



2006-06

Sleep Patterns of Cadets at the United States Military Academy: Interim Findings of a Four-year Longitudinal Study [presentation outline]



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1. Title: Sleep patterns of Cadets at the United States Military Academy: Interim findings of a four-year longitudinal study
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3. Introduction: In 2003, the authors began a four-year longitudinal study to investigate the sleep patterns of Cadets in the Class of 2007 at the U.S. Military Academy (USMA). This presentation reports findings on the first two years of the study. Carskadon & Davis (1989) surveyed incoming Brown University students during the Spring semester of their senior year in high school and again during the Fall semester of their freshman year at Brown. During Spring of the senior year in high school, students reported receiving an average of 6.98 h of sleep on weeknights and 8.75 h on weekends. As freshmen at Brown, they reported receiving 6.67 h of sleep on weeknights and 8.15 h on weekends. At the 2004 APSS Annual Meeting, we reported our findings on the sleep patterns of Cadets during their initial summer training and the 30 day period prior to their arrival at USMA. This report presents nighttime contiguous sleep and napping data on the same 80 Cadets for the first four academic semesters and permits comparison with the study conducted at Brown.
4. Methods: Actigraphy data were collected on 80 members of the USMA Class of 2007 during the Fall 2003, Spring 2004, Fall 2004, and Spring 2005 semesters. In addition, self-reported napping data were collected on the same Cadets during the Spring 2005 semester.
5. Results: Earlier findings showed Cadets received a mean of 8.39 h of sleep (SD = 1.62) for the month prior to reporting to USMA. During their first four semesters, their average contiguous nighttime sleep on weeknights was 4.88 hrs. (Fall 2003), 5.06 hrs. (Spring 2004), 5.28 h (Fall 2004), and 5.23 h (Spring 2005). On weekends, contiguous nighttime sleep was 6.87 h (Fall 2003), 6.48 h (Spring 2004), 7.04 h (Fall 2004), and 6.31 h (Spring 2005). Self-reported napping data during the Spring 2005 semester indicate a bimodal distribution with most of the naps occurring in the late morning and early afternoon. Cadets napped an average of once every 3.08 days. Average length of Cadets' naps was 1 h 29 m.
6. Conclusions: This study continues to chronicle sleep habits of Cadets at USMA. Compared to their sleep habits prior to arriving at the Academy, Cadets received approximately three hours less sleep after their arrival for summer training. During the academic semesters, Cadets received two hours less sleep per night compared to students at Brown. Additional benefits of the longitudinal study include: identification of Cadets with sleep disorders; access to the Academy's senior leadership with empirical data which has led to policy changes; and, education of Cadets, staff and faculty with respect to the benefits of good sleep hygiene. Upon graduation, these Cadets will be commissioned and lead America's soldiers. Soldiers with better sleep hygiene will likely perform better in battle. The findings of this longitudinal study will also be used to examine sleep and performance in the Army's Objective Force/Future Soldier program.