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Letter to the editor



The short-term impact of the COVID-19 outbreak on suicides in Korea

Dear Editor,

The Coronavirus Disease-19 (COVID-19) outbreak is a significant mental health threat. The continuing exposure to life-threatening infection may cause serious stress, and recognition of the risk involved with COVID-19 would increase anxiety and insecurity. Moreover, public health and social measures for COVID-19, which involve various restrictions in daily life and social distancing, are emotionally challenging (Klomek, 2020). Economic conditions are expected to decline, which would be a heavy burden for many people. These conditions can negatively affect mental health, which can increase the risk of suicide (Gunnell et al., 2020; Klomek, 2020; Reger et al., 2020).

While an increase in the suicide rate seems like an inevitable result of the COVID-19 outbreak, the current studies are limited to reports of individual suicides associated with COVID-19 (Buschmann and Tsokos, 2020; Dsouza et al., 2020; Griffiths and Mamun, 2020; Hollyfield, 2020) or statements about the concern for the possible increase in suicide rates (Gunnell et al., 2020; Reger et al., 2020; Thakur and Jain, 2020). However, the impact of COVID-19 on suicide cannot be corroborated by a sporadic occurrence of suicides. Whereas an increase in the suicide rate during pandemics or disasters has been reported (Bosnar et al., 2004; Cheung et al., 2008; Rachiotis et al., 2015), it was also documented that crises or disasters did not lead to an increase and could even cause a decrease (Chan et al., 2006; Lester, 1993; Rojcewicz Jr, 1971). These findings suggest that the effect of the COVID-19 pandemic on suicides

could be different from what is normally expected. Therefore, the change in suicides after the COVID-19 pandemic needs to be examined for the entire population rather than individuals.

The recent change in the number of suicides in Korea shows that the COVID-19 outbreak may not necessarily be associated with an increase in the suicide rate. Contrary to popular belief, the number of suicides in the first eight months of the pandemic compared with the same period last year (Fig. 1). In the analysis using the national data for suicide (CoronaBoard, 2020; KOSIS, 2020), the number of suicides in Korea decreased by 6.9% in the first eight months of 2020 compared with the same period in 2019. However, there was a difference between males and females. While the number of suicides in males, which accounts for about 70% of total suicides, decreased by 10.1%, females showed a 1.4% increase. In the period following March, when the number of COVID-19 deaths and cases were the highest, males showed marked decreases in the number of suicides while females showed increases in March and April and a decrease in May.

This study shows that the pandemic, despite many anticipated negative impacts on mental health, may not lead to an immediate increase in the suicide rate and that the impact can be different between males and females. The study finding is especially important considering that the unemployment rate in the first half of 2020 was higher than in 2019, which indicates that the negative economic after-effects have already begun to appear. This short-term change in suicides after the

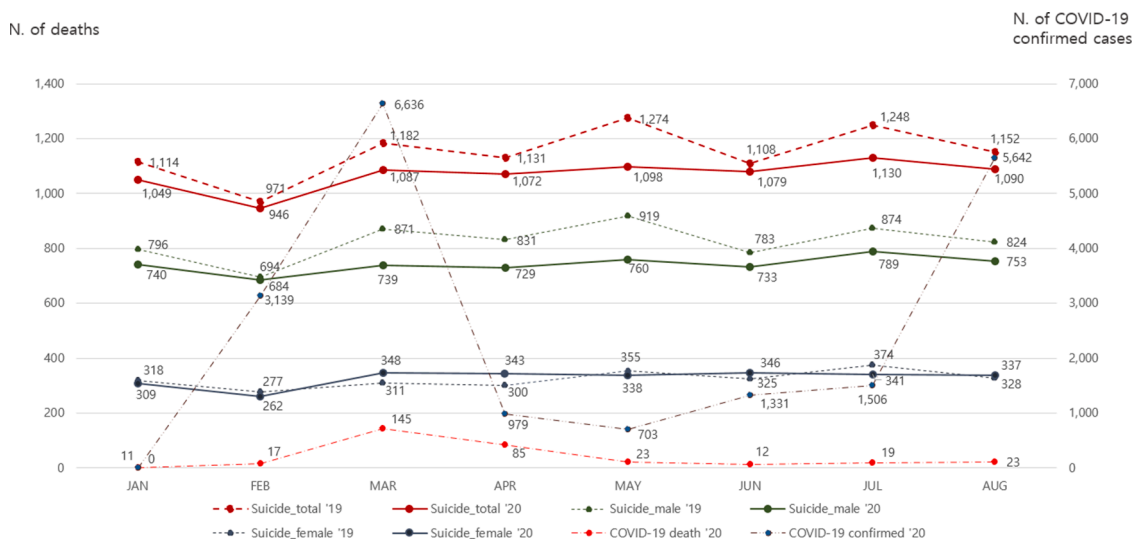


Fig. 1. The COVID-19 outbreak and the number of suicides in the first eight months of the years 2020 and 2019 in Korea

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COVID-19 suggests that a serious crisis pervading a society may have some effects that alleviate the risk of suicide. Although it is possible that in the long run the negative social and economic impacts of the COVID-19 pandemic may result in an increase in suicide rates, the short-term effect of the COVID-19 on suicide would have to be further investigated given the unexpected association of the crisis with suicide rates in Korea.

Declaration of Competing Interest

The author has no conflicts of interest to declare.

References

- Bosnar, A., Stemberga, V., Cuculic, D., Zamolo, G., Stifter, S., Coklo, M., 2004. Suicide rate after the 1991–1995 War in Southwestern Croatia. *Arch. Med. Res.* 35 (4), 344–347.
- Buschmann, C., Tsokos, M., 2020. Corona-associated suicide - Observations made in the autopsy room. *Leg. Med. (Tokyo, Jpn.)* 46, 101723. -101723.
- Chan, S.M.S., Chiu, F.K.H., Lam, C.W.L., Leung, P.Y.V., Conwell, Y., 2006. Elderly suicide and the 2003 SARS epidemic in Hong Kong. *Int. J. Geriatr. Psychiatry* 21 (2), 113–118.
- Cheung, Y., Chau, P.H., Yip, P.S., 2008. A revisit on older adults suicides and Severe Acute Respiratory Syndrome (SARS) epidemic in Hong Kong. *Int. J. Geriatr. Psychiatry* 23 (12), 1231–1238.
- Dsouza, D.D., Quadros, S., Hyderabadwala, Z.J., Mamun, M.A., 2020. Aggregated COVID-19 suicide incidences in India: fear of COVID-19 infection is the prominent causative factor. *Psychiatry Res.*, 113145.
- Griffiths, M.D., Mamun, M.A., 2020. COVID-19 suicidal behavior among couples and suicide pacts: case study evidence from press reports. *Psychiatry Res.* 289, 113105.
- Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R.C., Pirkis, J., Caine, E.D., 2020. Suicide risk and prevention during the COVID-19 pandemic. *Lancet Psychiatry* 7 (6), 468–471.
- Hollyfield, A., 2020. Suicides On the Rise Amid Stay-At-Home order, Bay Area Medical Professionals Say. *ABC7NEWS*.
- Klomek, A.B., 2020. Suicide prevention during the COVID-19 outbreak. *Lancet Psychiatry* 7 (5), 390.
- KOSIS, 2020. Number of suicides by month. Available from: http://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1B34E17&conn_path=I3.
- CoronaBoard, 2020. COVID-19 Briefing Board. Available from: <https://coronaboard.kr/#chart-slide>.
- Lester, D., 1993. The effect of war on suicide rates. *Eur. Arch. Psychiatry Clin. Neurosci.* 242 (4), 248–249.
- Rachiotis, G., Stuckler, D., McKee, M., Hadjichristodoulou, C., 2015. What has happened to suicides during the Greek economic crisis? Findings from an ecological study of suicides and their determinants (2003–2012). *BMJ Open* 5 (3), e007295.
- Reger, M.A., Stanley, I.H., Joiner, T.E., 2020. Suicide Mortality and Coronavirus Disease 2019—A Perfect Storm? *JAMA Psychiatry*.
- Rojciewicz Jr., S.J., 1971. War and suicide. *Suicide Life-Threat. Behav.* 1 (1), 46–54.
- Thakur, V., Jain, A., 2020. COVID 2019-suicides: a global psychological pandemic. *Brain Behav. Immun.* 88, 952–953.

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