



Hispanic Ethnicity May Be Associated with Short Sleep Duration and Elevated Sleep Distress in U.S. Air Force Trainees



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The views expressed are those of the authors and do not reflect the official views or policy of the Department of Defense or its components.

Introduction

Sleep research among Hispanic populations is limited. Hispanics may be at higher risk of poor sleep when compared to other race/ethnicities. Non-white and other socioeconomically disadvantaged populations have higher rates of chronic health conditions. Epidemiological studies have substantiated the correlation between short sleep and a multitude of negative health outcomes (e.g., cardiovascular disease, cerebrovascular disease, diabetes, and hypertension). The Congressional Armed Services Committee (2021) underscored “sleep as the most important biological factor that determines service member health and combat readiness.” Authors explored the role of race/ethnicity on perceived sleep health (e.g., sleep duration and sleep distress) among Airmen (members of the United States Air Force) attending technical school.

Methods

Sleep health survey was administered to two groups of Airmen at an Air Force technical training: *In-processing* Airmen just arrived to begin technical training, ($n=187$), Age: $M= 20.83$ ($SD 3.26$), 82.55% Male. *Out-processing*: Airmen about to complete technical training, ($n=302$), Age $M= 20.7$ ($SD 3.09$), 85.81% Male. To account for correlations between Airmen from the same squadron, a covariates-adjusted generalized mixed-effects model was used. Among short sleepers as a sub-group, authors examined associations between race/ethnicity and short sleep duration (≤ 6 hours), and between race/ethnicity and sleep pattern distress. Racial/ethnic frequency among short sleepers ($n=135$): 19.3 % Hispanic, 13.3% NH-Black, 55.6% NH-White, 6.6% NH-Multiracial, and 5.2% NH-Other.

Results

Figure 1. Ethnicity as a Predictor of Short Sleep on Weekends

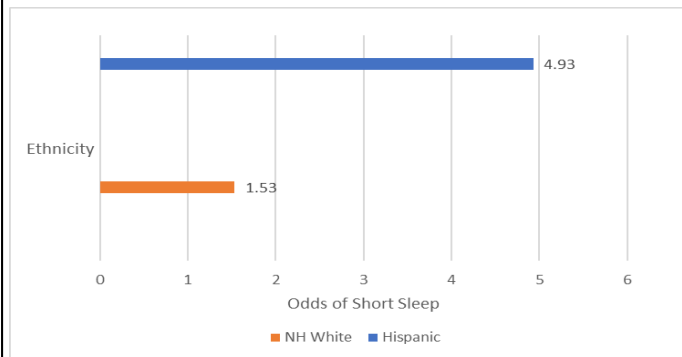
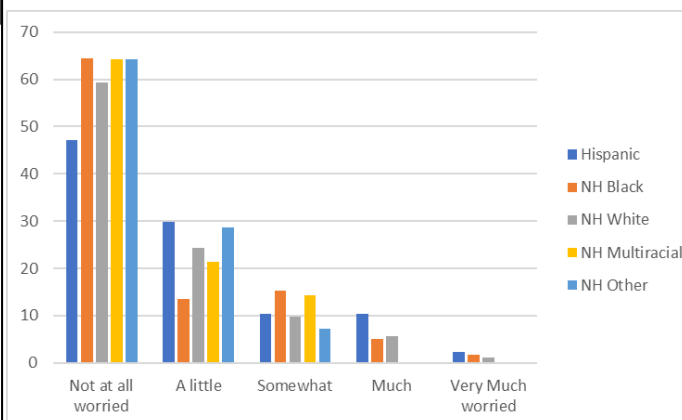


Figure 2. Racial/ethnic Differences in Sleep Distress



Results Continued

- Among Hispanic Airmen, the out-processing group was 2.25 times more likely than the in-processing group to be short sleepers on weekdays.
- Only Hispanic ethnicity predicted short sleep at training completion period in comparison to baseline levels on weekdays.
- Among the out-processing groups, Hispanic Airmen were 2.75 times more likely than NH-White Airmen to be short sleepers during the weekend.
- Among short sleepers in the out-processing group, Hispanic Airmen were significantly more worried/distressed about their sleep pattern than Black and White Airmen (OR=2.29, 95%CI: 1.18 to 4.42, $p=0.014$ and OR=2.29, 95% CI: 1.10 to 4.76, $p=0.026$, respectively).

Discussion

- Short sleep duration is a significant problem in the military and results suggest that race/ethnicity-related factors may point to at risk subgroups.
- The influence of perceived prejudice, access to social capital, cultural barriers to academic success, and potential sensitivity to somatic discomfort on sleep complaints should be considered.
- Future directions involve repeating this assessment with another cohort of technical training Airmen to see if findings replicate.