

The impact of culinary arts on the consuming convenience foods

[Health & Medicine](#), [Healthcare](#)



The purpose of this study is to evaluate if taking a culinary arts course in high school has an impact on a student's decisions about purchasing and consuming convenience foods. Students taking culinary arts courses are exposed to a range of cooking techniques as well as nutrition. This study could implicate that a student's participation in a culinary course improves decision making in regards to purchasing convenience foods based on concepts learned in nutrition (McCullen, 2016).

Justification for the Study

Since the Industrial Revolution, food production has become easier and cheaper to make (Lee, 2010). It is not uncommon for students to purchase items from a vending machine, eat fast food or use the microwave to make a quick meal. These types of foods are called convenience foods. Often times these foods lack nutritional value, are high in calories and can be purchased relatively inexpensive (The Effect of Sugar and Processed Food on Student On-Task Behavior in the National School Lunch Program: A Review of the Literature, 2010). Access to convenience foods is common place in our society. It is important for students to understand convenience foods do not make up for a well-balanced meal or snack. Exposure to nutritional concepts in a culinary arts course can help to facilitate making better dietary choices when choosing food options. Further examination is needed to evaluate if taking a culinary arts course has an influence on student's decision making with convenience food items.

Research Question

Does taking a culinary arts course in high school have an effect on students choosing to purchase and consume convenience foods?

Definitions

Words in this research proposal that may need further defining:

Convenience foods- Food items that can be bought from a vending machine, fast food restaurant, drive-through, or made/heated in a microwave. Usually purchased for a nominal price, lacking in nutritional value, and/or high in calories.

Culinary Arts program-a program consisting of Introduction to Culinary Arts, Intermediary Culinary Arts (Culinary I) and/or Advance Culinary Arts (Culinary II) courses.

Literature Review

In order to adjust to our faced paced lives, convenience foods have become a staple in our society. The days of having to spend hours preparing are meal are long gone. Ease of purchasing a prepared meal, snack or drink is literally at our fingertips. It can be as simple as going through a drive-through, pressing buttons on a machine where your food or drink drops down or even prepared through electromagnetic radiation (microwave).

Some high schools have culinary art programs that introduce students to food science, nutrition, and cooking concepts. It is that application of learned cooking techniques and nutrition that help to facilitate healthy eating choices. Through this literature review, studies report the growing problem

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with childhood obesity associated with purchasing and consumption of convenience foods.

Dietary Guidelines recommend 5-15% of calories consumed daily come from sugars and fats, however most Americans surpass the recommendations. In an article from the CDC, approximately 16% of caloric intake comes from sugars (Bethene Ervin, Kit, Carroll, & Ogden, 2012). According to Brenda Turgeon, the CDC reported a 38% increase of childhood obesity from 1980 to 2008. Her study examines the gap between public policy and actual practice of nutritional programs in public schools. The CDC also mentions that 71% of schools do not have policies in place to promote healthier food choices (Marketing and Promotion of Food and Beverages at School, 2014) In surveys administered to elementary school teachers it was reported that a healthier school environment could be created by eliminating access to vending machines, having healthier fundraisers and increasing instructional minutes given to health, nutrition and physical education (Turgeon, 2013).

The American Journal of Education examines the growing problem of soft drink vending machines in schools. It is calculated that the youth will consume 20-24% of their daily calories through soft drinks (Price, Murnan, & Moore, 2006). In a table the authors share, soft drinks offer no significant nutritional value when compared to orange juice and milk (Price, Murnan, & Moore, 2006). “ Liquid candy” are the words used to describe how Price, Murnan and Moore view soft drinks.

Additionally, Price, Murnan and Moore examined if an educational program aimed at reducing consumption of soft drinks could curb excessive weight gain in elementary students. In an experimental study, they took 644 students and divided them into two groups. One group served as the control group and the other the “intervention” group. Students in the intervention group received a four-hour mediation program aimed at consuming water. At the end of the 12 month study, the “intervention” group reduced their overweight risk by 0.2% whereas the control group increased their risk of obesity by 7.5% (Price, Murnan, & Moore, 2006). Final thoughts of Price, Murnan and Moore clearly suggest that soft drinks need to be eliminated from schools because of their threat to children’s health and well-being (2006). Reducing the amount of added sugar children consume can significantly lower the prevalence of obesity in the United States (Consumption of Added Sugar Amongst U. S. Children and Adolescents 2005-2008, 2012).

Jamie Daugherty offers a practical approach to this problem. He examines the importance of nutritional sciences in culinary arts at a post-secondary level. He explains that integrating Culinary Arts with Nutritional Science help to solidify abstract nutritional concepts with concrete experiences to food (Daugherty, 2015). This hands on approach cultivates behavior changes in which middle school students can then take to a real world setting. While food diaries are a traditional way to record dietary intake they rely on memory recall causing the method to be poor and unreliable (Ming Yan Chung, Wai Yee Chung, & Kwok Shing Wong, 2009). Daugherty further

demonstrated that application of nutritional concepts such as Designing Balanced Plates in a culinary cooking demonstration gives middle school students the practical information to recall and share thoughts about their experience (Daugherty, 2015).

In addition, Jennifer McMullen, stresses that most students at the college level do not meet daily recommended levels of fruit and vegetable consumption but solely relying on “ubiquitous” convenience foods as meal options (2016). McMullen states, “The average college students’ poor eating habits are perpetuated by the fact that many are not learning cooking skills when they are younger” (2016). Poor food choices are often link to health problems such as being overweight, obesity and chronic diseases. Studies done by Ogden, Carroll, Kit and Flegal report that more than one-third of U. S. college students are obese (2014).

Recognizing this issue McMullen pursued having a college nutrition based program. Through the development and implementation of her program CHEF “Cooking, Healthfully, Educating, For Life-Long Change” the aim is to influence cooking and eating attitudes and behaviors. The program provides students with the nutritional information in order to make healthier eating choices (McMullen, 2016). Participants in the CHEF program were assessed through pre and post evaluations. Some research questions include: What is the impact of the College CHEF (pre to post) on participants’ attitudes toward healthy cooking; What is the impact of the College CHEF (pre to post) on participants eating behaviors; What is the impact of College CHEF (pre to post) on participants cooking behavior (McMullen, 2016). McMullen

hypothesizes that participants in the CHEF program will display better attitudes towards eating healthier, will cook more often, and have an enhanced understanding of nutritional knowledge that will ultimately facilitate a healthier life-style. Although McMullen's efforts are substantial, she does note, " there is limited literature involving the impact of campus-based culinary nutrition education programming. The positive findings from previous research makes it clear the need for continued research in this area" (McMullen, 2016). In the long run, this study helps to see the correlation with nutritional education and culinary skills to positive attitudes and behaviors towards healthy cooking and eating.

Studies conducted by Sallis and Glanz note greater dependence on convenience foods thus leading to the growing epidemic of obesity in children (The Role of Built Environments in Physical Activity, Eating, and Obesity in Childhood, 2006). They attribute findings to the " Nutritional Environments" found in certain neighborhoods. Nutritional environments are defined as food sources and outlets in which consumers can purchase and consume food (Sallis & Glanz, 2006). Not only does this include grocery stores and restaurants but also cafeterias, schools and healthcare facilities. Data suggest that consumers are concerned with first how food taste, secondly how much it costs then followed by its convenience (The Role of Built Environments in Physical Activity, Eating, and Obesity in Childhood, 2006). These studies help understand the correlations between superior food environments over poor nutritional environments and its effects on children.

In conclusion, research on the effects of culinary arts on purchasing and consuming convenience foods is limited. However, Sallis and Glanz offer insight into nutritional environments and the effect they have on children (The Role of Built Environments in Physical Activity, Eating, and Obesity in Childhood, 2006). Implications for further research in this area are still needed. It is important to know if environmental factors play a role in purchasing and consuming convenience foods. A higher priority should be given to the involvedness of this issue to better combat childhood obesity and other health problems associated with consumption of convenience foods. A better emphasis is need on positive eating habits through education and application in nutrition through culinary arts programs.

Procedures

Research Design

The methodology intended for this study is qualitative, survey research. This type of methodology will allow for participants to conduct a self-evaluation. Completion of the self-evaluation checklist will then be return researcher for analysis. Participants in this study are high school culinary arts students from Gwinnett County Public Schools. Each research cycle will be completed within 9 months.

Sample

The intended sample for this research are high school students in the Culinary Arts program/pathway of Gwinnett County Public Schools. Students from this sample display a variety of socioeconomic statuses, races, ethnicities and ages. There are twenty high schools in Gwinnett County but

only six high schools have culinary programs. The sample will be drawn from students of these six programs. A maximum of 50 students will be selected from each school for a total of 300 students for this study. Students from this sample will range in age from 15 to 18 years old. Students must be enrolled in Intro to Culinary Arts, Culinary I or Culinary II courses in order to participate. Students who have partially completed a culinary course during the school year will be omitted from the sample. Any student not meeting this criterion will be excluded.

Instrumentation

A subject-compiled instrumentation will be used for this research. Self-checklist will be filled out by the intended sample and return to the researcher. Emails the self-checklist instrumentation will be sent out to the six culinary arts program instructors in Gwinnet County. The instructors will then ask 50 students to perform the self-checklist. In addition to the self-checklist an observation scale will be used to record the frequency of behaviors observed (this will be used to help with validation of the study). Current instrumentation of high school culinary art students recording frequency of purchasing convenience food has not yet been established. This instrument will measure the frequency of purchased convenience food over a period of time. In addition, this instrumentation will ask if students have purchased breakfast and or lunch from the school cafeteria for that period of time. Refer to Appendix A for student checklist.

Procedural Details

Students participating in study will be given the check-list the first week in October, December and March. Locations to be administered to will be the six Gwinnett County Public Schools that have culinary arts programs. Self-checklist evaluation will be administered on the Friday of the week being observed. The self-checklist can be done pen and paper or access to electronic form will be given. Data will be gathered three times over a nine-month period. Students will conduct a self-checklist evaluation of behaviors over a week period in each of the three times the study is conducted. For example, students will evaluate behaviors for the first weeks in October, December and March. Upon completion of the self-check list, they will be sent back to the researcher for analysis.

Internal Validity

To ensure that my research is valid I will use Criterion-Related evidence validity. I have created a self-checklist (appendix A) and an observer checklist (appendix B). The self-checklist administered to students can be compared to the observation scale conducted by the researcher to make sure that the data reported is accurate. For example, the teacher in the classroom can use the observation scale to record if students are purchasing and consuming convenience foods.