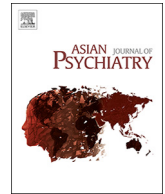




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Letter to the Editor

Suicides related to the COVID-19 outbreak in India: A pilot study of media reports



Dear Editor,

The COVID-19 pandemic, caused by infection with a novel coronavirus (nCoV-2), has reached the level of a global health crisis, generating a variety of emotional responses among the general public. This includes fear-related behaviour (Shultz et al., 2016) which can lead to psychiatric morbidity and even suicide in vulnerable individuals. A review of historical data from past pandemics such as influenza and Severe Acute Respiratory Syndrome (SARS) showed that these outbreaks were followed by significant increases in suicidal deaths (Wasserman, 1992; Chan et al., 2003). It is of interest that suicidal deaths related to COVID-19 have already been reported in the Asian Journal of Psychiatry (Goyal et al., 2020; Mamun and Griffiths, 2020).

The dissemination of information related to suicide during the COVID-19 outbreak, particularly as it pertains to Asian countries, is of importance to healthcare providers and policy-makers, and is in keeping with the objectives set out by the Journal in its position statement (Tandon, 2020). As direct interaction with the families of suicide victims is difficult during a disease outbreak, information regarding such deaths must be obtained through indirect means. One such method is the review of media reports. In this light, we conducted a pilot study of all English-language media reports containing the words "COVID-19", "suicide" and "India", and accessible online through the Google News aggregator, covering the period March 12th to April 11th, 2020. Only reports of individual completed suicides were considered for data analysis. In case there was more than one report of the same incident, all available reports were used as a data source.

The data extracted from the reports included: (a) socio-demographic details, (b) any possible diagnosis of mental illness or substance use disorder, (c) triggering circumstances, (d) remote predisposing factors. These categories were based on the stress-diathesis model of suicide (Mann, 2002).

A total of 49 relevant reports were retrieved, covering 23 suicidal deaths. The majority of reported victims were adult men (20/23, 87%). Three suicides occurred in elderly people. Six of the deaths occurred in hospitalized patients who were placed in isolation for symptoms of suspected COVID-19. There was one incident suggestive of a suicide pact involving a husband and wife.

Information regarding the method of suicide was available in 18 cases. The most common methods adopted were violent methods such as hanging (10/18, 55.6%), jumping from a height (3/18, 16.7%) and cut-throat injuries (3/18, 16.7%). One death each occurred through self-immolation and medication overdose.

In seven cases, a possible psychiatric diagnosis was mentioned. Four victims were reported as suffering from depression based on reports from relatives, and three victims were noted to have alcohol dependence with withdrawal symptoms. Alcohol-related suicides were reported exclusively in South Indian states, while depression was reported

in victims from North and Central Indian states.

At least one precipitating factor was reported for each victim. COVID-19 related factors formed the bulk of these, especially fears of being infected (9/23, 39.13%) or having influenza-like symptoms (7/23, 30.43%). Only one of the deaths occurred in a patient with confirmed infection, and one death occurred in a victim who underwent stigmatization and ostracism despite testing negative. Triggers unrelated to the disease were reported less frequently (6/23, 30.43%) and included alcohol withdrawal (n = 3), separation from family due to transport restrictions (n = 1), abrupt loss of a job in a migrant worker (n = 1), and alleged work stress in a disaster management official (n = 1).

Predisposing vulnerability factors were reported in 5 victims and included bereavement (2 cases), migrant worker status (2 cases), and financial hardship.

These reports reveal certain common themes that are of importance in preventing suicides during the COVID-19 outbreak. First, fears of infection played a major role in several number of attempts. Such fears are often the result of inadequate or inaccurate information. Up-to-date and valid information regarding the COVID-19 outbreak can reduce these fears. Similarly, symptoms suggestive of COVID-19 infection are associated with psychological distress, and patients with such symptoms should be evaluated for features of anxiety and depression as well as for suicide risk (Wang et al., 2020). It is possible that such measures, as well as greater vigilance at the hospital level, could have prevented some of these deaths. This is underlined by the fact that one-fourth of deaths in this series occurred in hospital settings high number of reported suicides that occurred in hospitalized patients (over ¼ of the cases in this series).

Pre-existing psychiatric or substance use disorders were found in 30% of the deaths reported. Patients with existing mental disorders are at risk of symptom exacerbation during a disease outbreak, and this can be compounded by restrictions on access to care. It is important to ensure continued access to mental health services for these patients during an outbreak, perhaps by implementing telemedicine services (Yao et al., 2020).

Even in the absence of a fear of infection, the protective measures necessitated by a disease outbreak can be a source of stress in vulnerable individuals, such as migrant workers (Nayar, 2020), older adults, and those in high-stress occupations, including healthcare workers. Interventions aimed at addressing the physical, emotional and socioeconomic needs of these individuals could reduce their risk of suicide.

Though the results presented here are subject to many limitations, particularly reporting biases (Armstrong et al., 2018), they provide preliminary information on the factors related to suicide during the COVID-19 outbreak in India. It is hoped that these findings will be of use to researchers as well as to policy-makers.

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References

- Armstrong, G., Vijayakumar, L., Niederkrotenthaler, T., Jayaseelan, M., Kannan, R., Pirkis, J., Jorm, A.F., 2018. Assessing the quality of media reporting of suicide news in India against World Health Organization guidelines: a content analysis study of nine major newspapers in Tamil Nadu. *Aust. N. Z. J. Psychiatry* 52, 856–863. <https://doi.org/10.1177/0004867418772343>.
- Chan, S.M., Chiu, F.K., Lam, C.W., Leung, P.Y., Conwell, Y., 2003. Elderly suicide and the 2003 SARS epidemic in Hong Kong. *Int. J. Geriatr. Psychiatry* 21, 113–118. <https://doi.org/10.1002/gps.1432>.
- Goyal, K., Chauhan, P., Chhikara, K., Gupta, P., Singh, M.P., 2020. Fear of COVID 2019: first suicidal case in India!. *Asian J. Psychiatr.* 49, 10189. <https://doi.org/10.1016/j.ajp.2020.10189>.
- Mamun, M.A., Griffiths, M.D., 2020. First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: possible suicide prevention strategies. *Asian J. Psychiatr.* 51, 102073 <https://doi.org/j.ajp.2020.102073>.
- Mann, J.J., 2002. A current perspective of suicide and attempted suicide. *Ann. Int. Med.* 136, 302–311.
- Nayar, P.K., 2020. The long walk: migrant workers and extreme mobility in the age of corona. *J. Extr. Anthropol.* 4, E1–E6 <https://doi.org/10.5617.7856>.
- Shultz, J.M., Cooper, J.L., Baingana, F., Oquendo, M.A., Espinel, Z., Althouse, B.M., Marcelin, L.H., Towers, S., Espinola, M., McCoy, C.B., Mazurik, L., Wainberg, M.L., Neria, Y., Rechkemmer, A., 2016. The role of fear-related behaviors in the 2013-2016 west africa ebola virus disease outbreak. *Curr. Psychiatr. Rep.* 18, 104. <https://doi.org/10.1007/s11920-016-0741-y>.
- Tandon, R., 2020. The COVID-19 pandemic, personal reflections on editorial responsibility. *Asian J. Psychiatr.* 50, 102100. <https://doi.org/10.1016/j.ajp.2020.102100>.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., Ho, R.C., 2020. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int. J. Env. Res. Pub. Health* 17, E1729. <https://doi.org/10.3390/ijerph17051729>.
- Wasserman, I.M., 1992. The impact of epidemic, war, prohibition and media on suicide: United States, 1910-1920. *Suicide Life. Behav.* 22, 240–254.
- Yao, H., Chen, J.H., Xu, Y.F., 2020. Patients with mental health disorders in the COVID-19 epidemic. *Lancet Psychiatry* 7, e21. [https://doi.org/10.1016/S2215-0366\(20\)30090-0](https://doi.org/10.1016/S2215-0366(20)30090-0).

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