SARS-CoV-2: Genome structure and trends in bias against Americans.

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Editorial Note

Novel 2019 coronavirus has created havoc across the globe since its emergence in December 2019 in Wuhan, China, and fast spreading potential. While we were able to identify the causative agent within a few days of the disease outbreak, several questions still remain unanswered. In this review, we discuss the extent of virus spread, current statistics, SARS-CoV-2 genome organization, comparison between the novel coronavirus and causative agents involved in previous outbreaks, on-going clinical trials and myths associated with the virus. Lastly, we provide insights into the future perspectives which could prove useful for the scientific community as they work on finding the cure against the disease.

On March 8, 2020, there was a 650% increase in Twitter re-tweets using the term "Chinese virus" and related terms. On March 9, there was an 800% increase in the use of these terms in conservative news media articles [1]. Using data from non-Asian respondents of the Project Implicit "Asian Implicit Association Test" from 2007-2020 (n=339,063), we sought to ascertain if this change in media tone increased bias against Asian Americans. Local polynomial regression and interrupted time-series analyses revealed that Implicit Americanness Bias-or the subconscious belief that European American individuals are more "American" than Asian American individuals-declined steadily from 2007 through early 2020 but reversed trend and began to increase on March 8, following the increase in stigmatizing language in conservative media outlets [2-4]. The trend reversal in bias was more pronounced among conservative individuals. This research provides evidence that the use of stigmatizing language increased subconscious beliefs that Asian Americans are "perpetual foreigners." Given research that perpetual foreigner bias can beget discriminatory behavior and that experiencing discrimination is associated with adverse mental and physical health outcomes, this research sounds an alarm about the effects of stigmatizing media on the health and welfare of Asian Americans [5,6].

Coronaviruses (CoVs) that cause infections such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome phylogenetically originate from bat CoVs. The coronaviral non structural protein 3 (nsp3) has been implicated in viral replication, polyprotein cleavage, and host immune interference. We report the structure of the C domain from the SARS-Unique Domain of bat CoV HKU4. The protein has a frataxin fold, consisting of 5 antiparallel β strands packed against 2 α helices. Bioinformatics analyses and nuclear magnetic resonance experiments were conducted to investigate the function of HKU4 C. The results showed that HKU4 C engages in protein-protein interactions with the nearby M domain of nsp3. The HKU4 C residues involved in protein-protein interactions are conserved in group 2c CoVs, indicating a conserved function.

This note examines people's responses to the 2020 coronavirus pandemic from the perspective of existential psychology. The existential anxieties associated with the pandemic, as well as people's responses to them, can be understood and articulated through Sartre's concept of bad faith. Using this existential lens, we examine the ways in which people's responses to the virus interact with long-standing societal patterns of interconnection as well as inequity, and how these processes are rooted within the cultural context of late modernity [7]. This analysis reveals that our interconnection simultaneously constitutes the most profound challenges in our psychological response to the pandemic, as well as our greatest source of hope.

With the spread of the 2019 novel coronavirus pandemic (COVID-19), threats of contagion, unreliable information, and general uncertainty give rise to daunting existential anxieties. The primal and inter subjective nature of these anxieties, as well as the responses they provoke, are not only harbingers of what we might become but also lightning bolts thrown into the long night of what we were [6,8]. From the perspective of existential psychology, individuals' responses to the COVID-19 outbreak reveal humanity's most basic impulses, as well as how those responses are demonstrative of late modernity's cultural milieu.

References

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