

# Social Media could be a of Threat for an “Infodemic” throughout COVID-19 Pandemic

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## ABSTRACT

This era is witnessed by a vibrant society and hastily grown and evolving communication technologies, indeed, which have many advantages. Information technology evolved and now plays a pivotal role in all fields and disciplines including the health-care system. Therefore, social media can be utilized either spread information in a fraction of a second for a campaign against smoking and cancer or spread news without any reason and confirmation. The people do not take care of any news relevant to anything. However, people feel an obligation to throw the information to others, why, so far do not know, as a result, news creates pandemic. We are witnessed during the current coronavirus disease (COVID)-19 pandemic situation where we are daily receiving thousands of messages, videos, or audios regarding different theories about COVID-19. Most of them are based on some kinds of speculations and do not have any empirical evidence. We need to assess the neglected influence and impact of this so called “Infodemic”, which may cause a variety of health hazards in a fraction of a second mainly anxiety and stress.

**Key words:** Social media, pandemic, non-communicable, stress, anxiety

## INTRODUCTION

Social media has become popular during the last decade, and it is an essential part of all life in the whole world even is in developing countries. Social media usually refers to internet-based tools that allow individuals and communities to communicate easily and quickly. It is used to share information, ideas, personal messages, images, and other content and in fact at certain level even collaborate with other users in real time.<sup>[1]</sup> These media are effectively used for communication regarding positive or negative personal experiences from some caregivers for the patients, and comments, and give an opinion openly.<sup>[2]</sup> It may increase the chances for ill people to share with the same kind of affected people. It is not only being used by patients and caregivers but also by health-care professionals, some organizations, some societies, and public health associations.<sup>[3]</sup> Nonetheless, nobody can deny the value of social media tools in every part of life,<sup>[4]</sup> but sometimes reliability and quality of the

information are contestable.<sup>[5]</sup> Generally speaking, people do not take care of any news relevant to anything, however, somehow feel an obligation to through this information to others, as a result, news craft pandemic. Therefore, it is urgently required to assess the neglected influence and impact of this pandemic, which may cause a variety of health hazards in a fraction of a second mainly anxiety and stress.

## IMPACT OF SOCIAL MEDIA

Instagram, Facebook, Snapchat, Twitter, and YouTube, as part of social media, have become a pervasive part of the way people share information. Wherever we’ve several admirable outcomes from having the ability to stay up with friends and family across the country or round the globe to quickly deploying breaking news similarly as well as depraved outcomes from it. The researches increasingly links used to less desirable outcomes as well including significant increases in depression, anxiety, and accidents.<sup>[6]</sup> According to research conducted by Pew,<sup>[7]</sup>

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across the country, nearly a quarter of teens are online almost constantly and 92% go online every day. Indeed, social media created a power to assemble the people and bring them back to their family and friends so a build a community; on the other hand, literature illustrates a connection between increased social media use and an uptick in anxiety and depression.<sup>[8]</sup>

It has been many times raised concerns relevant to the overuse of social media and call an action to discourage distracted driving, walking, or machinery use while operating handheld devices. Not only overuse but also there is also much increasing evidence regarding the behavioral health impact such as depression and anxiety of spending too much time in the front of screens or on social media channels.<sup>[9]</sup> In addition, too much screen time is associated with sleep hygiene problems and childhood obesity that can lead to many other health glitches.<sup>[10]</sup> The bottom line there are many health effects of overusing social media, which have been discussed and illustrated in many pieces of research. However, so far, all researchers and policy-makers ignore a significant issue relevant to the even giving a very small screen time on social media that is spread of wrong information in a fraction of a second and eventually ended up to a pandemic of anxiety and stress.

## WHAT IS PANDEMIC?

According to the World Health Organization, a pandemic is the worldwide spread of new diseases.<sup>[11]</sup> This pandemic is large-scale outbreaks of infectious diseases that can affect a large number of people and may cause high mortality over a wide geographic area and cause significant socioeconomic and political implications.<sup>[12]</sup> At present, shreds of evidence recommend that the chance of pandemics has exaggerated attributable to exaggerated world travel and integration, urbanization, changes in land use, and larger exploitation of the natural surroundings.<sup>[13]</sup>

While we are talking about the pandemic threats, are often divided into 3 broad categories; some extreme pathogens that have high potential to cause actually international and severe pandemics, like influenza virus that transmits expeditiously between humans. However, require some time to infect others and produce disease. The second category of pathogens presents a moderate global threat, for example, H5N1, etc., has not demonstrated sustained human-to-human transmission but could become transmitted more efficiently because of mutations and adaptation. The third group of pathogens, for example, Ebola, has the potential to cause regional or interregional epidemics, but the danger of a very global pandemic is restricted due to the slow pace of transmission or high probability of detection and containment [Table 1].<sup>[13]</sup>

A recent example of the pandemic is coronavirus disease (COVID)-19. It is a type of coronavirus such as SARS and MERS, but of course, having a mutation and emerged

with new virulence to become pandemic and threat for the whole world. The cases reached over 218 countries with around 51,259,771 cases until today.<sup>[14]</sup> However, health-care professionals and competent relevant authorities have already started an awareness campaign and preparedness activities beyond borders. However, a poor understanding of the disease among the community may result in delayed treatment and the rapid spread of infection. Moreover, it has some psychosocial implications which so far not being considered in many countries. One of the threats is fear or panic, which is spreading throughout the world through social media in a fraction of a second.

## DISCUSSION

Digital devices play an important role in society and the balanced use of these devices does not make any significant impact on the health of the people. However, it is not only a balance between screen time and physical activities, which are so far addressed by physicians, public health officials, and policy-makers, there are other issues, need to be discussed. Although we cannot ignore the educational and recreational benefits for the people, especially the younger generation, it is important, specifically for the young generation that screen time be balanced with physical activity and sleep.<sup>[6-10]</sup> Facebook alone attracts 1.3 billion users with 640 million minutes spent each month on the site and recent statistics showing 68% of adults and 71% of teenagers use Facebook with many users checking social media every day often multiple times a day.<sup>[15]</sup>

The spread of information in a fraction of a second creates any problem and how could we control is still debatable. However, in a very rapid way from the human-to-human transmission, which makes it highly contagion, hence, we symbolically consider it as an “Infodemic”. The issue is that not directly visible but had to be inferred from the flow of information from one individual to another mean human to human. The current COVID-19 pandemic is witnessed about this rapid flow of information and causing more panic or fear among the peoples.

Therefore, we do not yet understand the dynamics of information spread on networks or how the structure of the network affects it. However, a study<sup>[16]</sup> addressed this issue, presented results after analyzing data from two very famous social news sites, and tried to track how interest in news stories spreads among these sites. The results highlighted that structure of the network affects the flow and dynamics of the information, hence proved social networks play a crucial role in the spread of information.<sup>[16]</sup> The flow of information like either a water flow of a storm or an air, wind traveling from one place to another place, and it is almost impossible to stop it. The issue is how we assure the reliability and validity of the information.

**Table 1: Some notable pandemics during the past 50 years<sup>[9]</sup>**

Starting year	Event	Geographic extent	Estimated direct morbidity or mortality	Estimated economic, social, or political impact
2019	Novel coronavirus-19	210 so far	33,891,945 cases/1,013,559 deaths <sup>[14]</sup>	No estimate so far
2015	Zika virus pandemic	76 countries	2656 reported cases of microcephaly or central nervous system malformation <sup>[18,19]</sup>	US\$7 billion–US\$18 billion loss in Latin America and the Caribbean <sup>[20]</sup>
2009	Swine flu influenza pandemic	Global	151,700–575,500 deaths (0.2–0.8 per 10,000 persons) <sup>[21]</sup>	GDP loss of US\$1 billion in the Republic of Korea <sup>[22]</sup>
2003	SARS pandemic	4 continents, 37 countries	8098 possible cases, 744 deaths <sup>[23]</sup>	GDP loss of US\$4 billion in Hong Kong SAR, China; US\$3 billion–US\$6 billion in Canada; and US\$5 billion in Singapore <sup>[24]</sup>
1981	HIV/AIDS pandemic	Global	More than 70 million infections, 36.7 million deaths <sup>[25]</sup>	2–4% annual loss of GDP growth in Africa <sup>[26]</sup>
1968	Hong Kong flu influenza pandemic	Global	1 million deaths (2.8 deaths per 10,000 persons) <sup>[27]</sup>	US\$23 billion–US\$26 billion direct and indirect costs in the United States <sup>[28]</sup>
1957	Asian flu influenza pandemic	Global	0.7 million–1.5 million deaths (2.4–5.1 deaths per 10,000 persons) <sup>[28]</sup>	GDP loss of 3 percent in Canada, Japan, the United Kingdom, and the United States <sup>[29]</sup>

List of events is illustrative rather than exhaustive. All US dollar amounts are rounded to nearest billion. GDP: Gross domestic product, HIV/AIDS: Human immunodeficiency virus/acquired immunodeficiency syndrome, MERS: Middle East respiratory syndrome, SARS: Severe acute respiratory syndrome

Certainly, in pandemics, the transmission of pathogens from humans to humans needs a complete cycle, and indeed, it is depending on environment, host, and pathogen. This cycle can be simple with a direct transfer or complex, where transmission occurs through multiple or intermediate hosts or vectors.<sup>[17]</sup> Either it is simple or complex it takes time to transfer one disease from host to another susceptible person or animal and it is quite impossible that transfer the pathogen in a fraction of a second. The diseases can transfer through vectors that could be biological (e.g., mosquitoes, tsetse fly, and body louse) or mechanical (e.g., domestic flies and cockroaches), or transfer through water or food. Based on its transmission mood, we named them, for example, water-borne, water-washed, and food-borne diseases.

Do we need a cycle to be completed for a transfer of a small piece of information? Do we need any particular climate or susceptible host to transfer this information? The answers are no. spreads in a fraction of a second without confirmation and checking of its reliability, which may end up to a pandemic and cause unnecessary anxiety, stress, and depression among millions of people very quickly. Therefore, we could have labeled the diseases spread through mechanical social media as “Internet-borne diseases.”

Even for a public health practitioner, it is not possible to assess the source of this pandemic and prepare any prevention plan or invent any vaccine. However, the preparedness plan for a pandemic is only possible when it should be discussed at the grassroots level. It is already encouraging in many countries that the content of the curricula of primary and secondary schools addressing the current imbalance use of social media.<sup>[6,7]</sup> Besides, we need to include in curricula a special chapter at the school level relevant to the misuse and impact of social media. It should be addressed thoroughly through different campaigns and educational programs for using social media and try to establish that do not spread the news without confirmation because it may cause mental health impacts to millions of people in a fraction of a second.

## CONCLUSION

Social media tools are vital for a lot of reasons, as well as academic functions, however, the secret is to balance their usage. It ought to check that at the grassroots level that the user is safe and not prejudices to the one who has the device and will unfold the news while not confirmation.

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