

Equal risk, unequal burden? Gender differentials in COVID-19 mortality in India

William Joe
Abhishek Kumar
Sunil Rajpal
Archa Misra
S. V. Subramanian

Abstract

Background

Early reports on coronavirus disease 2019 (COVID-19) case fatalities in India suggests that males are at a greater disadvantage than females, but it is unclear whether males experience a higher risk of mortality throughout the age-spectrum or there are sex-differentials in survival risk. We adopt a gender lens and present a disaggregated view of age-sex specific COVID-19 infection and mortality risk in India.

Methods

We use crowdsourced data (<https://www.covid19india.org/>) to provide preliminary estimates for age-sex specific COVID-19 case fatality rate (CFR) for India. We analyse the burden of the cases and deaths for age-sex categories. CFR is estimated as the ratio of confirmed deaths in total confirmed cases. We report binomial confidence interval for the CFR estimates. Also, an adjusted-CFR is developed to capture the potential mortality among the currently active infections.

Results

As of May 20, 2020, males share a higher burden (66%) of COVID-19 infections than females (34%) but the infection is more or less evenly distributed in under-five as well as elderly age groups. The CFR among males and females is 2.9% and 3.3%, respectively. The age-specific COVID-19 CFR assumes ‘Nike-swoosh’ pattern with elevated risks among the elderly. The World Health Organization world standard population structure standardized CFR for India is 3.34%. The adjusted-CFR is estimated to be 4.8%.

Conclusion

Early evidence indicates that males have higher overall burden, but females have a higher relative-risk of COVID-19 mortality in India. Elderly males and females both display high mortality risk and require special care when infected. Greater focus on data collection and sharing of age-sex specific COVID-19 cases and mortality data is necessary to develop robust estimates of COVID-19 case fatality to support policy decisions.

Keywords:

COVID-19; Case fatality rate; Gender difference; Elderly; India

Web Link

<https://pc.e-jghs.org/DOIx.php?id=10.35500/jghs.2020.2.e17>