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## Editorial

## The acute effects of the COVID-19 pandemic on insomnia and psychological symptoms



The emergence of sleep disturbances in response to major stressful events including natural disasters (eg, wildfires, earthquakes, floods) or wartime has been documented previously [1,2]. Unlike those events, which are typically fairly localized, the 2019 novel coronavirus (COVID-19) pandemic is a worldwide crisis that has produced unprecedented changes in our lives. For many people, it has generated significant stress, anxiety, and worries about health, social isolation, employment, finances as well as the challenge of combining work and family obligations. Such a major stressful life event is also likely to have impaired sleep and circadian rhythms, at a time when healthy sleep is particularly important to cope adaptively with this crisis and uncertainty about the future.

The paper by Lin and colleagues in this issue of *Sleep Medicine* [3] reports on a timely study that investigated the early impact of COVID-19 pandemic on sleep and psychological symptoms in a large sample of adults ( $N = 5641$ ) living in China. Both health care workers and adults from the general population completed an online survey of insomnia, anxiety, depression, and acute stress during the peak of COVID-19 spread in China in early to mid-February 2020. By acting so quickly, the investigators were able to capture the acute impact of the pandemic on sleep and psychological symptoms. The main findings, as expected, revealed very high rates of clinically significant insomnia (20%), acute stress (15.8%), anxiety (18.5%), and depression (24.5%). Respondents were classified into four groups according to their level of exposure and threat to COVID-19 infection. Insomnia and psychological symptoms were more severe among participants living in the epicenter (Hubei province) and among those who experienced higher degree of threats, ie, health-care workers and management staff on the front lines. Investigators also compared rates of insomnia before and during COVID-19 by asking participants to complete twice the Insomnia Severity Index, including a retrospective evaluation of insomnia prior to the pandemic (defined as the last three months of 2019). Despite this imperfect measure subject to recall bias, the data suggested a 37% increase in the rates of clinical insomnia (from 14.6% to 20%) from before to peak of COVID pandemic.

This study is noteworthy because it is among the first one to document insomnia and psychological symptoms in response to a pandemic, and the first to examine severity of those symptoms according to degree of threats of being infected with COVID-19. The few published studies on this topic focused primarily on health-care workers and their findings indicated even higher rates of insomnia (34%–36%), anxiety (45%) and depressive symptoms (50%) among those individuals relative to the general population, with the symptoms being more severe among front line workers

directly involved with patients diagnosed or at risks for COVID-19 [4,5]. One weakness of the Lin et al.'s study is that older adults, clearly those most severely affected by this pandemic, represented only 2% of the sample [3]. One might expect significantly higher rates of insomnia and psychological symptoms among this segment of the population. In addition, the sample was composed predominantly of females (70%) and, although insomnia is generally more prevalent among females, the issue of sample representativeness remains problematic with this study as for most nonrandom surveys.

While the emergence of sleep disturbances and psychological distress in response to stressful life events is to be expected, the prolonged measures of social confinement and isolation during COVID-19 brings new dimensions to this crisis that might explain the increased incidence of sleep problems. Indeed, this pandemic and the social confinement have produced unprecedented changes in our daily routines. Beyond the stress and anxiety associated with health, employment, finances, and the fear of being infected, the restrictions surrounding the social confinement have upset daily routines that typically serve as timekeepers for sleep-wake rhythms to remain in synchrony with the day–night cycles. Simple routines typically performed at fixed times such as waking up in the morning, showing up at work, eating meals, and maintaining social and leisure activities have all been disrupted by the pandemic and social confinement. A study conducted in Italy reported that younger adults went to bed later and got up later during the peak of the pandemic, most likely contributing to a phase-delay type of insomnia [6]. The atypical work schedules of many health-care workers are also likely to have exacerbated these disruptions.

The findings of Lin et al.'s [3] study have important clinical and public health implications. The immediate psychological impact of the pandemic suggests the need for rapid and concerted interventions to help people in distress cope with the aftermath of this unprecedented crisis. While individual psychotherapy may be required for some people, the extent of the crisis and its psychological consequences are such that only large scale, population-based interventions may have a meaningful impact on global mental health. Because sleep disturbances such as insomnia and nightmares may persist well after the pandemic, and such problems are often precursors of psychiatric disorders, individuals who develop sleep disturbances during COVID-19 may be at greater risk for long-term adverse outcomes. Likewise, given the high rates of acute insomnia associated with this pandemic, and the evidence that acute insomnia often turns into chronic insomnia, this also calls for concerted public health interventions. Sleep health education targeting the general population should be the first priority to provide broad-based information about sleep health (eg, the

importance of maintaining regular sleep schedules, obtaining a daily dose of daylight exposure) even during a prolonged period of confinement. For those with chronic insomnia, cognitive behavioral therapy, the first-line therapy for insomnia disorder, should be made more widely available through digital and telehealth platforms [7]. The sleep community has a social responsibility to be visible in the media, take action, and educate the lay public and health-care workers about the importance of sleep and about strategies to maintain healthy sleep during this pandemic. The Canadian Sleep and Circadian Network and its partners, as well as the European CBT-I academy, have already taken such actions (for ex., see Altena et al. [7], and [www.sleepnitcanada.ca](http://www.sleepnitcanada.ca)).

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### Conflict of interest

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: <https://doi.org/10.1016/j.sleep.2020.06.005>.

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