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Ouachita Baptist University

The Eating Habits of College Females and
How Stress Affects Eating Behavior

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Research in Dietetics

Dr. Brech

December 11, 2017

Abstract

Background College females experience much stress from a variety of areas in their lives. Often times this stress affects usual eating behaviors and may even lead to disordered eating habits.

Objectives To examine whether stress affects the eating habits of college females in this study and how their eating is affected. We assumed that stress would affect eating habits. We also examined how stress makes a person feel and if that can influence or contribute to disordered eating habits.

Participants/setting Sixty-two women from Tri-Chi women's social club at Ouachita Baptist University completed a questionnaire October 16, 2017. The participants ranged in age from 19-22.

Results The stress levels of these college females were assessed, and it was found that not only were they stressed, but their stress was affecting their usual eating habits. Physical appearance was important to this group of women. Many causes of stress were mutual and included family issues, school and social pressures.

Conclusion Stress often affects usual eating habits and may contribute to but not cause disordered eating behaviors.

Keywords: College females, stress, eating disorders, eating and stress, eating behaviors, eating habits

Introduction

College is an extremely stressful time for many students, and disordered eating habits may accompany these stressful periods. Many college students struggle with disordered eating behaviors, and these students may often not be aware that they are struggling. The goal of this study is to determine if stress affects the eating habits of college students, particularly females, and if the way stress makes a person feel can influence or contribute to disordered eating habits.

Review of Literature

Disordered eating is a prevalent issue among college students in the United States. As many as six to seventeen percent of college females have an eating disorder, and as many as thirty-three percent of female students engage in harmful eating behaviors.¹ Disordered eating may be defined as any abnormal behavior used to control weight. These behaviors include binge eating, exercising excessively to lose weight, vomiting, or using laxatives or supplements to lose weight. Eating too quickly, too little, or too irregularly are also aspects of disordered eating.² These disordered eating habits can harm physical health, emotional health, and psychological health.³ The literature reviewed for this research covers the following topics about the lives of college females: stress-causing factors, the prevalence of eating disorders, common body image concerns, eating habits, and how to prevent disordered eating.

There are several factors to consider when addressing the causes of disordered eating in college students. Pressure to conform to a certain image is one cause of disordered eating. According to Matthews et al, "When both females and males engage in disordered eating, it is because they cannot achieve the unrealistic societal standards of perceived attractiveness. As a result, both genders may engage in disordered eating in an

effort to achieve these unattainable bodies.”² Disordered eating is also related to the unhealthy eating behavior of college students. Healthy eating is defined as “a diet low in fat, high in fiber, and high in fruit and vegetable consumption.”⁴ College students tend to eat high-fat, high-calorie foods and not many fruits and vegetables. This unhealthy diet often leads to weight gain, which in return leads to disordered eating patterns as an attempt to lose weight.⁵ According to Magnuson, low self esteem, depression, and family dynamics are also factors that contribute to disordered eating.¹

Disordered eating behaviors are also linked to exercise behavior and exercise dependence.⁶ When under significant amounts of stress, women often feel a need to maintain strict control over a specific area of their lives. Engaging in disordered eating habits such as purging or extreme calorie restriction is one tactic that women may use to create the feeling of control in their lives. In addition to disordered eating habits, many women also use excessive exercising as a way to provide a sense of control in their lives. When under stress, it is important for women to maintain a healthy body and mind by exercising regularly. In one study, the results suggested that “the beneficial effects of regular, moderate to strenuous intensity exercise behavior... are associated with improvements in eating disorder symptoms.”⁶ Women who exercise regularly are more likely to not suffer from disordered eating habits, but it is important for women to learn the difference between healthy exercise and excessive exercise habits.

Many college-aged women struggle with body dissatisfaction and have a negative body image, which often leads to excessive and disordered behaviors. Fasting, excessively exercising, and using slimming pills are examples of disordered eating behaviors that college-aged women use to lose weight.⁷ College-aged women are especially aware of what

their society esteems as beautiful, and body dissatisfaction is often linked with society's emphasis on the "ideal" body.⁸ It is important to note that while low self-esteem and body dissatisfaction are factors that affect disordered eating behaviors, they are not always the cause.

Disordered eating behaviors in females often peak from adolescence through the college years. This could be due to the fact that adolescence and the college years bring much change, stress, and anxiety. Disordered eating often arises from an issue that arose in childhood or early adolescence, seasons of life that are full of change and stress, or from demands of social and scholastic success. Disordered eating behaviors are often related to emotional issues that were never resolved, and stress can often trigger destructive eating habits if a woman has never learned how to manage stress or has not resolved issues from her past.⁹

A moderate amount of stress is a normal part of life and may, in some cases, motivate individuals to strive for success. For other individuals, stress is less manageable and may result in feelings of fear, incompetence, anger, or uselessness. Some of the main stressors in the lives of college females include academic expectations, excessive workloads, social events, family troubles, having no friends, emotional stress, romantic relationships, loneliness, and anxiety.¹⁰ Women must learn to manage their stress in healthy and appropriate ways in order to avoid disordered eating habits.

Methods

Development of Proposal

Eating disorders are a common problem among college females, and the stress associated with college may affect the eating habits of these young women. In order to

discover possible correlations between stress and eating disorders, the researchers reviewed related literature and developed a questionnaire consisting of nine multiple choice questions and three open response questions focusing on the current eating habits and the eating disorder history of college females. Once a research proposal, an informed consent form, and the questionnaire were developed, the study was sent to the Institutional Review Board (IRB) for approval. The study was approved by the IRB and was then piloted in the Intro to Nutrition and Dietetics class at Ouachita Baptist University. Revisions to the questionnaire were made based off of the results of the pilot test, and the informed consent form and the questionnaire were distributed to the test subjects. The questionnaire is presented in the following table:

Question	Answer choices
Age	Open response
Classification	a. Senior b. Junior c. Sophomore d. Freshman
1. How important is your health to you?	a. Extremely important b. Very important c. Moderately important d. Slightly important e. Not at all important
2. How important is your physical appearance to you?	a. Extremely important b. Very important c. Moderately important d. Slightly important e. Not at all important
3. Do you try to make healthy food and lifestyle choices?	a. Yes b. Sometimes c. No
4. Describe your stress level:	a. I am very stressed b. I am moderately stressed

	c. I am not stressed at all
5. Do your emotions, either good or bad, change your usual eating habits?	a. Yes b. No
6. What do you do when you are very stressed?	a. Eat more b. Eat less c. Eat the same amount as usual d. Eat an extreme amount in a short amount of time
7. When you are stressed out (mentally or emotionally), does it affect the way you feel about yourself?	a. Yes, I feel worse about myself b. No, it does not change the way I feel about myself c. It makes me feel better about myself
8. Have you ever participated in any of the following to lose weight? If so, which one(s)?	a. Stopped eating b. Restricted calories c. Thrown up d. Exercised compulsively e. None
9. Do you avoid eating when you're hungry?	a. Yes b. No
Have you ever struggled with or do you currently struggle with an eating disorder to your knowledge? If so please explain.	Open response
Do you try to eat in a healthy way? If yes, please describe.	Open response
What causes stress in your life?	Open response

Participants

Participants were recruited from a women's social club, Tri Chi, at Ouachita Baptist University (OBU) in Arkadelphia, Arkansas. Participation in this study was not mandatory, but all of the individuals who were asked to participate agreed to take part in the study. Sixty-two female students between the ages of nineteen and twenty-two participated in the study. Of the sixty-two participants, fourteen were nineteen years old, twenty-five were

twenty years old, twenty-one were twenty-one years old, and two were twenty-two years old. Eighteen of the participants were from the sophomore class, twenty-four were from the junior class, twenty were from the senior class, and none were from the freshman class. All of the participants were full-time students at OBU.

Procedures

The study was conducted during the social club's weekly meeting on Monday, October 16, 2017. Participants first received an informed consent form, which described the purpose and procedures of the study. After the subjects agreed to participate in the study and signed the informed consent form, they received the questionnaire. The responses to the questionnaire remained anonymous due to the sensitive nature of the data being collected. After the questionnaire responses were collected, we reviewed each participant's responses and analyzed the data.

Data Analysis

A table was created for the analysis of the questionnaire, and the data was analyzed by evaluating the prevalence, mean, and mode of the answers for each question. In order to determine the relationship between stress levels and eating habits, we primarily focused on questions four through seven of the questionnaire. These six questions analyzed the participants' perceived stress levels, eating behaviors related to stress levels, and the effects of stress on self-esteem. The results of the questions relating to stress levels were compared with the results of the those pertaining to eating habits to discover if there were any correlations between perceived stress levels and eating habits.

The results of the questionnaire are presented in the following table:

Question	Choices	Frequency	Mean	Mode
How important is your health to you ?	Extremely important	15%	20%	Very important
	Very important	58%		
	Moderately important	27%		
How important is your physical appearance to you ?	Extremely important	11%	20%	Very important
	Very important	57%		
	Moderately important	32%		
Do you try to make healthy food and lifestyle choices?	Yes	45%	33%	Sometimes
	Sometimes	55%		
	No	0%		
Describe your stress level:	I am very stressed	29%	33%	Moderately stressed
	I am moderately stressed	66%		
	I am not stressed at all	5%		
Do your emotions change your usual eating habits?	Yes	82%	50%	Yes
	No	18%		
What do you do when you are very stressed?	Eat more	40%	25%	Eat more (Eat less was only one point away, almost equal)
	Eat less	39%		
	Eat the same amount as usual	15%		
	Eat an extreme amount in a short period of time	6%		
When you are stressed, does it affect the way you feel about yourself?	Yes, I feel worse about myself	74%	33%	Yes, I feel worse about myself
	No, it does not change the way I view myself	24%		
	It makes me feel better about myself	2%		
Have you ever participated in any of the following to lose weight?	Stopped eating	15%	20%	Restricted calories
	Restricted calories	57%		
	Thrown up	3%		
	Exercised compulsively	16%		
	None	37%		
Do you avoid eating when you're hungry?	Yes	5%	50%	No
	No	94%		

Results

The first two questions in the questionnaire pertained to the age and classification of each participant. The participants ranged from age nineteen to twenty-two, and they represented sophomores to seniors in college. Thirty-nine percent of the participants were juniors, twenty-nine percent were sophomores, and thirty-two percent were seniors. For a college campus, the ages reported were fairly varied; however, freshmen were not included in this study.

The next section in the questionnaire dealt with the emphasis placed on health and physical appearance. There was almost an identical response between the level of importance health had on the participant and the level of importance placed on physical appearance. Table 1 provides a breakdown of the answers reported for the importance of physical appearance. The most common response was that physical appearance was very important to the participants. Thirty-two percent of the participants reported that they regarded physical appearance as moderately important, and 11% answered that physical appearance was extremely important to them. The emphasis placed on physical appearance was very similar to the emphasis placed on health, showing that the importance of health and physical appearance are related to each other and are both important factors in the lives of the participants.

Table 1. Importance of Physical Appearance

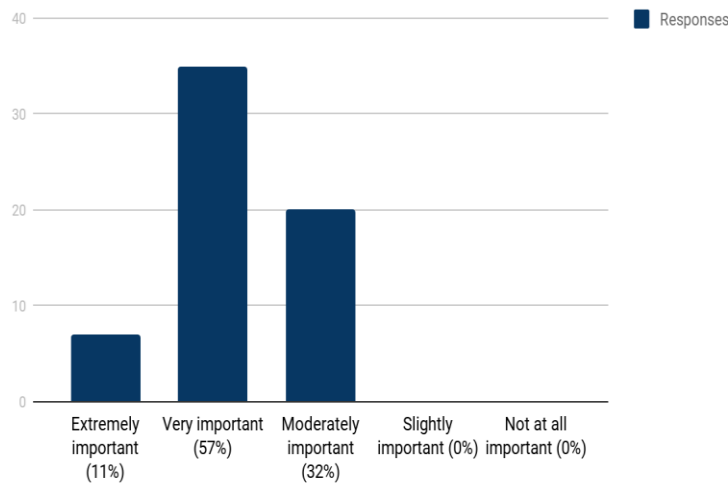
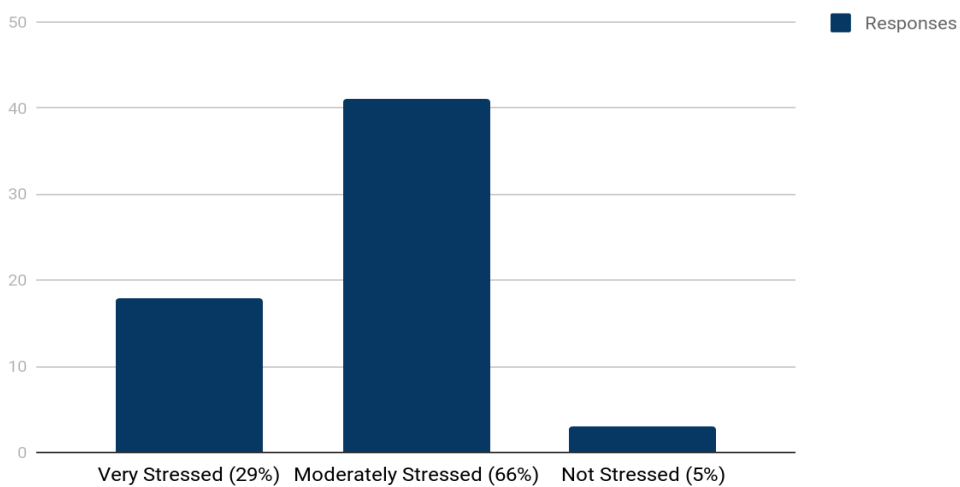


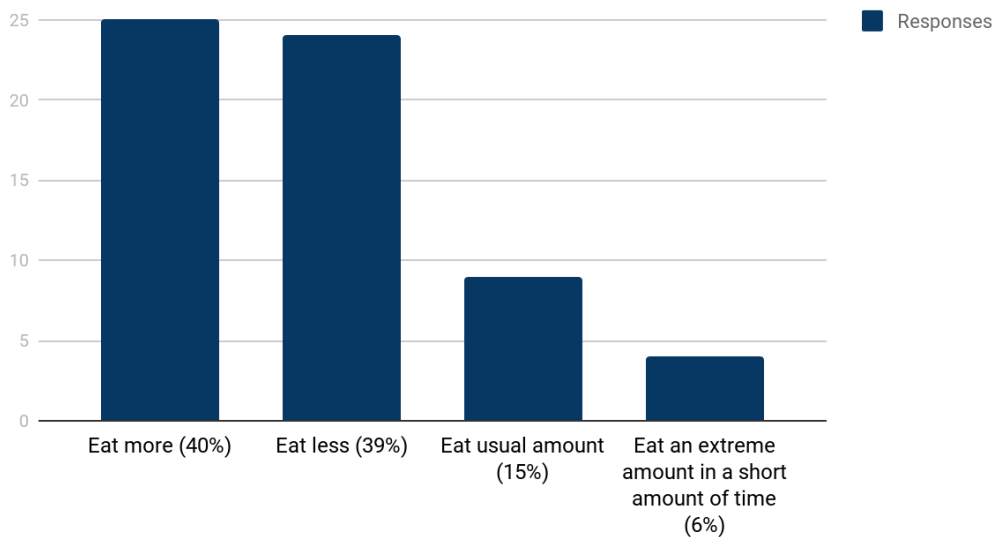
Table 2 shows that over half of the participants in our study indicated that they were moderately stressed, and more than one quarter indicated that they were very stressed. Only 5% of the participants indicated that they were not stressed at all. Since 95% of the participants in our study were moderately or severely stressed, we could more easily determine if stress affects eating behaviors.

Table 2. Perceived Stress



The majority of the participants indicated that stress does affect their eating habits in some way. Table 3 shows that the amount of participants who indicated that they eat more when they are stressed is almost equal to those who indicated that they eat less when stressed. Another question the participants answered was whether or not emotions affect their usual eating behaviors. Eighty-two percent of the participants indicated that their emotions affect the way they eat. Between the results of this question and the question from Table 3 there is a clear indication that stress and emotions dictate how these women are eating.

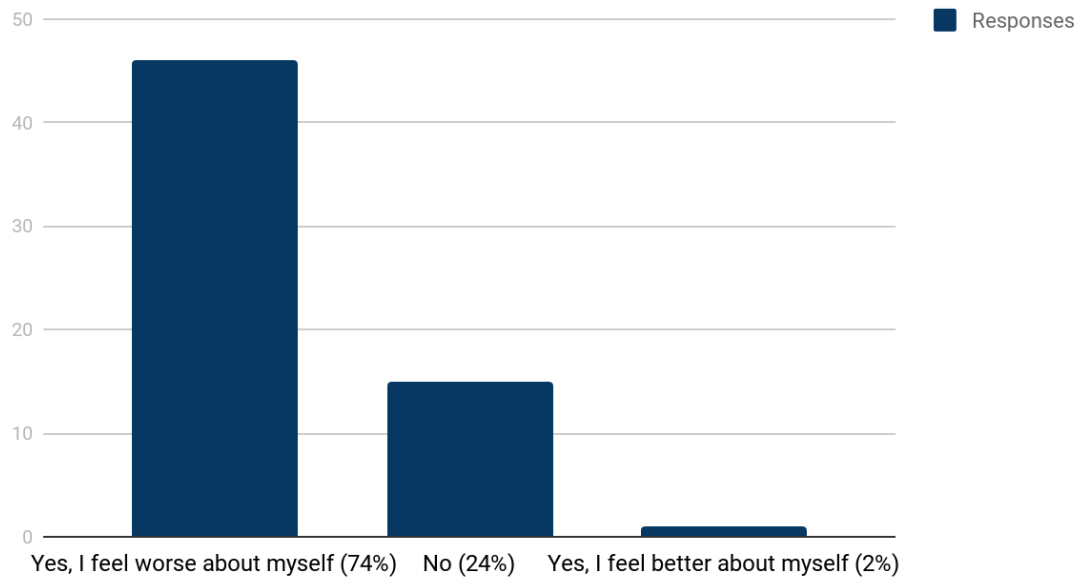
Table 3. Stress affects eating habits



Most participants indicated that stress not only changes their eating habits and behaviors, but it also changes the way they feel about themselves. As indicated in Table 4, almost three quarters of the participants reported that they feel worse about themselves when they are stressed. Self-esteem plays an important role in what and why people

eat; since stress causes the majority of the participants to have a lower self-esteem, it may have a greater influence on the participants' eating behaviors.

Table 4. Stress and feelings about yourself

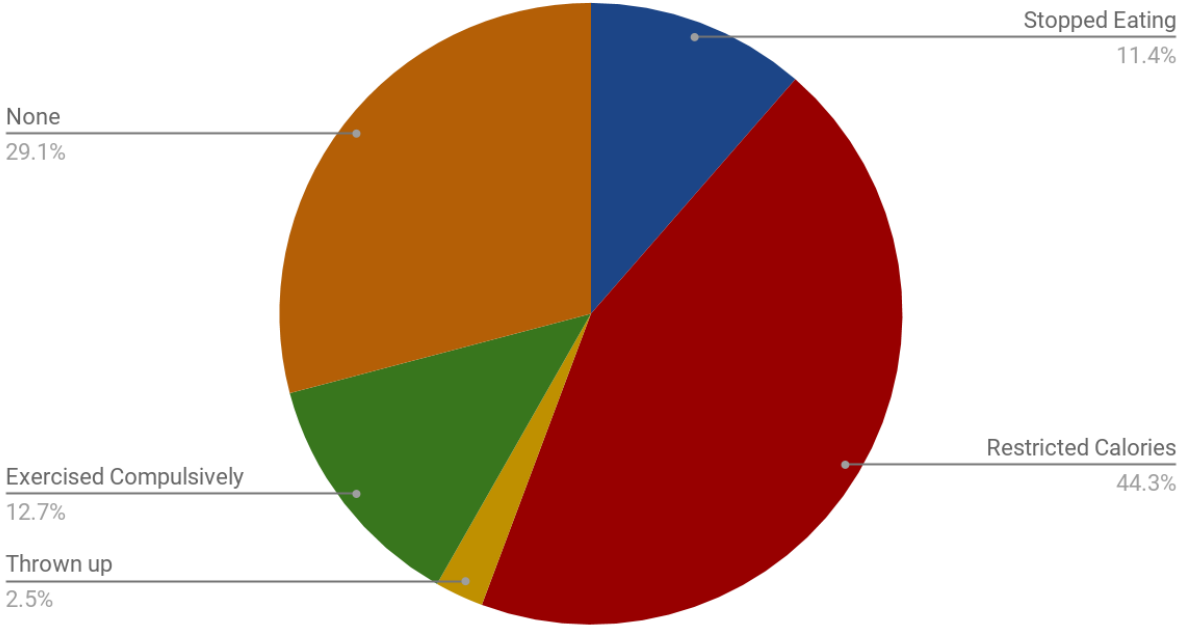


The main stressors that the participants in our study experienced were family, school, friends, physical appearance, and the future. Since this was an open-ended question, the participants were able to elaborate on their answers. The most common stressor was family, with an emphasis on relational issues and meeting the expectations of family members. The second most frequent response was school, which included professor expectations, the amount of homework, and performance anxiety. The third most common response to the cause of stress was friendships; which included social pressure, relationship issues, and the desire to find community. Overall, it was clear that these participants were affected by many of the same stressors.

In order to determine the prevalence of disordered eating behaviors among our participants, we provided several examples of disordered eating behaviors and asked them

to indicate whether or not they had participated in those behaviors in the past or the present. As shown in Figure 1, restricting calories was the most prevalent weight loss technique. However, over one quarter of the participants indicated that they had never participated in any of the weight loss techniques.

Figure 1. Weight Loss Techniques



Discussion

This study found that stress does affect the eating habits of the college females in some way. Most of the women who participated in our study reported that stress either causes them to eat a larger amount than usual, or it causes them to eat a smaller amount than usual. There are several reasons why stress may cause a change in eating behaviors. The literature reviewed indicates that stress may cause women to desire control in an area of their lives, so they resort to restricting calories, bingeing, or participating in another form of disordered eating.⁶ Family pressure is another stress-causing factor that may lead to disordered eating habits. When a woman feels that she is not measuring up to her family's standards or when extreme pressure to succeed is placed upon her, she may result to disordered eating behaviors as a coping mechanism.¹ Many of the women in our study indicated that family issues were a main cause of stress in their lives, and this could be a factor influencing disordered eating habits in their lives. Further research would need to be conducted in order to expound upon this point. Low self esteem is another stressor that may contribute to disordered eating habits. When a woman feels insecure about herself, she may turn to disordered eating to try to lose weight.¹ Most of the participants in our study indicated that stress causes them feel worse about themselves, which could lead to the use of disordered eating in an attempt to feel better about themselves.

according to Magnuson, low self esteem, depression, and family dynamics are also factors that contribute to disordered eating.¹

While the majority of the participants in our study indicated that they usually try to make healthy food and lifestyle choices, many people do not realize the extent of

disordered eating. While many people know that eating too little or too irregularly are aspects of disordered eating, many people do not know that eating too quickly is also an aspect of disordered eating.² Further education is needed in order for people to fully understand the scope of disordered eating habits and be able to identify characteristics of disordered eating in their lives.

Stress and disordered eating habits are major issues among college females. Further research must be done to determine how to address this problem on college campuses. In future research, information should be gathered on what can be done on the OBU campus and beyond to help women, specifically college females, better cope with stress instead of turning to disordered eating habits.

Conclusion

Overall, between the literature reviewed and this research study, it may be concluded that stress is a huge part of any college student's life. Emotions and stress are affecting women's usual eating habits. It is also important to note that stress may be a contributing factor but not necessarily a cause of disordered eating habits. Eating disorders are often a topic not addressed or analyzed. Future research may be needed to help discover how women at Ouachita and beyond can better cope with stress in order to prevent further disordered eating behaviors and in order to strengthen the mental and physical health of these women.

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Appendix A

**Ouachita Baptist University
Institutional Review Board**

Human Subjects Review Application Cover Sheet

Submission Date 09/27/2017

Project Title: **The Eating Habits of College Females and how Stress affects those Behaviors**

Project Personnel

Name Dept. School Faculty, staff, student

Principle Investigator Dietetics and Nutrition, Ouachita Baptist University, Student

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rus63011@obu.edu 901-371-1745 #3268

Suggested project classification: Exempt Nonexempt

Estimate of risk to subjects: None Low Moderate High

Proposed Project Dates: 10 / 01 / 2017 to 12 / 06 / 2017

Estimated number of participants 105

Funding Agencies or Research Sponsors:

There are no funding agencies or sponsors for this project

Submission Status:

New Project

Renewal or Continuation

Change in Procedure for Previously Approved Project

Annual Review

Resubmission

Action of the Research Committee

Project Number _____ Approve

Approve with minor revision Defer for revisions Disapprove

Health, Stress, and Female Body Image
Directions: Please answer the following questions honestly

Age: _____

Classification:

- Senior
 - Junior
 - Sophomore
 - Freshman
1. How important is your health to you?
 - Extremely important
 - Very important
 - Moderately important
 - Slightly important
 - Not at all important
 2. How important is your physical appearance to you?
 - Extremely important
 - Very important
 - Moderately important
 - Slightly important
 - Not at all important
 3. Do you try to make healthy food and lifestyle choices
 - Yes
 - Sometimes
 - No
 4. Describe your stress level:
 - I am very stressed
 - I am moderately stressed
 - I am not stressed at all
 5. Do your emotions, either good or bad, change your usual eating habits?
 - Yes
 - No
 6. What do you do when you are very stressed?
 - Eat more
 - Eat less
 - Eat the same amount as you normally do
 - Eat an extreme amount in a short amount of time
 7. When you are stressed out (mentally or emotionally), does it affect the way you feel about yourself?
 - Yes, I feel worse about myself
 - No, it does not change the way I view myself
 - It makes me feel better about myself; I feel accomplished
 8. Have you ever participated in any of the following to lose weight ? If so, which one(s)?
 - Stopped eating
 - Restricted calories

- Thrown up
 - Exercised compulsively
 - None
9. Do you avoid eating when you're hungry?
- Yes
 - No

Have you ever struggled with or do you currently struggle with an eating disorder to your knowledge? If so please explain:

Do you try to eat in a healthy way? If yes, please describe: (for example: avoiding fried foods, eating more vegetables)

What causes stress in your life?

Informed Consent Agreement

Project Title: The Eating Habits of College Females and How Stress Affects Eating Behavior
Please read this consent agreement carefully before you decide to participate in the study.

.....

The purpose of this study is to discover more information about the eating habits of college females and to gather more information about the effects of stress on the eating behaviors of college females.

What you will do in the study: Complete a questionnaire that asks several questions about your eating habits, stress level, and views on health.

The total surveying process will require no more than ten minutes, and you will spend about five minutes answering the questions on the questionnaire.

We are very serious about maintaining confidentiality in this study, so every response will be anonymous. However, there is a risk to you as a participant that another participant may see the answers you have marked on your questionnaire. Please be sure to respect others by only looking at your own answers to the questionnaire.

This study may help us get a general understanding of how women on our campus view themselves and their health, and it may also help us understand more about how stress affects eating habits. Participants benefit from this study by gaining an increased awareness of health and eating habits. This may lead to positive changes that benefit the health and eating behaviors of students at Ouachita Baptist University.

After the questionnaires are collected, the data will be compiled into a research paper and presented to the Research in Nutrition and Dietetics class in December 2017.

Participation in this study is completely voluntary, and you have the right to withdraw from this study at any time. If you would like to participate, please acknowledge below that you have read and understood this consent document and that you agree to participate in this study:

- I have read and understand this document and have had the opportunity to have my questions answered. I agree to participate in the research study described above.

Signature: _____

Date: _____

If you have questions or concerns about the study, please contact either Rachel Russom by email (rus63011@obu.edu) or Abigail Fontenot by email (fon61541@obu.edu).

You may contact the following person regarding your rights in this study:
Wesley Cluck, Chair Institutional Review Board

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