

Are 24-Hour Activity Behaviors Associated with Depression

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METHODS

Study Design/Sampling

- NHANES Survey Data Analysis
 - Survey cycles: 2015-2017 & 2018-2019
 - Adults 18-30 years
 - Complete mobile examination center (MEC), sleep disorder, and physical activity surveys
 - 1228 adults (mean age: 24 (23-25) years] residing in the US
 - Final sample: 856 adults had complete data

Measurements

- Self-reported
 - Demographics
 - Education
 - 24hr-activity behaviors (24hr-AB)
 - Moderate to vigorous physical activity (MVPA) (min/day)
 - Sleep (min/day)
 - Sedentary behavior (SEDB) (min/day)

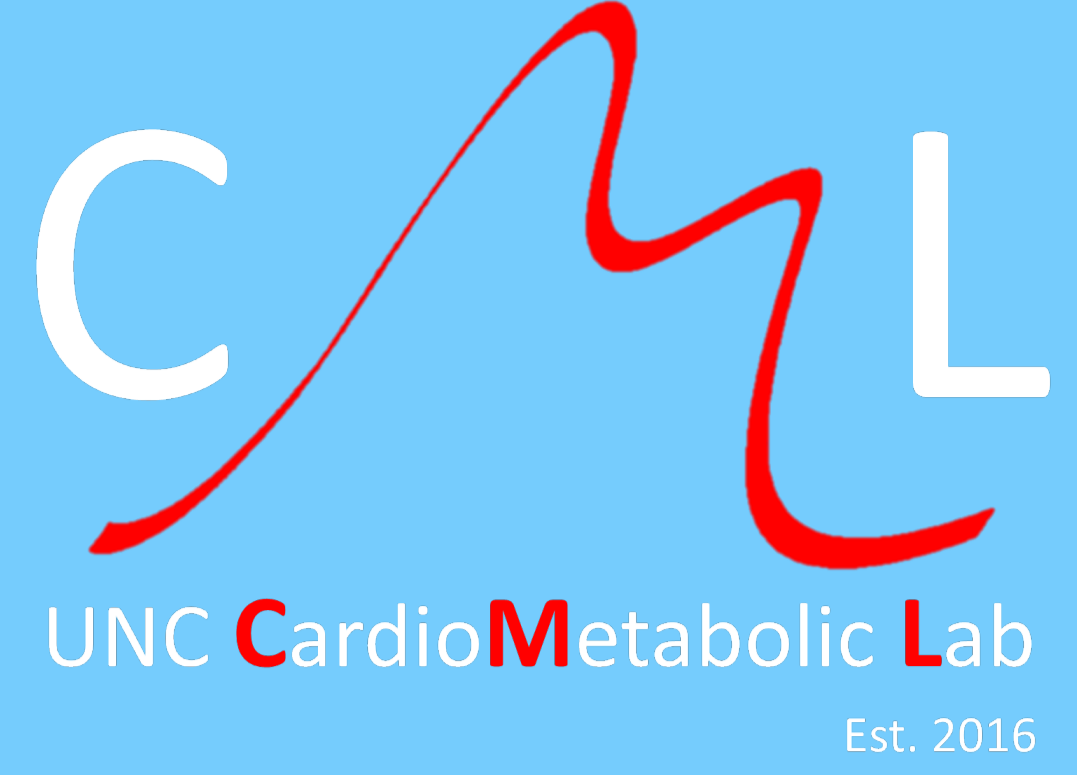
Analysis

- Gaussian Linear Model
 - Accounted for primary sampling unit, strata & sampling weight

PPL WAS SUPPORTED BY AHA (23PRE1022594) & NIA (R01AG062488)



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PROBLEM

Less time in beneficial 24hr-AB may increase risk for depression

OBJECTIVE

Identify the strongest associations between 24hr-AB and depression

CONCLUSIONS

Greater SEDB was marginally associated with worse depression scores. There were no associations between sleep or MVPA & depression scores.

TAKE HOME

- SEDB may be a feasible target for improving physical & mental health
- Future interventions evaluating depression should consider evaluating SEDB

QR Download: poster, further data
 Email: ppagan@unc.edu
 Lab: <https://unc-cml.weebly.com/>



RESULTS

Table 1. Demographics

Variable	%
Sex (female)	52%
Race/ethnicity	
Mexican American	17%
Other Hispanic	10%
non-Hispanic White	31%
non-Hispanic Black	23%
Other	5%
Asian	14%

Table 2. Descriptive characteristics

Variable	N	Mean	95%CI
Age (years)	856	25	(24, 26)
Sleep (min/day)	856	471.47	(464.32, 478.63)
MVPA (min/day)	856	32.25	(28.89, 35.62)
SEDB (min/day)	856	359.57	(335.37, 383.78)

Table 3. Regression Model (n=856)

Variable	Dependent Variable:	
	Depression Score	95% CI
Intercept	2.938	(-2.090, 7.966)
MVPA (min/day)	-0.005	(-0.015, 0.005)
SEDB (min/day)	0.003	(0.001, 0.005)*
Sleep (min/day)	0.001	(-0.004, 0.006)

Note: * p<0.05; ** p<0.01; Adjusted for age, sex, education, & race/ethnicity. Reference Values: Male for sex; non-Hispanic White for Race/ethnicity; <9th grade for Education



FIGURE 1. Depression score & sedentary behavior by sex

