



HARVARD | **SCHOOL OF PUBLIC HEALTH**
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Sleep Quality and Sleep Patterns in Relation to Consumption of Energy Drinks, Caffeinated Beverages and Other Stimulants among Thai College Students

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Purpose: Poor sleep and heavy use of caffeinated beverages have been implicated as risk factors for a number of adverse health outcomes. Caffeine consumption and use of other stimulants are common among college students globally. However, to our knowledge, no studies have examined the influence of caffeinated beverages on sleep quality of college students in Southeast Asian populations. We conducted this study to evaluate the patterns of sleep quality; and to examine the extent to which poor sleep quality is associated with consumption of energy drinks, caffeinated beverages and other stimulants among 2,854 Thai college students.

Methods: A questionnaire was administered to ascertain demographic and behavioral characteristics. The Pittsburgh Sleep Quality Index (PSQI) was used to assess sleep habits and quality. Chi-square tests and multivariate logistic regression models were used to identify statistically significant associations.

Results: Overall, the prevalence of poor sleep quality was found to be 48.1%. A significant percent of students used stimulant beverages (58.0%). Stimulant use (OR 1.50; 95%CI 1.28-1.77) was found to be statistically significant and positively associated with poor sleep quality.

Alcohol consumption (OR 3.10; 95% CI 1.72-5.59) and cigarette smoking (OR 1.43; 95% CI 1.02-1.98) also had statistically significant association with increased daytime dysfunction. In conclusion, stimulant use is common among Thai college students and is associated with several indices of poor sleep quality.

Conclusion: Our findings underscore the need to educate students on the importance of sleep and the influences of dietary and lifestyle choices on their sleep quality and overall health.

The Epidemiology of Sleep Quality, Sleep Patterns and the Consumption of Caffeinated Beverages and Khat Use among Ethiopian College Students

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Objective: To evaluate sleep habits, sleep patterns, and sleep quality among Ethiopian college students; and to examine associations of poor sleep quality with consumption of caffeinated beverages and other stimulants.

Methods: A total of 2,230 undergraduate students completed a self-administered comprehensive questionnaire which gathered information about sleep complaints, socio-demographic and lifestyle characteristics, use of caffeinated beverages and khat. We used multivariable logistic regression procedures to estimate odds ratios for the associations of poor sleep quality with socio-demographic and behavioral factors.

Results: Overall 52.7% of students were classified as having poor sleep quality (51.8% among males and 56.9% among females). In adjusted multivariate analyses, caffeine consumption (OR=1.55; 95%CI: 1.25-1.92), cigarette smoking (OR=1.68; 95%CI: 1.06-2.63), and khat use (OR=1.72, 95%CI: 1.09-2.71) were all associated with increased odds of long-sleep latency (>30 minutes). Cigarette smoking (OR=1.74; 95%CI: 1.11-2.73) and khat consumption (OR=1.91; 95%CI: 1.22-3.00) were also significantly associated with poor sleep efficiency (<85%), as well as with increased use of sleep medicine.

Conclusion: Findings from the present study demonstrate the high prevalence of poor sleep quality and its association with stimulant use among college students. Preventive and educational programs for students should include modules that emphasize the importance of sleep and associated risk factors.

The Epidemiology and Sleep Quality and Consumption of Stimulant Beverages among Patagonian Chilean College Students

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Objectives – (1) To assess sleep patterns and parameters of sleep quality among Chilean college students and (2) to evaluate the extent to which stimulant beverage use and other lifestyle characteristics are associated with poor sleep quality.

Methods – A cross-sectional study was conducted among college students in Patagonia, Chile. Students were asked to complete a self-administered questionnaire to provide information about lifestyle and demographic characteristics. The Pittsburgh Sleep Quality Index (PSQI) was used to evaluate sleep quality. In addition, students underwent a physical examination to collect anthropometric measurements.

Results – Of the 832 university students included in the analysis, 431 (51.8%) exhibited poor sleep quality. Approximately 45% of study participants reported sleeping six hours or less per night with 9.8% of reporting use of sleep medicine. In multivariate analysis, sex and age were significantly associated with poor sleep quality. Current smokers had significantly greater daytime dysfunction due to sleepiness and were more likely to use sleep medicines. Students who reported consumption of any stimulant beverage in the past week were 1.81 times as likely to have poor sleep quality compared with those who did not consume stimulant beverages (OR: 1.81, 95% CI: 1.21-2.00).

Conclusions –Poor sleep quality is prevalent among Chilean college students, and stimulant beverage consumption was associated with increased the odds of poor sleep quality in this population.