Campus Food Infrastructure and Poor Eating Behavior At Belmont University

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Introduction

Most prior research regarding college campus dining surrounds unhealthy eating behavior related to food insecurity affecting dietary habits. College's control a large portion of students' access to food via infrastructure. They have the responsibility creating environments for students that permit and encourage these healthy behaviors. College students are a high-risk population for malnutrition and unhealthy eating behaviors. When students across multiple colleges were surveyed around 42% self-reported poor dietary behaviors[1]. College dining services are oftentimes the enabler of preexisting bad habits like large consumption of caloric dense foods[2]. Most dining halls serve the same food without variation, limiting the diversity of students' food options. Survey data suggests that many college students do not have the resources or environment to encourage healthful eating. On-campus franchises that are convenient and fast are highly utilized on college campuses with student meal plans in lieu of their healthier alternatives[3]. At the university level, the environment potential has a positive or negative affect on eating behavior. Dining halls are the primary food resource for on campus students. At Belmont University, student engagement with dining services is unavoidable. All students with 60 credits or less are required to live on campus and are also required to have a meal plan with Belmont dining services. In October 2023, the Harrington Dining Place received a score of 72 on its health inspection. The main violation was the inadequacy of the dishwasher temperature[4]. Many students and parents voiced concern over being required to purchase meal plans and receiving potentially unsafe food. The purpose of this study is to examine the unhealthy eating behaviors of the Belmont undergraduate student body resulting from on campus dining limitations.

Methods

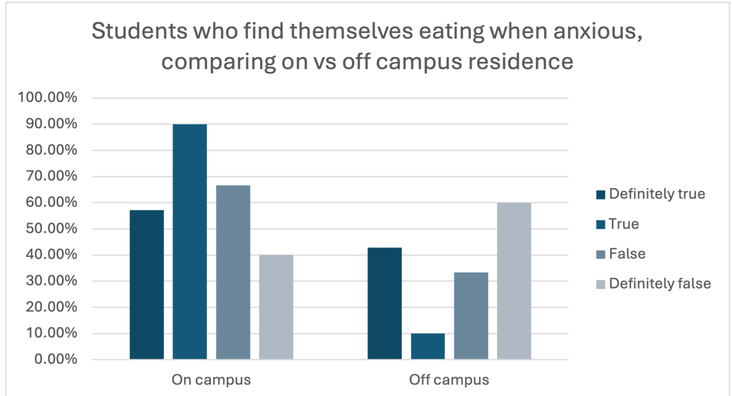
A mixed methods approach was used combining the NEMS tool specifically for campus dining environments, the Three-Factor Eating Questionnaire (TEFQ), and 5 qualitative questions from Swanstrom's 2017 focus group study on food environments influencing health behaviors[5]. Only Questions from the NEMS-CD came from the following sections: the Site Visit, Menu Review, and Facilitators and Supporters. Since the NEMS-CD survey is typically conducted by a health inspector, the survey administer periodically visited the campus cafeteria at breakfast, lunch, and dinner separately to assess the dining hall according to NEMS-CD. TEFQ and qualitative questions were in the survey administered to students. The survey began with two demographic questions, to assess how long the student has been at Belmont and whether they live on campus and are required to have a meal plan. TEFQ questions followed, and the survey concluded with the open-ended questions. The study sample was the Belmont undergraduate student population. Any currently enrolled student at Belmont University over the age of 18 was eligible to participate. To recruit participants, the survey was distributed to professors in the Public Health Department and through professors in the College of Pharmacy and Health Sciences (CPHS). The survey was also administered to several diverse on-campus groups to recruit students outside of CPHS. The groups include the Public Health Student Association, Kappa Alpha Theta, Reformed University Fellowship leaders and members, Towering Traditions leaders, and the examiners Towering Tradition students. Qualtrics was used to administer the survey online. A link to access the survey was shared via email with selected professors and campus organizations. The survey was open for three weeks. Quantitative data from Qualtrics was sorted and interpreted through excel sheets. Qualitative data from open ended questions was analyzed thematically.

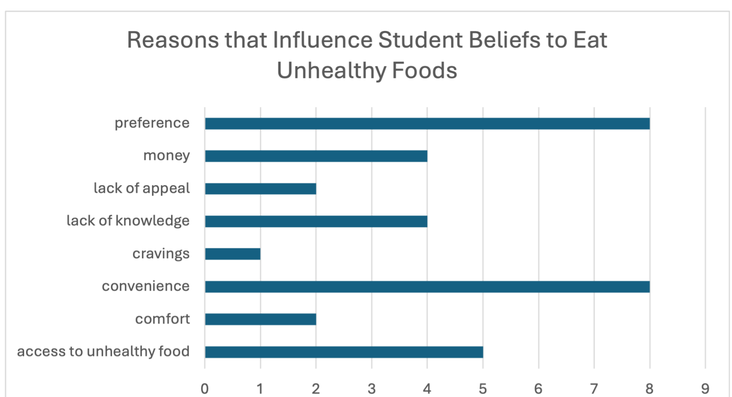
Results

Sample from NEMS-CD Results Menu Review Section

Main Dishes Entrees:		
Total # Main Dishes/Entrees	3	3
Healthy Options	3	2
Main Dish Salads:		
Total # Main dish salads	3	1
Healthy Options	3	3
Low-fat or fat free salad dressings	3	2
Fruit (w/out sugar) (outside of salad bar)	3	2
Non-fried vegetables (w/out sauce) (outside of salad bar)	3	2
Diet soda	0	0
Other healthy or low-calorie beverage?	0	0
Total Score	58	34

Data From the TEFQ and qualitative survey





Results Continued

In the NEMS portion, the Belmont dining hall suffered its worse deductions in the categories that scored points based on variety of options in the dining hall. Based on the NEMS survey, the Belmont cafeteria received a lower score because it failed to provide many options for healthy food, rather than issues of encouraging unhealthy eating. Notable categories include only one form of salad being offered in the salad bar, and a lack of unprocessed fruits and vegetables in the dining hall. The TEFQ data demonstrated that students who live on campus and have a meal plan report being more anxious at mealtimes and eat less than desired compared to their off-campus peers. On campus students in most categories leaned towards the unhealthy eating behavior. Students overall showed moderate to high eating restraint daily, and did not experience a significant effect in eating habits based on what and when their peers were eating. In the qualitative data, most students believed that healthier food options in addition to greater variety on campus would positively influence eating habits. Majority of students had an unfavorable view of food on campus, mostly complaining about the structure of meal plans, their cost, and the quality of food. Time was reported as an influential factor when deciding what to eat, matching the result of convenience being a predominant reason students professed to eating unhealthily. Other influences for unhealthy eating included eating preferences and easy access to unhealthy foods.

Conclusion

The NEMS-CD portion clearly shows the weaknesses of the Belmont dining hall. Though it is not the only meal option on campus, it is the most available to students with meal plans. Based on lack of variety in the NEMS score and student feedback, interventions in the dining hall should be focused on increasing whole foods variety. Increasing availability of unprocessed fruits and vegetables should be a future intervention. The TEFQ and qualitative survey gathered data on why and when students eat. Students who live on campus reported being more anxious around mealtimes compared to off-campus students. On campus students generally experienced more unhealthy eating behaviors than off campus students. Lack of variety was a consistent theme in all open-ended question responses, with many students not enjoying the food, and not being content with its healthfulness. Students were willing to admit that the limited choices they have, coupled with their busy college schedules led them to unhealthier eating behavior, even though they had the desire and motivation to eat healthy. In future studies, more students should be surveyed to hopefully further examine the differences between meal plan students and non-meal plan students. In addition, as Belmont grows drastically in the next couple of years, there should be some observation to see how dining services evolve to accommodate that. In addition, surveys about dining infrastructure should be developed to understand a quantifiable link between environment and behavior better.

References

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