

Measures of nutritional intake and attitudes associated with depression and achievement in college students.

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Abstract

For some students college can be a difficult time having to deal with new responsibilities and obligations. With increases in stress levels and below average nutritional intake students may

be confronted with problems with achievement and depression. This study explored the nutritional intakes and attitudes that were associated with depression and achievement in college students. In this current study, we used 120 UTSA students. The participants filled out surveys that assessed sociodemographic status, nutritional intake, achievement, and depression. Bivariate analyses were used to analyze the association among them. The results indicated that depressive symptoms were negatively correlated with perceived amount of fat consumed in one's diet ($p < .05$). There was also a positive correlation between depressive symptomology and performance-avoidance goals ($p < .01$). Performance approach goals were negatively correlated with perceived amount of fat consumed in one's diet ($p < .05$). There was a negative correlation with performance-approach goals and one's grade in the class ($p < .05$). A positive correlation with performance-avoidance goals and one's gender also emerged ($p < .05$). In addition, performance-avoidance goals and one's grade in the class were positively correlated ($p < .05$). The results in this study showed that all three variables had an effect on one another. The relationship among these three variables created a complex tapestry that may explain how depression, achievement and nutrient intakes were associated together.

Rationale

- In the world we live in today it is generally understood that living an unhealthy lifestyle leads to health risks.
- Researchers are constantly producing new studies that suggest that nutritional components of ones diet can either raise or lower the risks of chronic diseases (Babinska, Beder, Bederova, & Gabaaova, 2004; Batterham, Grenyer, Owen, Probst, & Tapsell, 2005).
- Depression is a growing problem in today's society. Most occurrences happen during the ages of 24 to 44, but younger generations are experiencing higher rates of depression at earlier ages and it now accounts for 10% of all disabilities (Plan of Action, 1998). With the ages of onset of this disease decreasing college students should be showing increases in depression as well.

Rationale

- Several studies have shown that there is a relationship between nutrition and depression (Albanes, Hakkarainen, Haukka, Lonnqvist, Partonen, and Virtamo, 2004). However, it is hard to determine if depression impacts what people eat or is it what we eat that impacts depression.
- There are many studies about the measures of achievement and the motivations of achievement (Church & Elliot, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 1999; Elliot & Sheldon, 1997; Elliot & Rawsthorne, 1999), once again it is unclear if there are any other factors that could attribute to this motivation.
- It is apparent that there is not enough research and literature that looks at relationships between nutrition, depression, and achievement.

Method

Participants

- For this study we used 110 students from the participant pool of the psychology department and 10 students from a nutrition class of Ashley Love, Ph.D.
- All of the students were enrolled at the University of Texas at San Antonio. Some of the students decided to refuse to answer some of the questions so the total number of students may vary among analyses.
- The male students represented thirty five percent of the population and the female students represented sixty five percent of the population.
- The mean age of the students was 19.5 years and the standard deviation was 2.5 years.

Method

Assessment Instruments

- Sociodemographic information and nutritional intake which took questions from the Behavioral Risk Factor Surveillance System Survey Questionnaire (Centers for Disease Control and Prevention, 2003).
- Elliot's Achievement Goals Questionnaire (Church & Elliot, 1997) assessed the students motivation for achievement.
- The measure of depression was assessed using CES-D (Radloff, 1977).

Results

- The results indicated that forty three percent of the sample population showed depressive symptomology.
- The results indicated that depressive symptoms were negatively correlated with perceived amount of fat consumed in one's diet, $r(115) = -0.20, p < .05$.
- There was also a positive correlation between depressive symptomology and performance-avoidance goals, $r(120) = .27, p < .01$. (see table 2)
- Performance- approach goals were negatively correlated with perceived amount of fat consumed in one's diet, $r(115) = -.21, p < .05$.
- There was also a negative correlation with performance-approach goals and one's grade in the class, $r(92) = -.21, p < .05$. (see table 2)
- A positive correlation with performance-avoidance goals and ones gender, $r(120) = .21, p < .05$ also emerged. (see table 2)
- Performance-avoidance goals and one's grade in the class, $r(92) = .22, p < .05$ were positively correlated. (see table 2)

Table 1

Comparison of Percentages, Means, and Standard Deviations of Students' Demographics by Gender

	Men (n = 42)	Women (n = 78)
What Is Your Age	19.67 ± 1.70	19.43 ± 2.89
What Is Your Weight	157.68 ± 29.31	135.90 ± 27.84
What Is Your Height	69.73 ± 2.79	64.24 ± 2.46
What Is Your GPA	3.21 ± 0.47	2.99 ± 0.53
What Grade Do You Have In This Class	1.66 ± 0.55	1.50 ± 0.65
What Is This Class Level	1.56 ± 0.98	1.55 ± 1.06
What Is Your Race		
Caucasian	35.9 %	26.2 %
Hispanic	35.9 %	50.0 %
African American	11.5 %	07.1 %
Asian	11.5 %	14.3 %
Other	05.1 %	0 %

Table 2

Correlation Among Study Variables

	Gender	Grade In Class	Fat In Diet	Approach Goals	Avoidance Goals	Mastery Goals	Depression Symptomology
Gender	_____						
Grade In Class	-.121	_____					
Fat In Diet	-.102	-.049	_____				
Approach Goals	.084	-.207*	-.208*	_____			
Avoidance Goals	.208*	.218*	-.154	.212*	_____		
Mastery Goals	.164	-.190	-.005	.351**	-.015	_____	
Depression Symptomology	.148	.137	-.204*	.068	.273**	.101	_____

■ ** $p < .01$.

■ * $p < .05$.

Depression and Performance

- The results showed that students who reported depressive symptoms also reported performance-avoidance achievement style. Since depression is represented in many symptoms, such as fatigue, low self-esteem, and poor decision making. The performance-avoidance achievement goals are shown when an individual was attempting to only do enough to avoid failure (Elliot & Harackiewicz, 1996, Church & Elliot, 1997, Elliot & Sheldon, 1997).
- Therefore, this link between the two variables is understandable. As an individual's depressive symptoms increase they cause poor decision-making and these decisions leads students no longer try to master their concepts but only try to avoid failure.

Nutrition, Depression, and Performance

- The current study predicted that those students whose self reported depressive symptomology to have “poorer” nutrition compared to students without the symptomology. The results indicated that the students who reported depressive symptomology also reported decreases in their perceived fat intake in their diet. Students who had increasing depressive symptomology might be eating less and may perceive that their fat intake would be less than an individual who was not suffering from depression.
- Those students with a “good” nutritional intake report would be negatively related with performance-approach or avoidance goals. As seen in Table 2, there was a significant correlation with performance-approach achievement goals and the perceived amount of fat consumed in ones diet. There appears no evidence of any literature which looks at the relationship between achievement goals and amount of fat consumed in ones diet. The current results suggested that as one’s use of performance-approach goals increased then their perceived fat intake within their diet begins to decrease.

Gender and Depression

- The data showed that there was no significant correlation between gender and depression. Since most of the research supported the conclusion that females show more depression than males, a plausible reason that this was not seen in the current study is that since this was a convenience sample of students those students who were not depressed came to the study and those who were depressed stayed at home or didn't register for the study.

Gender, Performance, and Grades

- There was a correlation between performance-avoidance goals and gender. These results suggested that female students engage in more performance-avoidance goals than male students. Further study on why female students engage in this behavior should be studied.
- Additional findings show that as one's performance-approach goals increased while their grade in the class decreased. Also, performance-avoidance goals increased as the students' grades in their class decreased. One might speculate, with no apparent literature available, that both performance-approach and performance-avoidance goals were very similar in nature in their effects on students' grades.

Conclusion / Discussion

- Unfortunately, the nutritional measurement used was not as effective as it could have been questions regarding consumption of chicken, fish, different types of milk, or specialized types of diets such as vegan or vegetarian were not addressed.
- It also failed to assess alcohol consumption in one's diet because the students are in college where their consumption might lead to many problems.
- There were also problems in how the dietary questions were interpreted.
- We discovered that the nutritional assessment questions were not diverse enough for the students to respond to.
- The sample population was chosen out of convenience, which would mean that not everyone from the target population has a choice of being in the study.

Conclusion / Discussion

- The role of nutrition apparently has more of an effect on depression and achievement than it is commonly known. This study showed that fat avoidance or perceived fat intake was related to depression and also achievement motivation.
- Clearly there are a number of factors impacting student mental health, such as perceived fat intake, depression, achievement motivation, and gender, which need to be addressed. This would open up new areas of research and expand the field that looks at individuals' health and also the psychological affects.

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