

# The Effects of Confinement on Sleep Quality and Level of Interest in University Students [Response To Letter]

This article was published in the following Dove Press journal:  
*Nature and Science of Sleep*

Iratxe Martínez-Lezaun<sup>1</sup>  
Montserrat Santamaría-  
Vázquez<sup>1</sup>  
Mario Del Líbano<sup>2</sup>

<sup>1</sup>Health Sciences Department,  
Universidad de Burgos, Burgos, Spain;

<sup>2</sup>Education Sciences Department,  
Universidad de Burgos, Burgos, Spain

## Dear editor

We are pleased our work has sparked discussion and we would like to thank the opportunity to answer the main questions raised by Zakariya and Low.<sup>1</sup>

Concerning the first question raised about to include lifestyle factors as a variable that could play a role in the deterioration of the sleep quality, we agree with Zakariya and Low that these kind of variables would have been interesting to study. We will consider them in future investigations that we will carry out such as assessing daily consumption of caffeine, tobacco or alcohol, as well as other non-legal drugs that can also affect sleep and that students may consume.

Regarding the suggestion to use a more homogeneous sample in terms of course in future studies, we agree that there may be differences in the quality of sleep related to students' academic commitments depending on the year of study. However, we believe it is preferable to increase the sample of participants in each course and control its effect on results, rather than focusing on just one of them.

To control the effect of the course on the results obtained in our research, we carried out two ANOVAs. As the first dependent variable, we used the change score in subjective sleep quality obtained by subtracting the average score obtained at 20 days from that obtained before the start of the confinement (change score 1). As a second dependent variable, we used the sleep quality change score obtained by subtracting the average score obtained at 40 days from that obtained at 20 days (change score 2).

The results showed that there are no statistically significant differences in change scores 1 ( $F(3, 71) = 1.932, p = 0.132$ ) and change scores 2 ( $F(3, 71) = 0.865, p = 0.464$ ) depending on the course (see Table 1). Therefore, we can conclude that, at least in our research, there are no statistically significant differences in the deterioration of sleep quality according to the year of study of each participant.

Finally, in response to the question of why we chose the time interval of 20 and 40 days, instead of considered the reference period of 1 month, it was because we thought it was important to take data in the same conditions of lockdown. In Spain, the government decreed a state of alarm on 14th March, and it was updating the period by 15 days. As time went by, the government was announcing that the confinement conditions would be less restrictive, and the population would be able

Correspondence: Montserrat  
Santamaría-Vázquez  
Health Sciences Department, Universidad  
de Burgos, Paseo Comendadores s/n,  
Burgos, 09001, Spain  
Tel + 34 947 109541  
Email msvazquez@ubu.es

**Table 1** Descriptive Statistics of Change Score 1 (20 Days – Before) and Change Score 2 (40 Days – 20 Days)

Course	Change Score 1		Change Score 2	
	M	SD	M	SD
First	0.51	0.83	-0.04	0.50
Second	-0.05	0.33	-0.21	0.49
Third	0.38	0.61	-0.22	0.49
Fourth	0.14	0.46	-0.03	0.44

**Abbreviations:** M, mean; SD, standard deviation.

to do more things outdoors. For this reason, we decided to anticipate the data collection in order to keep the same conditions.

In short, we agree with the authors' assertions and believe that more studies are needed in confinement situations in order to reach more consistent conclusions regarding their influence on people's sleep.

## Disclosure

The authors report no conflicts of interest in this communication.

## Reference

1. Zakariya MZ, Low JM. The effects of confinement on sleep quality and level of interest in university students [letter]. *Nat Sci Sleep*. 2020;12:1225–1226. doi:10.2147/NSS.S295981

Dove Medical Press encourages responsible, free and frank academic debate. The content of the Nature and Science of Sleep 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the Nature and Science of Sleep editors. While all reasonable steps have been taken to confirm the content of each letter, Dove Medical Press accepts no liability in respect of the content of any letter, nor is it responsible for the content and accuracy of any letter to the editor.

### Nature and Science of Sleep

Dovepress

### Publish your work in this journal

Nature and Science of Sleep is an international, peer-reviewed, open access journal covering all aspects of sleep science and sleep medicine, including the neurophysiology and functions of sleep, the genetics of sleep, sleep and society, biological rhythms, dreaming, sleep disorders and therapy, and strategies to optimize healthy sleep.

The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/nature-and-science-of-sleep-journal>