

The Journal of Undergraduate Research

Volume 15 *The Journal of Undergraduate Research*

Article 10

2017

Determining How Campus Food Environment Influences Eating Behaviors Utilizing Focus Groups

Jennifer Swanstrom
South Dakota State University

Follow this and additional works at: <https://openprairie.sdstate.edu/jur>

 Part of the [Human and Clinical Nutrition Commons](#)

Recommended Citation

Swanstrom, Jennifer (2017) "Determining How Campus Food Environment Influences Eating Behaviors Utilizing Focus Groups," *The Journal of Undergraduate Research*: Vol. 15 , Article 10.

Available at: <https://openprairie.sdstate.edu/jur/vol15/iss1/10>

This Article is brought to you for free and open access by the Division of Research and Economic Development at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in The Journal of Undergraduate Research by an authorized editor of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

Determining How Campus Food Environment Influences Eating Behaviors Utilizing Focus Groups

Author: Jennifer Swanstrom

Faculty Sponsor: Dr. Shelly Brandenburger DC, PhD, RD, LN, L.Ac, FIAMA

Department: Nutrition and Health Sciences

ABSTRACT

This study set out to explore what factors in a campus environment influence students' eating behaviors through qualitative methods. The student researcher developed questions based on a similar study and with the help of the faculty advisors. Researchers conducted focus groups and asked 9 open-ended questions. This study utilized a qualitative focus group approach along with a demographic survey that yielded quantitative data. Findings in the present study suggest that students eat unhealthier options when healthier options are available because of time, convenience, and cost. Students would like to cook in the dorm kitchens to eat healthier, however, most participants stated the kitchens were riddled with dirty dishes, filled with people, or they were unable to get supplies needed to cook. Recent changes in student meal plans require a minimum number of meals at the dining hall. Students report this change caused them to want to eat larger portions and resort to stealing in the form of bringing storage containers and hiding fruit under their shirts. Overpriced healthy food persuades students from eating those options, resulting in students buying unhealthy food choices. Students in this study noted several other concerns regarding the campus food service and health. Several struggled with finding nutrition information about campus food and others felt that the current food service was not flexible for students with special dietary needs. This study contributes some baseline information about what factors influence student choices and student insights on how the campus environment can influence food choices.

INTRODUCTION

The rising incidence of overweightness and obesity across the world could be described as a global pandemic. A 2012 study showed 68.6% of young adults were either overweight or obese, which increases the chances of diabetes, coronary artery disease, cancer, and other serious conditions (Ogden, Carroll, Kit, Flegal, 2013; Laska, Hearst, Lust, Lytle, & Story, 2015). Obesity is the leading cause of heart disease and is the major cause of death in the United States (Levi, Chan, & Pence, 2006). It results in an estimate of 300,000 excess deaths and \$100 billion in medical expenditures per year. Scientists are finding the acceleration of overweight and obesity prevalence in America is from environmental factors rather than biological. Fast food restaurants are known for having high glycemic, cheap, and energy-dense food options. These establishments have increased from about 30,000 in 1970 to more than 233,000 locations in the United States in 2004 and are taking their place on college campuses. Fast food restaurants have also been associated with the increase of overweight and obesity (Rosenheck, 2008).

Evidence suggests that college students do not have a vast awareness regarding food composition, recommended kilocalorie level, healthful eating, and the relationship between diet and disease (Kolodinsky, Harvey-Berino, Berlin, Johnson, & Reynolds, 2007; MacArthur, Grady, Rosenberg, & Howard, 2000). With the increasing prevalence of technology, numerous college students rely on the internet for their nutrition information. They also are looking toward magazines and television as a source (Kwan, Arbour-Nicotopoulos, Lowe, Taman, & Faulkner, 2010). Universities need to provide accurate and available nutrition

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

information to prevent students from incorporating inaccurate information found on the internet into their lifestyle. With the increase of overweight and obese individuals, it is important to develop healthy eating habits as a young adult (Neumark et al., 2006).

Transitioning from high school to college is a life changing event and is a time in life when independent health behaviors can form. This age group is the changing of childhood to adulthood and making choices for oneself. Parents are not as much of a deterrent in eating choices, which can cause the young adult to practice unwise eating behaviors (Hudd et al., 2000).

Transitioning to campus life is a large part of many young adult's lives, with nearly half of high school graduates attending a post-secondary institution (Laska, Hearst, Lust, Lytle, & Story, 2015). Many things influence dietary choices of a young adult, including time, convenience, and cost for food items (Hebden, Chan, Louie, Rangan, & Allman-Farinelli, 2015). Young adults who are overweight when leaving for college are at a greater risk of becoming obese adults (Ogden, Carroll, Kit, Flegal, 2013). This study set out to explore what factors in a campus environment influence students' eating behaviors through qualitative methods.

METHODS

The Campus Food Environments and Eating Behavior Study was conducted in a Midwest public university. The student researcher developed questions based on a similar study done by Pohlmeier, Reed, Boylan, and Harp and with the help of the faculty advisors (2012). Flyers were hung in social environments on campus and emailed to students through several faculty. All students were welcome to participate. The study was conducted late in the semester, thus freshmen and transfer students had time to get acclimated to the campus food environment. Students wanting to participate received a survey evaluating available times to meet for the focus group. Participants were assured information shared would be confidential and participation was strictly voluntary, and they could withdraw at any time. Those who agreed to participate had written consent obtained by the student researcher.

Researchers conducted focus groups on campus and asked nine open-ended questions (Table 1). A focus group is a small discussion to gain in-depth information from a representative sampling of a specific population. These sessions can provide a range of ideas and feelings on certain issues the sampling population has, while providing insight on similarities and differences in perspective between groups of individuals. The suggested number of participants for a focus group is six to 10 individuals to have a large enough variety in perspectives, but not too large that individuals cannot voice their opinion on the subject at hand (Rabiee 2004). In the Campus Food Environments and Eating Behavior Study, each participant completed a short, written survey upon arrival, which took approximately five minutes to complete, before the focus group began. The survey assessed personal information such as year in school, meal plan, and major. Participants received a \$10 gift card to the dining on campus after completion of the focus group. There were 16 participants in three focus groups and the audio recordings were transcribed verbatim for analysis.

Table 1. Open-Ended Questions

1	When you think of "healthy food" on campus, what location comes to mind?
2	If someone says they eat healthy, what does this mean to you?
3	How do time, convenience, and cost affect your ability to make healthy food choices on campus?

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

4	What information do you need to make healthy food choices?
5	Where do you find your nutrition information for the campus food?
6	What are your thoughts about the Meal Plans options offered here at this university?
7	If students choose unhealthier items when healthy choices are available, what influences that choice?
8	When you consider healthy food options at this university, what 3 things come to mind?
9	If you could implement any suggestion to encourage healthy eating at this university, what would you recommend and why?

Qualitative analysis was done after the focus groups were conducted. Qualitative research is different than quantitative in that participant responses are coded for patterns of opinions and motivations but are not quantified. Researchers conducting qualitative research are concerned with the meaning and each individual's frame of reference. From several reviews of the transcripts, the researchers deduce the major concepts revealed and conclude theories for the subject in question (Taylor, Bogdan, & DeVault, 2015). This study utilized a qualitative focus group approach along with a demographic survey that yielded quantitative data. Each focus group was analyzed by both the student researcher and the faculty advisor.

RESULTS

When it comes to healthy eating on this Midwest campus, most participants expressed that fruits and vegetables are the major healthy food source they should be seeking on campus. Students reported where they could find healthy eating options was mostly the salad bar at both the dining hall and Union. Participants described that eating healthy isn't all about calories and more about what is put into the body like non-processed food, fruits, and vegetables. However, calories can alter choices students make. As one individual reported, "I think when they put the calories out there that really second guesses you, like you think 'that looks good' but then you look at the calories and you're like 'holy Moses' — like it's a lot." Students felt that the type of fat is more important than the amount. For example, one participant stated, "If you are eating French fries from McDonald's then there would be more fat, but ... avocados are high in natural fats so it just kind of depends on the kind of fat."

College students are pressed for time with school work, jobs, and peer activities; they find time a challenge for eating healthy. One participant in the study reported "It is kind of hard when you are running from class to class to be able to sit down and eat something quick." Many students stated they had to get options on-the-go and run to their next class because their time was so limited. The amount of time it takes to get through the lengthy line of some establishments deters students from eating healthier options. One participant stated, "I like to go there but the lines are super long and, so I have gone somewhere else, because it doesn't take a long time." These quicker restaurants to get a bite to eat are the fast food establishments located at the centralized student Union. Others said they have food in the dorms for quicker access: "I would eat in the dorm because of my timing and how my schedule is set up." Also, students will eat in their dorm rooms for healthier options because of the limited time the food establishments are open. As described by one, "there are people who have lab from like the 5-8 whenever they are open, and I am like, where are they supposed to eat? We live on a college campus, you can't close everything down at 8. We aren't done eating!"

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

Besides being concerned about the limited hours of the food establishments during the week, students report that some places are closed entirely on weekends despite students living on campus.

Convenience also plays a significant role in the food choices college students make. As summed up by one student going through the Union, “My biggest problem is that it is too convenient ... I wasn’t even hungry, but this yogurt looked good, so I just bought it, and I ate it.” The dorm kitchen would be a convenient place for students to make their own food for healthier options.

However, many stated dirty dishes were left in sinks for several days and other residents of the dorms will clean wild game in the community kitchen sink. “They will, like, clean their pheasants and stuff in the kitchen in the basement. Most of the time they clean up, but sometimes they don’t and there are, like, pieces of feathers.” Also, the dorm room community kitchens have utensils and kitchen ware that can be checked out for students, so they do not need to buy their own. However, in some cases, no facility member was available to check out utensils for the students, “you have to check them (utensils) out with your ID and stuff, but no one is ever in the lobby.” On this campus, there is a convenience store located in the middle of two major dormitories. The food options available in this location are mostly convenience food, but it also has an organic section and steam-ready vegetables. The fact that the convenient store is located in the building of two major dorms affects the amount students eat there: “Convenience does play a role because I probably go to the [convenience store] more to get food than I go out to [the Union], for example, to eat, just because it is right there next to me.”

Students displayed differing opinions on the effect of cost on food choices in this study. Some stated price was a huge impact and would alter the selections they made from a healthier option to an unhealthier choice. One participant reported, “if you go to, like, [a particular restaurant on campus] you can get a fried sandwich and fries and it is going to be less than buying a salad at [there] or if you go to [the Union] and you get a salad. It is going to be \$10, but you can get a sandwich or pasta for like \$7.” One individual even stated regarding the \$10 salads in the Union, chicken nuggets are a far cheaper option, “you know how many nuggets you can get for \$10? You can get like 40 nuggets ... It takes me a long time to eat 40 nuggets, like that would be a couple days’ worth of food for me. I don’t want to spend all that on one meal.” Other individuals disagreed saying price didn’t matter as much because they went home every weekend, or they didn’t care about price because they had already spent the money, “I guess for me it’s like I already paid and there is no going back once you got your flex, like you already bought this food.” At this campus, students pay to have money on their student IDs before the start of the school year and pay for food during the school year with their ID, similar to a debit card, with a currency known as flex. “We have to use the flex eventually, it’s either that or I am going to lose it.” They reported they only started looking at prices at the end of the year when funds were getting low. Another individual stated that, in the convenience store, the price of the healthier option was more than an unhealthier option that provided more food, “those (dried peas) are so much more expensive then like a bag of chips ... I have definitely been like, I could buy three bags of chips for one price of this...” Many of the participants, agreed that overpriced healthy food dissuades students from eating those options, resulting in students buying unhealthy food choices. One individual stated, “If healthier food cost just that much, I know I would get healthy food just as often.”

Nutritional information for the food on this campus is found online or sometimes beside the food in the establishment. However, when asked where one can find nutritional information about what’s available to eat on campus, some students didn’t know where to look. One individual stated, “I know they have told us about that online, but I’ve never actually been able to find it. So, I think it is a little bit inconvenient, I wish there was a better way to make that available.” Another participant is diabetic where it is essential she knows how many carbohydrates are in the meals she is consuming; however, she didn’t know where to find that information: “I need to know how many carbs I’m having in a meal ... but I don’t know even know where it is at.” For several years, there has been a registered dietitian located in the student health services. Most of the participants stated they would like to

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

talk to the dietitian to get more guidance on what to eat, however, the fee for visiting (currently \$25 for the first visit and \$10 for returning visits) deterred students from wanting to go. Despite her specific nutrition challenges, the student with Celiac disease was asked if she visited the campus dietitian for help with eating on campus and responded, “No, I am broke.” When the nutrition information is available to students it can alter the way they eat. Like a student stated, “When you put the calories up there on the board I think that really gives people perspective of what they are actually eating.”

There are two general types of meal plans available to students on this campus. One option is all flex, which, as stated above, is the plan with money that can be used as a credit card and can pay for many choices on campus, including food chain establishments and coffee. The other general meal plan is block. This is the dining hall plan which students can only use to eat meals at the dining hall, although it comes with a small amount of flex to be used all around campus. The dining hall is an all-you-can-eat buffet style eatery. Both options have differences in the amount of money or meals for the student to meet their needs. However, recent changes were made to the student’s meal plan. For the 2016-17 school year, the change requires eating at the dining hall on campus a minimum number of meals for freshman students. Students report that being forced to participate in the dining hall experience when they didn’t necessarily want to cause them to, “want to get my money’s worth.” This mandated change appeared to lead to students eating larger portions and resorting to stealing in the form of bringing storage containers, hiding fruit under their shirts, or putting food in their backpacks: “The thing is that I’m not going to spend money at the [Union] I’m going to take apples from the [dining hall] and put them in my backpack and take them back to my dorm.”

Freshmen and sophomores on this campus are required to have a meal plan, with the possibility of being excused in rare cases with documentation and effort. One major topic of discussion in the focus groups was the struggles of students with special dietary needs. Gluten intolerance and Celiac disease were mentioned in several focus groups with only a few options available for individuals whom suffer from these dietary restrictions. If there are options available to meet these needs, students report that they are increased in price and cause them to run out of funds faster than the students without such limitations. The participant with Celiac disease stated the following regarding the amount of money it cost to meet her dietary needs: “I ran out really early and I had to spend like \$250 over my meal plan.” Not only is gluten a problem for individuals, but lactose intolerance was a topic for discussion as well. The campus is trying to cater to the special dietary needs for individuals, but students in these focus groups reported feeling self-conscious for having to ask service members for the lactose-free option at the dining hall.

Healthy options are available on this campus, so students were asked what drove them to choose unhealthy options when both were available. A couple of students said taste was a factor in the choices made for eating. Fruits are a healthy option; however, participants reported fruit in the Union seems to be over priced and questionable in quality. For example, one student reported, “Whenever I get their grapes I only eat half of them because the other half are old.” Cost was brought to the discussion as the main reason college students make the less healthy choice. Most of the comments referred to how students could get the most out of a meal for the least amount of money, rather than thinking about the healthiest option. “My basic meal at [one name brand establishment] is more than my basic meal at [another establishment] by like a couple dollars and if I do that every day that’s going to, like, add up.” Participants unanimously reported that healthy options were available on campus, including the salad bar, fruits, a pocket bread establishment, and vegetables. However, different focus groups had different outlooks on some of the healthier options. Most stated that the dining hall had some good options, however, it also had unhealthy choices readily available. There were different opinions regarding the dining hall on campus. Some students stated the dining hall allows for a variety of foods choices and a vast amount of fruits and vegetables at the salad bar, “that’s where I can usually go with the most variety of healthy options.” Whereas, other individuals stated the food was not the right temperature or was not appealing to the eye, thus the availability of these better options didn’t make a difference for them in the end.

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

DISCUSSION

Healthy options on this campus appear to be limited and costly. With the prevalence of obesity in young adults, it is important to develop healthy eating habits while a young adult. Thus, it would seem important that college campuses work to establish healthy eating environments. The transition from high school to college is an important stage for developing personal lifestyle choices, including food selections. A college campus, according to the responses in this study, is not the place to get a healthy meal with fast food restaurants and overpriced healthy options. Salads, which can be a great meal to get vegetables and fruits into a day, are \$10 at most locations on this campus and deter students from eating this healthy option. Fruits and vegetables are needed in a healthy, balanced diet, however, according to the reports of the participants in this study, they are overpriced and questionable in taste. In the Student Union, fruits can be purchased in a small quantity and at a large price. This is unfortunate because some college students focus on price rather than the health.

Price was a big determinant in the choices college students made. With a limit to the amount of money to spend in a semester, students don't want to run out before the end of the school year. Students who desire to buy healthier options with their meal plan may run out of money faster. It is very unfortunate there is a fee to see the registered dietitian on this campus because some students would like to obtain information about healthy eating from a trained individual, but don't want to pay the price. Not only does price determine what college students choose for food, but time plays a role as well. On the way to class during the day, students are not likely to wait in a lengthy line for a salad, but rather will stop at the quick fast food establishment they can eat on the go. College students are pressed for time and that can ultimately govern if a student chooses a healthy option or an unhealthy option. Convenience is important in the eating behaviors for college students. Stores are located in the dorms for convenient eating without having to even go outside. These stores do have healthy options available, but they are limited to one section or often out of stock. This study contributes some baseline information about what factors influence student choices and student insights on how the campus environment can influence food choices. Further research could help delineate factors in campus eatery design and meal plan options that could best contribute to improving healthy choices.

DETERMINING HOW CAMPUS FOOD ENVIRONMENT

REFERENCES

- Hebden, L., Chan, H. N., Louie, J. C., Rangan, A., & Allman-Farinelli, M. (2015). You are what you choose to eat: factors influencing young adults' food selection behaviour. *Journal of Human Nutrition and Dietetics*, 28(4), 401-408.
- Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuka, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal*, 34(2), 217-228.
- Laska, M. N., Hearst, M. O., Lust, K., Lytle, L. A., & Story, M. (2015). How we eat what we eat: identifying meal routines and practices most strongly associated with healthy and unhealthy dietary factors among young adults. *Public health nutrition*, 18(12), 2135-2145.
- Kolodinsky, J., Harvey-Berino, J., Berlin, L., Johnson, R., & Reynolds, T. (2007). Knowledge of current dietary guidelines and food choice by college students: Better eaters have higher knowledge of dietary guidance. *Journal of the American Dietetic Association*, 107, 1409–1413.
- Kwan, M., Arbour-Nicitopoulos, K., Lowe, D., Taman, S., & Faulkner, G. (2010). Student reception, sources, and believability of health-related information. *Journal of American College Health*, 58(6), 555–562.
- Levi, A., Chan, K. K., & Pence, D. (2006). Real men do not read labels: The effects of masculinity and involvement on college students' food decisions. *Journal of American College Health*, 55(2), 91-98.
- MacArthur, L., Grady, F., Rosenberg, R., & Howard, A. (2000). Knowledge of college students regarding three themes related to dietary recommendations. *American Journal of Health Studies*, 16, 171–178
- Neumark-Sztainer, D., Wall, M., Guo, J., Story, M., Haines, J., & Eisenberg, M. (2006). Obesity, disordered eating, and eating disorders in a longitudinal study of adolescents: how do dieters fare 5 years later? *Journal of the American Dietetic Association*, 106(4), 559-568.
- Ogden, C. L., Carroll, M. D., Kit, B. K., Flegal, K. M. (2013). Prevalence of Obesity of Adults: United States, 2011-2012 (Report No. 131). National Center for Health Statistics Data Brief. Hyattsville, MD: National Center for Health Statistics.
- Pohlmeier, A., Reed, D. B., Boylan, M., & Harp, S. (2012). Using focus groups to develop a nutrition labeling program within university food service. *Family and Consumer Sciences Research Journal*, 40(4), 431-443.
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the nutrition society*, 63(04), 655-660.
- Rosenheck, R. (2008). Fast food consumption and increased caloric intake: a systematic review of a trajectory towards weight gain and obesity risk. *Obesity Reviews*, 9(6), 535-547.
- Taylor, S. J., Bogdan, R., & DeVault, M. (2015). Introduction to qualitative research methods: A guidebook and resource. John Wiley & Sons.