

## What's Keeping You Up at Night?



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Millions of people suffer from sleep disorders, commonly attributed to health conditions such as heart disease, diabetes, high blood pressure etc. Also, the use of alcohol, nicotine and caffeine have been thought to cause lack of sleep. However, studies researching this have previously not accounted for diversity in ethnicity or race, or are objective in their measurements of sleep.

Led by a researcher from Florida Atlantic University, a recent study explored the effects of alcohol, nicotine and caffeine use in the evening on sleep quality for an African-American population. The study also collaborated with researchers from Harvard T. H Chan School of Public Health, Brigham and Women's Hospital, Emory University the National Institutes of Health, the University of Mississippi Medical Center and Harvard Medical School.

Published in *Sleep*, the study is currently the largest longitudinal study of this nature, with a total of 785 individuals taking part over 5,164 days. Researchers used actigraphy (a watch-like sensor) and the use of sleep diaries to measure the impact of alcohol, caffeine and nicotine use, four hours before bedtime, in a natural setting.

The results showed that there was no impact of the evening use of caffeine on sleep quality. However, researchers noted that they were not able to measure the dosage of caffeine, and the certain tolerance or sensitivity levels for individuals, both of which can affect caffeine's influence on sleep.

However, it was found that nicotine and/or alcohol use up to four hours before sleep can decrease sleep quality. Researchers noted that this was still the case even after accounting for gender, age, education level, obesity, having to go to school/work the following day, and any depressive symptoms such as anxiety or stress.

Out of the three substances analysed, nicotine was the most statistically significant substance to disrupt sleep. In particular, for individuals suffering from insomnia nicotine was found to reduce sleep for an average of 42.47 minutes.

The results found are particularly significant as all participants in the study usually had good night's sleep, with no previous sleep problems. Also, as the study was conducted to produce longitudinal data, variations in personal sleep behaviour could be accounted for.

Lead author of the study, Christine E. Spadola, PhD, discussed how the African-American population has previously been underrepresented when studying the effects of nicotine, alcohol and caffeine on sleep quality. She went on to explain that this is quite surprising as the African-American population is more likely to have short or fragmented sleep, and also the health problems linked to African-Americans are commonly associated with a lack of sleep.

The results of the study are consistent with the current sleep recommendations promoting reduced use of alcohol and nicotine in the evening for improved sleep quality.

Source: [Sleep](#)

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Published on : Wed, 7 Aug 2019