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<th>I. Primary Investigator (Student)</th>
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<tr>
<td>Name: Medina Karagic</td>
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<td>School Name: Boca Ciega High School</td>
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<th>II. Sponsor of this Research Application (Teacher/Mentor)</th>
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<tr>
<td>Name: Dr. Jennifer Denmon</td>
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<tr>
<td>Professional Position/Title: AP Research Teacher</td>
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<td>Organization/School Name: Boca Ciega High School</td>
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<td>Fax: (727)-893-1382</td>
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<th>III. Research Overview:</th>
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<td>Brief description of this research: Questions: What is the correlation between sleep quality and academic performance? In what ways do high school students perceive the effects of sleep quality on academic performance?</td>
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<td>Research Design:</td>
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<td>This research will be conducted through a mixed-method study. Participants will record their sleep data with a free mobile sleep app called Sleep Cycle for a two-week period</td>
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during the second grading period of the school year. Grades (signed and approved by their teachers) or digitally sent to the researcher will be collected at the end of the second grading period and compared with the sleep data collected. This data will be used to identify if there is a correlation between sleep quality and academic performance. Additionally, participants will complete a survey to identify sleep habits and adolescent perceptions of the effect of sleep on their academic performance. Results will be analyzed through statistical analyses to determine student perceptions and the correlation between sleep and academic performance.

Sample (include number of students, staff, parents, school levels, and grades)

The sample will require approximately 25 high school students at Boca Ciega High School.

IV. Supporting Research/Literature Review

Please reference the most prominent research studies, articles, or books most pertinent to this field of research when answering the following question (attach additional pages if necessary)


sleep quality is associated with better academic performance among Sudanese medical students. BMC Research Notes, 81-5. doi:10.1186/s13104-015-1712-9

How will this research contribute to the field?

This research will educate the scientific community and the public of the importance of healthy sleep habits. Analyzing the perceptions of students is necessary because it can reveal the disconnect between their actual patterns of sleep or reveal that there is a general standard of quality and quantity of sleep that is not up to par with what it should be (Ming, Koransky, Kang, Buchman, Sarris, & Wagner, 2011). It has the potential to encourage reform in school times or test times by showing the effects of sleep (which may be directly related to school schedules) on academic performance (de Souza, Maia, de Azevedo, 2012). Furthermore, the increased awareness as a result of the study will lead to increased education about sleep, allowing for preventative measures and treatment that may prevent the onset or worsening of sleep disorders (Mirghani, Mohammed, Almurtadha, Ahmed, 2015). As of now there are mainly just quantitative and qualitative studies conducted on the subject at hand; thus, a mixed-method study is needed. Also, these studies have been primarily conducted in foreign countries. While this data may be valid, it may not be generalizable to the United States, specifically the southeastern region.

V. Data Relevance

How will the data collected address each of the research questions/hypotheses (please be specific)?

1. Collecting sleep data through the free Sleep Cycle mobile app will help determine a student’s normal sleep schedule. Then, their average sleep quantity and quality over this two-week period will be compared with the grades one received during the second grading period to determine if there is a correlation between sleep and academic performance.

2. The survey will aid in assessing student perceptions of their sleep habits and its affect on academic performance.
VI. Primary Data Collection

Are you requesting to collect data? **Yes**

What data will be collected and from whom will it be collected?

Sleep data will be collected through the Sleep Cycle app while student perceptions will be collected through a survey. High school students will be the participants of this study.

How will this data be collected? (i.e., Research and PCS roles, data collection methods, online vs. paper and pencil)

High school students participating in this study will record sleep data through the Sleep Cycle app. The grades obtained from students will be used to assess the correlation between sleep and academic performance.

Additionally, their perceptions on sleep and academic performance will be collected through the administration of the survey.

What instruments will be used? Provide a copy of all finalized instruments to your teacher.

The survey and the Sleep Cycle app will be the instruments used.

List any equipment you may use for this research:

Participants will need a phone to record their sleep data. The survey will be on paper.

Does any of the equipment or procedure to be used constitute a potential emotional or physical hazard to the participants? **No**

If yes, please explain in detail

VII. Attachments

The following documents must be submitted to your teacher with your application

§ AP Capstone Research Inquiry Proposal
§ Cover Letter - Explain the study in simple terms that are easy for people to understand, including:
  - An introduction to yourself (the researcher)
- An introduction to the research
- An explanation of what the research is going to achieve
- A description of what the research is going to involve (i.e. taking a test, surveys, discussion groups, special curriculum, etc.)
- An explanation of risks and benefits to the participants as well as the voluntary nature of their participation
- Your contact information

§ Primary Investigator and Research Sponsor Assurances [Form A] (signed)
§ Access and Use of Confidential Data [Form B] (signed)

Please list any additional attachments submitted with the application:

§
§
§
§
§
I understand that I am requesting permission to conduct research in Pinellas County Schools.
✓ I have read and understand the “Procedures for Conducting Research in Pinellas County Schools.”
✓ I understand that the privilege of conducting future studies in Pinellas County Schools is contingent upon the fulfillment of my obligations.

If my research request is granted, I agree to:
✓ Abide by all Federal and State laws and regulations, as well as Pinellas County Schools’ policies, rules and procedures;
✓ Submit any proposed changes for review and approval prior to being implemented and report any adverse or unexpected events immediately;
✓ Provide written results of the research and any resulting publications to Pinellas County Schools’ Department of Assessment, Accountability and Research.

Signature: /s/ Medina Karagic Date: 10/3/2016
Primary Investigator

I am sponsoring this research in Pinellas County Schools.
✓ I understand that a sponsor is someone who endorses the proposed research, deems it appropriate, and believes it to be based on sound educational and research practices. I acknowledge the supervision of this research project.
✓ I have read and understand the “Procedures for Conducting Research in Pinellas County Schools.”
✓ I understand that the privilege of conducting future studies in the Pinellas County Schools is contingent upon the fulfillment of obligations by the Primary Investigator.

Signature: /s/ Jennifer Denmon Date: 10/4/16
Sponsor of Research

Access and Use of Confidential Data [Form B]
Primary Investigator: Medina Karagic Submission Date: 9/30/16

Title of Proposed Research: The relationship between sleep and academic performance in high school students: The statistics and the perspectives

I understand that any unauthorized disclosure of confidential information is illegal as provided in the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. 1232g and 34 CFR Part 99), and Pinellas County Schools Policy 8330, Student Records.

I understand that any data or reports that I, or any authorized representative may generate, are confidential and are to be protected. I understand that I am not permitted to distribute to any unauthorized person any data or reports that I have access to or may generate, using confidential data. I understand that I am responsible for any computer transactions performed as a result of access authorized by the use of my sign-on(s)/password(s), and I understand and agree to abide by the Pinellas County Schools Policy 7540.04, Use of Electronic Resources.

I understand the Pinellas County School Board policies regarding the use, retention and disposal of all confidential data.

I understand that any final reports produced as a result of this study must report student data in aggregate summaries and not individually. I understand that the confidentiality of all participants must be protected to the extent allowed by law.

I will comply with the access and use of confidential data terms listed above.

Signature: /s/ Medina Karagic  Date: 10/04/16
Primary Investigator

[Please sign physically or by typing “/s/” and then your name, such as “/s/ John Doe.” If you submit this document with a typed signature, you acknowledge that this electronic signature serves as your valid signature under the Florida Electronic Signature Act and the federal Electronic Signatures in Global and National Commerce Act.]