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**RAPID REPORTS AND PERSPECTIVES FROM THE FIELD****Rumours and social stigma as barriers to the prevention of coronavirus disease (COVID-19): What solutions to consider?**Md. Nazmul Huda\*<sup>1,2</sup>, Rubana Islam<sup>1</sup>, Mohammed Owais Qureshi<sup>1</sup>, Sunitha Pillai<sup>3</sup> & Syeda Zakia Hossain<sup>4</sup><sup>1</sup>School of Public Health and Community Medicine, The University of New South Wales, Sydney, Australia<sup>2</sup>Green University of Bangladesh, Dhaka<sup>3</sup>Anglia Ruskin University, Essex, United Kingdom<sup>4</sup>Faculty of Medicine and Health, The University of Sydney, Sydney, Australia\*Corresponding author: [nazmulsoc2008@gmail.com](mailto:nazmulsoc2008@gmail.com)

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**Abstract**

Globally, multiple factors have elevated the risk and contributed to the fast spread of COVID-19. Alongside this, unsolicited rumours and social stigma are believed to be two possible barriers to the effective prevention of the disease. Despite measures taken, rumours and social stigma related to COVID-19 tend to increase globally. Several studies document that rumours and social stigma may fuel the risk and rapid spread of COVID-19. However, how these rumours and social stigma act as barriers to the prevention of the COVID-19 outbreak remain unclear. This article aims to discuss how rumours and social stigma can undermine the preventive and clinical efforts to fight against the spread of COVID-19 and suggest potential policy implications for addressing rumours and social stigma and optimising preventive efforts. A narrative review of secondary sources of data, including published studies, grey literature and authentic press reports was conducted. The analysis indicates that unverified rumours associated with COVID-19 may weaken people's preparedness for a new infectious disease by driving them to wrong treatment and preventing them from adhering to evidence-based medical suggestions and treatment. Findings also suggest that social stigma may reduce healthcare workers' agency and self-respect to provide support, treatment and care for those with COVID-19. Social stigma may also constrain participation in screening, testing, quarantine, isolation, and treatment of the disease. This article offers six potential policy pathways and emphasises the national and international coordination of all stakeholders for addressing rumours and social stigma associated with COVID-19.

**Key words:** Rumours, social stigma, SARS-CoV-2, COVID-19, prevention efforts

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**Background**

The outbreak of a novel coronavirus, which is named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and causes a disease called COVID-19, continues to spread globally. On 11 March 2020, the World Health Organization (WHO) declared the outbreak a pandemic (1). As of 23 August 2020, the WHO (2) reported over 23,025,622 confirmed cases and 800,420 deaths in 215 countries. Multiple factors are increasing the risks and contributing to the rapid spread of the disease (3). These factors include inadequate preparedness, limited screening, shortage of testing kits and Personal Protective Equipment (PPE), inadequate knowledge as well as awareness about the spread of infection, prevention and control of COVID-19 in the population, and unavailability of effective medications or vaccines (4). Alongside these factors, unsolicited rumours and social stigma can act as barriers to the effective prevention of COVID-19, thus becoming public health issues (5, 6).

In the COVID-19 context, a rumour is a distinctive form of 'improvised news' (7), while social stigma is a

process of separating, stereotyping, labelling and discriminating individuals due to perceived connection to the disease (8). Rumours related to COVID-19 may provoke social stigma by raising fear and yielding unfounded perceptions towards the disease, geographical locations, and the people affected by the virus (9). Social media companies (Facebook, Twitter, YouTube and so on) and policymakers in various countries globally have undertaken measures to stamp out misinformation (5) that provokes rumours and social stigma (9). Additionally, to tackle and avoid social stigma associated with COVID-19, the WHO (6) prepared a guide for supporting various governments, media and organisations. However, unsolicited rumours (5) and social stigma (6) related to COVID-19 tend to increase globally. Therefore, stopping rumours and social stigma associated with COVID-19 are considered indispensable parts of an effective response to COVID-19 (9, 10).

Several studies document that rumours (5) and social stigma (8) may fuel the risk and rapid spread of COVID-19 (11). However, the ways rumours and social stigma act as barriers to the prevention of COVID-19 outbreak

remain unclear. This article aims to discuss how rumours and social stigma can undermine the preventive and clinical efforts to fight against the spread of COVID-19 and offer potential policy implications for addressing these barriers.

## Methods

To discuss the adverse roles of rumours and social stigma in the spread of COVID-19 and offer potential policy implications for tackling rumours and social stigma, a narrative review of secondary sources of data, including published studies, grey literature and authentic press reports, was conducted. Literature searches were conducted between 11 March and 25 May 2020, using Google, Google Scholar, and Medline. To identify relevant literature, combinations of the following search terms were used, 'rumour', 'social stigma', 'COVID-19', 'novel coronavirus', 'SARS-CoV-2', 'barriers', 'recommendations', and 'policy implications'. Furthermore, a search of references cited in related studies was also performed to identify additional research on rumour and social stigma related to COVID-19.

Inclusion and exclusion criteria were used to screen and select the relevant studies and reports. Studies and reports were included if they a) discussed rumours and stigma related to COVID-19 in Australia, Bangladesh, China and India, and b) were available in the English language. A total of 62 studies and reports matched the above criteria. Of those, 40 studies and reports were chosen. The remaining 22 studies and reports were excluded because they a) contained no or limited information on rumours and stigma related to COVID-19 in Australia, Bangladesh, China and India, and b) contained duplicate or unauthentic information. Attempts were made to determine the authenticity of reports. The first author accessed relevant press reports published in reliable online newspapers, such as the Washington Post, the Guardian Australia, the Gulf News, the Economic Times, and the Business Standard. Then, all the other authors validated the information about rumours and social stigma by searching other online newspapers.

### *Rumours as a potential barrier to COVID-19 prevention*

Studies suggest that unverified information/story, in other words, rumours, can aid in the spread of COVID-19 among various populations and act as a barrier to the treatment for COVID-19 (5, 11, 12). For example, a rumour attributable to wearing masks can be drawn from India, which suggests that wearing facemasks increase people's health risks (13). Such rumours may prompt people to discontinue healthy practices, such as wearing facemasks and hand-washing (5, 12). Another unverified rumour went viral via social media, which suggests that garlic can be used as a cure for COVID-19 (14, 15). Furthermore, through social media, people propagated the use of traditional Chinese medicine, or cow urine and dung as a cure to remedy the infection and treat COVID-19, even though experts suggest that no

effective medications or vaccines are available to treat the disease (16, 17). Such practices may drive people to wrong treatment and prevent them from accepting appropriate health guidance and attending evidenced-based medical suggestions and treatment, thus potentially costing lives (18). Another example of a rumour can be taken from Wuhan in China, the epicentre of SARS-CoV-2, where the police summoned and censured Doctor Li Wenliang, since he notified his colleagues about the novel coronavirus for the first time, which police termed a false rumour. Doctor Li was subsequently forced to sign a statement confessing his infringement and assuring not to commit further criminal activities, such as spreading rumours (19). Convicting for case reporting and raising awareness may prevent healthcare workers from issuing warning messages of the signs and symptoms of new and emerging infectious diseases in the future, and can potentially act as a barrier to undertaking speedy control measures for preventing large-scale outbreaks (19). Together, rumours can contribute to spreading COVID-19 and hindering its prevention.

### *Social stigma as a potential barrier to COVID-19 prevention*

Like rumours, social stigma, marked by stereotypes and discrimination, related to COVID-19 may hinder the prevention efforts of healthcare workers and health authorities for COVID-19 (11). In Bangladesh, for example, returned travellers from Singapore and Italy were admitted into hospitals due to having symptoms of COVID-19, including fever, headache, and cough. However, it appeared that because of fear and stereotypes associated with coronavirus and people who have COVID-19, doctors and nurses were reluctant to provide care, support, and treatment for returnee patients. This possible social stigma, characterised by discrimination and negative attitudes, left COVID-19 patients unattended as well as untreated (20), which may have cost their lives (9). Social stigma is also prevalent in developed countries. For example, parents at an Australian hospital declined to avail the treatment, support, and care of doctors and nurses of Asian appearance for their children due to the fear of COVID-19 (21). Such stigma marked by stereotypes and negative attitudes towards doctors and nurses may reduce the agency and self-respect of healthcare workers to provide support, treatment and care for people who have COVID-19, thus potentially hampering the prevention of the COVID-19 outbreak.

Fear of infection and existing social stigma may also prevent individuals from attending the screening, testing and treatment of an infectious disease (22) such as COVID-19. Evidence from India (23) suggests that people with signs and symptoms of COVID-19 fled from hospitals. This was possibly due to stigma marked by prejudice and stereotypes, fear to be diagnosed with COVID-19, and negative attitudes from family members, friends, and neighbours (24). These (potential) COVID-19 cases may become super-spreading patients who

interact more than others and connect with many others, and thus have more potential than normal patients to spread the disease (25). This situation may make it difficult to trace the contact of people who may have had close contact with possible super-spreaders, and may lead people to hide symptoms of diseases, thus potentially challenging the screening, testing, and treatment of COVID-19.

#### *Potential policy pathways*

To address rumours and social stigma, and strengthen prevention efforts for COVID-19, policy makers, particularly in countries with high occurrences of rumour (5) and social stigma (6, 26), including Bangladesh, India, and China, can undertake several measures.

#### *First, strengthening governments' efforts*

To create awareness about COVID-19 among people, governments need to strengthen their efforts to promote scientific and credible sources via social and mass media. These sources may include the announcements and guidelines from the WHO on transmission and prevention of the coronavirus disease. Such initiatives may contribute to challenging and reducing the spread of rumours (5) and stigma (6) related to COVID-19. Nigeria is a case in point. The West African country utilised social media (e.g. Twitter and Facebook) for promoting accurate and scientific information about the transmission and prevention of the Ebola outbreak in 2014, which might have contributed to the control efforts of the epidemic (27). In terms of COVID-19, the Government of Vietnam, a country which has successfully contained the disease (28, 29), has tackled rumours and misinformation by applying hefty fines (e.g. US\$ 430–870) for people who spread rumours or misinformation and stigmatise individuals (30). Such evidence-based examples from Nigeria and Vietnam suggest that it is vital to bolstering the efforts of governments to minimise the spread of rumours and social stigma, which often accompany an outbreak such as COVID-19.

#### *Second, the role of social media corporations*

Social media corporations, with the help of governments, may need to strengthen their measures to identify and remove rumours and misinformation about the treatment of COVID-19 from their sites (31). Social media can also advertise and promote evidence-based medical suggestions and treatment of the disease by citing credible sources using local languages to reach people from culturally diverse backgrounds (5). Such efforts of social media companies may facilitate the efforts of governments and contribute to changing people's wrong perceptions and practices related to the treatment of COVID-19 (32).

#### *Third, adequate education and training for healthcare workers*

It is important to provide healthcare workers with infectious disease management and control education and training (5). Adequate education and training will equip healthcare workers to increase their capacity to manage COVID-19 patients and provide care, support and treatment to COVID-19 infected people without stereotypes, fear and anxiety induced by social stigma (33). Previous pandemics have shown that appropriate education and training may enable frontline workers in identifying and dealing with people's stereotypes, fear, anxiety and psychological distress (34). Therefore, it is important to provide healthcare workers with adequate education and training for the prevention of COVID-19.

#### *Fourth, an enabling environment*

In healthcare settings, it is essential to formulate and sustain a rigorous policy for averting social stigma and people's negative attitudes towards healthcare workers. Authorities need to involve healthcare workers who have experienced stigma related to COVID-19 in developing such a policy (35). This may help create an enabling environment that can enhance the capacity of healthcare workers to provide care, support, and treatment for COVID-19 infected patients (36).

#### *Fifth, maintaining confidentiality*

Policies are also needed to help preserve the confidentiality of infected and affected persons and minimise the panic, rumours and social stigma associated with COVID-19. In turn, this can facilitate screening, testing, quarantine, isolation, and access to treatment for infected individuals (6). Maintaining confidentiality is also essential for the person infected by COVID-19 for post-infection community rehabilitation and their successful engagement in socio-economic and cultural activities (37).

#### *Sixth, strengthening laws*

It may be helpful to properly implement cybercrime laws or initiate cybercrime services at the government level to remove malicious content and misinformation related to the COVID-19 outbreak from social media, and to regulate and prevent rumours from circulating and provoking social stigma (11). Proper implementation of existing laws can be done by building coordinated efforts and strategic partnerships at the local, regional and global levels. The adequate implementation of laws in all countries can potentially reduce rumours, fear and stigmatisation of the affected populations and regions, and increase their chances of being screened, quarantined, tested, and treated (38). Notably, a Whistle-blower Protection Act (39) is required to protect all hospital whistle-blowers and doctors from retaliation and intimidation so that they feel secure to issue warning messages of the signs and symptoms of new and emerging infectious diseases in the future. Recently, India amended its colonial Epidemic Diseases Act 1897 and strengthened its implementation to stop violence against health care workers and provide additional

support for them. Such a law may help protect healthcare workers from retaliation and intimidation (40).

### Limitations

To provide information regarding rumour and stigma related to COVID-19 in the selected countries, some information used in this article were extracted from local, national and international newspapers and reports of the WHO and the United States Centre for Disease Control and Prevention. This was due to a lack of relevant peer-reviewed publications on rumours and stigma associated with COVID-19.

### Conclusion

From the above discussion, it is clear that rumours and stigma related to COVID-19 are likely to contribute to weakening the global efforts to prevent the transmission of the disease. Therefore, the control of rumours and social stigma associated with COVID-19 may require national and international coordination of all stakeholders to implement the strategies described above. Otherwise, it may be difficult to stop the spread of rumours and social stigma related to COVID-19, and subsequently, reduce the transmission and spread of the disease. When implemented, such strategies and policies may be relevant not only for COVID-19 but also for all future pandemics and health emergencies that the world may face.

### Competing interests

The author has no competing interests to declare.

### Authors' contribution

MNH conceived, drafted, wrote, revised, and finalised the manuscript. ZH, MOQ and RI also contributed to revising and finalising the manuscript with critical inputs and edits. SP developed a short initial section, 'potential policy pathways'. Then, MNH developed the section. All authors read and approved the final manuscript.

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