COVID-19 Pandemic: Urgent Needs to Support and Monitor Long-Term Effects of Mental Strain on People

See also Holingue et al., p. 1628.

To date, coronavirus disease 2019 (COVID-19) has claimed more than 800 000 lives worldwide, with most cases in the Americas and Europe.[1] The United States is one of the countries with higher COVID-19 death counts. Despite global efforts to decrease its colossal impacts, such as lockdown, social distancing, and strict hygiene measures, the pandemic is likely to negatively affect anybody with or without previous mental illnesses, manifested by fear and disconnecting from society.[2]

Population-based research evidence reported in this issue of *AJPH* by Holingue et al. (p. 1628) showed that fear of becoming infected with and dying from COVID-19 was strongly associated with the chance of becoming mentally distressed. In the states with higher COVID-19 death counts, this chance increased each day by 11%, independent of history of mental conditions. Their findings warn us not to overlook the adverse effects of prolonged mental distress on overall health and well-being at a population level.

I highlight mental strain resulting from the COVID-19 pandemic reported by Holingue et al., followed by implications from ongoing exposure to this mental health strain at the population level and future implications.

FEAR AND ANXIETY

Observing a population-representative adult sample in the United States, Holingue et al. showed that the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) had a negative effect on individual mental health at a population level. Most importantly, increased fear of becoming infected with and dying from COVID-19 further amplified the risk for becoming mentally distressed in general, while individual efforts to avoid infecting other people also increased the chance of becoming mentally distressed. Macrolevel interventions such as providing useful information[3] (e.g., effective preventive hygiene measures, local infection rate, and medical resources) could help to reduce the level of fear and anxiety at a population level. However, the work indicates that the interaction between fear and anxiety and preventive measures appeared to be complex.

Even during the seven days of observation, the study reported that the chance of people worsening their mental health increased by 11% for each day in the states with higher COVID-19 death counts. The authors found that those who had previous mental conditions were vulnerable to developing poor mental health during the COVID-19 pandemic. Directly facing actual COVID-19 cases in their life could worsen existing poor physical or mental conditions by amplifying such detrimental symptoms,[3] which their findings also report. Prolonged exposure to the COVID-19 pandemic across the countries is likely to be a threat to positive mental well-being at the population level, probably leading to a sharp rise in those who report poor mental health across countries. Observing the sharp increase in positive COVID-19 cases and deaths in the United States[1] raises the concern that population mental health in the United States is at stake.

FUTURE IMPLICATIONS

Based on the work of Holingue et al., we could say that disparities of mental health in the United States would be widened as the pandemic continues, given that those who had a history of mental illness were likely to be vulnerable to develop poor mental health during the pandemic. Lockdown to control the COVID-19 pandemic also suppressed economic activity globally.[4] Although the findings were not significant, a negative association between nonemployment and mental distress in the work of Holingue et al. is troubling. Rise of unemployment has been observed elsewhere,[4] with the rate varying even among hard-hit countries like the United States (11%). Lockdown disproportionally affected economic productivity among occupational groups in terms of those who can continue to work remotely as opposed to those who cannot, such as service and hospitality workers. In the United States, the speed and volume of job loss were far greater than during the 2008 financial crisis. The disparities in economic damage from lockdown need macrolevel financial interventions to protect vulnerable occupational groups.

The suicide rate is expected to rise during the COVID-19 pandemic if the trend observed in the influenza and SARS pandemics continues.[2] In this regard, strengthening mental health and suicide crisis management

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services is a priority, requiring urgent and upstream interventions that ensure access to resources such as financial support. The future of disparities in mental health in the United States is likely to be bleak unless the government implements effective measures to mitigate financial loss caused by job loss that are equally applicable and accessible to all.

Biologically, irreversible structural damage to the brain region that regulates the inflammatory response through exposure to untreated depression was estimated to occur in more than 10 years.[5] Given that, the cognitive and physiological effects from depression caused by the COVID-19 pandemic are less likely to be given a high priority. However, we do not know yet how long the global pandemic will continue or whether a second major outbreak will follow the current pandemic. The daily increase in depression cases, reported by Holingue et al., informs us that the COVID-19 pandemic has brought and accumulated all sources of mental strain at an unprecedented speed and intensity. Despite vaccines in development being the vital determinant to end physical threats from the virus, mental scars resulting from the pandemic are likely to last for a considerable time. Supported by existing and new population-based data, research evidence enables us to develop a long-term vision for population mental health, which can mitigate the subsequent global poor mental health attributable to the COVID-19 pandemic.

Having extensive social networks that provide regular social contacts is a significant driving factor to promote adults' positive mental well-being,[6] because social isolation and loneliness are risk factors for mental distress. Despite loneliness not being the focus of this *AJPH* article, 5% of adults in the United Kingdom reported chronic loneliness (feeling always or often lonely).[7] By contrast, approximately 30% of the adults were thought to be experiencing lockdown loneliness (feeling lonely during one week in lockdown). Moreover, loss of employment caused by lockdown may further economically disadvantage those who are experiencing lockdown loneliness because they often live in rented accommodations. Given the association between experiencing loneliness and poor mental health, lockdown loneliness could be an agenda to be examined in the United States.

The negative association between being unmarried and mental distress in this *AJPH* work is of concern, although not statistically significant, because individuals experiencing lockdown loneliness were mostly living alone.[7] In a UK report, those who experienced loneliness expressed that they were not coping well with their living situation but did not actively engage with family members or friends for help and were less likely to acknowledge the presence of support in their community. Lockdown can be a useful and necessary intervention to contain the COVID-19 pandemic but also can independently worsen individual mental health and well-being through loneliness.[7]

The interrelations between the determinants of poor mental health during the COVID-19 pandemic reported by Holingue et al. require continuous efforts to understand the mechanism. The authors clearly warn us that population mental health is at stake in the COVID-19 pandemic. As numbers of cases and death totals resulting from COVID-19 increase each day globally, other determinants of poor mental health such as job loss and loneliness should be investigated for the short- and long-term effects on mental health and well-being at the population level. AJPH

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CONFLICTS OF INTEREST

The author has no conflicts of interest to disclose.

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