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# The association between reported dietary habits and perception of diet quality in Grand Valley State University students

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## **ABSTRACT**

Research indicates that weight gain is common among traditional college students. The purpose of this study was to obtain descriptive information about the dietary habits of full time Grand Valley State University Students (GVSU). The subjects were students in public health concepts, clinical nutrition, and liberal studies classes. The students completed a survey consisting of questions on age, gender, class level, enrollment status, frequency of usage of campus dining facilities, residency status, kitchen status, and frequency of late night consumption. This study is the first to describe the nutrition environment at GVSU and the potential role this environment may play in student weight gain.

## **INTRODUCTION**

Existing research indicates that weight gain is common among traditional college students, primarily in the first year of study (Holm-Denoma). This weight gain is commonly referred to as the 'Freshman 15,' as it has been proven most drastic during the freshman year of college (Mihalopoulos). Previous research has established that this weight gain is affected by such factors as campus dining facilities, student residency, eating behaviors, level of physical activity, and alcohol intake (Crombie, Hoffman, Hajhossieni, Holm-Denoma).

The 18-29 age range that traditional college freshmen fall into is the group with the highest prevalence of weight gain, which may lead to obesity (Crombie). Once obesity is established, it is difficult to reverse. Obesity has adverse effects on many facets of the population, including healthcare allocation, economics, and marketing. It also leads to many severe health problems later in life (Eckersley). Therefore, it is important to control weight gain in college to avoid these long-term population consequences.

A study by Wang of 547 women showed that in the younger generations, negative attitudes about food resulted in an increase in body mass index (BMI). This may be due to factors such as food as stress control or incorrect knowledge about the amount of calories in food (Wang). Therefore, information such as an increase in awareness of actual nutrition of available food may contribute to a healthier BMI.

There needs to be a better understanding of why weight gain occurs in college students. Students may have dietary habits that they believe contribute to good dietary quality, when in actuality this may not be the case. In this study, we will assess the influence

of dietary habits on the perception of diet quality in traditional Grand Valley State University Students.

## **MATERIALS AND METHODS**

A total of five classes, consisting of two clinical nutrition classes, two public health concepts classes, and one freshman level liberal studies class were surveyed. Students had to be full time and between the ages of 18 and 24 to participate. A total of 133 valid surveys were collected. The surveys used can be seen in Figure One. Surveys were kept confidential, and data was entered in Epi Info, then analyzed using SPSS. Chi square tests, Kruskal-Wallis tests, and Spearman's rho were used to find significant correlations in the data.

## **RESULTS**

Respondent descriptive information is shown in Table 1. The respondents were mainly female (76%), and lived off campus (77%). Students mostly had kitchens (96%) and few had meal plans (17%). The majority of students (95%) perceived that they try to eat healthy most of the time and succeeded. A large majority of students (83%) consumed at least one meal a week on campus, yet almost two thirds of those surveyed had never looked at the nutritional information available about food on campus, whether online or at the campus dining locations. Figure Two depicts that many students who claim to usually or always eat healthy have never viewed the available nutritional information, and that many were even unaware that the information was available.

The campus dining facilities were indicated as a barrier to eating healthy by 84% of students with a meal plan and 50% of students who consumed more than 6 meals a week on campus. When asked if they consumed food after 10:00 PM, 80% of the students indicated that they did and 36% of these students still perceived their diet as healthy (data not shown).

There was a significant correlation between student's dietary perceptions and students trying to eat healthy, as shown in table two ( $p < .0001$ ). Student who ate on campus more were less likely to try to eat healthy ( $p = 0.042$ ) and more likely to use their kitchens ( $p < .0001$ ). Students who tried to eat healthy used their kitchens less often ( $p = .002$ ).

**1. Age** \_\_\_\_\_

**2. Gender**                    M                    F

**3. Class**    Freshman                    Sophomore                    Junior                    Senior

**4. Full Time College Student?**    Yes                    No

**5. Where is your current residence?**  
On-Campus                    Off-Campus                    At Home(With Parents)

**6. Do you have a kitchen in your unit?**                    Yes                    No

**7. How often do you use your kitchen?**  
5 or more times per week    3-4 times per week    1-2 times per week    Hardly ever

**8. Do you have a meal plan?**                    Yes                    No

**9. How often do you eat at Campus dining Facilities per week(Including facilities such as Fresh Food, Lower Commons, Papa Johns Pizza...)?**  
1-2 times/week    3-5 times/week                    6-8 times/week                    9-11  
times/week    12-14 times/week                    15+ times/week

**10. How often do you consume food after 10PM?**  
1-2 times per week                    3-4 times per week  
5-6 times per week                    7 days per week                    Practically Never

**11. If you consume food after 10PM, where do you get it from?**  
Campus Dining Facility    Fast Food    Home/Dorm    Other

**12. I try to eat healthy**  
Never                    Sometimes                    Usually                    Always

**13. Overall, how would you rate your diet?**  
Very Unhealthy    Unhealthy                    Somewhat Healthy                    Very Healthy

**15. I find it hard to eat healthy because:**  
Lack of time    Social Influence    Money    Available Dining    Do not find it hard

**16. Have you ever viewed the nutritional information available about food on campus either online or at a dining location?**  
Yes    No, but I was aware it was available                    No, I was unaware it was available

**Figure One:** Survey used for data collection.

<b>Variable</b>	<b>Frequency(Percentage)</b>
<b>Age</b>	
Mean	21( $\sigma=1.246$ )
<b>Gender</b>	
Females	102 (77 %)
<b>Class</b>	
Freshman	12(9%)
Sophomore	6(5%)
Junior	42(32%)
Senior	73(55%)
<b>Residence</b>	
On Campus	15(11%)
Off Campus	118(89%) <sub>a</sub>
<b>Kitchen</b>	
Yes	128(96%) <sub>b</sub>
<b>Meal Plan</b>	
Yes	22(17%) <sub>c</sub>
<b>I Try to Eat Healthy</b>	
Never-Sometimes	20(15%)
Usually	87(65%) <sub>d</sub>
Always	26(20%)
<b>Rating of Own Diet</b>	
Very Unhealthy-Unhealthy	6(5%)
Somewhat Healthy	101(76%) <sub>e</sub>
Very Healthy	25(19%)
<b>Frequency of Eating On Campus</b>	
0 times per week	23(17%)
1-5 times per week	90(68%) <sub>f</sub>
6+ times per week	14(11%)
<b>Viewed Nutritional Info About Campus Food?</b>	
Yes	43(32%)

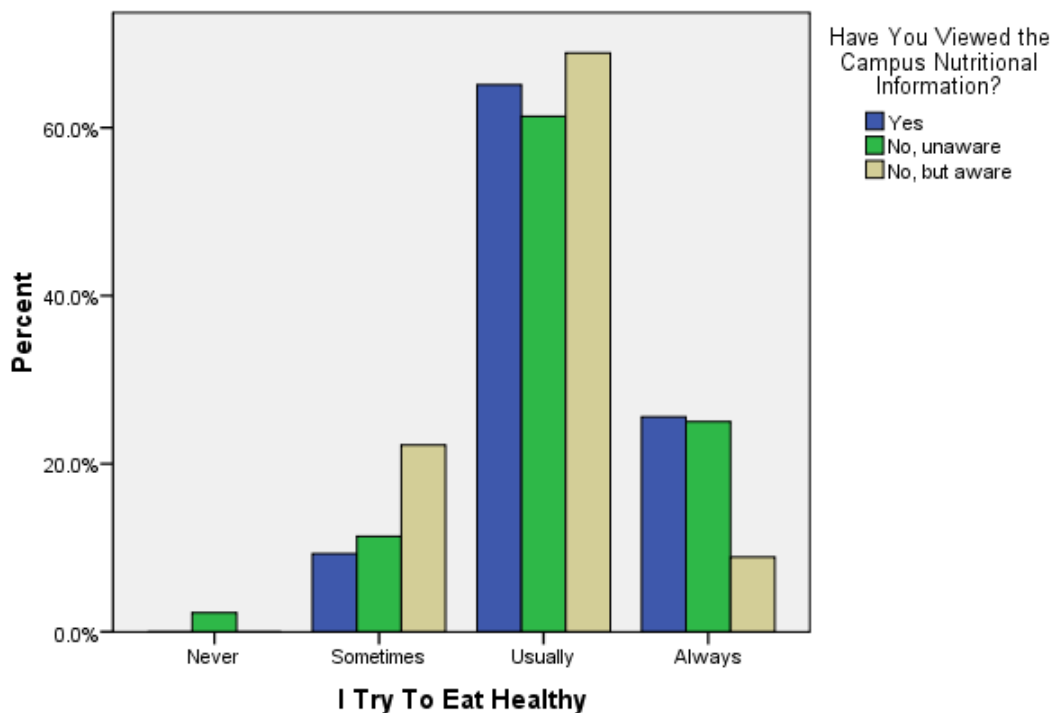
- a. There were significantly more students living off campus ( $p<.0001$ ).
- b. There were significantly more students with a kitchen ( $p<.0001$ ).
- c. There were significantly more students without a meal plan ( $p<.0001$ ).
- d. There were significantly more students who usually try to eat healthy ( $p<.0001$ ).
- e. There were significantly more students who rate their diet as somewhat healthy ( $p<.0001$ ).
- f. There were significantly more students who eat on campus 1-5 times per week ( $p<.0001$ ).

**Table One:** Summary of Important Frequencies in GVSU respondents

	Rating of Own Diet	Try to Eat Healthy	Frequency Use Kitchen
Eating On Campus	$r = -0.044$	$r = -0.180$ ( $p=0.042$ )	$r = 0.358$ ( $p<.0001$ )
Rating of Own Diet		$r = 0.622$ ( $p<.0001$ )	$r = -0.165$
Try to Eat Healthy			$r = -0.265$ ( $p=.002$ )
Frequency Use Kitchen			

**Table Two:** Important Correlations found in Data Analysis

### Student Attempts to Eat Healthy and Knowledge of Nutritional Information



**Figure Two:** This figure shows that many students who try to eat healthy most of the time still are unaware of the nutritional content of the food available on campus.

### DISCUSSION

Despite the majority of students believing that they try to eat healthy and have a healthy diet, two thirds of the students were not knowledgeable about the nutrient content of foods they were consuming. The discrepancy in frequencies between those students who ate on campus and those students who had looked at the nutritional information about the food available on campus showed that students were largely unaware about the nutritional value of food they were consuming. Instead of just making this information available, it needs to be abundant and obvious, so that students are more aware about the actual content of the food that they eat. If students truly are trying to eat healthy most of the time, making them more aware of this information would be beneficial.

In addition, I found the majority of students consumed foods late in the evening when intake of high calorie, low nutrient foods commonly occurs. Therefore, GVSU students' perceptions of their diet may not concur with their actual dietary quality. Additional knowledge of good eating habits compared with poor eating habits could arm students with more knowledge to make better choices about their diets.

The limitations to this study were the small sample size and the convenience sample. This may account for the conflicting correlations between the use of kitchens with healthy eating and on campus eating.

In summary, this survey indicates that improved advertising of the online dining nutritional information and increased education about healthy eating habits, such as not eating late, may improve the nutrient intake of GVSU students. The results also imply that students may not be aware of potentially unhealthy eating habits. Therefore, increased education about actual nutritional value of foods could be beneficial to those students who truly believe they are already eating healthy.

The fact that many students who eat on campus perceive the food available to them as a barrier to healthy eating also needs to be addressed. A future study on the dietary quality of GVSU students is recommended for further analysis and a larger sample size, which could provide more statistical significance.



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