



COVID-19 suicide and its causative factors among the healthcare professionals: Case study evidence from press reports

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*Case Report***COVID-19 suicide and its causative factors among the healthcare professionals: Case study evidence from press reports****Abstract**

Introduction: Recent research has demonstrated the psychological impact of the COVID-19 pandemic among the general population. However, COVID-19-related suicides among healthcare professionals (HCPs) have yet to be investigated. **Findings:** The present study utilized retrospective press media suicide reports and identified a total of 26 worldwide HCP COVID-19-related suicide cases (aged 22 to 60 years; 14 females; most of the cases from India). The cases comprised doctors (n=11), nurses (n=9), paramedics (n=5), and one medical student. Being infected with the COVID-19 was the most common suicide reason, followed by work-related stress, and fear related to COVID-19 infection/transmission. Among the eight cases diagnosed with COVID-19, most were female (n=6), and either doctors (n=4) or nurses (n=4). **Practice implications:** The present findings will be helpful for human resources departments in healthcare workplaces in ensuring HCP's mental wellbeing.

Keywords

COVID-19 suicide; Pandemic suicidal behavior; Healthcare professionals' suicide; Hospital suicide.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has affected almost the entire world with its rapid transmission rate. As a result, healthcare professionals (HCPs) globally have been under extreme pressure in the care and management of their patients (Barua et al., 2020; Khan et al., 2020; Usman et al., 2020). Additionally, HCPs are more likely to be infected with the COVID-19 than other individuals because of their repeated exposure to the virus and reported lack of appropriate personal protective equipment (Mamun et al., 2020a; Sakib et al., 2020). Alongside the risk of personal infection, HCPs also have other concerns such as worrying that they will infect their families and relatives if they are infected with the virus, the uncertainty of access to rapid testing facilities for their own and family members if they get infected etc. (Mamun et al., 2020a; Shanafelt et al., 2020; Usman et al., 2020). As a result, the HCPs have reported higher increased psychological suffering (e.g., depression, anxiety, insomnia, etc.) compared to other cohorts (see Pappa et al. [2020] for a recent review).

Repeated exposure to highly stressful situations in healthcare facilities can facilitate mental instability and in an extreme minority of cases may lead to suicidal tendencies, especially given that 90% of the global suicide occurs due to psychological suffering (Mamun et al., 2020d; Mamun and Ullah, 2020). The fear of contracting COVID-19 among HCPs may also have unintended consequences for their patients. For instance, a woman in Bangladesh committed suicide on hospital premises because of perceived negligence by the hospital staff not treating her. It was alleged that HCPs did not want to treat her because they thought she had COVID-19 (Mamun et al., 2020a).

Evidence suggests that increases in suicide rates during and after a pandemic is not unusual (Dsouza et al., 2020; Mamun and Griffiths, 2020a). For instance, higher suicide rates were observed in 1918–19 Spanish influenza pandemic in the US, and the 2002-03 SARS pandemic in Hang Kong (Leaune et al., 2020). There have been various cases in the psychological literature concerning COVID-19-related suicides in the general population from different part of the worlds including Bangladesh (Bhuiyan et al., 2020; Mamun et al., 2020b; Mamun and Griffiths, 2020a), India (Dsouza et al., 2020; Mamun, 2020; Mamun et al., 2020e), Pakistan (Mamun et al., 2020f; Mamun and Ullah, 2020), and more globally (Griffiths and Mamun, 2020; Manzar et al., 2020; Syed and Griffiths, 2020)], but HCP's COVID-19-related suicide has not previously been investigated.

By the end of the last decade, profession-wise suicide risk increased significantly in specific occupational groups, especially among medical-related professions (i.e., 3 to 5 times higher suicide risk than the general population [Blacker et al., 2019]). Therefore, HCPs' suicide rate may be further increased during (and in the aftermath of) the pandemic due to the aforementioned problems and challenges in healthcare systems (as well as traumatic suffering originated from the pandemic). At present, there is currently no systematic evidence of the HCPs' suicide and potential risk factors which are essential to prevent further suicides. Therefore, the present study investigated the factors associated with COVID-19-related suicides among HCPs globally by utilizing reports collected from the print media.

Methods

Based on previous studies, the present study utilized the press media reporting suicide method (e.g., Bhuiyan et al., 2020; Dsouza et al., 2020; Griffiths and Mamun, 2020), a retrospective method that has been used for extracting common suicide data such as age, gender, method of suicide, and suicide reasons (Mamun and Griffiths, 2020b). Here, the *Google News* search engine was used to extract HCP-related suicide press media reports using English keywords such as 'doctor suicide', 'nurse suicide', 'physician suicide', 'medical technologist suicide', 'healthcare suicide', 'hospital suicide', 'healthcare professional suicide' and 'COVID-19 pandemic', 'COVID-19 suicide', 'COVID-19 fear', and 'pandemic'. Because HCPs are frontline workers in the fight against COVID-19 and are among the most important key workers during the pandemic, press coverage of such suicides will more likely have received press coverage than suicides among other groups such as the general population.

Results

After excluding duplicate cases, a total of 26 suicide cases were found (aged 22 to 60 years; 14 females and 12 males). Of these, 11 were doctors, nine were nurses, five were paramedics, and one was a medical student. Most of the cases were from India (n=8), followed by USA (n=6), UK (n=3), Russia (n=3), Pakistan (n=2), Italy (n=2), France (n=1), and Mexico (n=1). Five press media reports did not report the possible suicide reasons. Of the remaining 21 cases, being infected with COVID-19 were the most common suicide reason (n=8), followed by work-related stress (n=7), and fear concerning COVID-19 infection (n=4). Lesser reasons included fear of transmitting the virus to others, and anxiety from witnessing deaths and being unable to save lives of those with COVID-19. Other reasons included unstable mental conditions such as missing family, depression and previous suicidal behavior (Table 1).

Table 1 also separates out those diagnosed with COVID-19 from those who were not. Six out of eight suicide cases diagnosed with COVID-19 were female. Among the 18 suicide cases who had not been diagnosed with COVID-19, the majority were male (n=10). In relation to medical occupation, the eight suicide cases diagnosed with COVID-19, four were doctors and four were nurses. Among the 18 suicide cases who had not been diagnosed with COVID-19, more diverse medical occupations were reported (seven doctors, five nurses, five paramedics, and one medical student).

Discussion

The present study provides an initial observation concerning COVID-19-related suicide reasons among a cohort who are fighting against COVID-19 on the frontline. Based on the findings, being infected with COVID-19 was the most common suicide reason reported (n=8), followed by work-related stress (n=7), fear concerning COVID-19 infection (n=4), fear of transmitting the virus to others, anxious by witnessing overwhelming deaths, mental suffering. However, HCPs' suicide reasons appear to be different from that of the general population. For instance, in other studies, fear of COVID-19 infection was reported in one-third of suicides among the Indian general population (i.e., 21 cases out of a total 69 cases), followed by economic distress (n=19). Reports from Bangladesh (i.e., all but one out of a total 9-cases) and Pakistan (i.e., 12 out of 16 cases)

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3 suggested that economic factors due to COVID-19 were the predominant reason for COVID-19-
4 related suicides (Bhuiyan et al., 2020; Mamun and Griffiths, 2020a; Mamun and Ullah, 2020).
5 Additionally, other COVID-19-related suicide risk factors have been reported including loneliness,
6 missing family, being socially boycotted by others, and social negligence, being infected with the
7 COVID-19, alcohol unavailability, and COVID-19 work-related stress (Dsouza et al., 2020).
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10 Although there are no vaccine and no specific proven treatment available for combating COVID-
11 19, some public health preventive measures have been implemented to control its' exponential
12 growth (Dsouza et al., 2020). These measures help provide protection for the general population,
13 but HCPs are at much higher risk of contracting COVID-19 because of their working environment.
14 Additionally, the global transmission rate has not yet been suppressed as was originally expected.
15 Consequently, enormous pressure is being placed upon healthcare systems, particularly in the
16 critical care services, which makes the HCPs psychologically more vulnerable (Mamun et al.,
17 2020a). This is reflected in the present study, where work-related stress was one of the common
18 reasons for suicide among HCPs.
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21 Furthermore, the psychological stress-mediating factors such as fear of person-to-person
22 transmission to and/or from others, and other mental health issues experienced in relation to what
23 HCPs see at the hospital, prolonged isolation, being overwhelmed by the number of deaths of
24 patients in their care, working with insufficient and poor quality personal protective equipment
25 (PPE), penalties for complaining to employers etc. makes this group vulnerable to mental health
26 suffering, and in the extreme case, can lead to suicide (Hossain et al., 2020; Mamun et al., 2020a;
27 Shanafelt et al., 2020; Usman et al., 2020). The present findings also found other reasons for
28 suicide including fear of being infected with COVID-19, fear of transmitting COVID-19 to others,
29 anxiety concerning death by COVID-19, and having pre-existing mental health conditions.
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32 The present study found almost equal rates of suicide among both males and females, which is
33 unlike previous non-COVID-19-related reports. For instance, Schernhammer and Colditz (2004)
34 reported that compared to the general population, the aggregate suicide rate ratio for male
35 physicians was 1.41, and for female physicians was 2.27. Similar finding (i.e., more female
36 committing suicides) have also reported been reported among medical sciences students (Mamun
37 et al., 2020c). However, gender-based suicide among general population in the COVID-19 context
38 has found that males tend to be at greater risk. For example, 12 out of 16 cases in Pakistan (Mamun
39 and Ullah, 2020)], and 63 out of 69 cases in India (Dsouza et al., 2020), which is quite different to
40 the present finding. The present study also found that among those that had been diagnosed with
41 COVID-19, the majority of suicide cases were (i) female (six out of eight) which was not the case
42 among those not diagnosed with COVID-19 (eight out of 18), and (ii) were doctors (n=4) or nurses
43 (n=4) but was more diverse among those not diagnosed with COVID-19. All though the findings
44 are based on very small and non-representative cohort, the vulnerability of female HCPs diagnosed
45 with COVID-19 should be noted by healthcare employers.
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49 Based on the present findings, HCPs appear to be committing suicide due to issues related to being
50 infected with COVID-19, fear of COVID-19 and safety, work-load stress, and pre-existing mental
51 health conditions, which are different to COVID-19-related reasons for suicide among the general
52 population. Consequently, the present authors recommend some preventive strategies that are
53 essential and somewhat different to those for the general population. These should be provided by
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3 the hospital or government authorities and include: (i) prioritizing HCP family access to testing
4 and treatment to reduce HCP uncertainty, (ii) ensuring the best personal protective equipment and
5 safety measures (e.g., providing enough personal protective equipment, providing safe hospital
6 environment etc.), (iii) facilitating risk minimizing practices (e.g., showering at work before
7 coming home, not bringing work clothes home, etc.), (iv) ensuring flexible duty schedules to
8 reduce work-related distress, and (v) enhancing training and professional skills in an attempt to
9 minimize the spread of COVID-19 (Mamun et al., 2020a; Usman et al., 2020).
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12 The present findings are limited because the information was collected from press media reports
13 published in the English language. However, Mamun and Griffiths (2020d) emphasized the
14 importance of such media reports in suicide research especially where available information is
15 limited. In addition, the press reports that were collected were not verified by psychological
16 autopsies, which may limit the findings. Finally, the suicide cases extracted from the *Google News*
17 search engine may also be a limitation of the study, because some of the cases might not have been
18 picked up.
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21 **Implications for psychiatric nursing practice**

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23 Hospitals are at the forefront of helping combat the COVID-19 crisis, and HCPs work on the
24 frontline daily. Suicide occurrence by HCPs may subsequently affect other HCPs in their day-to-
25 day work. Therefore, a supportive workplace infrastructure for HCPs is needed to ensure their
26 mental health wellbeing. Support is needed for preparation for their role, monitoring of their
27 mental health, and regular mental health evaluation. These are essential to maintain a healthy and
28 productive workforce with full partnership within the multidisciplinary team. Furthermore,
29 adequate quantity and quality supplies of PPE, COVID-19 compliant work practices, and infection
30 control measures are required to reduce the burden of further stress.
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