID-19 in Turkey. To our knowledge, it is the first study in Turkey to value human life losses associated with COVID-19.

Methods: A human capital approach (HCA) model was applied to estimate the total monetary value of the 4,807 human lives lost in Turkey (TMVHL) from COVID-19 by 15 June 2020. The TMVHL equals the sum of monetary values of human lives lost (MVHL) across nine age groups. The MVHL accruing to each age group is the sum of the product of discount factor, years of life lost, net GDP per capita, and the number of COVID-19 deaths in an age group. The HCA model was re-calculated five times assuming discount rates of 3%, 5%, and 10% with a national life expectancy of 78.45 years; and the world highest life expectancy of 87.1 years and global life expectancy of 72 years with 3% discount rate.

Results: The 4807 human life losses from COVID-19 had a TMVHL of Int\$1,098,469,122; and a mean of Int\$228,514 per human life. Reanalysis with 5% and 10% discount rates, holding national life expectancy constant, reduced the TMVHL by Int\$167,248,319 (15.2%) and Int\$ 429,887,379 (39%), respectively. Application of the global life expectancy reduced the TMVHL by 36.4%, and use of world highest life expectancy increased TMVHL by 69%. However, the HCA captures only the economic production losses incurred as a result of years of life lost. It ignores non-market contributions to social welfare and the adverse effects of economic activities.

Conclusions: Additional investment is needed to bridge the persisting gaps in International Health Regulations capacities, Universal Health Coverage, and safely managed water and sanitation services.