SUPPLEMENTAL MATERIAL

Table S1. Distributions of the *absolute differences* of each characteristic from the within-person mean for apparent temperature (AT) exposure, cognition (immediate word list and delayed word list recall) scores, and sleepiness score among 18 Detroit, Michigan participants surveyed on 2-4 occasions, July-November, 2019.

Characteristic	Minimum	25th Percentile	Median	75th Percentile	Maximum
Immediate Word List Recall score (WLL)	0.0	0.5	0.8	1.7	5.0
Delayed Word List Recall score (WLD)	0.0	0.5	0.8	1.3	5.0
Epworth Sleepiness Scale score	0.0	1.0	1.4	2.4	4.3
Mean AT (C), lags 0-23 hours*	0.0	0.4	1.1	2.2	6.5
Mean AT (C), prior night[†]*	0.1	0.6	1.3	2.1	6.2
Mean AT standard deviation (C), prior night[†]*	0.0	0.1	0.2	0.3	2.0

*N = 22 participants
[†]Night = 22:00-06:00

Figure S1. Distributions of apparent temperature (AT) by hour (A) and by participant (B) on August 21, 2019 among 34 Detroit, Michigan participants with indoor temperature monitors.
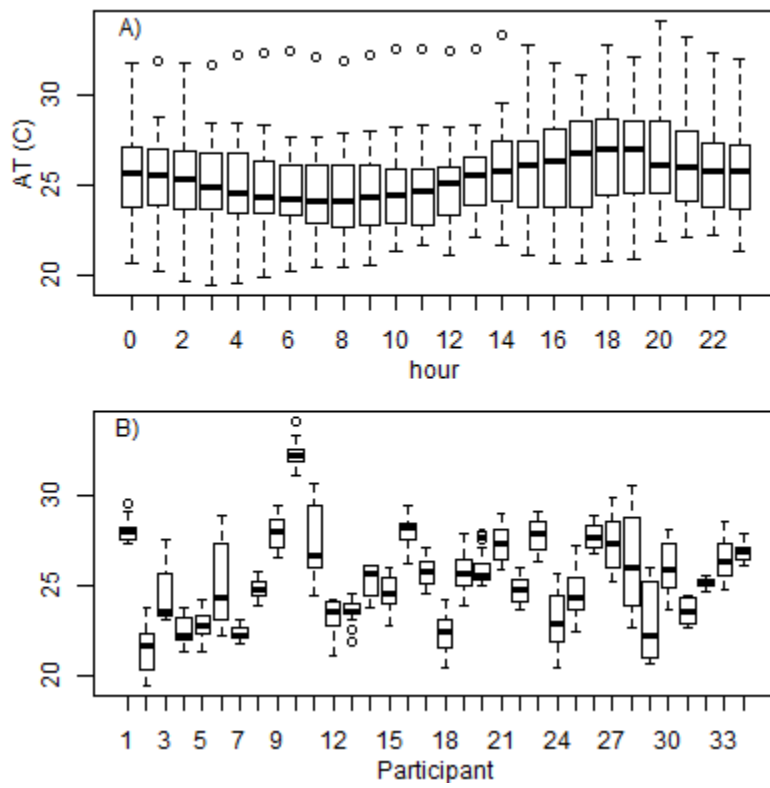
Figure S2. Indoor apparent temperature (AT) maxima, minima, and medians by hour (A) and boxplots by participant (B) in 34 Detroit, Michigan participants, July, 2019-April 2020.
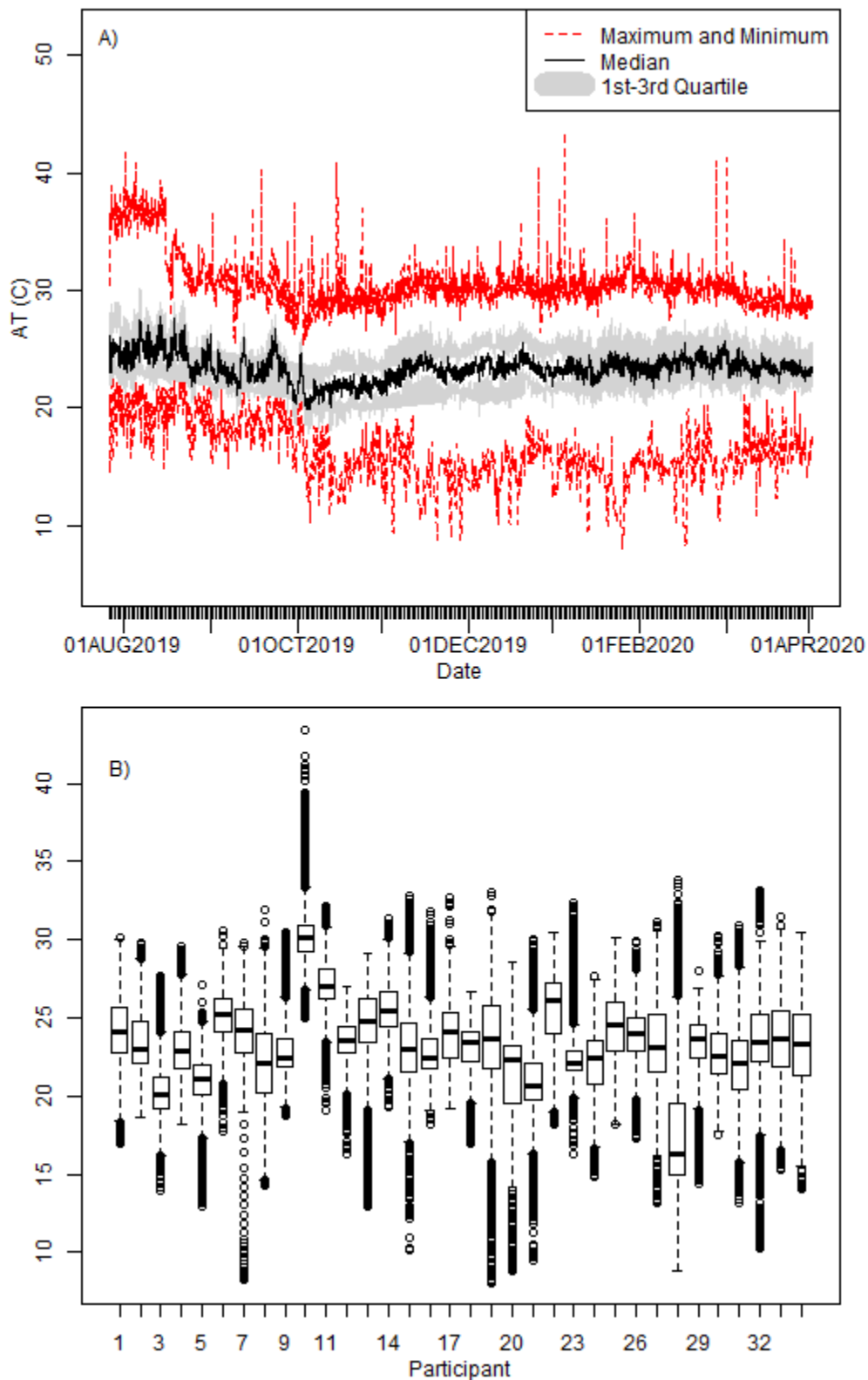
Figure S3. Night time (22:00-06:00) average indoor apparent temperatures (AT) and next-day cognition and sleepiness (the differences between the immediate word recall (A, B), delayed word recall (C, D), and sleepiness (E, F) scores vs. the scores at 24 C (A, C, E) or 20 C (B, D, F). The gray shaded areas represent 95% confidence intervals.
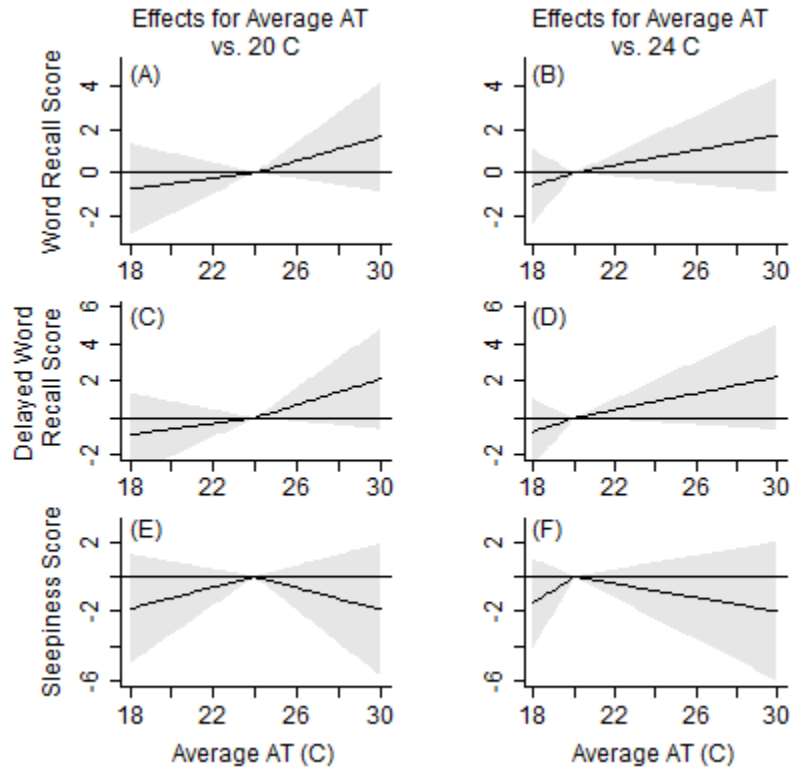
Figure S4. For nighttime (22:00-06:00) indoor apparent temperatures in the 0-6 nights prior to the phone survey (lag nights), the differences between immediate word recall, delayed word recall, and sleepiness scores and the scores when nighttime apparent temperature was 22 C. The left column is the effects at 16 C and the right column is the effects at 32 C. The gray shaded areas represent 95% confidence intervals.
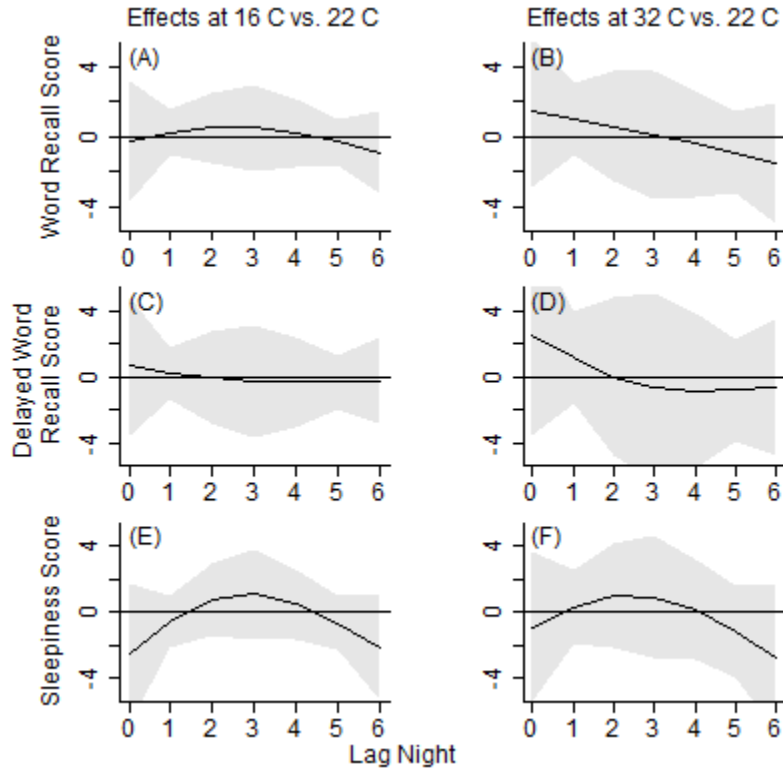

Figure S5. For nighttime (22:00-06:00) indoor apparent temperature standard deviations (SD) in the 0-6 nights prior to the phone survey (lag nights), the differences between immediate word recall, delayed word recall, and sleepiness scores and the scores when nighttime apparent temperature SD was 1 C. The left column is the effects at an SD of 0.2 C and the right column is the effects at an SD of 2 C. The gray

shaded areas represent 95% confidence intervals.