

Characterization of Sleep Inadequacy and Association with Health Among Homeless Adults

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Background

- For the estimated 554,000 homeless individuals in the United States, obtaining good quality sleep is often challenging.
- This population is known to have multiple health disparities, potentially affected by sleep inadequacy.
- Self-rated health is a predictor of premature mortality and morbidity, and is an important indicator of overall health.
- This study sought to characterize sleep inadequacy and examine its association with self-rated health among a large sample of homeless adults.

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Methodology

Participants: Participants (N=712) were adults who were homeless. They were recruited from several homeless-serving agencies in Dallas and Oklahoma City.

Measures:

- **Sleep Inadequacy:** 1) self-reported days (in the past 30 days) with insufficient sleep, 2) sleep duration (over average 24 hours), and 3) unintentional daytime sleep (in the past 30 days) using individual items from the Behavioral Risk Factor Surveillance System.
- **Self-reported health:** assessed with a single item asking participants to rate their health in general (excellent/very good/good vs. fair/poor).
- **Sociodemographic variables:** recruitment site (city), sex, race, age, education, lifetime months homeless, weight status, history of serious mental illness, at-risk drinking, and smoking status. These were treated as covariates in analyses.
- **Analysis:** Biserial correlations were run between sleep variables and self-rated health adjusted for recruitment site, sex, race, age, education, lifetime months homeless, weight status, history of serious mental illness, at-risk drinking, smoking status.

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Participants' Characteristics (N=712)

Variable Of Interest	M (SD) / % [N]
Recruitment site	
Dallas	27.95 [199]
Oklahoma City	72.05 [513]
Sex	
Males	66.29 [472]
Females	33.71 [240]
Race/ethnicity	
White	48.6 [346]
Minority race	51.4 [366]
Age	43.68 (12.03)
Educational attainment	11.97 (2.02)
Lifetime months homeless	43.79 (52.02)
Weight Status	
Underweight / Normal weight	38.76 [276]
Overweight	29.49 [210]
Obese	31.74 [226]
Self-rated health	
Excellent, very good, or good	65.87 [469]
Fair or poor	34.13 [243]
Serious mental illness	
No	33.29 [237]
Yes	66.7 [475]
At-risk drinking	
No	63.76 [454]
Yes	36.24[258]
Smoking status	
Non-smoker/former smoker	19.66 [140]
Current smoker	80.34 [572]
Days of inadequate rest/sleep	12.6 (11.21)
Average hours of sleep	6.72 (2.18)
Days with unintentional sleep	5.11 (8.13)

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Results

- Insufficient sleep and unintentional sleep were positively associated with fair/poor self-rated health ($ps < .001$).
- Sleep duration was negatively associated with fair/poor self-rated health ($p < .001$).

	Self-rated Health Fair/poor vs. Others	
	r	p-value
During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?	0.18093	< .0001
Average hours of sleep in 24 hours	-0.12801	0.0007
During the past 30 days, for about how many days did you find yourself unintentionally falling asleep during the day?	0.12604	0.0008

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Conclusions

- Attention to improving sleep for homeless individuals could potentially improve homeless health.
- Because sleep inadequacy may be affected by multiple and potentially unique challenges rendered by conditions of homelessness, better understanding modifiable factors associated with sleep quality, duration, and unintentional sleep can provide inroads to eventual intervention development.

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Acknowledgements and Funding

This work was supported by institutional funding provided by the University of Texas Health Science Center, School of Public Health (to Businelle), the University of Texas MD Anderson Cancer Center, and the University of Houston (to Reitzel). Funding was also provided by the Oklahoma Tobacco Research Center and Oklahoma Tobacco Settlement Endowment Trust (092-016-0002; to Businelle), the University of Houston (to Reitzel), and the National Cancer Institute. (P20CA221697 to Reitzel, on which Taylor and Murillo were also supported, the latter through P20CA221697-01S1).



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