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”?

Napping Frequency on Schooldays and Weekends

Nap analysis by day of the week

Nap duration by Semester, Gender and Day Category

Average nighttime sleep

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

Nap duration vs Gender and Semester

Nap duration vs Gender (AY 2005-1)

Nap duration vs Gender (AY 2005-2)

Nap duration vs Gender and Day Category

Frequency of 15-minute napping intervals during schooldays

Frequency of 15-minute napping intervals during Saturdays

Frequency of 15-minute napping intervals during Sundays

Method

School Night

Weekend Night

Combined

Frequency of 15-minute napping intervals