



Honors College Theses

---

5-5-2023

## Self-Care in Mental Health: A Study on the Effectiveness of Self Care for Overall Mental Wellbeing

Amy C. Branson  
*Georgia Southern University*

Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/honors-theses>



Part of the [Sociology Commons](#)

---

### Recommended Citation

Branson, Amy C., "Self-Care in Mental Health: A Study on the Effectiveness of Self Care for Overall Mental Wellbeing" (2023). *Honors College Theses*. 884.

<https://digitalcommons.georgiasouthern.edu/honors-theses/884>

This thesis (open access) is brought to you for free and open access by Digital Commons@Georgia Southern. It has been accepted for inclusion in Honors College Theses by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact [digitalcommons@georgiasouthern.edu](mailto:digitalcommons@georgiasouthern.edu).

*Self-Care in Mental Health: A Study on the Effectiveness of Self Care for Overall Mental Wellbeing*

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in *Sociology*.

By  
*Amy Branson*

Under the mentorship of Dr. Alicia Brunson

Abstract

*Studies have shown that self-care can be very effective in the treatment of different mental health issues. The purpose of this study is to test the effectiveness of three common self-care techniques (sleep, diet, and exercise) on the overall mental health and wellbeing of college students. This research consists of two surveys that collect data on self-care habits and current mental health, interposed by a two-week period of implementing positive changes to one of the self-care methods. This study used voluntary response sampling. The survey was administered online to students at Georgia Southern University. The survey data was collected and analyzed using SPSS to determine whether the differences between groups of data are statistically significant. The data showed the most significant improvements in the overall mental wellbeing of the participants who improved sleep habits. However, it also showed improvements for the participants who improved diet or exercise habits. This shows that although proper sleep habits make the biggest impact, following any of the three self-care techniques leads to an improvement in overall mental wellbeing.*

*Key terms: Self-care, Mental health, Diet, Sleep, Exercise*

Thesis Mentor: \_\_\_\_\_

Dr. Alicia Brunson

Honors Director: \_\_\_\_\_

Dr. Steven Engel

April 2023  
*Sociology*  
Honors College  
**Georgia Southern University**

## **Self-Care in Mental Health: A Study on the Effectiveness of Self Care for Overall Mental Wellbeing**

Studies have shown the importance of conducting self-care for overall mental wellbeing. The three most commonly discussed and agreed upon methods of self-care include maintaining a proper diet, participating in a suitable amount of daily exercise, and having a consistent and appropriate sleep schedule. Despite all the research that has been done into self-care and its impact of self-care on mental health, there is a noticeable lack of research that examines which self-care method alone makes the greatest impact in the improvement of overall mental wellbeing. White, Whittaker, Gores, and Allswede (2019) suggest that implementing a self-care course increased health behaviors in college students. My research aims to build on this research and examine if healthy behaviors (proper diet, exercise, and sleep) have an impact on overall mental wellbeing, and further examines which of these health behaviors has the largest impact on overall mental wellbeing.

### **Statement of the Problem**

Mental Health, even for all the progress the subject has made over the years, is still a vastly underdiscussed topic. Mental Health issues can plague anyone, but it is no surprise that students, especially college students, are highly susceptible to developing mental health issues. However, many college students have a hard time asking for or receiving help for their mental health. One common option is for these students to practice self-care. However, one flaw to this plan is that it is hard to change habits, especially without motivation to do so. As a college student myself, I have heard about all the different types of self-care and realized that I truly just didn't have time to practice all these different self-care techniques. Many college students are so busy that they can't practice one self-care technique, let alone multiple. Many other students

have the time to change their self-care techniques, but their mental health problems leave them unmotivated to try and improve their lives. Therefore, I decided to test the three most suggested self-care techniques to see which one of these alone had the greatest effect on the mental health of college students.

### **Purpose of the Study**

The purpose of this study is to test the effectiveness of the three most common self-care techniques on the overall mental health and wellbeing of college students. Despite all the positive changes that have occurred in the last few decades, mental health is still underdiscussed. College students are also known to have poor mental health, as the pressure and stress of college classes combined with the reality of being on your own for the first time in your life can be taxing on a person's mental health. I am using this research to try and help college students improve their mental health in the most effective way, without needing to completely change their lifestyle and habits.

### **Research Question/Hypothesis**

For the purpose of this study, the following question was addressed:

1. Which self-care method has the greatest effect on the overall mental health of college students?

As a part of this study, investigation included one research hypothesis:

1. Proper sleep has the greatest impact on the overall mental health and wellbeing of college students.

### **Definition of Terms**

1. *Overall mental health* – measured using 'DSM-5 Self Rated Level 1 Cross-cutting Symptoms Measure – Adult'.

2. *Self-care* – The World Health Organization defines self-care as “the ability of individuals, families and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider” (WHO, 2021).
3. *Proper sleep* – A consistent and appropriate sleep schedule as defined by the Centers for Disease Control and Prevention.
4. *Proper exercise* – Appropriate exercise as defined and measured by the World Health Organization Physical Activity Questionnaire.
5. *Proper diet* – A diet following the guidelines for a healthy diet for adults as provided by World Health Organization.

### **Literature Review**

Freeman et al. (2017) decided to research if improving sleep improved mental health. They studied 3,755 students with insomnia at 26 UK universities from March 2015 to February 2016. They found that by treating insomnia with cognitive behavioral therapy, insomnia, paranoia, and hallucinations were reduced. This led them to the conclusion that insomnia was a mediator of change in paranoia and hallucinations. Similarly, a study of 991 adults (above the age of 16) in Germany studied the effect of stress on sleep quality between April and June of 2020 (Werner et al. 2021). The study found that a higher level of stress predicted a lower sleep quality in participants. They also found that higher levels of positive affect and self-care predicted higher sleep quality. This same result was confirmed in a non-clinical population (João et al. 2018), a study done with 1,552 participants from Portugal, Spain, and Brazil. This is important because it not only showed stress having a negative effect on sleep, but it also showed self-care having a positive effect on sleep.

A meta-analysis was done on physical activity's effect on sleep quality (Memon et al. 2021). The article used 29 studies, totaling 141,035 participants total. The analysis showed that a high level of physical activity is associated with better sleep quality. Another study on physical activity showed its effect on stress (Tan et al. 2020). The research looked at the links between physical activity, sedentary time, and perceived stress for students in Germany. The study showed that more physical activity and less sedentary time was associated with reduced levels of perceived stress, with no significance to the intensity level of the physical activities. The study showed that the students with the high levels of physical activity and low levels of sedentary time showed the lowest amount of perceived stress out of all combinations of physical activity and sedentary time.

Dunn and Jewell (2010) did an analysis of current research to investigate the connection between exercise and preventing and treating mental disorders. They found that there is recent evidence that demonstrates the effectiveness of exercise as a treatment for some mental disorders. It should be noted that they also found insufficient evidence as to the effectiveness towards exercise in preventing mental disorders and suggests that more research in this area is needed. Wattick, Hagedorn, and Olfert (2018) investigated the relationship between diet and mental health for young adults in Appalachia. They had three hypotheses. The first is that students with poor mental health would show different diet intake characterized by lower fruit and vegetable intake and higher sugar intake. The second hypothesis is that individuals categorized as food insecure would show higher days of poor mental health. The third hypothesis is that there would be differences in diet intake between genders, and between depressed and anxious individuals. The study found associations between the presence of both anxiety and depression with sex, food security status, and added sugars intake.

One study done in Slovakia examined the relationship between self-care and depression (Gavurova et al. 2022). The study included 806 participants, and found that there was an association between self-care activities and depression. The study also found that people who engaged in more self-care activities were associated with lower levels of depression. This was the same result found in an analysis of sleep quality, self-care behaviors, and mental health risk (DiBenedetto et al. 2019). Another study investigated the relationship between self-care and mental health (White et al. 2019). The study was done with 187 graduate level students, and it examined the effectiveness of a public health class in preventing worsening mental health. The study ultimately found that the curriculum-based self-care was effective at preventing worsening mental health. The study showed that health promotion behaviors increased over the semester, with the most increases occurring in the areas of fruit and vegetable consumption and physical activity.

Another study examined sleep, diet, and exercise and their effect on mental health. The study consisted of 1,111 young adults who resided in New Zealand and the United States (Wickham et al. 2020). The study found that sleep quality was the strongest predictor of depressive symptoms and well-being, followed by sleep quantity and then by physical activity. Only one dietary factor—raw fruit and vegetable consumption—predicted greater well-being, but did not predict depressive symptoms when controlling for covariates.

The DSM–5 Self-Rated Level 1 Cross-Cutting Symptom Measure, which I used to measure overall mental health in my survey, was evaluated to determine if it was an appropriate measurement tool to use in research (Bravo, Margo, and Pearson 2018). The study found that the measure is a viable tool for identifying and addressing the needs of college student’s mental health.

## **Methodology**

### **Research Design**

This research was a survey of students at Georgia Southern University. The survey used in my research measured the overall mental health, along with sleep, diet, and exercise habits of participants. Choosing to use a survey saved me time in finding participants and getting my questions answered and allowed me to get more responses to my questions than I would be able to get with interviews. I also choose to use surveys because my questions are all close ended questions that require no further explanation by the participant. Leaving my questions as an online survey gave the respondents anonymity. Because of this, using surveys to gather my data is a suitable data collection tool for my research.

### **Sampling**

Participants were all students currently enrolled at Georgia Southern University who were 18 or older. I used convenience sampling. I was in contact with several teachers at Georgia Southern University, and I asked those teachers to inform their students of the survey. Those students were able to volunteer themselves to take the survey and thus participate in the research. I also posted flyers around Georgia Sothern's Statesboro and Armstrong campuses. Using this type of convenience sampling is beneficial because it allows me to collect a lot of data quickly at a very low cost. However, this sampling method also can lead to slight bias, as it may accidentally exclude a group of people. For example, I will be surveying as many people as possible from Georgia Southern University, but the main way that the students would know about my survey is from their teachers or from flyers around campus. Because of this, if a student does not have any classes with any teachers that I contact, or if a student does not frequent the places around campus that I posted my flyers, they will likely not know that my



research exists. However, these sampling methods, though not perfect, were the best option for my research.

### **Instrumentation**

For my research I distributed two surveys, which were given through an online survey platform called “Qualtrics”. This allowed the participants to remain completely anonymous throughout the research process. My dependent variable is the measured overall mental health and wellbeing of the participants. My independent variables are the three self-care techniques that were tested for: sleep, diet, and exercise.

#### **Beginning Survey**

The beginning survey included sections that measure current sleep, diet, and exercise habits, which are my independent variables. It also measured current overall mental health, which is my dependent variable. The variables were measured using a mix of Likert scales and nominal variables. The questions for assessing the mental health of the participants were taken from the “DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure—Adult”, which is a general questionnaire that assesses overall mental health in several different areas.

The questions that measure exercise were taken from a physical activity questionnaire given by the World Health Organization (WHO). The questions that measure diet were taken from diet recommendations given by WHO. The questions that measure sleep are based off of sleep guidelines given by the Center of Disease Control (CDC). These questions, along with their means and standard deviations for both the beginning and ending surveys, can be found in the table below (Table 1). Because I am using these questions that have already been developed and tested, I know that the survey

results will be both reliable and valid. This survey will be the foundation of my experiment and will let me measure a baseline of self-care techniques and overall mental wellbeing. I used the data in this survey and comparing the three self-care techniques to the measured mental health in order to determine the most statistically significant self-care technique.

### Ending Survey

The ending survey will be nearly identical to the initial survey. The only change was the addition of a section that measured how effectively the participant followed the guidelines for their self-care technique. This was important because my results could have been skewed by participants not fully completing the self-care technique, and thus not getting the full benefits of the experiment. However, due to my limited sample size, those questions were unable to be analyzed. This ending survey was the bulk of my data, and was used to compare against the beginning survey in order to statistically measure the effectiveness of each self-care technique on the overall mental health of the participants.

**Table 1.** Descriptive Statistics

	<b>Beginning Survey</b>	<b>Ending Survey</b>
	<b>Mean (SD)</b>	<b>Mean (SD)</b>
<b>Mental Health Questions</b>	47.711 (14.1668)	37.00 (10.80381)
<i>In the past two (2) weeks, how often have you been bothered by the following problems?</i>		
Little interest or pleasure in doing things	2.69 (.766)	2.11 (.798)
Feeling down, depressed, or hopeless	2.62 (.963)	2.10 (.968)
Feeling more irritated, grouchy, or angry than usual	2.59 (1.019)	2.05 (.916)
Sleeping less than usual, but still have a lot of energy	2.54 (1.189)	2.08 (.984)
Starting lots more projects than usual or doing more risky things than usual	2.36 (1.246)	1.90 (1.046)

Feeling nervous, anxious, frightened, worried, or on edge	3.03 (1.181)	2.00 (.858)
Feeling panic or being frightened	2.38 (1.269)	1.85 (.875)
Avoiding situations that make you anxious	2.89 (1.226)	2.36 (1.063)
Unexplained aches and pains (e.g., head, back, joints, abdomen, legs)	2.51 (1.295)	1.72 (.999)
Feeling that your illnesses are not being taken seriously enough	1.82 (1.097)	1.55 (.950)
Thoughts of actually hurting yourself	1.56 (.882)	1.33 (.662)
Hearing things other people couldn't hear, such as voices even when no one was around	1.10 (.307)	1.28 (.560)
Feeling that someone could hear your thoughts, or that you could hear what another person was thinking	1.33 (.701)	1.31 (.766)
Problems with sleep that affected your sleep quality over all	2.36 (1.328)	1.62 (.847)
Problems with your memory (e.g., learning new information) or with location (e.g., finding your way home)	2.15 (1.329)	1.49 (.790)
Unpleasant thoughts, urges, or images that repeatedly enter your mind	2.00 (1.235)	1.41 (.785)
Feeling driven to perform certain behaviors or mental acts over and over again	1.87 (1.080)	1.37 (.751)
Feeling detached or distant from yourself, your body, your physical surroundings, or your memories	2.44 (1.334)	1.69 (1.055)
Not knowing who you really are or what you want out of life	2.69 (1.321)	1.72 (1.025)
Not feeling close to other people or enjoying your relationships with them	2.59 (1.352)	1.85 (1.159)
Drinking at least 4 drinks of any kind of alcohol in a single day	1.36 (.811)	1.24 (.634)
Smoking and cigarettes, a cigar, or pipe, or using snuff or chewing tobacco	1.41 (1.044)	1.26 (.677)
Using any of the following medicines ON YOUR OWN, that is, without a doctor's prescription, in greater amounts or longer than prescribed [e.g., painkillers (like Vicodin), stimulants (like Ritalin or Adderall), sedatives or tranquilizers (like sleeping pills or Valium), or drugs like marijuana, cocaine or crack, club drugs (like ecstasy), hallucinogens (like LSD), heroin, inhalants or solvents (like glue), or methamphetamine (like speed)]	1.18 (.601)	1.18 (.644)

**Independent Variables**

The CDC recommends 150 minutes of physical activity each week (30 minutes of activity 5 times a week, 20 minutes of activity every day, etc.). Do you currently meet this recommendation?	1.46 (.505)	1.21 (.409)
The CDC recommends 2 days of muscle-strengthening activities that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). Do you currently meet this recommendation?	1.56 (.502)	1.23 (.427)
What types of exercises do you do often? (Choose all that apply) (Endurance, Strength, Balance, Flexibility, None)	2.62 (1.60)	1.90 (1.209)
On average, how much sleep do you get each night?	2.97 (.537)	3.03 (.628)
On average, what is your quality of sleep?	2.36 (.778)	1.92 (.774)
How regular is your sleep schedule?	2.28 (.887)	2.03 (.628)
Do you feel rested/refreshed after an average night of sleep?	2.15 (.630)	1.77 (.583)
On average, how many times do you eat per day?	1.69 (.521)	1.69 (.521)
For each meal, do you feel that you eat...?	3.05 (.826)	3.00 (.649)
Would you consider your diet well balanced (including vegetables, fruits, grains, and protein)?	2.38 (.782)	2.18 (.721)

**Data Collection and Analysis Procedures**

The surveys were administered online, and for the sake of anonymity, I did not meet with participants in person. The surveys were distributed through a combination of flyers posted around the Georgia Southern Universities Statesboro and Armstrong campuses and through correspondence with professors at Georgia Southern University who distributed the research information to their students. There was a letter of consent in a separate page at the beginning of each survey and allowed the participant to complete the survey only if they sign the letter of consent. After the data collection was completed, the data was analyzed using ANOVA, Bivariate, and Multivariate analysis through the SPSS Statistical Tool.

## Results

I had 122 participants that responded to the beginning survey. However, as expected, there was a drop in participation after the beginning survey, as many respondents failed to complete the two-week period of intervention or the ending survey. I received 40 responses to the ending survey, however, one response was deemed to be invalid. Therefore, I was left with a sample size of 39 participants.

The participants were allowed to choose the self-care method that they wanted to implement for the two-week period. Of the 39 participants, 15 chose sleep, 15 chose exercise, and 9 chose diet. As shown in Table 2, this resulted in 38.5% of the respondents implementing changes to their sleep habits, 38.5% of respondents implementing changes to their exercise habits, and 23.1% of respondents implementing changes to their dieting habits.

**Table 2.** Frequencies

**Which self-care method did you select on the first survey?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sleep	15	38.5	38.5	38.5
	Exercise	15	38.5	38.5	76.9
	Diet	9	23.1	23.1	100.0
	Total	39	100.0	100.0	

Due to the small sample size, the demographics measured in my research lack enough diversity to be able to determine if demographics such as age, race, or gender had an impact on the results of the surveys. Of the 39 respondents, 28 identified as white (71.8%), 6 identified as Black/African American (15.4%), and 5 identified as Hispanic (12.8%). Additionally, 12 respondents identified as Male (30.8%), and 27 identified as female (69.2%). Most of the respondents were Freshman (51.3%), while 38.5% were Sophomores and 10.3% were Juniors. In regard to employment, 2.6% of respondents were employed full time, 33.3% were employed part

time, and 64.1% were not currently employed. 61.5% of respondents were single, 35.9% were in a relationship, and 2.6% were married. Only one respondent reported having any children/dependents (reporting that they had 4 or more children/dependents), while the rest had none. Finally, 92.3% of the respondents reported being in the 18–20 year-old age range, while 5.1% reported being between the ages of 21 and 23, while only 2.6% of respondents reporting being 30 or older.

When measuring the overall mental wellbeing of the participants using the DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure, each question is measured on a scale from 1 (being not at all) to 5 (severe, nearly every day). With 23 total questions on the measure, assuming all questions receive responses, the lowest possible score is 23, while the highest possible score is 115. The lower the total score is, the better the overall mental wellbeing of the participants is. In Table 3 (below) you can see the average score on the mental health measure for first and second surveys, separated by the type of self-care method that was implemented by the participants. The overall mean for the beginning survey was 43.028. This decreased to 36.9444 by the ending survey. This shows an average improvement of 14.14% in the overall mental wellbeing of participants from the beginning survey to the ending survey. The mean for the overall mental wellbeing of the participants who chose ‘Sleep’ changed from 46.600 to 33.3333, showing an improvement of 28.45% from the first survey to the second survey. The mean for the overall mental wellbeing of the participants who chose ‘Exercise’ changed from 52.846 to 41.3846, showing an improvement of 21.67% from the first survey to the second survey. The mean for the overall mental wellbeing of the participants who chose ‘Diet’ changed from 47.375 to 36.5000, showing an improvement of 23.01% from the first survey to the second survey.

**Table 3.** Descriptive Statistics

<b>Descriptive Statistics</b>				
Which self-care method did you select on the first survey?		Mean	Std. Deviation	N
MHA	Sleep	46.600	14.8651	15
	Exercise	52.846	12.7922	13
	Diet	47.375	12.9387	8
	Total	49.028	13.6580	36
MHB	Sleep	33.3333	13.69393	15
	Exercise	41.3846	8.32204	13
	Diet	36.5000	6.41427	8
	Total	36.9444	10.95170	36

When analyzing the correlation between the question “Which self-care method did you select on the first survey?” and the dependent variables for the beginning and ending surveys, I did not find any statistical significance at the 95% confidence level. The correlation coefficient for the beginning survey was .549, and the correlation coefficient for the ending survey was .144. Despite this seeming lack of statistical significance, I feel it is important to note the large change in the correlation coefficients from the beginning to the ending survey. There was a 73.77% increase in statistical significance from the beginning survey to the ending survey.

**Table 4.** Correlation Coefficient

<b>ANOVA</b>						
		Sum of Squares	df	Mean Square	F	Sig.
MHA	Between Groups	250.470	2	125.235	.611	.549
	Within Groups	7175.346	35	205.010		
	Total	7425.816	37			
MHB	Between Groups	452.310	2	226.155	2.051	.144
	Within Groups	3749.690	34	110.285		
	Total	4202.000	36			

Of the questions that were used to measure current exercise habits, only one was statistically significant. The question “The CDC recommends 2 days of muscle-strengthening

activities that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). Do you currently meet this recommendation?” was shown to be significant at the .01 level. However, it was only statistically significant for the beginning survey. No other exercise measures were statistically significant.

Of the questions were used to measure current sleep habits, one question was significant only for the beginning survey, one question was significant only for the ending survey, one question was significant for both surveys, and one was not statistically significant. The first question asked about quality of sleep. This question was significant at the .01 level; however, it was only significant for the beginning survey. The next question asked participants about the regularity of their sleep schedule. This question was shown to be statistically significant at the .05 level, but only for the ending survey. The final sleep question asked, “Do you feel rested/refreshed after an average night of sleep?”. This question was statistically significant for both the beginning and ending surveys, with a correlation coefficient of .038 and .000 respectively. This was one of only two questions that were statistically significant for both the beginning and ending survey.

Of the questions that were used to measure current diet habits, only one question was statistically significant. That question was “Would you consider your diet well balanced (including vegetables, fruits, grains, and protein)?”. This question showed a correlation coefficient of .019 for the beginning survey, and .048 for the ending survey, making this question one of only two in the entire survey that showed statistical significance for both the beginning and the ending survey. However, none of the other questions in the diet section were shown to be statistically significant.



**Table 5. Relationship between independent and dependent variables**

		<b>Correlations</b>	
		MHA	MHB
The CDC recommends 150 minutes of physical activity each week (30 minutes of activity 5 times a week, 20 minutes of activity every day, etc.). Do you currently meet this recommendation?	Pearson Correlation	0.227	0.246
	Sig. (2-tailed)	0.171	0.142
	N	38	37
The CDC recommends 2 days of muscle-strengthening activities that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). Do you currently meet this recommendation?	Pearson Correlation	.451**	0.062
	Sig. (2-tailed)	0.005	0.717
	N	38	37
What type of exercise do you do most often?	Pearson Correlation	0.187	0.046
	Sig. (2-tailed)	0.260	0.787
	N	38	37
On average, how much sleep do you get each night?	Pearson Correlation	-0.220	-0.267
	Sig. (2-tailed)	0.184	0.110
	N	38	37
On average, what is your quality of sleep?	Pearson Correlation	.439**	0.143
	Sig. (2-tailed)	0.006	0.399
	N	38	37
How regular is your sleep schedule?	Pearson Correlation	0.250	.371*
	Sig. (2-tailed)	0.130	0.024
	N	38	37
Do you feel rested/refreshed after an average night of sleep?	Pearson Correlation	.338*	.578**
	Sig. (2-tailed)	0.038	0.000
	N	38	37
On average, how many times do you eat per day?	Pearson Correlation	-0.097	-0.034
	Sig. (2-tailed)	0.562	0.842
	N	38	37
For each meal, do you feel that you eat...?	Pearson Correlation	0.084	-0.069
	Sig. (2-tailed)	0.615	0.683
	N	38	37
Would you consider your diet well balanced (including vegetables, fruits, grains, and protein)?	Pearson Correlation	.378*	.327*
	Sig. (2-tailed)	0.019	0.048
	N	38	37

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### Discussion

My original hypothesis was that sleep would have the most significant effect on the mental health and wellbeing of college students, and the results of my research supported that hypothesis. However, I was surprised to see just how much of an improvement both diet and exercise also made to the overall mental wellbeing of my participants. This shows that although sleep resulted in the lowest mean reported for overall mental wellbeing and the highest percentage of improvement from the beginning survey to the ending survey, making improvements to any of the self-care methods that I looked at in my research will make a significant improvement in the overall mental health and wellbeing of Georgia Southern students.

The only exercise question that was statistically significant was asking if participants followed recommended guidelines for muscle strengthening exercises. This was also only significant for the beginning survey, and not the ending survey. I am not entirely sure why this question was so statistically significant for the beginning survey and not the ending survey. I believe it may be related to sleep. It is common knowledge that physical activity during the day leads to better sleep at night. This may be a factor for this exercise questions' statistical significance. This is an area that I would explore further in any future research

Regarding the statistical significance of sleep, I was surprised that some of the tested questions were only significant for one of the two surveys. Sleep quality was shown to only be statistically significant for the beginning survey, while regularity of the sleep schedule was only significant for the ending survey. These results were surprising, specifically the result about sleep quality. A question about feeling rested and refreshed after a night of sleep was shown to be significant for both the beginning and ending surveys. This seems like a question that should

yield similar results to the question about sleep quality, however, only one is fully significant. Further research may be able to determine if this discrepancy is a result of wording, inconsistencies in self-reported measures, or any other reason. It is also interesting to note that while the question regarding sleep quantity was not significant, the question regarding sleep quality was. In fact, the question regarding quantity of sleep was the only sleep question that was not statistically significant. This result was seen in several of the studies that I researched for this study, such as Memon et al. (2021).

I was not expecting that any of the diet questions would turn out to be statistically significant, so I was surprised that one of the questions was significant for both the beginning and ending surveys. However, this may be explained by previous research. This study found that there was only one dietary factor that predicted greater well-being, and that was consumption of raw fruits and vegetables (Wickham et al. 2020). My research supports this result, although the cause for that result is still unknown.

While discussing the statistical significance of sleep, diet, and exercise individually, it is important to discuss the lack of statistical significance shown overall. When measuring if the chosen self-care method was statistically significant, it was proven that it was not. This seems to be the result of overall improvement of mental wellbeing. Upon further examination, it was determined that the reason that there was a lack of statistical significance as a result of similar improvements in diet, exercise, and sleep in correlation to overall mental wellbeing. Because all three self-care methods improved drastically from the beginning survey to the ending survey, as shown by the overall improvements to the average means of sleep, diet, and exercise from the beginning survey to the ending survey, there was not statistical significance regarding any self-care method being drastically better than another. However, there was a large change in the

statistical significance from the beginning survey to the ending survey. I believe that if the period of intervention was longer, which would result in overall mental health seeing a larger improvement, there would be a more statistically significant result.

This study does have weaknesses and limitations, including the possible exclusion of other factors from the overall mental health of college students. Due to a limited sample size, I was not able to properly analyze the results of my research with regard to these demographic questions. These results could be different based on ethnicity, gender, sexual orientation, or other factors that I simply was not able to test for. With a larger sample size, a deeper analysis can be done to possibly show any other factors that would have an influence of the overall mental wellbeing of my participants.

Another weakness of this project is the time constraints that I have for the collection of my data. With more time, I could make sure that my sample is conclusive and extensive, but with the time constraints, I was not able to be as expansive as I would like. The limited time period I had to complete this research also limited how much improvement in overall mental wellbeing that I was able to show. With more time, overall mental wellbeing would improve even more than what was shown in my research, which could lead to changes in the results.

The largest limitation I experienced when completing my research, however, was the limits imposed by anonymity. I started this research being keenly aware that asking questions about mental health came with challenges. One of those large challenges is that participants may change their answers to questions regarding mental health if they fear being judged for their answers. This leads to issues of inaccurate results. This is something that I wanted to eliminate in my research, so I took many steps in order to make sure that my participants could remain completely anonymous. This included using a survey ID that was created by the participant

instead of names or emails to link the beginning and ending surveys. However, many participants did not follow the guidelines for the survey ID, resulting in the need to match all 39 surveys by hand. These issues could have been avoided with more careful planning.

### **Conclusion**

This research can help not only colleges, but all institutions find stability in the area of mental health. This study will help future counseling, specifically at colleges. With the information that will be acquired through this study, both colleges and counseling services will have a better foundation for supporting college students in their efforts to improve their mental health. This research could also be used to help those struggling with mental health to start bettering their mental health in the most effective way. This research will help give people the tools that they need to regulate and improve their mental health on their own through these different self-care techniques, specifically through improving sleep habits.

## References

- Bravo, Adrian J., Margo C. Villarosa-Hurlocker, and Matthew R. Pearson. 2018. "College Student Mental Health: An Evaluation of the DSM–5 Self-Rated Level 1 Cross-Cutting Symptom Measure." *Psychological Assessment* 30(10):1382–89.
- Centers for Disease Control and Prevention. (2020, April 15). *CDC - Sleep Home Page - sleep and sleep disorders*. Centers for Disease Control and Prevention. Retrieved November 16, 2021, from <https://www.cdc.gov/sleep/index.html>.
- Di Benedetto, Mirella, Cameron J. Towt, and Melinda L. Jackson. 2019. "A Cluster Analysis of Sleep Quality, Self-Care Behaviors, and Mental Health Risk in Australian University Students." *Behavioral Sleep Medicine* 18(3):309–20.
- Dunn, A. L., & Jewell, J. S. (2010). The effect of exercise on mental health. *Current Sports Medicine Reports*, 9(4), 202-207.
- Freeman, D., Sheaves, B., Goodwin, G. M., Yu, L. M., Nickless, A., Harrison, P. J., ... & Espie, C. A. (2017). The effects of improving sleep on mental health (OASIS): a randomised controlled trial with mediation analysis. *The Lancet Psychiatry*, 4(10), 749-758.
- Gavurova, Beata, Boris Popesko, Viera Ivankova, and Martin Rigelsky. 2022. "The Role of Self-Care Activities (SASS-14) in Depression (PHQ-9): Evidence from Slovakia during the COVID-19 Pandemic." *Frontiers in Public Health* 9.
- João, Karine Alexandra, Saul Neves Jesus, Cláudia Carmo, and Patrícia Pinto. 2018. "The Impact of Sleep Quality on the Mental Health of a Non-Clinical Population." *Sleep Medicine* 46:69–73.
- Memon, Aamir R. et al. 2021. "Sleep and Physical Activity in University Students: A Systematic Review and Meta-Analysis." *Sleep Medicine Reviews* 58:101482.

- Tan, Shu Ling, Malte Jetzke, Vera Vergeld, and Carsten Müller. 2020. "Independent and Combined Associations of Physical Activity, Sedentary Time, and Activity Intensities with Perceived Stress among University Students: Internet-Based Cross-Sectional Study." *JMIR Public Health and Surveillance* 6(4).
- Wattick, R. A., Hagedorn, R. L., & Olfert, M. D. (2018). Relationship between diet and mental health in a young adult Appalachian college population. *Nutrients*, 10(8), 957.
- Werner, Anika, Maren-Jo Kater, Angelika A. Schlarb, and Arnold Lohaus. 2021. "Sleep and Stress in Times of the Covid-19 Pandemic: The Role of Personal Resources." *Applied Psychology: Health and Well-Being* 13(4):935–51.
- White, Marney A., Steve D. Whittaker, Ashton M. Gores, and Dana Allswede. 2019. "Evaluation of a Self-Care Intervention to Improve Student Mental Health Administered through a Distance-Learning Course." *American Journal of Health Education* 50(4):213–24.
- Wickham, Shay-Ruby, Natasha A. Amarasekara, Adam Bartonicek, and Tamlin S. Conner. 2020. "The Big Three Health Behaviors and Mental Health and Well-Being among Young Adults: A Cross-Sectional Investigation of Sleep, Exercise, and Diet." *Frontiers in Psychology* 11.
- World Health Organization. (2019, May 15). *What do we mean by self-care?* World Health Organization. Retrieved November 29, 2021, from <https://www.who.int/reproductivehealth/self-care-interventions/definitions/en/>.
- World Health Organization. (n.d.). *Healthy diet*. World Health Organization. Retrieved December 1, 2021, from <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>.