

Repeated COVID-19 Media Exposure Effects on Anxiety and Sleep in College Students

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BACKGROUND

Since the start of the COVID-19 pandemic, the college population has reported higher levels of distress, anxiety, and sleep disturbances that have been linked to increased COVID-19 media exposure (Keckojevic et al., 2020; Huckins et al., 2020).

As these reports continue to emerge, it is critical to characterize the mood and sleep alterations they highlight as targets for interventions and preventative strategies.

In our pilot study, we designed and tested a new protocol to directly assess the effect of COVID-related media exposure on self-reported measures of mood, anxiety, and sleep in 14 undergraduate students.

METHODS

Participants: 14 undergraduate students (Males, n=1; Females, n=13; 18-26 yo).

Procedure:

➤**Week 1 (baseline measures):**

-**Day 1-7:** Qualtrics sleep questionnaires and dream logs daily for 7 days.

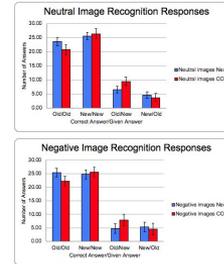
➤**Week 2 (IAPS task and media exposure):**

-**Day 1:** International Affective Picture System (IAPS) Image rating task (Encoding); 60 emotionally valenced and arousing images, 60 neutral images; Collected valence and arousal ratings (both on a 9-point Self-Assessment Manikin scale) for each image presented.

-**Day 2-7:** Daily manipulation videos (COVID-19-related news for the experimental COVID group (n=8) and neutral non-COVID-19 related news for the control NEUTRAL group (n=6)); Daily pre-video mood and anxiety questionnaires (BAI, PANAS and STAI-S); Daily post-video mood and anxiety questionnaires (BAI, PANAS and STAI-S); Daily morning sleep questionnaires and dream logs the next morning.

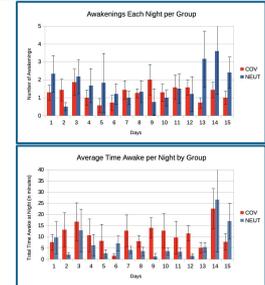
-**Day 8:** IAPS Image rating task (Recognition memory); 60 emotionally valenced and arousing images (30 old, 30 new), 60 neutral images (30 old, 30 new); Collected responses: old or new image and valence and arousal ratings (both on a 9-point Self-Assessment Manikin scale) for each image presented.

RESULTS: RECOGNITION MEMORY



In our preliminary data, COVID participants showed a pattern of more incorrect old/new responses to the presentation of IAPS images, regardless of the type of image.

RESULTS: SLEEP



Though COVID participants appeared to have fewer awakenings in the night, they seemed to stay awake longer.

RESULTS: MOOD AND ANXIETY

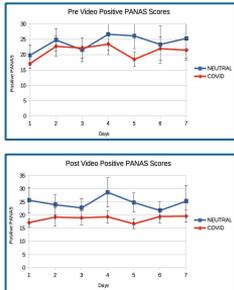


Figure 1.

Positive PANAS score: There were no group differences before or after the media exposure.

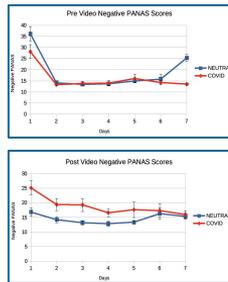


Figure 2.

Negative PANAS score: There was no difference in negative PANAS scores prior to the media exposure. However, post-manipulation, COVID participants showed higher negative mood scores compared to the NEUTRAL participants, indicating that COVID-19 media exposure led to stronger negative affect.

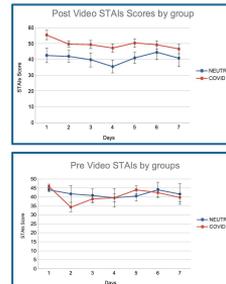


Figure 3.

STAI-S score: COVID participants showed higher levels of state anxiety following the media exposure compared to the NEUTRAL participants.

CONCLUSIONS

Our pilot study suggests that repeated COVID-19 media exposure, even at only 15 minutes, can negatively impact mood and state anxiety, and these changes can be observed almost immediately.

Limitations: We had a small sample of participants that were predominantly female. More data points were necessary to more fully evaluate sleep measures. Our protocol consisted of only 1 week of media exposure, which might not have fully grasped the effects of our manipulation.

Future directions: Further analyses of the sleep and dream data will be performed, as well as other more qualitative measures we collected.

REFERENCES

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Keckojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K. (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PLoS one*, 15(9). e0239696. <https://doi.org/10.1371/journal.pone.0239696>

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