APPENDIX B

Jackson Heart Study Manuscript Proposal Form
Please read JHS Publications & Presentations Guidelines before completing this proposal form.

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<tr>
<th>JHS P #</th>
<th>0631</th>
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<tr>
<td>Date of Submission:</td>
<td>08/12/2015</td>
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<tr>
<td>Date of Approval:</td>
<td>___ (09/15/2015)</td>
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PART I. OUTLINE OF PAPER

1. Title Information

   a. Proposal Title: Association between sleep and obesity in African Americans in the Jackson Heart Study

   b. Abbreviated Title: Sleep and obesity in African Americans

   c. Suggested key words: sleep; sleep quality; sleep duration; obesity; African Americans; Jackson Heart Study; BMI; waist circumference

2. Lead Author Name: Trimella Jefferson

   Institutional Affiliation: School of Health Science, Jackson State University

   Address: 350 West Woodrow Wilson Dr., Suite 320 Jackson, MS 39213

   Telephone: (601) 979-8850 Fax: (601) 979-8848

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3. Co-authors, Contact Information, and Responsibilities: (Proposed co-authors, Email address and/or telephone numbers and proposed responsibilities. Examples of responsibilities include design and concept of study, statistical analysis, data acquisition, methodological expertise, funding acquisition, literature review. Also indicate specific writing assignments including: introduction methods, results, discussion, preparation of tables and figures. Items not assigned to a co-author are assumed to be the responsibility of the lead author. Corresponding author should also be identified if it is not to be the lead author.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact Information</th>
<th>Responsibilities</th>
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<tbody>
<tr>
<td>Adam Knowlden</td>
<td>Department of Health Science, The University of Alabama</td>
<td>-- Statistical analysis</td>
</tr>
<tr>
<td></td>
<td>P.O. BOX 870311</td>
<td>-- Preparation of Tables &amp; Figures</td>
</tr>
<tr>
<td></td>
<td>Tuscaloosa, AL 35487-0311</td>
<td>-- Writing Results</td>
</tr>
<tr>
<td></td>
<td>Phone: (205)348-1625</td>
<td>-- Assistance in writing</td>
</tr>
<tr>
<td>Name</td>
<td>Affiliation</td>
<td>Responsibilities</td>
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<td>-----------------------</td>
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</tbody>
</table>
| Manoj Sharma          | Behavioral & Environmental Health, Jackson State University                   | -- Design & concept of study  
|                       | 350 West Woodrow Wilson Ave.                                                 | -- Data acquisition  
|                       | Jackson, MS 39213                                                           | -- Statistical analyses  
|                       | Phone: (601)979-8850                                                        | -- Literature review  
|                       | Fax: (601)979-8848                                                           | -- Statistical analysis  
|                       | manoj.sharma@jsums.edu                                                      | -- Assistance in writing entire manuscript |
| Marinelle Payton      | Center of Excellence in Minority Health and Health Disparities                | -- Literature review  
|                       | 350 West Woodrow Wilson Ave, Suite 2280                                    | -- Critical review of entire manuscript |
|                       | Jackson, MS 39213                                                           |                                                                                   |
|                       | Phone: (601)979-8817                                                        |                                                                                   |
|                       | Fax: (601)979-8816                                                          |                                                                                   |
|                       | marinelle.payton@jsums.edu                                                  |                                                                                   |
| Clifton Addison       | Jackson Heart Study, Jackson State University                               | -- Literature review  
|                       | 350 West Woodrow Wilson Dr, Suite 2900B                                     | -- Critical review of entire manuscript |
|                       | Jackson, MS 39213                                                           |                                                                                   |
|                       | clifton.addison@jsums.edu                                                   |                                                                                   |
| Brenda Jenkins        | Jackson Heart Study, Jackson State University                               | -- Literature review  
|                       | 350 West Woodrow Wilson Dr, Suite 2900B                                     | -- Assistance in writing Introduction & Discussion |
|                       | Jackson, MS 39213                                                           |                                                                                   |
|                       | Phone: (601)979-8731                                                        |                                                                                   |
|                       | Fax: (601)979-8701                                                          |                                                                                   |
|                       | brenda.w.campbell@jsums.edu                                                 |                                                                                   |

4. **Non-JHS Lead Authors:** Non JHS Lead authors are required to have a JHS co-author and primary contact person (indicate with an asterisk). Non-JHS Lead Authors are encouraged to visit the JHS website at [www.jacksonheartstudy.org](http://www.jacksonheartstudy.org) for information on JHS investigators. The JHS Steering Committee may nominate additional authors if special expertise for interpreting JHS data is needed.

5. **Brief Overview:** In 250 words maximum, provide a brief overview of the proposal including the nature of the problem to be addressed, scientific relevance, objectives/aims, research question/hypotheses, and methods/analytical plan. This overview will be posted on the internal JHS website.

Previous cross-sectional and longitudinal studies have demonstrated an association between short sleep duration and obesity; however none of the studies have examined this relationship in African Americans. Short sleep duration has been suggested as a contributory factor toward obesity by increasing ghrelin, decreasing leptin, and conceding insulin sensitivity. Obesity is a known risk factor for cardiovascular diseases and several chronic diseases. The specific aim of this research
study is to study the association of sleep duration and poor quality of sleep with overweight and obesity as measured by BMI and waist circumference. It is hypothesized that short sleep duration will be associated with overweight and obesity in African Americans after adjusting for covariates. Likewise poor quality of sleep will also be associated with overweight and obesity in African Americans after adjusting for covariates. For this study the sample size has been calculated using G*Power with an alpha of 0.05, power of 0.80, 8 predictors and an effect size of 0.05 separately for men and women. The sample size has been found to be 309 for each group. Using SPSS Version 22.0, descriptive statistical analyses and inferential statistical analyses with stepwise multiple regression will be conducted. Results, discussion, recommendations and implications for practice will be presented.

6. Background/Rationale (Include the relevance of this proposal to African Americans and justify the need for the JHS cohort to answer the research question):

Previous cross-sectional (Anic et al., 2010; Gangwisch et al, 2005; Kohatsu et al, 2006; Taheri et al, 2004) and longitudinal studies (Gangwisch et al, 2005 Sayón-Orea et al., 2013; Vgontzas et al. 2013) have demonstrated an association between short sleep duration and obesity. It is postulated that short sleep duration contributes toward obesity by increasing ghrelin, decreasing leptin, and conceding insulin sensitivity (Taheri et al., 2004). However, none of these studies have been done with African American population. There is a definitive need to test this hypothesis with African American population along with the role of poor sleep quality on BMI and waist circumference.

7. Research Hypotheses:

Short sleep duration after adjusting for sex, age, educational achievement, household income, depressive symptoms, physical activity score, marital status, alcohol consumption, and snoring will be associated with higher BMI and higher waist circumference in African Americans. This association will hold true for both men and women. Further, greater signs of poor quality of sleep such as snoring, stopping breathing while sleeping, sleeping during day, feeling tired after sleeping, feeling sleepy while driving, sleeping with two pillows to help breathe, disturbed while trying to sleep, and sleeping poorly will be associated with higher BMI and higher waist circumference in African Americans.

8. Data: (Visits and variables to be used, sample inclusions/exclusions)

Dependent variables (from Exam 3):

- BMI
- Weight
- Waist circumference

Independent variables (from Exam 3):

- Sleep duration (Hours of actual sleep)
- Snoring
- Stop breathing when sleeping

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• Sleep during day
• Tired after sleeping
• Sleepy while driving
• Overall quality of sleep
• Sleep on two pillows to help breathe
• Sleep poorly

Covariates (From Exam 3):

• Age
• Sex
• Education
• Household income
• Depressive symptoms
• Marital status
• Alcohol consumption
• Physical activity score
• Snoring

9. Brief Statistical Analysis Plan and Methods: (Including power calculations, if necessary.)

For this study, the sample size was calculated using G*Power with an alpha of 0.05, power of 0.80, 8 predictors and an effect size of 0.05 separately for men and women. The sample size was found to be 309 for each group. Using SPSS Version 22.0, descriptive statistical analyses and inferential statistical analyses with stepwise multiple regression will be conducted.

10. References: (Maximum 15)


**PART II. AUTHOR CONTRIBUTIONS**

11. Have all co-authors reviewed and approved this document?  Yes (Required)

12. Does the lead author (or designee) agree to present findings at a JHS Colloquium? or Seminar?  Yes (required)

**PART III. ADDITIONAL INFORMATION**

13. Is this manuscript proposal based on an Ancillary Study?  Yes  No

If yes, please provide the ASC # ________.

14. Type of Study:

   ___ Full Cohort  ___ Family Study  ___ Sub-Study
   ___ Ancillary Study  ___ Case Control  ___ Other (list):

15. Type of Data:

   ___ Longitudinal  ___ Cross-Sectional  ___ Other (list):

16. Location of Statistical Analysis:

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Central (by Jackson Heart Study Staff)
__√__ Local (SPSS version 22.0)

17. Genetic Information:
   a. Do you propose use of data from a participant’s DNA? __ Yes (see b) __√__ No
   b. If yes, for a primary aim or secondary aim of JHS? (Please check one or both)
      __ Primary Aim (heart, vascular disease) __ Secondary Aim (other conditions)

18. Conflict of Interest
   a. Are these analyses to involve a for-profit corporation? _____Yes __√__ No
   b. Do you or any member of your Writing Group intend to patent any process, or aspect of outcome from these analyses? _____Yes __√__ No

19. Data Sharing Agreement

   Has the Lead Author and any co-authors who will have direct access to JHS data signed the JHS Data Sharing Agreement? __√__Yes (Required)

20. JHS Manuscript Overlap

   The Lead Author is responsible for reviewing the manuscript list on the JHS website http://jhs.jsums.edu/jhsinfo, listing the JHS manuscripts / manuscript proposals that are similar to the one he/she is proposing and justifying the differences and similarities. The lead author is encouraged to contact lead authors of the most related manuscript proposals for comments on the new proposal or collaboration.

   a. Similar manuscripts / proposals: __√__No ______Yes
   b. If “yes”, list MS # title and Lead Author below)

21. Manuscript Completion

   It is expected that the manuscript will be completed in less than one year. The manuscript proposal will expire if no manuscript is submitted for JHS review at the end of one year from the date of approval. If additional time is needed after one year, the Lead Author should request an extension from the Publications and Presentations Subcommittee.