

Research

Chopped: The Salad Competition Dietary Behaviors of Urban College Students

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ABSTRACT

Introduction: To measure the dietary behaviors of urban college students 18 to 25, with an evaluation of a nutritional intervention “Chopped: The Salad Competition” by the American Heart Association.

Methods: A convenience sample of 100 students engaged in an intervention and evaluation.

Results: Our sample reported 92.8% had a shift in eating habits since attending college. Notably, 80.7% reported an interest in changing their diets.

Conclusions: College can be a stressful transition for all students, interventions to guide healthy choices for college students should include peer health educators, engaging activities, and create an ongoing atmosphere for supporting continued healthy choices.

Keywords: College students, Peer education, Nutrition, Influence, American Heart Association

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INTRODUCTION

The American Heart Association promotes that an effective way to prevent cardiovascular diseases is by eating a healthy, low-calorie, nutrient-rich diet, low sugar diet consisting of vegetables, fruits, whole grains, low-fat dairy products, poultry, fish, legumes, nuts and non-tropical vegetable oils [1]. For college students, maintaining a “healthy” diet is not as easy as it may sound. The average college student, especially those who have a demanding schedule, have to balance a limited budget and schedule which can represent a crucial factor in their food choices [2]. A significant factor in college students maintaining a nutritious diet is their willingness to try new and healthier food options [3].

According to the Centers for Disease Control and Prevention [4], Cardiovascular diseases (CVD) remain the number one cause of death in the United States [4], on average cardiovascular disease prevalence costs the United States about \$200 billion a year. As reported by the Centers for Disease Control and Prevention, 630,000+ of American deaths each year are due to cardiovascular diseases. For the Hispanic, Black and White demographics in the United States, cardiovascular diseases are the leading cause of death;

in the other race and ethnicity groups, heart diseases are only second to cancer as the leading cause of death as reported by the CDC. Cardiovascular diseases are caused by a multitude of factors; some factors are uncontrollable such as age, accessibility to quality medical care, and family genetics, but there are other factors of poor eating habits and nutrition, smoking, excessive alcohol consumption, physical inactivity, and more.

The Health for Life program is a “community-based nutrition and wellbeing program created by Aramark and the American Heart Association (AHA) that focuses on empowering people to make healthy food, nutrition and lifestyle choices” [1].

Normand et al. tested the daily feedback dietary feedback of recommended daily nutrients along with the estimated calorie and fat data of daily food purchases with given the dietary feedback, the authors noticed that calorie reduction of the foods the students purchased at the universities were declining or below the suggested guidelines by the United States Department of Agriculture [5].

College students reported time as a barrier to food preparation. This may result in fast food intake since it's

quick and easy and students do not have time to practice their cooking skills [6]. Most young adults believed that it is challenging to maintain a healthy lifestyle between work, school, and other responsibilities [7].

The consumption of food on a college campus-based on taste, cost, and convenience, it was noted that the limited availability of healthy and affordable food options on college campuses receive a direct impact on students nutrition. Researchers determined that the necessary change in availability and affordability even though it may be short-term, it sets the precedent for students to have the right outlook on nutritional knowledge and dietary behaviors [8].

Examining how college students view beverages, how they select their beverages, and as well as when they drink certain beverages, Block, Gillman, Linakis, Goldman et al.[2] believed that educating college students on nutrition can assist in reducing the number of obese adults in the U.S., which is an epidemic. Also reported was a calorie content in food awareness among students but a lack of knowledge on calorie counting in beverages [2].

Students who live on campus and commute to campus face difficulties in making healthy food choices. Their desire for convenience and affordability in addition to the lack of concern and knowledge for their health and wellbeing may play a role in college students dietary choices. Alternatives for inexpensive, nutritious and appetizing food selections should be taken into consideration for maintaining a healthy lifestyle for students [9].

Students do not have adequate knowledge of age and sex-specific food guide recommendations. Simpler food guide recommendations or age-and sex-targeted campaigns may enhance their knowledge. The objective of this research was intended for students to consume more vegetables; however, the authors believe that most students have low coping self-efficacy, all of which could be targeted in nutrition interventions [10].

MATERIALS AND METHODS

This study aimed to conduct an intervention and evaluate dietary behaviors and choices to a convenience sample of urban college students.

To recruit the desired target audience, the researchers arranged with professors to utilize their students for the intervention. In addition, the researchers engaged other recruitment methods such as posting flyers around campus and communicating via campus social media channels. Participants were not financially compensated for their participation in their study; some professors may have offered extra credit for participation.

Multiple nutrition guidelines and health education curriculums were produced by the American Heart Association and Aramark which were provided for facilitators to conduct as a part of their Healthy Habits program, the co-principal investigators chose the “Chopped Salad Competition” intervention because of the ease of access to the supplies and the ability to create a meal without heating preparation

techniques. This intervention was designed to teach college students knife skills and salad preparation, the Chopped Salad Competition was a friendly competition offering participants valuable skills to use their daily lives.



Figure 1: Photo of two of the Peer Health Educators delivering the intervention & salad making instructions.

The inclusion criteria for the experiment was based on age and consent. The research was approved, #2019-0015, by the Institutional Review Board Committee on 2/4/2019.

The intervention was given to 100 (n=100) students between the ages of 18-25. Various groups of students, consisting of 16-25 students each were engaged for our intervention. Some groups consisted of self-formed groups, while others were in a structured class. The recruiting process also involved contacting professors to request permission to implement within their class cohorts.

The co-principal investigators decided to develop the evaluation questions to capture and understand the perceptions of the dietary and nutritional behavior of urban college students. The evaluation questions were reviewed and tested by experts in the field. With this data, the researchers were capable of measuring the effectiveness of the intervention evaluation. Each evaluation had a specific identification number to allow the co-principal investigators to review the data with no identifying information. The data was inputted with fidelity into SurveyMonkey® an online survey software.

RESULTS

Our target audience was urban college students between the ages of 18-25 with an average age 20.58, there were participants over the age of 25 that were allowed to participate (however, they did not participate in the evaluation process).

Totaling an amount of 100 participants for the intervention, attrition for the evaluation was due to student time constraints.

The following characteristics were reported in the demographic questions (n=83); 74.75% were female (n=62), 25.25% male (21); 55.43% (n=46) non-African descent, 44.57% (n=37) were of African descent; 75% (n=62) of the participants were of non-Hispanic descent, with 25% (n=21) Hispanic; 57.73% (n=48) were of middle class and 42.27%

(n=35) were of a lower-middle class; and 51.52% (n=43) are employed part-time, with 48.48% (n=40) not working.

Evaluating a change in eating habits since they first started attending college, out of a total of n=83 participants, 47% (n=39) responded “Yes, a lot”, 45.8% (n=38) responded “Yes, but not that much”, and 7.2% (n=6) responded, “No, not at all”. Reporting that 92.8% had a shift in eating habits since attending college.

Participants were asked how many meals they ate per day. Out of n=84 respondents, 2.4% (n= 2) responded “1 meal per day”, 59.5% (n=50) responded “2 meals per day”, and 38.1% (n=32) indicated “3 or more meals per day”.

The number of participants that consumed breakfast each morning was a total of 47.0% (n=39) participants. Participants that did not consume breakfast each morning, indicated a total of 53.6% (n=45). Total respondents for this query was n=84.

Within weekly vegetable consumption (n=83); 4.8% (n=4) ate vegetables once per week; 13.3% (n=11) ate vegetables twice per week; 28.9% (n=24) ate vegetables three times per week; 24.1%(n=20) ate vegetables four times per week; and 28.9% (n=24) ate vegetables five times or more per week.

Within weekly fruit consumption (n=76); 5.3% (n=4) ate fruit once per week; 14.5% (n=11) ate fruit twice per week; 25% (n=19) ate fruit three times per week; 26.3%(n=20) ate fruit four times per week; and 28.9% (n=22) ate fruit five times or more per week.

Satisfaction of diet and eating habits (n=83); 50.5% (n=42) stated “Yes”, and 49.4% (n=41) stated “No”.

Interest in changing their diet (n=83); 80.7% (n=67) stated “Yes” and 16% (n=16) stated “No”.

In keeping track of daily caloric and nutrition consumption (n=83); 31.3% (n = 26) stated “Yes” and 68.7% (n=57) stated “No”.

After the intervention the researchers had several participants shared S.M.A.R.T. (Specific, Measurable, Achievable, Realistic, and Time-bound) goals that were inspired by our intervention, here is a sample of the responses:

“I would like to eat healthier foods, try vegetables that are foreign to me, and eat out less”.

-Female, 23

“I want to increase my cardio to two times per week”.

-Male, 19

“Maintain my weight. I would like to find new ways to become healthier as well as achieve my fitness goal”.

-Female, 20

“I have never eaten a salad, like really NEVER. This was good”.

-Male, 19

“I want to eat more balanced meals and not binge eat or skip meals. I also want to eat more fruits and vegetables”.

-Female, 20

“I just need to have better time management skills when I wake up, to make sure I meal prep and think about what I am going to eat before my day gets ahead of me”.

-Female, 24

Highlighting the participants engaging in creating and cutting techniques of the chopped salad intervention (Figure 2) offers a snapshot into the experience.



Figure 2: Photo of participants engaging in creating and cutting techniques.

DISCUSSION

Our demographics sample was reflective of a college campus. The majority of our participants were female 74.75%, non-African descent 54.43%, non-Hispanic descent 75%, of the middle class 57.73%, and employed part-time 42.27%. Our campus environment reflects the urban demographics with 44.57% of African descent, 25% of Hispanic descent, and 42.27% were of a lower-middle-class participant pool.

Our research noted a desire to change current eating habits with a very high percentage (92.8%), however, the response bias related to this question, could be an indicator for the high result. Because this intervention was conducted within the campus of study and with classmates; students may have unconsciously noted their responses to fulfill the experiment’s purpose.

With 53.6% reporting, no breakfast consumption and the frequency of at least two meals per day at 59.5% the overall frequency pattern notes limiting meals. Variables and environmental influences need to be more deeply examined without bias.

Within weekly vegetable and fruit consumption, there were some strong correlations; with 4.8% vegetable and 5.3% reported fruit consumption once per week; 13.3% vegetable and 14.5% reported fruit consumption twice per week; 28.9% vegetable and 25% reported fruit consumption three times per week; 24.1% vegetable and 26.3% reported fruit consumption

four times per week; and 28.9% vegetable and 28.9% reported fruit consumption five times or more per week.

Total satisfaction of diet and eating habits was noted positively at 50.5%, with 80.7% seeking to change their diet.

Few of our participants 31.3%, reported they were already engaged in keeping track of daily caloric and nutritional consumption.

The qualitative spontaneous response samples from the participants allowed the researchers to hear expectations that the intervention motivated participants to plan for future food choices. Increased exercise, nutritional monitoring, and the introduction to new foods can increase perceived healthy dietary choices.

CONCLUSION

College can be a stressful transition for all students, interventions to guide healthy choices for college students should include peer health educators, engaging activities, and create an ongoing atmosphere for supporting continued healthy choices. Research continues to demonstrate that the high school to college transition can increase stress and maladaptive eating habits. College campuses can have limited healthy eating choices. Frequency of meals reported may be influenced on schedule, availability, and access to food within the campus. Future studies could look at internal and external resources for food sources within a college campus. In addition, caloric and nutritional content may or may not be available within resources. Future research could examine the understanding of required caloric and nutritional requirements and comprehension of monitoring if these are aligned.

With 53.6% reporting, no breakfast consumption and the frequency of at least two meals per day at 59.5%; the limited amount of reported food consumed versus caloric intake could be a future level of research to be more deeply examined. Our researchers were concerned with our demographic level of lower socio-economic-status reported as 42.27% of our population had resources to purchase food. With the growth of college food pantries, our researchers are interested in exploring this area more deeply.

Future interventions could make note of accessibility for nutritional counseling on campus. Direct resources imbedded within future interventions could access the campus wellness center to ensure accuracy.

If students are utilizing campus food services, future interventions could include “fruit and vegetable vouchers” to support an increase in consumption. Students engaged in our intervention devoured the salad, and often had more than one bowl.

Further research could include a wider sample and more detailed queries on the type of interventions best suited for college students. Creating healthy habits at the college level will assist in creating healthy adults.

STATEMENT OF FUNDING

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