



Napping Patterns of USMA Class of 2007 during Year Two: A Preliminary Analysis

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Objectives

As part of a four-year longitudinal study of sleep in Cadets in the Class of 2007 at United States Military Academy (USMA), West Point, this work focuses on:

- Cadet napping patterns during the second year of their stay at the Academy
- Effect of napping on daily sleep
- Frequency of napping versus gender, and seasonality issues.

Method

A stratified sample of 80 cadets from USMA class of 2007 was selected to wear wrist activity monitors (WAMs) to assess their activity and rest periods. There were two 30-day data collection periods: one from early-October 2004 through early-November 2004 (AY 2005-1), and one from early-April 2005 through early-May 2005 (AY 2005-2). During the study periods, the cadets were also asked to fill out a sleep log to indicate napping patterns.

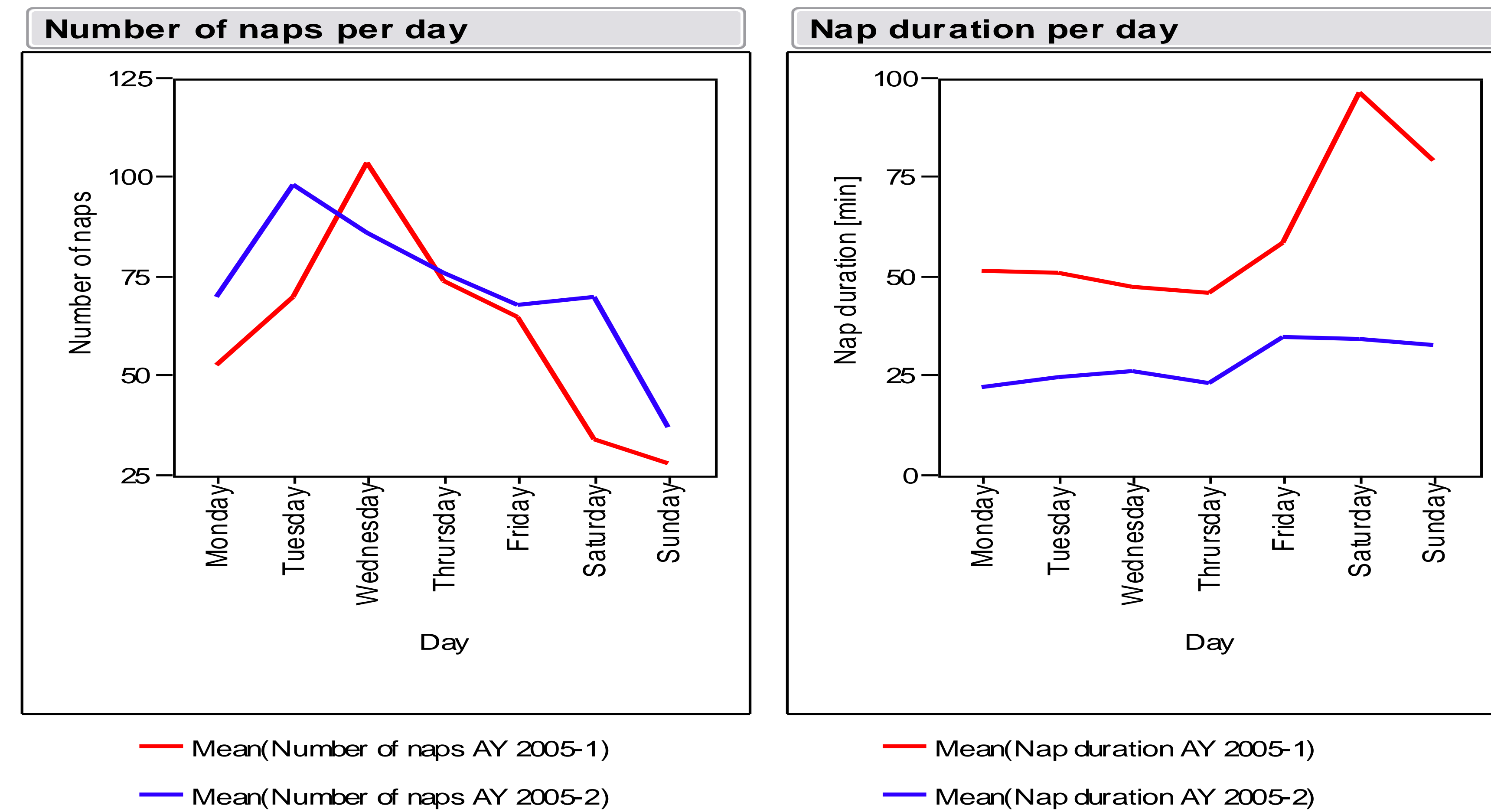
Preliminary Findings

- Cadets are chronically sleep deprived.
- Weekend sleep provides only partial amelioration of sleep debt.
- The percentage of cadets taking naps was 68%-75%.
- **A significant number of naps occur from 7:30 to 11:45 between morning classes.**
- **Napping at USMA is not related to amount of night sleep.**
- USMA napping is compensatory rather than appetitive in nature.
- Nap length was longer between 13:00 and 15:00 than 09:00 and 11:00 (Morning: mean=26 min, Afternoon: mean=36 min, $p < 0.001$).
- More frequent and shorter naps occur during schooldays while fewer and longer naps occur on weekends.
- **Anything else on the graphs statistically significant?**
- **Why a line graph rather than a bar graph for “Nap Analysis by Day of the Week”?**

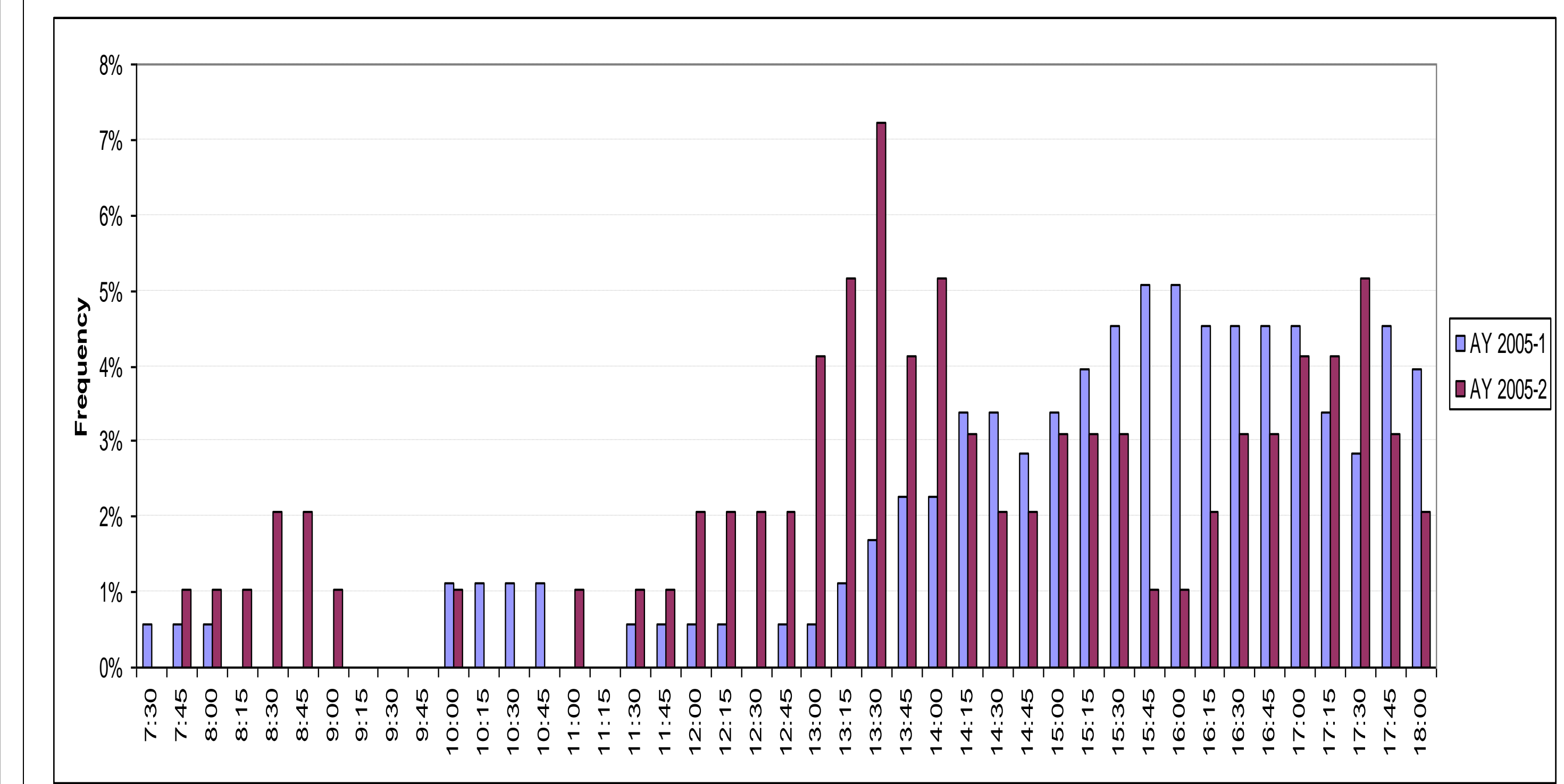
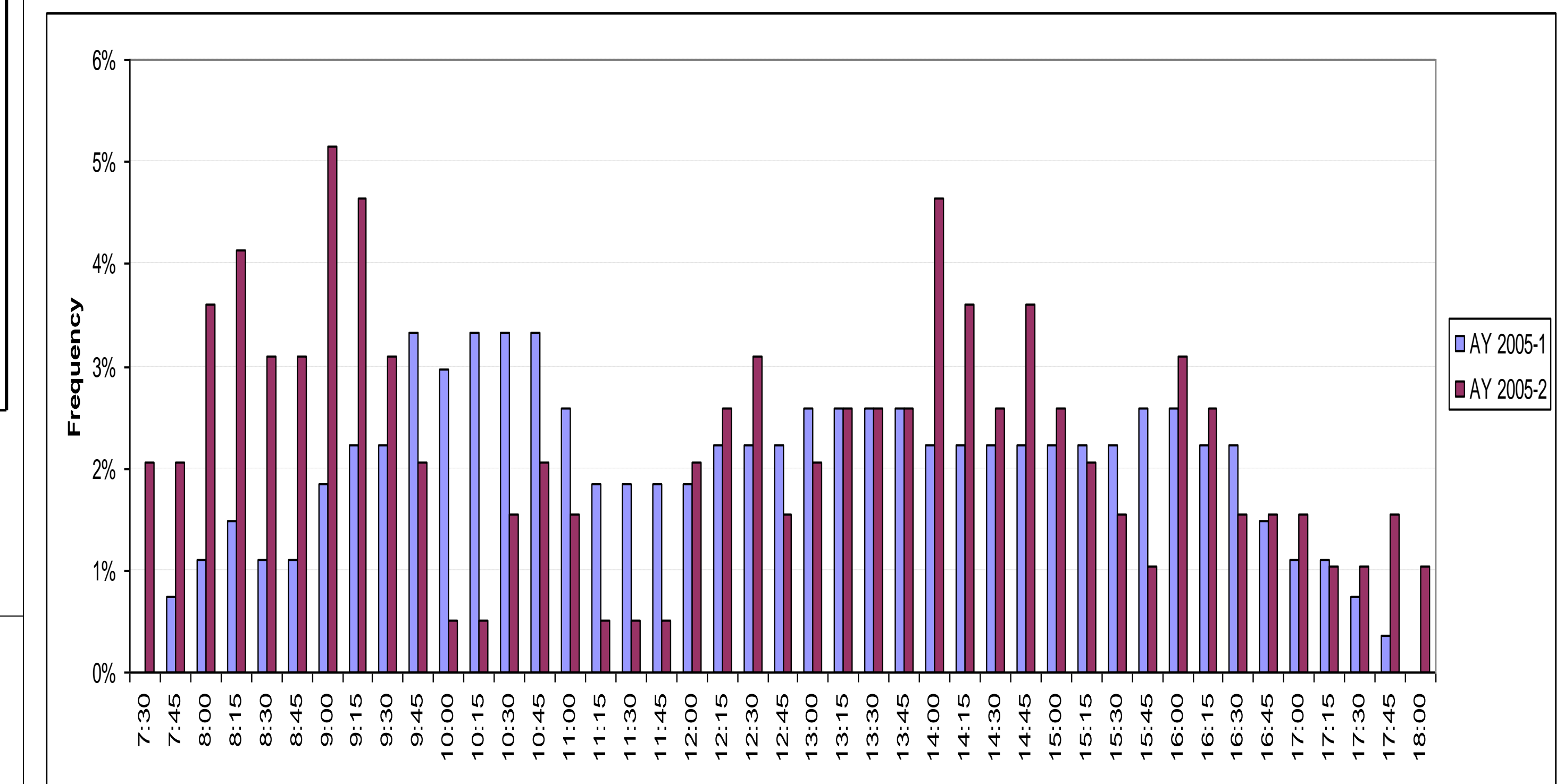
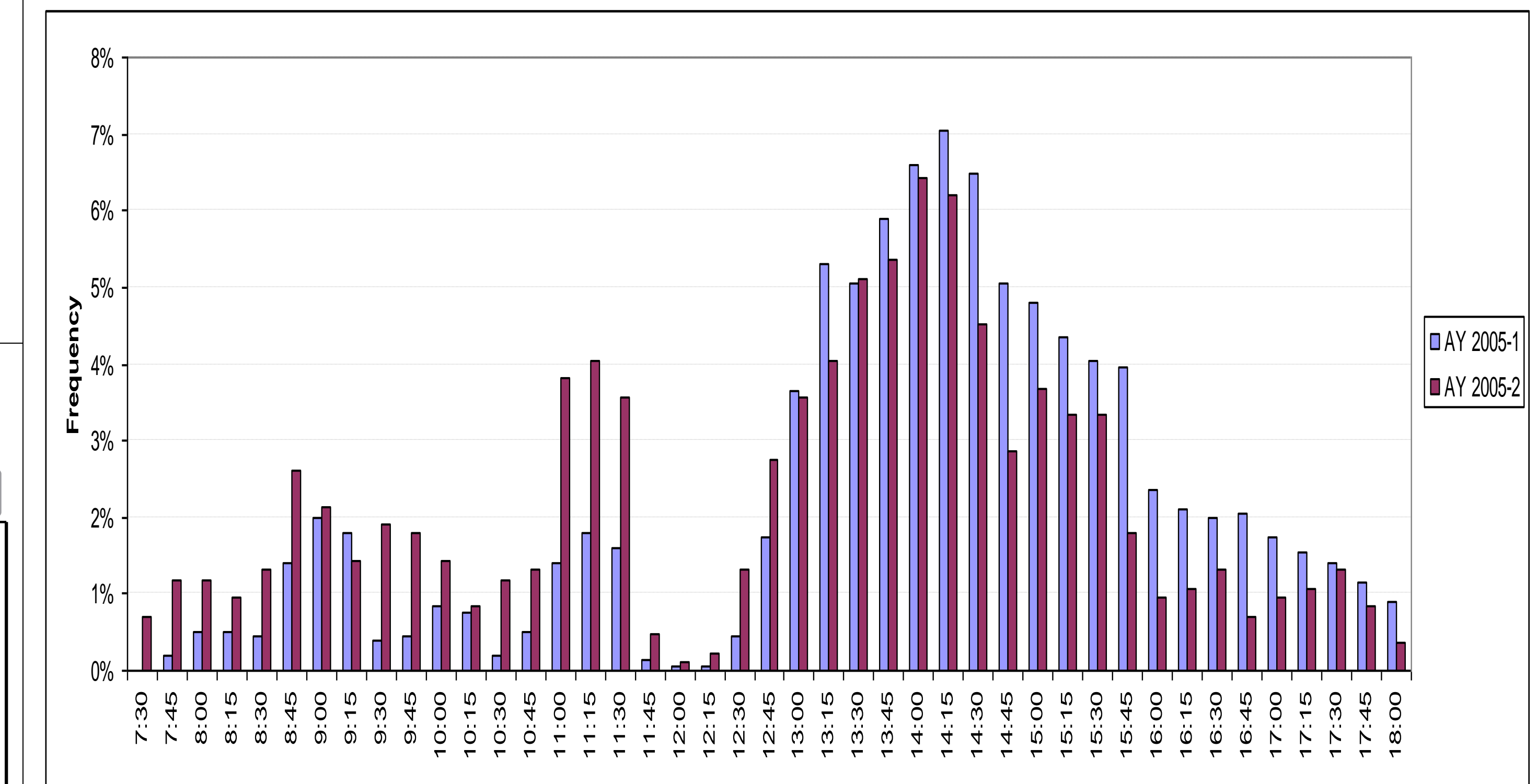
Average nighttime sleep

Data collection period	School Night	Weekend Night	Combined
AY 2005-1	5h 13m s.d.=0h 59m	6h 32m s.d.=1h 48m	5h 32m s.d.=1h 20m
AY 2005-2	5h 09m s.d.=0h 51m	6h 15m s.d.=1h 38m	5h 24m s.d.=1h 12m

Nap analysis by day of the week



Napping Frequency on Schooldays and Weekends



Nap duration by Semester, Gender and Day Category

