

NutriSynergy: Proposal
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Problem Statement

Although on average Americans have become healthier over the past 20 years, the average American diet still consists of too much unhealthy food and too little healthy food, as defined by the Food and Drug Administration 2010 Dietary Guidelines.

Unhealthy eating is caused by a number of factors including convenience of food, average higher costs of healthy food, the distribution of healthy food, perceived barriers to healthy eating, and limited nutritional knowledge. Since nutritional knowledge has a large influence on people's eating habits, it is one of the more significant problems concerning food. Eating unhealthy food is strongly associated with cardiovascular disease, type II diabetes, obesity, hypertension, cancer, and premature death, and various other diseases. Thus, the lack of nutritional knowledge that exists in America is a major factor of the problem of unhealthy eating, and therefore a problem in itself.

Significance

Health is commonly quantified through the use of the USDA Healthy Eating Index (HEI), which compares diet with the FDA 2010 Dietary Guidelines. The average HEI of Americans in 2007-2008 accordance with the 2010 HEI criteria was 53.5%, with 100% being the ideal score. In terms of just fruits and vegetables, the average HEI score in 2007-2008 was 62.5% in accordance with the 2010 HEI criteria (USDA, 2013). Nutrition education has been shown to increase HEI scores: according to a study conducted in elementary schools, children in second and third grade had a significant improvement in healthy eating behavior as a result of a nutritional program (Powers, Struempfer, Guarino & Parmer, 2009). In addition, a study taken over a period of five months showed that an educational program increased HEI scores of postmenopausal women in terms of fat, milk, calcium, and vitamin D intakes compared to a control group (all $P < .050$) (Manios, Moschonis, Katsarolli, Grammatikaki & Tanagra, 2007). A nationwide program called Farm2School has made a nutritional program in elementary schools, linking local farms to consumers. Although lacking experimentation, surveys showed a strong causal association between the educational programs and children's eating habits, family eating habits, and diet choice in the home (Food Research Action Center). Therefore, there is a gap between the average American diet and the recommended FDA guidelines, and nutrition education is clearly a factor that at least partially causes this gap.

Unhealthy eating in America has a serious toll on society. According to the World Health Organization, at least 2.6 million people die every year as a result of being obese or overweight. From 2009 to 2010, more than 35% of adults and almost 18% of youth were obese (CDC). It is estimated that by 2015, "approximately 2.3 billion adults will be overweight and more than 700 million will be obese" worldwide (WHO). In addition, WHO attributes 2.7 million annual deaths to diets containing inadequate levels of fruits and vegetables. "Worldwide, low intake of fruits and vegetables is estimated to cause about 19% of gastrointestinal cancer, about 31% of coronary heart disease, and 11% of stroke" (WHO). In 2010, it is estimated that globally at least 43

million children under the age of five were overweight (Harvard). Evidence has also been shown that “childhood obesity is associated with a higher chance of premature death and disability in adulthood” (WHO). However, there has been an improvement over the past ten years. From 2003-2004 to 2011-2012, childhood obesity in the United States dropped (0-19 years of age) by 1.4% for 0 to 2 years old and 0.2% for 2-19 with the biggest drop being 5.5% for children 2 to 5 years of age.

Eating unhealthily can also have negative psychological impacts. The human brain is mostly comprised up of lipids, and a 2008 study showed that a high-fat diet can result in inflammation in the brain, leading to higher rates of depression, Alzheimer’s disease, and even schizophrenia (Senior, 2008).

Meanwhile, poor nutrition is known to affect cognition and other mental capacities as well. Nutrients help trigger neurodevelopment and cognition, so a lack of the right nutrients causes parts of the brain and the sensorimotor system to remain underdeveloped. In fact, this can actually have a negative effect of neurodegeneration: “the breakdown of synapses and shrinking of the brain”, a factor usually attributed to aging (Virtual Medical Center). Junk foods have also been correlated with higher risk of ADHD, while a poorly nourished body is generally more prone to stress and fatigue.

There is also economic loss caused by unhealthy eating. According to the Commonwealth Fund, “labor time lost due to health reasons represents lost economic output totalling \$260 billion per year.” In addition, various organizations spend almost half of their profits on improving employee healthcare, because the “overall annual cost impact of poor health on the workplace is estimated at \$1.8 trillion” (KCIM). Statistics have provided evidence that worker healthcare benefit programs “can reduce sick leave by 28%, medical costs by 26%, and among worker’s compensation claims by 30%” (KCIM).

Other possible causes of the problem are lack of convenience of healthy food and lack of distribution of healthy food. An estimated 23.5 million people live in food deserts in the United States, and approximately 13.5 million (57 %) out of that sum are low-income households (USDA-AMS). In Fulton County, approximately 30 % of the population (over 290,000 people) live in food deserts, specifically 7,778 residents within a 1-mile radius of Truly Living Well’s model farm (Arkfab). When controlled for other confounding factors, “the presence of supermarkets was associated with a lower prevalence of obesity and overweight (obesity prevalence ratio [PR] = 0.83...; overweight PR = 0.94), and the presence of convenience stores was associated with a higher prevalence of obesity and overweight (obesity PR = 1.16...; overweight PR = 1.06)” (ScienceDirect).

In addition, there is very strong evidence to suggest that subliminal cues and packaging affect eating behavior. Various factors in food choices include emotional state, association of the food with pleasure, and subliminal messages. For example, 9% of consumers are swayed by positive nutritional messages. In general there is an underestimation of the effects of pleasure in messages concerning food choice (Jacquier, 2012). In addition, when exposed to advertising, children increased their food intake by 45%, clearly showing that advertising can prime automatic eating behavior in children. In addition, in a 2011 pilot study, researchers found that nutritional messages at the point of purchase resulted in a 3.6% positive difference in food choices of college students (Freedman & Connors, 2011). In addition, more active programs to improve health can improve health; a 2013 follow-up study concluded that a university obesity prevention program promoting healthy eating and physical activity resulted in a 60% reduction in eating disorder onset compared to a control group (Stice, Rohde, Shaw & Marti, 2013).

Therefore, both passive, subliminal programs targeted to health and more active programs can improve health and more specifically, health of students.

If the problem of nutrition education were addressed, there would be a net benefit in society. In a 2010 study conducted in the UK, “Interest in healthy eating was the only variable having a direct effect on use of nutrition information in the store” (Grunert, Wills & Fernandez-Celemin, 2010). In addition, adults who consider nutrition more important are much more likely to eat healthier: in a 2005 study, scientists determined that adults who considered nutrition less important had an average intake of 157 kcal more than their counterparts, 60 cal of which came from added sugar and 72 cal of which came from added fats (Bowman, 2004).

Stakeholders

Four different stakeholders for the problem of students’ unhealthy eating would be the students, dining hall staff, the university administration and staff, the medical community, and other firms that are sources of food for college students. From the perspective of the university administration, student’s eating is important for student health and therefore grades and the university success in general. Students are also highly motivated by high grades, and healthy eating could improve academic achievement. Many, if not most students eat at the university dining hall; thus, it is a critical target for healthy eating practices. Finally, some students procure food from other sources, such as grocery stores, and cook the food themselves.

Student health is incredibly important to all levels of university staff. Healthy eating has been shown to be a factor in psychological health, which affects students’ grades. Since student success defines the success of a university, the investment in student health is important for university success and status. Thus, the university is a stakeholder and an advocate for students’ healthy eating.

Students are the primary target for this project, and are known for being exceptionally stressed and below average health-wise. They are motivated by grades, which are in turn affected by health, which affects memory, concentration, learning. . As healthy eating is a factor of good sleep habits, healthy eating plays a role in grades. Therefore, students are unhealthy in general and a health improvement would probably improve their success in university and happiness.

For the standpoint of the medical community, “Worldwide, low intake of fruits and vegetables is estimated to cause about 19% of gastrointestinal cancer, about 31% of coronary heart disease, and 11% of stroke” (WHO). The recent increases in knowledge about healthy food have caused and decrease diagnosis of disease such as cardiovascular disease, hypertension, type II diabetes, and cancer.

As dining halls are the primary source of food for a large percentage of students, they are a large factor in students’ eating habits. If healthy food is made attractive and accessible, students are more likely to eat it instead of unhealthier options. On the other hand, if unhealthy food is made more convenient to eat, then students will generally eat more unhealthy options. The other sources of food for students, generally upperclassmen, also factor into students’ food choices. For example, the marketing techniques and food placement at regular grocery stores is designed for consumers to buy specific foods. Therefore, both dining halls and off-campus options play a role in students’ eating.

Context and Existing Solutions

Farm to School (inadequacy is varied widely in success) only three programs had a parent education program, which impacted the learning of healthy eating by involving parents in the program. Some problems with the national program are that the individual programs are very varied. The program has a good supply of resources but for some program, such as one in Pittsburgh, but the teaching is not as quality there. This program is so specific that it cannot cover all areas of the US; thus, this solution can have an impact.

Truly Living Well is an urban farm in southwest Atlanta. The goal of the TLW is to provide urban agricultural education and training to the members in its community. TLW primarily uses gardening classes as the medium of teaching community members about healthy food. The main limitation of urban farms such as TLW is the emphasis of supplying healthy food to communities. However, if the members of the community are not knowledge about about the benefits and consequences of eating unhealthily, supplying more healthy food for community members is not beneficial for the community. Only after establishing health knowledge in a community can the resources of farmer's market be fully utilized.

There are various obstacles to implementing a nutritional knowledge program in a community. One major barrier to changing eating habits is marketing of unhealthy food; the fast food industry spends more than \$5 million every day marketing food to children (Kovacic, 2008) and 98% of advertisements viewed by children are high in fat, sodium, or sugar (Story, 2008). In addition, the food and beverage industry spent over \$40 billion in lobbying to prevent regulations against the marketing of unhealthy food (Food and Beverage Industry Profile). Therefore, marketing against healthy food is a major, if not the most difficult obstacle to surpass.

Considering just Georgia Tech, there are no existing solutions in terms of a whole living space involved in a health initiative. There is a ThinkBig program focused on cooking and food, but not specifically promoting health. However, there are many resources available to students, such as the Campus Recreation facility, fitness programs sponsored by the Recreation Center such as G.I.T. FIT, a large bank of nutritional information on dining hall food, and appointments with dietitians. Although each of these resources is well-maintained, they are not compiled into one program in a living space, which is Nutrisynergy's goal.

Proposed Work

One of our three solutions for our action plan is to create an on campus study to identify and determine the eating habits of college freshmen. The study will last three months. Twenty-four students, or two sets of twelve students, will be needed to participate in the study. Twelve freshmen will have to live in the same dorm and the same hall, while the other twelve freshmen will have to live in a different dorm but also on the same hall. One dorm will have posters, flyers, information on the walls of the hallway that promote and encourage healthy eat, specifically emphasizing eating vegetables, salads, and fruits. In addition the hallways will provide information of the negative consequences of eating unhealthy foods. In the other dorm, no healthy food information will be provided on the walls.

To collect data for our control group, all twenty four students will be asked to record their eating habits for one week using a food app (Q-Bot) during the first week of the study. After the first week, students do not have to track what they eat. The students will be asked to record their eating habits once a month after the initial food recording to determine if the student's eating

habits changed. In order to analyze the data collected of the types of food students ate; we will create a metric based off the USDA Dietary Guidelines for a healthy food intake.

The positive aspects of this study is essentially the feasibility of the project: 1) our study can be executed on the Georgia Tech campus, 2) the study is easy to implement and maintain, and 3) based on the results of the study, we can easily determine whether the results of the study were successful or unsuccessful. The negative aspects of this study are 1) the small scope of the experiment, 2) the difficulty of finding twelve students in one hallway who are willing to participate in the experiment, and 3) our group lack of interest and passion for implementing this study.

Goal

The scope is the healthiness of students at Georgia Tech living in dorms, and our goal is to make students, specifically Georgia Tech students, eat healthier and live healthier lives. One recent study showed that obesity rates doubled from adolescence to the early twenties, and a review of several studies indicated that students, on average, gain 1.6 pounds in the first 20 weeks to 8.8 pounds over the full school year, with most of that weight coming from fat. In addition, according to the Spring 2011 National College Health Assessment, only 48.3% of students achieved 30 minutes of activity for 5 days every week (Pope & Harvey-Berino, 2013). Thus, the shift from adolescence to college is a critical period, especially for college freshmen. The rationale for this approach is that subliminal messages and increased activities involving a healthy lifestyle will improve student's health; since there is strong evidence showing that subliminal cues affect eating behavior (Jacquier, 2012). The impact of students eating healthier is better memory, better attendance, higher alertness and concentration, and faster information processing. Healthy eating is also associated with a more positive body image in students ("Why are healthy").

Objectives

Objective 1: Define control groups for each of our activities and develop assessment matrices measuring success. The eating habits of each Freshmen-Experience dorm will be quantitatively assessed by through the consistent use of a food journal, specifically through the food app called My FitnessPal. The data collected from the food journals will subsequently be quantitatively assessed through a metric based on the FDA dietary guidelines.

STEPS:

Determine Dorms Used- After researching the different Freshmen Experience dorms available on campus, we will choose three dorms: one will serve as our control group, another will measure the impact of subliminal messaging, and the final dorm will measure the impact of active programs.

Study Consent Approval - We will develop an informed consent form for college students as well as a script and process for verbally receiving consent (for any illiterate persons).

Food Journal Logging - Over the course of nine weeks, all participants will log their eating habits for one week at the beginning of the nine weeks, a time at week 5, and at the end of the nine weeks. The first food journal test will serve as the baseline eating habit trends of each participant. The second food journal test will serve as a checkpoint midway through the testing to check the progress of our experiment. The last testing period will serve as a final test to determine whether the eating habits of the participants changed over the course of the nine weeks. During each testing week, participants will log their eating habits everyday for every meal that week through the app MyFitnessPal.

Assessment Metric Identification - We will use the app, MyFitnessPal, to have participants log the food they eat and share with fellow participants. The data collected from each individual's eating habits will then undergo a metric, based on the FDA daily nutritional intake recommendations to determine to what extent each individual's food consumption follows the daily-recommended intake. According to the data collected, we will be able to collect a quantitative trend of the freshmen college student's eating habits.

ANTICIPATED PROBLEMS:

- External factors, such as finals weeks may skew the eating habits of participants during the testing weeks.
- Participants may not consistently log their eating habit that week, leading to inconsistent data.
- If three dorms cannot be found with the same sample size, statistical analysis may have to be done on the data collected from each dorm in order to compare the results.

Objective 2: Design a dorm setting to influence participants by subliminal messaging. By just placing a variety of posters with differing themes all relating to food healthiness, we hope influence the eating habits and overall health of students.

STEPS:

Poster Design - We will make a variety of posters relating to healthy eating to place throughout the test dorm. In these posters, we will focus on them being attractive, funny, and bright and appealing so they are memorable to the viewer, hopefully making an impressive on their daily routine. Some of them will have pertinent information on them such as recipes and nutrition facts whereas others will be focused more on entertainment purposes with fruit jokes or pick up lines. The posters that are more information based will include dietary guidelines (in laymen terms), healthy and easy recipes, resources (where to find more information online or where in the

community one may find a nutritionist or a farm), where to buy food in bulk and what kinds of foods are in season.

Poster Placement - We will place the posters on all of the levels on the dorm. The primary location would be on the hall walls throughout the dorm so students get the most exposure. However, we will also place a few near kitchen areas, especially those focused more on recipes, and some in the bathrooms, especially the funnier posters.

Healthy Study Snack Basket - We will make a basket of healthy student snacks available to students of the dorm. It would have snacks such as apples, oranges, healthy trail mixes and others. This would be placed in the dorm's study lounge and kitchen.

Healthy Food Coupons - We will work to obtain coupons to healthy food items at local stores. We will place the coupon selection near the main entrance to each floor so visible to the most students.

ANTICIPATED PROBLEMS:

- Hanging on the wall, there is a possibility that they fall down. Especially in a college dorm, with students running and playing around, our posters could fall down and get put in the trash, thus limiting the students' exposure to them.

Objective 3: Design a dorm setting to influence participants by active participation in healthy food and lifestyle activities. We will target a range of topics, such as healthy eating, fitness, sleep, and productivity/time stress management through providing activities in the aforementioned topics accessible to all participants.

STEPS:

Bonding Activities with Making Healthy Food- We will have dorm cooking sessions, themed days (eg. Monday Munchies, Fiber Fridays and Salad Saturdays) and communal grocery trips to increase social bonding through healthy eating.

Exercise Component - We will have the PLs organize a variety of activities around exercise, such as weekly runs, dorm trips to the CRC, and outdoor trips such as backpacking or kayaking. One event will be an "Introduction to Physical Exercise" that imitates the CRC's fitness week and will take place at the beginning of the semester. Over this week, study participants will be given the option to explore a different form of exercise every day. For example, this year, the CRC's fitness week had Insanity on Monday, Yoga Tuesday, Run Wednesday, Zumba Thursday and smoothies on Friday. This will allow students to find an activity they may be interested in pursuing for the rest of the semester.

Challenges/Reward System - We will have various challenges throughout the study time period to encourage individuals to pursue a variety of healthy-lifestyle habits. Examples of challenges include running x-number of hours a week or avoiding processed sugar for the same amount of time. For every challenge a student succeeds, he or she obtains a certain number of points that can be accumulated for an award at the end of the semester.

Subliminal Hall Features - The dorm will also feature the same posters, study snack basket, and coupons that the subliminal dorm has.

ANTICIPATED PROBLEMS:

- We rely heavily on the PLs (or motivated participants) to drive activities around making/obtaining healthy food and exercise. We also rely on participants to attend these events and make the dorm “active”.

Research Team

Data Manager would be in charge of assessing the impacts of our program on the participants as described under objectives. This person works closely with the statistician to evaluate our program and provides data of students and compare and contrasts those in the program against those who are not in the program.

Poster Designer manages posters and signs in the participating dorm. This person consults with Dr. Ludovice and Dr. Bond (described below) to make those advertisements as effective as possible. He/she will be in charge of the subliminal messages that we will post in the dorms. This will also encompass researching nutritional facts and other health related facts.

Activities Coordinator works with the Peer Leaders in the active-programs dorm to plan out the activities for residents and advertises those events to residents through various methods such as social media and calendars. He/she will also keep track of the attendance to those events and work closely with the *Data Manager* to see the effects of the active-programs on participating student’s eating habits.

Social Media Coordinator develops a good campaigning tactic to promote healthy eating amongst students. He/she will mainly works with the *Activities Coordinator* to promote events. We would also like to come up with a way to motivate students to influence each through the use of social media; thus, we plan on consulting Dr. DiSalvo (described below).

Public Relations Coordinator contacts both on-campus functions and off-campus businesses to make our project possible. First and foremost, he/she will work with the Residential Hall

Association, the Department of Housing, and Dr. Schafer in order to make this program take effect.

We have not received an agreement from our potential mentors; however, we have several contacts that would be resourceful to us.

- Dr. William Schafer is the Vice President of Student Affairs. Upon talking to him during a student survey at North Avenue Dining Hall, Dr. Schafer mentioned how the Georgia Tech administration is currently in the process of creating a new living learning dorm, however a theme has yet to be decided. After mentioning the progress of our GC team toward promoting healthy eating, we were encouraged to possibly expand our original solution involving 24 students to a solution that encompasses an entire dorm. Thus, we plan on proposing our solution to him in the near future.
- Dr. Ludovice, the Director of Center for Academic Enrichment, has been involved with the ThinkBig program and other student programs; thus his knowledge of such programs would be useful in the implementation of our program. Although we have not formally met with him regarding our project, several of our group members have established connections with him that we hope we could hear his advices.
- We have talked to Dr. DiSalvo from the School of Literature, Media, and Communication about the use of technology on our project. He mentioned that technology is also useful in managing logistics. He made us realize that technology does not necessarily have to be applications, but includes social media. We believe that social media would be a very effective tool in working with college students.
- We have also spoken with Dr. Yonathan Thio from the School of Chemical and Biomolecular Engineering and the School of Materials Science and Engineering. He leads the Think Big program called “Thought for Food.”
- We are interested in talking to Dr. Samuel Bond in the Scheller School of Business whose research focuses on consumer psychology and behavior as his knowledge would be beneficial to us in designing how to influence the mindsets of students in the program.

Timeline

	Fall 2014	Spring 2015	Summer 2015
Objective 1: Dorm Testing	X		
Objective 2: Subliminal Dorm	X	X	
Objective 3: Active Dorm	X	X	

Budget

Materials and Supplies:

<i>Item</i>	<i>Unit Cost</i>	<i>Quantity</i>	<i>Total Cost</i>
Posters in the dorms	100		\$200
Fruit and healthy snacks	20 / week	20 weeks x 2 dorms	\$800
Compensation to the participants	10	50 Students	\$500
Communal healthy food events for active dorms	30 / week	20 weeks x 2 dorms	\$1200
Total			\$2700

We do not anticipate any major need for equipment, services, or travel. We hope that we would be able to obtain sponsorship through hall councils and/or RHA to fund further monetary expenses.

Expected Outcomes and Future Direction

We expect to see an improvement in eating habits of college students after they had been exposed to the idea of healthy eating. In order to do so, we would compare and contrast eating trends of students in our program against those of students who are not in our program. Through the study, we would like to evaluate the effectiveness of the program by determining the extent to which students are aware of and follow the FDA Dietary Guidelines. According to Dietary Guidelines Advisory Committee, “individuals who eat fast food one or more times per week are at increased risk for weight gain, overweight, and obesity.”

In the future, we hope to collaborate with other organizations and initiatives that promote overall wellness of students at Georgia Tech. For example, we believe it would be beneficial to work with the CRC for the fitness component and work with other Grand Challenges groups working on mental health, focusing specifically on depression, to provide support and information to study participants about how to combat illnesses through healthy living. Furthermore, we hope to take our initiative to other colleges around the United States and the world upon proving the success of our program.

References

About Us. (n.d.). *Wholesome Wave Georgia*. Retrieved February 28, 2014, from <http://www.wholesomewavegeorgia.org/about-me/>

Atlanta's Food Deserts. (n.d.). *Ark Fab*. Retrieved November 26, 2013 from <http://www.arkfab.gatech.edu/content/atlanta's-food-deserts>

Bowman, S. (2004). Food shoppers' nutrition attitudes and relationship to dietary and lifestyle practices. *Nutrition Research*, 25(3), 281-293. Retrieved from <http://www.sciencedirect.com/science/article/pii/S027153170500014X>

Brown, B., & Hermann, J. (2005). Cooking classes increase fruit and vegetable intake and food safety behaviors in youth and adults. *Journal Of Nutrition Education And Behavior*, 37(2), 104-105.

Jacquier, C., Bonthoix, F., Baciú, M., & Ruffieux, B. (2012). Improving the effectiveness of nutritional information policies: assessment of unconscious pleasure mechanisms involved in food-choice decisions. *Nutrition Reviews*, 70(2), 118-131. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1753-4887.2011.00447.x/citedby>

Effect of Nutrition on Behaviour and Cognitive Performance. *Nutrition and Brain Health*. Retrieved December 6, 2013 from <http://www.virtualmedicalcentre.com/healthandlifestyle/nutrition-and-brain-health/281>

Freedman, M., & Connors, R. (2011). Point-of-purchase nutrition information influences food-purchasing behaviors of college students: A pilot study. *Journal of the American Dietetic Association*, 115(2), S42-S46. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0002822311002719>

Grunert, K., Wills, J., & Fernandez-Celemin, L. (2010). Nutrition knowledge, and use and understanding of nutrition information on food labels among consumers in the uk. *Appetite*, 55(2), 177-189. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0195666310003661>

Food Deserts. (n.d.). *United States Department of Agriculture Agricultural Marketing Service*. Retrieved December 6, 2013 from <http://apps.ams.usda.gov/fooddeserts/foodDeserts.aspx>

Food Research and Action Center. *Fresh from the Farm: Using Local Foods in the Afterschool and Summer Nutrition Programs*. Retrived February 26, 2014, from <http://frac.org/newsite/wp-content/uploads/2009/09/produceguide.pdf>

- Kovacic, W. e. (2008). *Marketing food to children and adolescents: A review of industry expenditures, activities, and self-regulation: A Federal Trade Commission report to Congress*. Federal Trade Commission.
- Manios, Y., Moschonis, G., Katsarolli, I., Grammatikaki, E., & Tanagra, S. (2007). Changes in diet quality score, macro- and micronutrients intake following a nutrition education intervention in postmenopausal women. *20(2)*, 126-131. Retrieved February 26, 2013 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-277X.2007.00750.x/full>
- Meehan, M., Yeh, M., & Spark, A. (2008). Impact of Exposure to Local Food Sources and Food Preparation Skills on Nutritional Attitudes and Food Choices Among Urban Minority Youth. *Journal Of Hunger & Environmental Nutrition*, *3(4)*, 456-471.
- Nutrition Facts. (2013, February 19).Centers for Disease Control and Prevention. Retrieved February 28, 2014, from <http://www.cdc.gov/healthyyouth/nutrition/f>
- Pope, L., & Harvey-Berino, J. (2013). Burn and earn: A randomized controlled trial incentivizing exercise during fall semester for college first-year students.*Preventive Medicine*, *56(3-4)*, 197-201. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0091743512006378>
- Powers, A. R., Struempfer, B. J., Guarino, A., & Parmer, S. M. (2009). Effects of a nutrition education program on the dietary behavior and nutrition knowledge of second-grade and third-grade students. *75(4)*, 129-133. Retrieved February 25, 2013 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1746-1561.2005.tb06657.x/abstract>
- Stice, E., Rohde, P., Shaw, H., & Marti, N. (2013). Efficacy trial of a selective prevention program targeting both eating disorders and obesity among female college students: 1- and 2-year follow-up effects. *Journal of Consulting and Clinical Psychology*, *81(1)*, 183-189. Retrieved from <http://psycnet.apa.org/journals/ccp/81/1/183/>
- Story M, L. N. (2008). *Food and beverage marketing to children and adolescents research brief*. Robert Wood Johnson Foundation
- Unhealthy Diets & Physical Inactivity. (2009). *World Health Organization*. Retrieved December 1, 2013 from http://www.who.int/nmh/publications/fact_sheet_diet_en.pdf
- Why are healthy eating habits important?.* (n.d.). Retrieved from <http://health.gatech.edu/promotion/Pages/Why-are-healthy-eating-habits-important.aspx>

50 Workplace Wellness Facts. *Kansas City Internal Medicine Corporate Medicine & Wellness Division*. Retrieved February 20, 2014 from <http://www.kcim.com/wp-content/uploads/2012/06/50-workplace-wellness-facts.pdf>

(2009). *Food and beverage industry profile*. Center for Responsive Politics.

(2013). Diet quality of americans in 2001-02 and 2007-08 as measured by the healthy eating index-2010. *USDA Publications*, Retrieved from <http://www.cnpp.usda.gov/Publications/NutritionInsights/Insight51.pdf>