

HOW MUCH SLEEP IS ENOUGH FOR TEENAGERS?

Roberta Longpré
Head, Student Services

Branksome Hall, Toronto, Ontario

rlongpre@branksome.on.ca



BRANKSOME
HALL

INTRODUCTION

Research indicates:

- Adolescents need 8.5 to 9.25 hours of sleep per night.¹
- Only 15% of adolescents get enough sleep – the “lost hour”¹
- Sleep deprivation affects academic performance.²
- Sleep deprivation is linked to ADHD, anxiety disorders and clinical depression.³
- In adolescence the circadian clock changes.¹

BACKGROUND INFORMATION

- Dr. Avi Sadeh Tel Aviv University⁵
- Dr. Mary Carskadon - Brown University, and Dr. Kyla Walstrom -University of Minnesota²
- Edina School Board, Minneapolis, Minnesota⁶
- Drs. Link and Ancoli-Israel⁷

LACK OF SLEEP CAN LOOK LIKE...

- ADHD
- An anxiety disorder
- Depression
- A car accident
- Obesity

HOW SLEEP AFFECTS LEARNING

- Allows memories of daytime learning to be encoded in the brain.
- Keeps executive function intact.
- Keeps hormone levels stable.
- Allows for plasticity of neurons so they fire effectively.

RESEARCH QUESTIONS

1. Do Branksome Hall girls get enough sleep?
2. What effect does sleep have on their academic performance?
3. Does the amount of homework affect their sleep and academic performance?
4. Do recreational technology activities affect their sleep and academic performance?

METHODS

- During an advisory period, a sample of 291 Branksome Hall girls from grades 10, 11 and 12 were asked:
 1. How long did you sleep last night?
 - 3 – 4 hours, 5-6 hours, 7-8 hours, or 8+ hours?
 2. How much time did you spend on homework last night?
 - 1 – 2 hours, 2-3 hours, 3-4 hours, or 4+ hours?
 3. Last night after 8 pm, did you do any of these activities?
 - Text message, E-mail, Face book, or YouTube?

METHODS

- Student surveys were cross-referenced with December report card averages.
- SPSS (version 15) was used to analyze the data, which included student's t-tests to determine significance between student groups.

GRAPHS OF RESULTS

Please note that the three slides of graphs are under copyright and can be found in the following on-line peer reviewed journal.

Longpre, Roberta. Investigating the relationship of different amounts of sleep, homework and recreational technology use on academic performance. *IB Journal of Teaching Practice*, 1 (1), 2013.

CONCLUSIONS

The results indicate:

- 94% of Branksome Hall girls surveyed reported inadequate sleep, as defined by the National Sleep Foundation.¹
- 7 to 8 hours of sleep is optimal for Branksome Hall girls, because:
 - This group had the highest grades.
 - This group also had fewer hours of homework per night (2-3 hours).
- More than one recreational technology activity after 8:00 PM may interfere with the amount of sleep attained by Branksome Hall girls.

NEXT STEPS

- Sleep is a choice.
- Make sleep a priority.
- Family must value sleep.
- Students must learn to “turn off” the brain.

HOW TO “TURN OFF” THE BRAIN

- Develop a sleep routine.
- Turn off computers and cell phones.
- 30 to 45 minute slow down ritual.
- Use your bed for sleeping only.
- Keep your bedroom cool, dark and quiet at night.

PRACTICE HEALTHY LIVING

- Drink lots of water.
- Exercise regularly, but not before going to bed.
- Avoid caffeine after 3:00 pm.
- Eat lots of fruits and vegetables. Avoid sugars and carbohydrates before going to bed.

REFERENCES

1. “Teens and Sleep.” *National Sleep Foundation*. 2009.
<http://www.sleepfoundation.org/article/sleep-topics/Teens-and-sleep>.
2. Wahlstrom K. *School Start Time Study, Technical Report Volume II: Analysis of Student Survey Data*. Centre for Applied Res and Educational Improvement (CAREI) University of Minnesota, 2001.
<http://education.umn.edu/carei/Reports/default.html>.
3. “Sleep Disorders.” *Anxiety Disorders Association of America*. 2010.
<http://www.adaa.org/understanding-anxiety/related-illnesses/sleep-disorders>.
4. Wolfson AR, Carskadon MA. “Understanding Adolescents’ Sleep Patterns and School Performance: A Critical Appraisal.” *Sleep Medicine Reviews*. 7 (6) 491-506, 2003.

REFERENCES CONTINUED

5. Sadeh, S., Gruber R., Raviv, A. (2003). The effects of sleep restriction and extension on school-age children. What a difference an hour makes. *Child Development*, 74, 444-455.
6. Bronson, P., Merryman, A. (2009). *Nurture Shock*. New York: Hachette Book Group, Inc. 36.
7. Link, S.C., Ancoli-Israel. (1995). Sleep and the teenager. *Sleep Research*. 24a, 184.

*Thank you to Heather Longpré, MSc Eng and PhD candidate,
for her statistical and technological support.*