Baseline Population Data
Goal: To find baseline data for our experiment and test the reliability of our device

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Experimental design

- The paper we chose to study our baseline data provides findings for: Effects of sleep extension on sleep duration, sleepiness, and blood pressure in college students
- Participants: A total of 57 healthy undergraduate students at a large university campus were enrolled in the study. Inclusion criteria consisted of being in good general health, being between the ages of 18 and 23 years, being enrolled in classes during the study, maintaining an average habitual pattern of 6-8 hours of sleep per night, and having a schedule that allowed for extension of sleep by at least 1 hour per night for 1 week. Exclusion criteria included smoking, and diagnosis or history of either cardiovascular disease or sleep disorder. Data collection did not occur during final exam weeks or weeks when classes were not in session. Habitual sleep and sleep extension weeks were always consecutive and, withinperson, occurred within the same semester. Four participants did not complete the protocol, and thus, the final analytic sample included 53 undergraduate students (mean age ± standard deviation [SD] 20.5 ± 1.1 years; 70% female).

Experimental Design

- Protocol: There were 3 study visits: a consent/baseline visit, a preintervention visit after week 1 (habitual sleep week/control) and a postintervention visit after week 2 (sleep extension week/experimental). All study visits were scheduled at the beginning of the study to occur one week apart and the pre- and postintervention visits were scheduled for the same time of day for each person (within participant) to avoid circadian or diurnal fluctuations in measures. The timing of visits, however, varied between participants but all study visits occurred during the daytime. All participants completed the same protocol, including all 3 study visits, the same sleep extension intervention (i.e., no control group), and the same order of habitual sleep week followed by sleep extension week. To prevent known factors that could influence sleep patterns (e.g., finals week, school holidays/breaks, major personal or family events), participants were queried about their schedules; visits were scheduled during weeks representative of typical schedule.

Statistical Analysis

- Actigraphical assessment
- Multilevel models in SAS

Graph summarising findings of the study