RESEARCH TITLE PROPOSAL

# Title of the Study:

A Correlational Study on Sleep Duration and Cognitive Function Among Students Aged 15–19 at GCCNHS

# Significant Readings

Write five recent sources of your significant readings that are used as basis of formulating your research title.

|  |  |  |  |
| --- | --- | --- | --- |
| Author/Title and Year | Methods Used | Findings | Gaps |
| Owens, J. et al. (2017) | Quantitative survey and cognitive performance test | Students who slept less than 6 hours scored significantly lower on memory and attention tests. | Study not conducted in local (Philippine) context. |
| Curcio, G. et al. (2006) | Meta-analysis of 15 quantitative studies | Lack of sleep correlates with lower academic and cognitive performance. | Did not isolate effects on specific cognitive functions (e.g., memory, attention). |
| Shochat, T. et al. (2014) | Experimental design using sleep manipulation and tests | Sleep deprivation caused delayed reaction time and poor decision-making in teens. | No direct measurement of sleep duration hours. |
| Becker, S. P. et al. (2018) | Daily sleep tracking and test-based data analysis | Teens with inconsistent sleep schedules had lower logic and comprehension scores. | No specific age group (15–19) focus. |
| Mindanao State University (2020) | Survey and academic test scores (local study) | Students with 6–8 hours of sleep performed better on logic and reasoning tasks. | No correlation analysis between sleep and specific cognitive abilities. |

Proposed Working Title:

A Correlational Study on Sleep Duration and Cognitive Function Among Students Aged 15–19 at GCCNHS

# Rationale

In five bullets, write your reasons why the study is necessary and important.

* Sleep is a critical biological need that affects students' mental and academic performance.
* Adolescents are especially vulnerable to cognitive decline due to sleep deprivation.
* There is a lack of local and age-specific data focused on sleep duration and cognitive ability.
* The study will help educators and families understand the impact of sleep on learning.
* The results may guide future school policies on student wellness and class schedules.

# Theoretical / Conceptual and Legal Bases

1. Sleep-Wake Homeostasis Theory (Borbély, 1982): Explains that the longer a person is awake, the greater the need for restorative sleep to maintain cognitive performance.
2. Cognitive Load Theory (Sweller, 1988): Suggests that the brain has a limited capacity for processing information, and lack of sleep overloads this capacity.
3. Information Processing Theory (Atkinson & Shiffrin, 1968): Emphasizes that sleep is essential for memory encoding, storage, and retrieval.

# Variables

Independent Variable: Sleep Duration (number of hours slept per night)

Dependent Variable: Cognitive Function (measured through standardized logic, memory, and attention tests)

# Proposed Research Questions

* What is the average sleep duration of students aged 15–19 at GCCNHS?
* What is the level of cognitive function among students aged 15–19 at GCCNHS?
* Is there a significant correlation between sleep duration and cognitive function among students?

# Research Design

☑ The Correlational Design

Justification: This quantitative design is suitable as it determines whether a statistical relationship exists between two measurable variables (sleep hours and cognitive test scores), without manipulating either.

# Research Locale

* General Comprehensive Central National High School (GCCNHS)
* Public secondary school setting
* Location accessible to researchers and participants

# Participants of the Study

* Students aged 15–19 years old enrolled at GCCNHS
* Selected through random sampling across grade levels
* Participants will provide informed assent and parent/guardian consent

# Research Instrument/s

* Sleep Duration Questionnaire (self-reported hours of sleep over 7 days)
* Cognitive Function Test (standardized or researcher-made test assessing memory, logic, and attention)
* Demographic Survey Sheet (age, grade level, etc.)

# List of References (APA 7th Edition Format)

Owens, J. A., Belon, K., & Moss, P. (2017). Impact of insufficient sleep on adolescents’ cognitive performance. Journal of Adolescent Health, 61(6), 641–647.

Curcio, G., Ferrara, M., & De Gennaro, L. (2006). Sleep loss, learning capacity, and academic performance. Sleep Medicine Reviews, 10(5), 323–337.

Shochat, T., Cohen-Zion, M., & Tzischinsky, O. (2014). Functional consequences of inadequate sleep in adolescents: A systematic review. Sleep Medicine Reviews, 18(1), 75–87.

Becker, S. P., et al. (2018). Sleep and academic functioning in adolescents: A review. Journal of Youth and Adolescence, 47(5), 875–889.

Mindanao State University. (2020). The relationship between sleep and academic performance among high school students in Mindanao. Philippine Journal of Educational Studies, 12(1), 45–56.