

BOOZE MAKES YOU LOSE SNOOZE: THE EFFECT OF ALCOHOL ON PERCEIVED SLEEP QUALITY

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INTRODUCTION

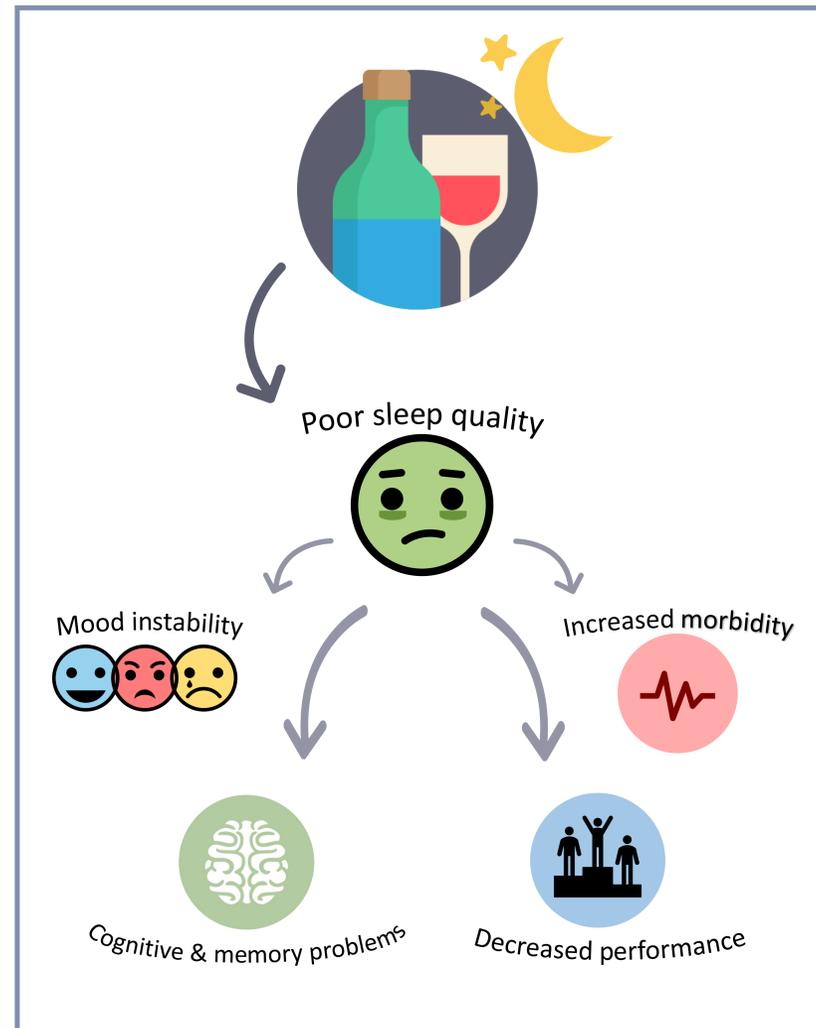
Extensive research indicates that alcohol impacts sleep: sleep latency decreases, yet the price is paid in sleep fragmentation, disturbed sleep architecture, and increased WASO, causing overall poor sleep quality. Poor sleep is in turn linked to increased morbidity, mood instability, decreased performance, cognitive and memory problems. Evaluating the influence lifestyle in general, and alcohol intake in particular, have on sleep, is facilitated by the universal availability of mobile technology.

METHODS

We studied 19,327 nights recorded with the SleepRate application by 6,979 different users during the period September-October 2017. The night recordings included, besides a digitized real-time sleep diary, information regarding the quantity and timing of alcoholic beverages consumed during that day. Upon waking up, the users reported several parameters:

- ☒ Wake-up time
- ☒ Time it took them to fall asleep (SO)
- ☒ Time spent awake after falling asleep (WASO)
- ☒ Perceived sleep satisfaction (SS), on a scale of 1-10.

Sleep efficiency (SE) was calculated based on the reported SO and WASO.



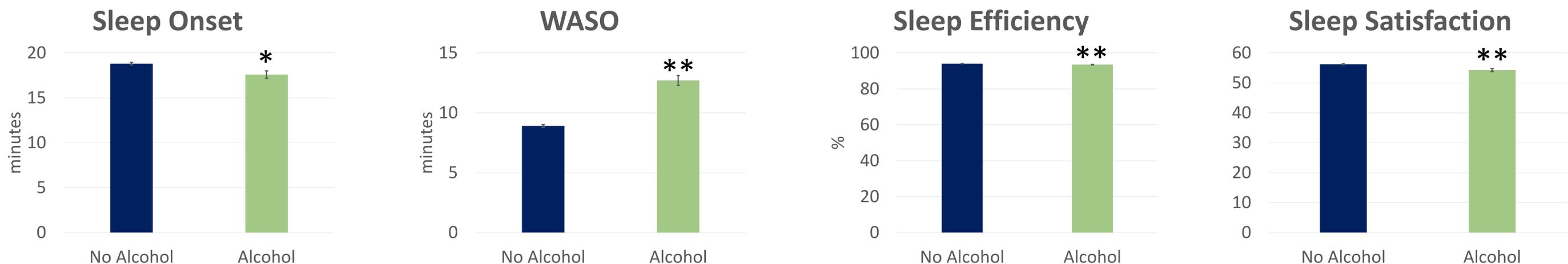
The recorded nights were divided into two groups: nights for which the users reported no alcohol consumption (“No Alcohol” group, N=17,502), and nights for which the users reported having one or more alcoholic beverages (“Alcohol” group, N=1,825) before bed time. The two groups were compared using unpaired t-test with $p < 0.05$ as the criterion for statistical significance.

RESULTS

Average SO was significantly shorter for the “Alcohol” group (17.6 ± 0.4 minutes, mean \pm SEM) compared to that of the “No Alcohol” group (18.8 ± 0.1 minutes). Nevertheless, “No Alcohol” nights had shorter WASO (8.9 ± 0.1 minutes), better SE ($94 \pm 0.04\%$) and higher SS (56.2 ± 0.2), compared to those of the “Alcohol” group (12.7 ± 0.4 , $93.5 \pm 0.4\%$, 54.3 ± 0.5 , respectively).

CONCLUSION

Our goal was to evaluate the effect alcohol has on perceived sleep quality, on a large population in the comfort of their homes. As expected, while alcohol was related with shorter sleep latencies, the subjective sleep quality and sleep efficiency decreased significantly.



* $p < 0.05$ ** $p < 0.0005$