

## LETTERS TO THE EDITOR

### Sleep in young-adult cancer survivors during the COVID-19 pandemic

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The impact of coronavirus disease 2019 (COVID-19) on sleep has received considerable attention. Quarantine recommendations have reduced commutes and allowed many to work from home, resulting in increased schedule flexibility. This has enabled people to potentially wake up later and have more sleep opportunity.<sup>1</sup> However, rather than improving self-reported sleep quality, data have suggested that sleep during the pandemic has been worse.<sup>2</sup> One group that has not been the focus of much quarantine-related sleep research are young adults. This is relevant as the normal delay in circadian rhythms associated with later sleep onset/offset begins at puberty and continues into adolescence/young adulthood.<sup>3</sup> These biological changes conflict with early school/work schedules, resulting in insufficient sleep and circadian misalignment.

We have been collecting data from young-adult cancer survivors (mean age = 25.5 years; 63.9% female) as part of a health behavior change study that is not addressing sleep. These data included the Insomnia Severity Index (ISI).<sup>4</sup> In exploratory analyses, we compared the sleep of participants who completed the ISI before COVID-19 restrictions were implemented in the United States (data collection: February 2018–June 2019; n = 173) versus those completing the ISI afterwards (April 2020–May 2020; n = 35). Rather than seeing increased insomnia severity as hypothesized, the directionality of our findings suggests that insomnia severity was less in young-adult cancer survivors after widespread quarantine restrictions had been instituted (ISI total score of 6.3 [SD = 5.3] vs 8.1 [SD = 5.9];  $P = .09$ ). Additionally, the proportion of participants reporting an ISI total score  $\geq 8$  (indicating likelihood of insomnia disorder<sup>5</sup>) was lower during the pandemic (34.3% vs 50.3%;  $P = .08$ ). The sex and age of both samples were comparable.

These findings are notable because the poorer sleep documented during COVID-19 has been partially attributed to higher levels of anxiety/depression during lockdown,<sup>1</sup> and young-adult cancer survivors are at higher risk of anxiety/depression than their peers.<sup>6</sup> While preliminary, our data raise the possibility that not all individuals are sleeping worse during the pandemic. Rather than assuming worse sleep, clinicians and researchers should consider pandemic-related factors that may be associated with better sleep and health outcomes for certain subpopulations.<sup>7</sup>

#### CITATION

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#### REFERENCES

- Cellini N, Canale N, Mioni G, Costa S. Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. *J Sleep Res*. 2020;29(4):e13074.
- Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Res*. 2020;288:112954.
- Crowley SJ, Acebo C, Carskadon MA. Sleep, circadian rhythms, and delayed phase in adolescence. *Sleep Med*. 2007;8(6):602–612.
- Bastien CH, Vallières A, Morin CM. Validation of the Insomnia Severity Index as an outcome measure for insomnia research. *Sleep Med*. 2001;2(4):297–307.
- Savard MH, Savard J, Simard S, Ivers H. Empirical validation of the Insomnia Severity Index in cancer patients. *Psychooncology*. 2005;14(6):429–441.
- Prasad PK, Hardy KK, Zhang N, et al. Psychosocial and neurocognitive outcomes in adult survivors of adolescent and early young adult cancer: a report from the Childhood Cancer Survivor Study. *J Clin Oncol*. 2015;33(23):2545–2552.
- Liu Z, Tang H, Jin Q, et al. Sleep of preschoolers during the coronavirus disease 2019 (COVID-19) outbreak [published online ahead of print, 2020 Jul 27]. *J Sleep Res*. 2020;e13142. doi:10.1111/jsr.13142

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