

Risk factors for severe COVID-19

"As long as #COVID19 is circulating, we are all at risk. That's why we're asking everyone to treat the decisions about where they go, what they do and who they meet with as life-and-death decisions – because they are." - Dr. Tedros Adhanom Ghebreyesus, Director General of World Health Organization, July 25, 2020.^[1]

Dear Editor,

Narayan *et al.* calculated household secondary attack rate in mild COVID-19 by analyzing data of the patients presenting at their tertiary care center at New Delhi. For this observational study, they interviewed cases who had a positive RT PCR report for SARS-CoV-2 and were admitted to isolation ward of the Institute. Subsequently, they were interviewed and provided useful exposure history, and then, their data are presented in this original article. We are grateful to the researchers to go to such an extraordinary length so as to make us available an insight into the pandemic by looking at the data at the tail end of the first wave in India.^[2] When vaccine was not available—although was in a developmental stage—dread of the virus was looming large on our psyche then; such a courageous act inspires us to serve the humanity with a greater cause. Kudos to the observers for sharing us the details of the data analysis.

Nevertheless, there are a few points which I could not reconcile with the Results observed therein and I want to draw the authors' attention to those points here. Tale 2 of the Results has a heading—*Factors associated with secondary cases*. Here, the authors divide study cohort into three age groups and observe that higher age is associated with higher susceptibility to infection. As odds ratio above 18 years of age is more than one, it indicates that achieving adulthood makes one vulnerable to higher chances of infection. In last paragraph, the investigators mention that *children below 18 years old were less susceptible to secondary infection*. But according to well-established knowledge that is an incorrect interpretation of the observation. Now, we know that all the age groups have similar probability of getting infected. It is the elderly^[3] who are prone to develop symptomatic infection—mostly respiratory

system involvement/hypoxia/dyspnea—so much so to need respiratory support sometimes.^[4]

So, if an expert at a tertiary care center observes that incoming patients are usually the elderly that makes sense. But to interpret the observation in a way to suggest that the elderly are *more likely to get infected* may not be correct. Having been infected, a subgroup of at-risk group seeks advanced care and it is necessary to be cautious to draw an inference on that basis.

Also, under a heading of methodology, the authors write that *household contacts were excluded if they were exposed to some other potential source of COVID-19*. However, how it was done, I want to know. When most of the cases of COVID-19 are asymptomatic,^[5] it may not be an easy exercise to discover a potential source of the disease. Hence, what prudence was observed then is an intriguing piece of information.

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Conflicts of interest

There are no conflicts of interest.

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