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**Fear can be more harmful than the** **severe acute respiratory syndrome coronavirus 2 in controlling the corona virus disease 2019 epidemic**

Ren SY *et al*. Fear *vs* SARS-CoV-2 outbreak

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**Abstract**

The current corona virus disease 2019 outbreak caused by severe acute respiratory syndrome coronavirus 2 started in Wuhan, China in December 2019 and has put the world on alert. To safeguard Chinese citizens and to strengthen global health security, China has made great efforts to control the epidemic. Many in the global community have joined China to limit the epidemic. However, discrimination and prejudice driven by fear or misinformation have been flowing globally, superseding evidence and jeopardizing the anti-severe acute respiratory syndrome coronavirus 2 efforts. We analyze this phenomenon and its underlying causes and suggest practical solutions.

**Key words:** Coronavirus; Severe acute respiratory syndrome; Severe acute respiratory syndrome coronavirus 2; Coronavirus disease 2019; Outbreak; Fear; Discrimination; Prejudice

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**Core tip:** The acute respiratory syndrome coronavirus 2 outbreak is a global public health issue. Fear and stigma are growing due to misinformation and unfounded rumors. As a global community, we need solidarity instead of stigma to limit the spread of corona virus disease 2019. Open and transparent information on the outbreak to the global public, and administrative warning from authorities in every country are necessary to reduce fear and discrimination.

**INTRODUCTION**

The corona virus disease 2019 (COVID-19) outbreak caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) appears to have started in Wuhan, China in December 2019[1-10]. Subsequently, it has spread within and outside China[10-12] and has become an unprecedented global public health issue[12-19]. Most cities in China heavily affected by the epidemic have been put on lockdown[1,2]. As of 18 February 2020, there have been 72528 confirmed infections, 1870 deaths in China (Figure 1 and Figure 2), and 804 confirmed cases with 3 deaths in 25 other countries[20]. To safeguard Chinese citizens and strengthen global health security, medical staff and government in China have made great efforts to control the epidemic[6-9,21]. It was confirmed that 1716 medical workers had been infected with SARS-CoV-2, and 6 died in hospitals for the control of epidemic on 14 February 2020[22]. Many in the global community have joined China in this effort[14,23,24].

However, discrimination and prejudice driven by fear or misinformation have been flowing within and outside China[19,25-31], triggering panic and jeopardizing the response efforts of health workers and health authorities[25,32]. Importantly, discrimination, prejudice, and stigma make sick people reluctant to get medical help[19]. Nurses are prevented from accessing the areas where their rented houses are located[33]. This should be stopped[23,29].

**WHEN SOME PEOPLE FEAR, THEY MAY STIGMATIZE OTHER PEOPLE**

Psychologically, when the living environment changes, people feel unsafe, uneasy, and anxious[19]. When the cause of an epidemic is not clear, close-minded attitudes and rumors often flourish. Innocent people in Wuhan are targeted and unfairly blamed at a national level, and the same happens to Chinese people internationally[31].

Attempts to control the epidemic have involved isolation and quarantine, lockdown of an entire city, cancellation of flights, and evacuation of foreign nationals from Wuhan. As the World Health Organization’s (WHO’s) Director of Global Infectious Hazard Preparedness Sylvie Briand said, "Fear and stigma go together and when people fear, they tend to stigmatize some groups and what we try to do is to reduce this fear."[34].

**FORMAL NOMINATION OF SARS-COV-2 AND COVID-19**

The International Committee on Taxonomy of Viruses (ICTV) is responsible for developing the official classification of viruses and taxonomy of the Coronaviridae family. The Coronavirus Study Group (CSG) of ICTV evaluated the novelty of the new virus causing human infection in Wuhan, China tentatively named 2019-nCoV[35,36]. Based on phylogeny, taxonomy, and established practice, the CSG formally recognized this virus as a sister to SARS-CoVs of the species SARS-related coronavirus and designated it “SARS-CoV-2”[35]. China’s National Health Commission gave the virus a temporary name, the Novel Coronavirus Pneumonia[[37](#_ENREF_38)]. The term “novel” may refer to that 2019-nCoV is only emerging and requires further studies and an incomplete match between the genomes of this and other previously known coronaviruses[35,38]. On February 11, 2020, WHO formally named the disease caused by SARS-CoV-2 as “COVID-19”[39]. WHO Director-General Tedros Adhanom Ghebreyesussaid, “the name COVID-19 did not refer to a geographical location, an animal, an individual or group of people, and which is also pronounceable and related to the disease. Having a name matters to prevent the use of other names that can be inaccurate or stigmatizing. It also gives us a standard format to use for any future coronavirus outbreaks.”[39].

**HARMFUL EFFECTS OF FEAR, STIGMA, OR DISCRIMINATION**

Some people believe that viruses are present in the air for quite a long time, and fear being infected, thus becoming very anxious and angry, targeting people from Wuhan, and blaming them for spreading the virus[31]. Anecdotal evidence has shown Wuhan's families being "rejected and even hunted"[40]. Travel bans have been imposed, and when some people see a car with a Wuhan plate, they hit the car even when the driver is inside[40]. In some rural areas, vigilantes have even dug a ditch across the road to their villages to stop “outsiders” from entering[40]. An Indian person who was mistakenly thought to have SARS-CoV-2 infection, was so scared of transmitting the virus, that he committed suicide to protect his villagers[41]. Some posts have accused the United States of introduced the virus in China[31,42]. The SARS-CoV-2 outbreak is a perfect metaphor that illustrates the negative side of human societies[31].

Prejudice and bigotry have occurred with each huge epidemic in history. There is a link between imagining disease and imagining foreignness. For instance, when syphilis started to spread through Europe in the last decade of the fifteenth century, it was named a dreaded foreign disease, such as the Chinese disease by the Japanese, Morbus Germanicus by the Parisians, “French pox” by the English, Naples sickness by the Florentines. In 2003, Chinese were targeted for the epidemic of SARS-CoVs; in 2009, Latinos were widely targeted for the outbreak of swine flu; and in 2014, people of African origin were targeted for the Ebola crisis[31].

Indeed, as far as the SARS-CoV-2 is concerned, the virus is named the "China virus" or "Wuhan virus" by some westerners[30,31]. At the end of January of 2020, a newspaper in Denmark published a cartoon of the Chinese national flag that replaced the five symbolic stars with virus-like figures[30,31]. On February 3, 2020, the *Wall Street Journal* published an opinion column headlined "China Is the Real Sick Man of Asia"[25,31,32]. The Australian Herald Sun made reference to the virus as to a "Chinese virus" in a subtitle under a headline and blazoned "China Kids Stay Home" on its front page[25,30]. French papers ran articles headlined "New Yellow Peril" and "Yellow Alert"[25,30]. Some Chinese people in the United States and in European countries have been verbally or physically insulted simply because they were wearing masks[30,43]. In some parts of Europe, some people of non-Chinese Asian heritage have had to make clear that they are not Chinese[30,31,43].

**SOLUTIONS TO STOP FEAR, STIGMA, AND DISCRIMINATION**

Fear, prejudice, and discrimination can considerably impede anti-SARS-CoV-2 efforts[34]. A recent study of 138 hospitalized COVID-19 patients shows that SARS-CoV-2 can be transmitted from person to person through droplets and hand contact during an incubation period as well as on acute attack[2]. The closer we are to the truth, the farther we are from fear or panic. We think that open and transparent information on the outbreak to the public in China and the world, and administrative warning from authorities in every country are necessary to reduce fear and discrimination[34]. The health authorities should make the SARS-CoV-2 epidemic and essential preventive measures to the public in China and the world openly and transparently in time through radio, television, newspaper, WeChat, and the internet, *i.e.* washing hands and wearing a mask. A 24-h free hotline 7 d a week should be set up for public to respond to all the questions and concerns, relive the worries and panic, and clear the rumor or misinformation. The public hospitals should open COVID-19 clinics and mental health clinics to consult with people to clear panic and misinformation.

Likewise, government authorities in every country should cooperate with China to oppose stigma, language abuse and discrimination caused by the SARS-CoV-2 epidemic and strictly abide by disciplines and laws stress that our enemy is SARS-CoV-2 rather than the fear and stigma.

As Singapore's Prime Minister Lee Hsien Loong said, "The virus may have started in China but it doesn't respect nationality or race. It doesn't check your passport before it goes into your body and anybody can be infected"[30]. Indeed, the SARS-CoV-2 outbreak is not a Chinese issue, but a worldwide one. People can discriminate against each other, yet the SARS-CoV-2 never will. No boundary can stop the SARS-CoV-2 from interrupting the regular life of all of us on earth, reminding us that we are indeed a global community.

Stigma and discrimination are more harmful than the SARS-CoV-2 itself for our global efforts to control the outbreak. As WHO Director-General Tedros Adhanom Ghebreyesus said, "This is a time for facts, not fear. This is the time for science, not rumors. This is the time for solidarity, not stigma. This outbreak is a test of solidarity - political, financial and scientific. We need to come together to fight a common enemy that does not respect borders"[23].

**CONCLUSION**

Although the COVID-19 outbreak caused by SARS-CoV-2 started in Wuhan, China, it is now a global public health issue rather than a Chinese issue. As global community, we need solidarity instead of stigma or discrimination to contain the spread of SARS-CoV-2 outbreak. An open and transparent information on the outbreak to the global public, and administrative warning from authorities in every country are necessary to reduce fear and discrimination.

**REFERENCES**

1 **Chen N**, Zhou M, Dong X, Qu J, Gong F, Han Y, Qiu Y, Wang J, Liu Y, Wei Y, Xia J, Yu T, Zhang X, Zhang L. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet* 2020; **395**: 507-513 [PMID: 32007143 DOI: 10.1016/S0140-6736(20)30211-7]

2 **Wang D**, Hu B, Hu C, Zhu F, Liu X, Zhang J, Wang B, Xiang H, Cheng Z, Xiong Y, Zhao Y, Li Y, Wang X, Peng Z. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA* 2020 [PMID: 32031570 DOI: 10.1001/jama.2020.1585]

3 **Lu CW**, Liu XF, Jia ZF. 2019-nCoV transmission through the ocular surface must not be ignored. *Lancet* 2020 [PMID: 32035510 DOI: 10.1016/S0140-6736(20)30313-5]

4 **Lu H**. Drug treatment options for the 2019-new coronavirus (2019-nCoV). *Biosci Trends* 2020 [PMID: 31996494 DOI: 10.5582/bst.2020.01020]

5 **Lu H**, Stratton CW, Tang YW. Outbreak of pneumonia of unknown etiology in Wuhan, China: The mystery and the miracle. *J Med Virol* 2020 [PMID: 31950516 DOI: 10.1002/jmv.25678]

6 **Wang W**, Tang J, Wei F. Updated understanding of the outbreak of 2019 novel coronavirus (2019-nCoV) in Wuhan, China. *J Med Virol* 2020 [PMID: 31994742 DOI: 10.1002/jmv.25689]

7 **Wang Z**, Chen X, Lu Y, Chen F, Zhang W. Clinical characteristics and therapeutic procedure for four cases with 2019 novel coronavirus pneumonia receiving combined Chinese and Western medicine treatment. *Biosci Trends* 2020 [PMID: 32037389 DOI: 10.5582/bst.2020.01030]

8 **Wilson ME**. What goes on board aircraft? Passengers include Aedes, Anopheles, 2019-nCoV, dengue, Salmonella, Zika, et al. *Travel Med Infect Dis* 2020: 101572 [PMID: 32035269 DOI: 10.1016/j.tmaid.2020.101572]

9 **Wilson ME**, Chen LH. Travelers Give Wings to Novel Coronavirus (2019-nCoV). *J Travel Med* 2020 [PMID: 32010938 DOI: 10.1093/jtm/taaa015]

10 **World Health Organization.** Pneumonia, 2020 of unknown cause — China. Available from: https://www.who.int/csr/don/05-january-2020-pneumonia-of-unkown-cause-china/en/

11 **Holshue ML**, DeBolt C, Lindquist S, Lofy KH, Wiesman J, Bruce H, Spitters C, Ericson K, Wilkerson S, Tural A, Diaz G, Cohn A, Fox L, Patel A, Gerber SI, Kim L, Tong S, Lu X, Lindstrom S, Pallansch MA, Weldon WC, Biggs HM, Uyeki TM, Pillai SK; Washington State 2019-nCoV Case Investigation Team. First Case of 2019 Novel Coronavirus in the United States. *N Engl J Med* 2020 [PMID: 32004427 DOI: 10.1056/NEJMoa2001191]

12 **Giovanetti M**, Benvenuto D, Angeletti S, Ciccozzi M. The first two cases of 2019-nCoV in Italy: Where they come from? *J Med Virol* 2020 [PMID: 32022275 DOI: 10.1002/jmv.25699]

13 **Eurosurveillance Editorial Team**. Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. *Euro Surveill* 2020; **25** [PMID: 32019636 DOI: 10.2807/1560-7917.ES.2020.25.5.200131e]

14 **Bassetti M**, Vena A, Giacobbe DR. The novel Chinese coronavirus (2019-nCoV) infections: Challenges for fighting the storm. *Eur J Clin Invest* 2020: e13209 [PMID: 32003000 DOI: 10.1111/eci.13209]

15 **Battegay M**, Kuehl R, Tschudin-Sutter S, Hirsch HH, Widmer AF, Neher RA. 2019-novel Coronavirus (2019-nCoV): estimating the case fatality rate - a word of caution. *Swiss Med Wkly* 2020; **150**: w20203 [PMID: 32031234 DOI: 10.4414/smw.2020.20203]

16 **Benvenuto D**, Giovanetti M, Ciccozzi A, Spoto S, Angeletti S, Ciccozzi M. The 2019-new coronavirus epidemic: Evidence for virus evolution. *J Med Virol* 2020 [PMID: 31994738 DOI: 10.1002/jmv.25688]

17 **Biscayart C**, Angeleri P, Lloveras S, Chaves TDSS, Schlagenhauf P, Rodríguez-Morales AJ. The next big threat to global health? 2019 novel coronavirus (2019-nCoV): What advice can we give to travellers? - Interim recommendations January 2020, from the Latin-American society for Travel Medicine (SLAMVI). *Travel Med Infect Dis* 2020: 101567 [PMID: 32006657 DOI: 10.1016/j.tmaid.2020.101567]

18 **Carlos WG**, Dela Cruz CS, Cao B, Pasnick S, Jamil S. Novel Wuhan (2019-nCoV) Coronavirus. *Am J Respir Crit Care Med* 2020; **201**: P7-P8 [PMID: 32004066 DOI: 10.1164/rccm.2014P7]

19 **Shigemura J**, Ursano RJ, Morganstein JC, Kurosawa M, Benedek DM. Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: mental health consequences and target populations. *Psychiatry Clin Neurosci* 2020 [PMID: 32034840 DOI: 10.1111/pcn.12988]

20 **National Health Commission.** Epidemic report on time (Feb 15, 2020). Available from: https://voice.baidu.com/act/newpneumonia/newpneumonia/? from=osari\_aladin\_top1.Feb. 15

21 **Wang FS**, Zhang C. What to do next to control the 2019-nCoV epidemic? *Lancet* 2020; **395**: 391-393 [PMID: 32035533 DOI: 10.1016/S0140-6736(20)30300-7]

22 **New Agency.** State Council ’s Joint Prevention and Control Mechanism: Seven Major Measures Provide Strong Protection to Frontline Medical Staff. Available from: http://www.gov.cn/xinwen/2020-02/14/content\_5478871.htm

23 **World Health Organization Director-General**. WHO Director-General's remarks at the media briefing on COVID-2019 outbreak on 14 February 2020. Available from: https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-covid-2019-outbreak-on-14-february-2020

24 **World Health Organization Director-General**. WHO Director-General's remarks at the media briefing on COVID-2019 outbreak. Available from: http://terrance.who.int/mediacentre/videos/coronavirus/WHO-PROD\_Coronavirus\_Press\_Conference\_Tedros\_06FEB2020%20ch.mp4.14-february-2020

25 **China Daily**. Discrimination against Chinese a virus: China Daily editorial. Available from: http://ex.chinadaily.com.cn/exchange/partners/45/rss/channel/www/columns/419cf7/stories/WS5e39581aa310128217274d8d.html

26 **Ai H,** Bo L. WHO holds to line against travel bans. China Daily. 5 Feb, 2020. Available from: http://global.chinadaily.com.cn/a/202002/05/WS5e3a1f44a310128217274fd8.html Cited 17 February 2020

27 **Consulate-General of the People’s Republic of China in Houston**. Xi Jinping meets with visiting World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus. Available from: http://houston.china-consulate.org/eng/nv/t1737205.htm

28 **National Health Commission**. Epidemic report on time. Available from: https://voice.baidu.com/act/newpneumonia/newpneumonia

29 **Wang W.** History will note China’s strength, West’s arrogance. Global Times. 10 Feb, 2020. Available from: http://www.globaltimes.cn/content/1179067.shtml Cited 17 February 2020

30 **China Daily.** Be united, not stigmatized! Multinational leaders oppose discrimination against Chinese: benighted and illogical! Available from: http://www.yidianzixun.com/article/0OZwzKT7

31 **Rong X.** Coronavirus a common foe the global village must fight together. Global Times. 6 Feb, 2020. Available from: https://www.globaltimes.cn/content/1178729.shtml Cited 17 February 2020

32 **Chang J.** Who is 'the real sick man'? China or biased author? China Daily. 7 Feb, 2020. http://www.chinadaily.com.cn/a/202002/07/WS5e3cab20a310128217275a06.html Cited 17 February 2020

33 **Internet comment**. Who gave you the power to prohibit medical staff from returning home? Available from https://baijiahao.baidu.com/s?id=1657793996926292623wfr=spiderfor=pcisFailFlag=1

34 **China Daily**. Responses to outbreak widely praised. Available from: http://ex.chinadaily.com.cn/exchange/partners/45/rss/channel/www/columns/f8gszh/stories/WS5e3b7785a310128217275603.html

35 **Gorbalenya AE,** Baker SC, Baric RS, de Groot RJ, Drosten C, Gulyaeva AA, Haagmans BL, Lauber C, Leontovich AM, Neuman BW, Penzar D, Perlman S, Poon LLM, Samborskiy D, Sidorov IA, Sola I, Ziebuhr J. Severe acute respiratory syndrome-related coronavirus: The species and its viruses – a statement of the Coronavirus Study Group. 2020 Preprint. Available from: bioRxiv: 937862 [DOI: 10.1101/2020.02.07.937862]

36 **World Health Organization**. WHO guidelines for 2019-nCoV. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019.

37 **National Health Commission**. Notification of novel coronavirus pneumonia temporarily named by the national health and Health Commission. http://www.gov.cn/zhengce/zhengceku/2020-02/08/content\_5476248.htm

38 **Ceraolo C**, Giorgi FM. Genomic variance of the 2019-nCoV coronavirus. *J Med Virol* 2020 [PMID: 32027036 DOI: 10.1002/jmv.25700]

39 **Cnet**. Coronavirus disease gets an official name: COVID-19. Available from: https://www.cnet.com/news/coronavirus-disease-gets-an-official-name-covid-19/

40 **New Beijing Newspapers.** In order to prevent the spread of epidemic situation, some villages in Henan Province have to arrange specially assigned persons to be on duty at the road and intersection. Available from: http://m.sohu.com/a/368997508\_114988

41 **India Today.** Andhra man wrongly thinks he has coronavirus, kills self to protect village. Available from: https://www.indiatoday.in/india/story/andhra-pradesh-chittoor-man-wrongly-believes-coronavirus-kills-self-1645578-2020-02-12

42 **NetEase**. Novel coronavirus is a genetic weapon and a conspiracy of the United States. The wise will not listen to rumors. Available from: https://c.m.163.com/news/a/F4H53T8H0517DRJS.html?spss=newsappspsw=1

43 **SOHU.** The new coronavirus triggered racial discrimination, overseas Chinese protesting:" I am Chinese, not a virus". Available from: http://m.sohu.com/a/370527634\_299706

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**Figure Legends**



**Figure 1 Corona virus disease 2019 epidemic map in China on February 17, 2020.** Different colors indicate the number range of corona virus disease 2019 cases.

**Figure 2 Fluctuation of the daily number of confirmed corona virus disease 2019 cases in China in recent 2 wk (February 3 to 17, 2020).** Red color: Number of confirmed cases; Yellow color: Number of suspected cases; Green color: Number of cured cases; Blue color: Number of deaths.