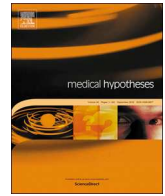




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Letter to Editors

WHO statement – “Older people are at highest risk from COVID-19”: Should the hypothesis be corroborated or rejected?



ARTICLE INFO

Keywords:
COVID-19
Corona
WHO

ABSTRACT

Coronavirus COVID 19 has become a threat to mankind affecting millions of people worldwide. United States, Italy and Spain has the highest number of Coronavirus cases as of April 30, 2020. According to World Health Organization (WHO) statement – “Older people are at highest risk from COVID-19”. However, in contrast to the statement, some new studies and findings have come to light. And this has created confusion in our mind as to whether the hypothesis should be corroborated or rejected.

Dear Editor,

Coronavirus COVID 19 has become a threat to mankind affecting millions of people worldwide [1,2]. United States, Italy and Spain has the highest number of Coronavirus cases as of April 30, 2020 [3–5]. According to World Health Organization (WHO) [6] statement – “Older people are at highest risk from COVID-19”. However, in contrast to the statement, some new studies and findings have come to light. And this has created confusion in our mind as to whether the hypothesis should be corroborated or rejected.

A well-known literature published by Chinese Center for Disease Control and Prevention [7], found that older people are found to be at highest risk from COVID-19. The facts and figures of COVID 19 fatality rate by age in mainland China can be found online [8]. In mainland china, 80 percent of all deaths occurred among people aged 60 and above as of February 11, 2020 [9]. Wu Z and McGoogan [10] also reported that old age, cardiovascular disease, diabetes, chronic respiratory disease, hypertension, and cancer were all associated with an increased risk of death in mainland china.

The same pattern in also observed in Italy [11] where more than 60 per cent of total population is over 40 years of age. According to the reports, Italy has the world’s highest number of deaths [12] and it is believed that the higher percentage of older person may have contributed to more infections and deaths in Italy with regards to the novel coronavirus. In Italy, approximately 85 percent were patients aged 70 years and older [13].

In United Kingdom, “25% of people in the United Kingdom are designated as high risk including all adults aged over 70 and those with underlying health conditions such as respiratory and cardiovascular disease, and cancer” ([doi.org/https://doi.org/10.1136/bmj.m1198](https://doi.org/10.1136/bmj.m1198)). In New York city, as of April 14, 2020; older person with previous underlying illnesses like Diabetes, Lung Disease, Cancer, Immunodeficiency, Heart Disease, Hypertension, Asthma, Kidney Disease, and GI/Liver Disease are more vulnerable to COVID 19 compared with no underlying illness [14].

Japan has the world’s oldest population with 28.4 percentage of old people. According to 2014 estimates, 33.0% of the Japanese population is above the age of 60, 25.9% are aged 65 or above, and 12.5% are aged 75 or above. However, the number of COVID 19 cases in older people is

less compared to younger people [15].

On the contradictory, in India, an age-wise analysis of 1809 coronavirus patients show that most of the infected person belong to the age group of 21–40 (42%), 83% of India's coronavirus patients are below the age of 50 [16]. This result shows that in India younger generation are at higher risk of contracting the disease. Facts and

Table 1
COVID-19 Vulnerability age group in countries with larger percentage of older people.

Rank	Country	65+ (%)	Most vulnerable group (Yrs.) #
1	Japan	28.2	20–59
2	Italy	22.8	> 50
3	Finland	21.9	20–59
6	Germany	21.4	20–49
9	France	20.3	45–64
10	Latvia	20.3	20–49
12	Sweden*	19.9	70–90
14	Estonia	19.8	30–54
15	Denmark	19.6	50–59
16	Czech Republic*	19.6	> 75
17	Slovenia	19.6	45–54
18	Hungary*	19.3	66–88
20	Spain*	19.1	70–79
21	Netherlands*	18.9	> 75
22	Austria	18.8	45–54
23	Belgium*	18.7	80–89
25	Switzerland*	18.3	> 80
26	Romania	18.2	40–49
28	Poland*	17.5	75–77
30	Norway	17.2	50–59
31	Canada	17.2	50–59
32	Ukraine*	16.5	60–69
33	Hong Kong	16.4	21–30
36	United States*	16	> 75
37	Australia	15.8	20–29
38	New Zealand	15.3	20–29
41	South Korea	15.1	20–29
44	Russian Federation	14.6	18–45
48	Iceland	14.2	50–59

Source of data: # Statista Research Department; *COVID 19 more vulnerable in older people.

<https://doi.org/10.1016/j.mehy.2020.109896>

Received 7 May 2020; Accepted 27 May 2020

Available online 16 June 2020

0306-9877/ © 2020 Elsevier Ltd. All rights reserved.

figures are published in the India Today newspaper dated April 4, 2020 [17].

Some of the list of countries with highest number of older people (65 + years and above) with COVID 19 most vulnerable age group is represented in Table 1. Out of 29 countries, only 10 countries are having more risk in older people. This finding made us ponder upon the statement “Older people are at highest risk from COVID-19, to either corroborate or reject the hypothesis.

To conclude, COVID 19 can affect all age group irrespective of whether the individual is young or old. Therefore, the statement by World Health Organization, “Older people are at highest risk from COVID-19” is still conflicting. Therefore, in depth research is required before making such claims as this may pile up the mental pressure to individuals. There have been cases whether people believed to be suffering from COVID 19 committing suicide in India [18–20], Bangladesh [21], frontline medical doctor from New York [22], and German finance minister; Thomas Schafer [23]. As of now, it would be more apt to state that “People with chronic health conditions are at highest risk from COVID 19” as strong immunity is the key weapon to fight against Covid-19.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] Ali A. Dawood, Mutated COVID-19, May Foretells Mankind in a Great Risk in the Future, *New Microbes and New Infections*, 2020,100673, ISSN 2052-2975, <https://doi.org/10.1016/j.nmni.2020.100673>. <http://www.sciencedirect.com/science/article/pii/S2052297520300251>.
- [2] Zixing Huang Shuang Zhao Zhenlin Li Weixia Chen Lihong Zhao Lipeng Deng et al. (COVID-19): Emergency Management and Infection Control in a Radiology Department, *Journal of the American College of Radiology* ISSN 2020 2019 1546 440 10.1016/j.jacr.2020.03.011. <http://www.sciencedirect.com/science/article/pii/S1546144020302854>.
- [3] Yen Nee Lee (April 1, 2020).US, Italy and Spain have the most coronavirus cases. These charts show their infection curves. <https://www.cnbc.com/2020/04/01/charts-show-the-coronavirus-spike-in-us-italy-and-spain.html> (Accessed on April 14, 2020).
- [4] <https://www.statista.com/page/COVID-19-coronavirus> (Accessed on April 24, 2020).
- [5] <https://www.worldometers.info/coronavirus/> (Accessed on April 26, 2020).
- [6] World Health Organization, Europe (April 2, 2020).Statement – Older people are at highest risk from COVID-19, but all must act to prevent community spread. <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/statements/statement-older-people-are-at-highest-risk-from-covid-19,-but-all-must-act-to-prevent-community-spread>.
- [7] Chinese Centre for Disease Control and Prevention (2020). The epidemiological characteristics of an outbreak of 2019 novel corona disease (COVID-19)- China, 2020. *CCDC Weekly*/Vol.2/No. x, pp: 1-10. <https://github.com/cmriivers/ncov/blob/master/COVID-19.pdf>.
- [8] Chinese Centre for Disease Control and Prevention. Elderly most at risk from the coronavirus.COVID-19 fatality rate by age (as of February 11, 2020). <https://specials-images.forbesimg.com/imageserve/5e4bbc0ef133f40006291c89/960x0.jpg?fit=scale>.
- [9] Niall McCarthy (Feb 18, 2020). Study: Elderly Most at Risk From The Coronavirus. <https://www.statista.com/chart/20860/coronavirus-fatality-rate-by-age/>.
- [10] Wu Z, McGoogan JM. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases from the Chinese Centre for Disease Control and Prevention. *JAMA* 2020;323(13):1239–42. <https://doi.org/10.1001/jama.2020.2648>.
- [11] Porcheddu R, Serra C, Kelvin D, et al. Similarity in case fatality rates (CFR) of COVID-19/SARS-COV-2 in Italy and China. *J Infect Dev Ctries* 2020;14:125–8. <https://doi.org/10.3855/jidc.12600>.
- [12] Hopkins University, COVID-19 Dashboard by the Centre for Systems Science and Engineering (CSSE). <https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>.
- [13] Statista Research Department (May 4, 2020). Distribution of Coronavirus cases in Italy as of May 4, 2020, by age group. <https://www.statista.com/statistics/1103023/coronavirus-cases-distribution-by-age-group-italy/>.
- [14] worldometer (April, 16, 2020). Age, Sex, Existing Conditions of COVID-19 Cases and Deaths. <https://www.worldometers.info/coronavirus/coronavirus-age-sex-demographics/>.
- [15] Statista Research Department (May 4, 2020). Patients profile of coronavirus disease COVID-19 cases in Japan as of May 3, 2020, by age group and state of health. <https://www.statista.com/statistics/1107703/japan-patients-detail-coronavirus-covid-19-cases-by-age-and-state-of-health/>.
- [16] The Economic Times (April 4, 2020). 42% of coronavirus patients in 21-40 age bracket: Govt. <https://economictimes.indiatimes.com/news/politics-and-nation/42-of-coronavirus-patients-in-21-40-age-bracket-govt/articleshow/74987254.cms?from=mdr>.
- [17] India Today (April 4, 2020). 83% of India's coronavirus patients are below the age of 50: Health ministry data <https://www.indiatoday.in/india/story/83-of-india-s-coronavirus-patients-are-below-the-age-of-50-health-ministry-data-1663314-2020-04-04>.
- [18] TV9 News (March 18, 2020). Delhi: Suspected coronavirus patient commits suicide by jumping off 7th floor of Safdarjung Hospital. YouTube: <https://www.youtube.com/watch?v=NIMaZnsmK2E> (Accessed on April 1, 2020).
- [19] India Today (May 1, 2020). Medical student serving Covid-19 cases found dead in Chennai hostel, cops suspect suicide. <https://www.indiatoday.in/india/story/medical-student-serving-covid-19-cases-found-dead-in-chennai-hostel-1673188-2020-05-01> (Accessed on May 4, 2020).
- [20] Hindustan Times (April 27, 2020). One Covid-19 patient commits suicide at hospital, 8 new cases in Karnataka. <https://www.hindustantimes.com/bengaluru/one-covid-19-patient-commits-suicide-at-hospital-8-new-cases-in-karnataka/story-1srVwqrjmrq2oGNzkrChO.html> (Accessed on May 7, 2020).
- [21] Mamun Mohammed A, Griffiths Mark D. First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian J Psych*. Apr. 2020;51(102073):7. <https://doi.org/10.1016/j.ajp.2020.102073>.
- [22] NBC News (April 27, 2020). New York Doctor on Front Lines of Coronavirus Pandemic Dies By Suicide | NBC Nightly News. <https://www.youtube.com/watch?v=PvXv57eKPB0&t=19s> (Accessed on May 4, 2020).
- [23] TRT World (March 30, 2020). German minister commits suicide over Covid-19 stress. YouTube <https://www.youtube.com/watch?v=NsXwygRs1w0> (Accessed on April 1, 2020).

Ramananda Ningthoujam^{a,*}, Deepa Khomdram^b

^a Department of University and Higher Education, Manipur, Department of Physical Education, Health Education & Sports, DM University, Indo

Myanmar Road, Imphal 795001, Manipur, India

^b Lairik Yengbam Leikai, Salan Leirak, Imphal, Manipur 795010, India

E-mail address: ramanand.ningthoujam5@gmail.com (R. Ningthoujam).

* Corresponding author.