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Dr. Melodee Lasky, M.D.  
Executive Director of Rutgers Health Services  
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Dear Dr. Lasky,

Obesity has become a growing concern among Americans and its prevalence among children and college students is now a major part of the problem. From a personal viewpoint, I understand this ordeal as I have also struggled with maintaining my healthy eating habits constantly throughout the first two semesters. The transition from high school to college was a big leap in my life. The concept of the “Freshman 15” seemed inevitable, and I could not curtail my eating habits the first couple of months.

As a commuter without a meal plan from the dining halls, it was quite difficult to find healthy food around campus. Eventually, I only gained a few pounds that first semester, but that was just the start. With added stress from a 17-credit load in the spring, I resorted to skipping meals and binge eating. Unfortunately, this gradual weight gain will add up and by the time I reach adulthood, I will be another statistic in obesity reports.

In an article published less than a month ago, the Huffington Post reported that, “if America’s obesity trend continues, all 50 states could have obesity rates above 44 percent by 2030” (Gates 1). This is a staggering number when considering the hundreds of millions of people who will be at risk for obesity-related health problems such as heart disease, hypertension, and diabetes. While Rutgers offers some ways to cope with obesity, these tools are rarely utilized, and are ineffective, and more needs to be done in order to combat this problem.

I felt Rutgers did not provide enough information in terms of eating right. It can start by adding healthier options in the dining halls other than just a plain salad bar. We suggest that Rutgers add nutritional guides or calorie counters by each food in the buffet line. Subsequently, more students will be aware of how much they are eating at one meal in proportion to the rest of the day. Therefore, it is Rutgers’ responsibility to promote more healthy eating habits and changes in order to slow down the obesity curve among my fellow students.

The best way to contact us would be at our email [joshua.chelli@rutgers.edu](mailto:joshua.chelli@rutgers.edu) or through our cell phone number listed above. Thank you for your time and patience in considering our proposal to make Rutgers a healthier place.

Sincerely,  
Joshua Chelli, Rugved Deshpande, Paul Madolid, Sage Lim

# **A Balanced Lifestyle: Learning to Eat Healthy at Rutgers University**

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Executive Director of Rutgers Health Services  
11 Bishop Place  
New Brunswick, NJ, 08901-1180

**December 12, 2012**

**Collaborative Writing: Social Networking for Business 375:02**

**Dr. Peter Sorrell**



### **Abstract (i)**

In this proposal it is argued that obesity is a worldwide problem and can be broken all the way down to the college population. Students are challenged with the transition from high school to college, and are unable to eat healthy. The authors discuss a key misconception among students with regards to the Freshman 15. They go in depth as to why this myth could not be wrong. A study done by Rutgers itself pulls evidence that the New Brunswick area has the second highest obesity rate among neighboring cities. Framing and ELM theoretical models are used as a basis for proposed change. Models of Success and Failure are discussed, with a few from Rutgers University itself. The use of social media used by Rutgers University resources is visually critiqued. A four-step plan is suggested that incorporates the research done. The plan includes a mobile app version of the Rutgers Dining Halls website, an inclusion of a nutrition reading in Expository Writing, plastic containers in dining halls that showcase calorie information, and labels next to the food that show students what is in the food they are eating. **Keywords: obesity, college students, Rutgers, Freshman 15, weight gain**

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## Executive Summary (v-vi)

The transition from high school to college is too great for any student to bear by oneself. Friends, family, and even college advisors can be used to help ease this transition and make university life a delightful time. Some students fail to realize these resources at hand, and suffer in making right choices the first couple semesters. In particular, these choices are related to their mental and physical health. Freshmen are known for partying all night long and binge drinking; they lack all sense of self-control. While this is detrimental to their weight, body, and mind, they do it to have what is perceived as a “good time”.

Additionally, obesity is one troubling consequence of these poor decisions. As around 33% of college students suffer with obesity, they are left asking themselves the question: “why me?” The answer may not be as appealing as they would hope. Many college students fail to eat a proper meal that is balanced with all fruits and vegetables. Furthermore, around 60% of students do not even exercise on a daily basis (Kopelman 1). While “Freshman 15” has been discovered as a myth, gradual weight gain throughout college is still inevitable. Unfortunately, the university does not take enough action to help students in their quest for weight loss. Instead, they focus on drinking problems and other mental issues that plague students. However, they do not see that with a healthy body, everything else falls into place: a clearer head, more daily activities, and liveliness through the day are some of many positive effects.

Is the university trying to save money at the risk of the students health? Some of the negative effects of obesity are Type II diabetes, cardiovascular ailments, respiratory problems, pregnancy complications, and psychological disorders (Kopelman 1). More importantly, obesity is the second leading cause of premature death reported at 325,000 early deaths (Kopelman 1). However, one important thing to note is that these health complication caused by obesity *can be treated* (Kopelman 1)

Health education that intrudes into the students lives will be unnecessary. A school should not make it a mandatory requirement for a student to pass a class for fitness. In Lincoln University, in Pennsylvania, students with a high body-mass index had to pass the class “Fitness for Life” (Sander 1). Many scholars still say that this is intrusive into the students’ lives and in result the university repealed the policy. How, then, are universities supposed to take on the responsibility to teach healthy living but not be intrusive about it?

The plan that we are proposing will tackle this issue without forcibly intruding into the lives of the students. In order to create an environment where students are able to make health conscience decisions, we must look at the research that other universities have done that is related to healthy eating.

The environment is a major factor that impacts how healthy a college student is, as well as the nutritional choices he or she makes. Research done on college student eating habits has shown that “buffet style cafeterias and excessive portions served at dining halls have been implicated in overeating and poor nutrition,” (Boyle 195). The study was conducted at Brown University, which offers buffet style dining, similar to the dining halls at Rutgers University. Therefore, we are also proposing that Rutgers University take decisive action in the dining halls, which is the source, and the major hub, for unhealthy eating.

As shown in the research about buffet style cafeterias, the amount of food that a student can get on a plate is limitless; this is ineffective to those who are seeking to be healthy due to the excessive calorie intake. If calories per servings are posted next to each dish along with the appropriate sizes per serving, the amount of food that students eat would decrease significantly. With the nutritional information postings students can now monitor their calorie intake,

something that was impossible to do in the past. Students will be able to use a calorie counter that is available on many smartphones to keep track of how many calories that they consume on a given day. Since students cannot be nurtured on what they eat for the rest of their lives, this would be a good habit that will reduce excess calorie intake in the future.

For those who are interested in promoting healthy eating as a career, Rutgers offers a major in nutrition. However, for the rest of the students, adding a nutritional based reading into every freshman Expository Writing class will be an effective way of reaching out to the Rutgers Freshman population. Expository Writing is a mandatory class that is required for almost all incoming freshman. This will be a great opportunity to reach to a population of students that are just entering college. These readings will have a direct relationship with bad eating habits and the health complications that are associated with it. The point of integrating these nutritional related reading into Expository Writing is to educate the students about an epidemic called obesity that is spreading at an exponential rate and what to do that will prevent them from becoming obese.

Additionally, using cell phones as a tool to promote healthy eating would be an effective plan since students are always on their mobile phones; therefore, the most effective plan would require posting some mobile apps that will encourage healthy eating. These apps would have an interactive menu that allows its users to look up nutritional information based on the food options offered by the dining halls along with the calorie per serving. This would enable students to use the detailed nutritional summary for their meals to plan what they are going to eat ahead of time. The whole point of this plan is to raise public knowledge about this issue. This process will enable students to take their health into their own hands. College is all about planning ahead, whether it is your major, classes, or a future to study abroad there must be time set apart from one's daily life to plan for tomorrow. Eating is no different, most of the time our choices are based off of impulses which inhibit attempts for a balanced meal.



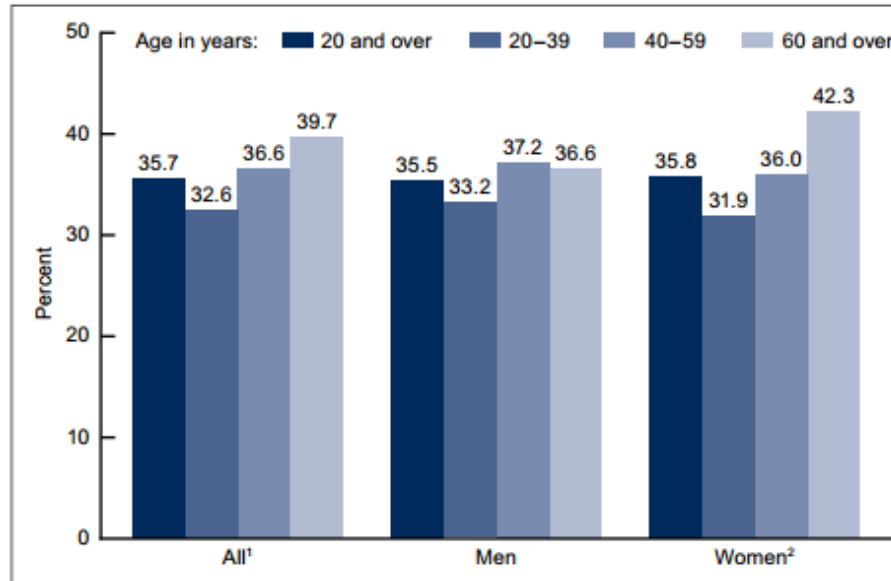
## Introduction

America is a greatly diversified nation that harbors people from all kinds of different places. Likewise, the United States is plagued by all types of diseases. Many decide to pit physical ailments against psychological diseases; both of these types of diseases are a great concern, it is tough to judge which one is tougher to live with. Autism is one mental disease that affects brain patterns mostly in little kids. Subsequently, it limits their communication and social skills. This plays a huge factor when they grow up, as they are greatly dependent on their family. Imagine that it may be impossible to work effectively or even study in school because of this crippling mental issue. Cancer another deadly disease, is the most dreadful physical ailment to a person's body. It is debilitating, and the fight to live every day puts a huge strain on their body. While these are two diseases that exist in America that threaten the lives of millions, many fail to realize that obesity is also a potent killer.

## Obesity Nationwide

What exactly is the definition of obesity? According to the World Health Organization, it is the “abnormal or excessive fat accumulation that may impair health” (Organization 1). **In 2009–2010, 35.7% of U.S. adults were obese.**

Figure 1. Prevalence of obesity among adults aged 20 and over, by sex and age: United States, 2009–2010



Nationally, the obesity rate has increased over the past twenty years. As seen in the chart below, 35.7% of United States adults are obese. This astounding rate implies that the United States is turning into a horizontally challenged nation. The prevalence of obesity increases as age increases. The graph illustrates that the gap between old and young, and male and female, is

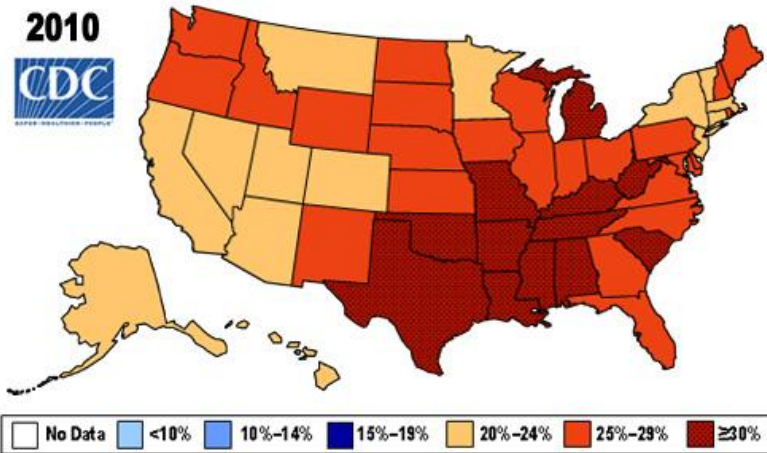
no longer substantial when it comes to the differences in obesity. The one outlier is women 60 and over who have an obesity rate of 42.3%. With such data, it is evident that the United States is an obese nation that is continuing to exceed normal obesity rates.<sup>1</sup>

Cynthia L. Ogden, a researcher for the Centers of Disease Control & Prevention in the United States, discovered that 16.9% of kids from ages 2 to 19 are considered obese. By the time they have families of their own; the obesity rate will be proportionally higher. A timeline provided by the Trust for America's Health illustrates that by the year 2030 the obesity rates in Mississippi will reach 66.7%, whereas Ohio will be 59.8%, and New Jersey will almost topple 50%. With more than half of New Jersey's population obese, this single-handedly would result in

<sup>1</sup> Source:: CDC/NCHS, National Health and Nutrition Examination Survey, 2009–2010.

a 34.5% increase in health care costs in New Jersey, which would devastate many families. These reports combined with the earlier mentioned Huffington Post article go hand-in-hand in demonstrating that *things are only getting worse*. Something has to be done, but before tackling the issue on the national front, it is important to take a look at how this problem is affecting the northeast as a whole. Furthermore, “over the next 20 years, obesity could contribute to 971,386 new cases of type 2 diabetes, 2,087,173 new cases of coronary heart disease and stroke, 2,177,679 new cases of hypertension, 1,418,265 new cases of arthritis, and 308,035 new cases of obesity-related cancer in New Jersey” alone (Trust for America’s Health 1). As a nation, we are consuming more than we can handle. If this outbreak is not controlled soon, future generations will pay the price for our mistakes.

### Obesity in the Northeast



While nationwide obesity rates are growing, it is necessary to look at regional rates to reinforce positive acts to change eating habits. New York and Delaware both rank in the top 20 for most sedentary lifestyles. This goes to show that, even though New York is one of the busiest places, the people are always on the move and are not immune to the clutches of obesity.<sup>2</sup>

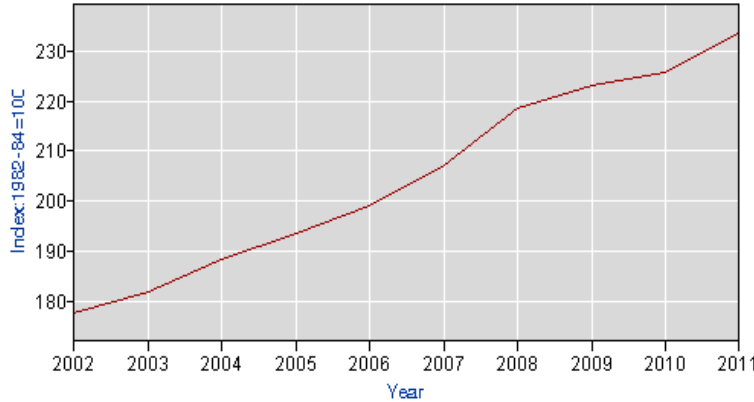
The image above is from the Center for Disease Control and Prevention in America. This map is especially significant as it dictates the trend of obesity and body mass index percent over each region. The darker shades of red represent an extraordinarily high level of obesity in Americans. While lighter show less of an impact on these populations. Nonetheless, *not one state* is immune to the disease. It is clear that this is an epidemic, spreading from southern states to both the east and west coasts. However, Southern hospitality cannot be held accountable for obesity: “I think part of what’s happened is we’ve taken ritual events, like harvest events, where there’s going to be an indulgence and unusual pleasure of [a certain] kind and made them into things that are widely available and routine” (Patrik Jonsson 2). Also attributed to this southern breakout are low socioeconomic levels that prevent healthy eating habits.

<sup>2</sup> Source: Centers for Disease Control and Prevention Obesity Data 2010.

While portion sizes and binge eating play a major role in the south’s obesity challenge, the northeast faces different circumstances. As seen below, the Northeast Region of the United States has rising CPI (consumer price index) rates that will continue to grow for a number of

**Consumer Price Index - All Urban Consumers**

**Series Id:** CUUR0100SAF1  
 Not Seasonally Adjusted  
**Area:** Northeast urban  
**Item:** Food  
**Base Period:** 1982-84=100



years. According to the Bureau of Labor Statistics, CPI is defined as “prices paid by urban consumers for a representative basket of goods and services” (1). The CPI in the Northeast is a significant 20-30 points higher when compared to the South. Rising prices of goods creates a sense of dependence on the government to regulate certain goods, or create more food stamps. Rising prices also give birth to poverty, which then gives birth to cheap, unhealthy

fast-food consumption, which all culminates into higher obesity rates. It is no coincidence that obesity is tied to a low socioeconomic status. This link is even more apparent in cities that have a sedentary lifestyle. As such, the Northeastern region needs a plan to support healthy lifestyles.

**Obesity in New Jersey**

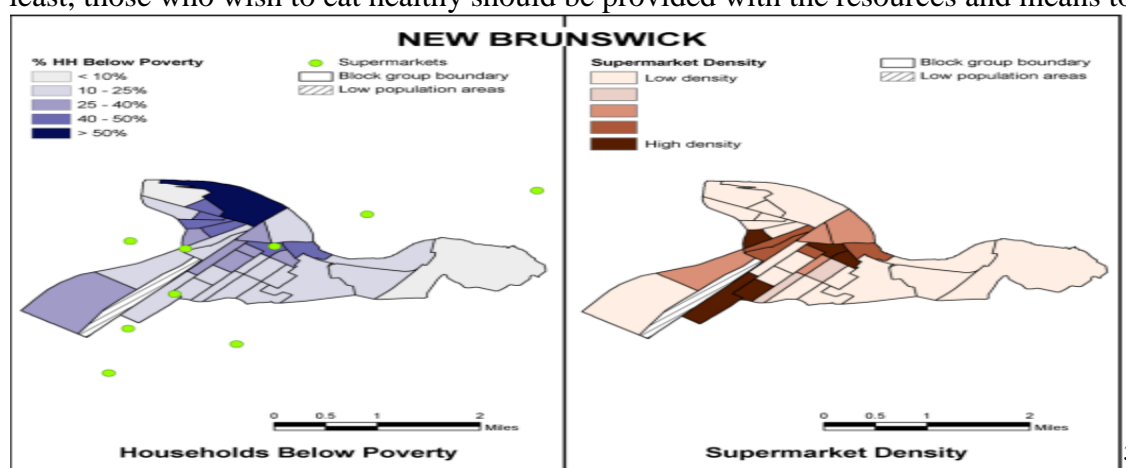
		Overweight & Obese (BMIPCT ≥ 85)	Obese (BMIPCT ≥ 95)	Very Obese (BMIPCT ≥ 97)
City (Ages 3-19)	Camden	39.8%	23.3%	17.3%
	Newark	44.2%	25.2%	18.3%
	New Brunswick	46.4%	26.7%	19.9%
	Trenton	47.3%	28.0%	21.0%
	Vineland	43.6%	25.3%	18.5%
NHANES (Ages 2-19)	All	31.7%	16.9%	11.9%
	Non-Hisp Black	35.9%	20.0%	14.9%
	Mexican Am	38.9%	20.8%	14.9%
	Hispanic	38.2%	20.9%	15.2%
	Non-Hisp White	29.3%	15.3%	10.5%

Sources:  
 CSHP 2010, BMI data from public schools in 5 NJ cities, 2008-2009  
 NHANES 2007-2008 data

**RUTGERS**  
 Center for State Health Policy  
 Funding provided by the Robert Wood Johnson Foundation

As the nationwide data provided a glimpse into New Jersey’s future relative to the issue of obesity, this data from Rutgers itself provides a current outlook on how people are living. Obesity is an ongoing concern especially in New Brunswick, New Jersey. In research conducted

by Rutgers University, New Brunswick ranked second in New Jersey behind Trenton as the most obese city with 46.4% of its residents considered obese (Center for State Health Policy 5). Additionally, close to 20% of New Brunswick residents are very obese. In other words, 1 out of every 5 residents being obese significantly inhibits the community's health and its ability to perform efficiently. It is also apparent that race and ethnicity plays a role in the obesity trend in New Jersey and specifically New Brunswick, as an astounding 35.9% of people between ages 2-19 were overweight and obese. The image below, shows a population density of New Brunswick. Specifically, it shows the spread of poverty in the community. The relationship between poverty and supermarket density is pretty clear here: consumers want the cheapest food and producers attempt to maximize business profits. Therefore, it is clear that supermarkets need to redefine their goals; possibly by creating a supermarket for those who are less fortunate. It is unfair that the rich can afford healthy food yet they still choose to eat unhealthy. At the very least, those who wish to eat healthy should be provided with the resources and means to do so.



### Obesity in College Students

College students are just a small population when compared to this group of the obesity outcry. Dr. Jeffrey Levi, executive director of Trust for America's Health states that "you certainly can find a lot of data showing that kids today under 19 are becoming more and more obese, they're moving on to college — *this is a trend that's been going on for 20 years* — and clearly admission to college does not suddenly eliminate those rates of obesity" (M. Jill 1, emphasis added). The main part of Dr. Levi's argument is that this trend has been going on for many years now. The percentage of overweight and obese college students increased from 27.4% to 29.2% in five years. At this rate of 1.8 percentage points per every five years, the obesity rate among college students will reach 36.4% by the year 2030. Most college students will not experience major health effects since they are young. However, their health will deteriorate while they age, if left untreated.

Obesity is considered by many to be a medical problem that threatens an individual's well being. It increases the risks for heart diseases, cancers, diabetes, and many other chronic diseases. Although a large percentage of people are affected by obesity, one fact that many fail to realize is that obesity is preventable. Diet and exercise have been recommended by medical professionals to treat and prevent obesity (Kopelman). When treated properly, there should be a

<sup>3</sup> Source: Rutgers Center for State Health Policy. CSHP New Brunswick food outlet 2008 data (Updated August 2010).

decrease in the risk for life-threatening diseases. However, college students face many challenges in managing these two important recommendations.

The transition between high school to college is more significant than most parents and many students realize. Leaving a home with healthy regular meals and sleeping patterns, and moving to a college life with sparse eating, or too much eating, creates a discrepancy that is hard to overcome. In an article from the CDC, a survey found that “[b]ehaviorally, 9 of 10 students eat fewer than five servings of fruits and vegetables per day, and nearly 6 of 10 students participate fewer than 3 days per week in vigorous-intensity (20 minutes or more) or moderate-intensity (30 minutes or more) physical activity (Sparling 1). Students must transition from a strict eight hour schedule where both lunch and physical activity are regulated. Why are students failing to eat healthy? College life is strictly based on a students’ personal choices: “There are a lot of choices to be made; it’s a totally different environment,” said Emily Schmitt, the University of Maryland fitness programs coordinator (M. Jill 1). Without family members monitoring caloric intake the typical college student responds with excessive drinking and binge eating or lack of eating. While environments may change, a student has a responsibility to his own body to ensure optimal health. It takes a couple semesters to develop a routine that is balanced in studying, socializing, and stabilizing one’s health.

Even with advances in medicine, scientists are unlikely to discover an effective, safe, and affordable drug that would cure or prevent obesity (Sparling 1). Today’s society relies on the common drug to fix everyday life problems. Whether it is Tylenol or Nyquil to help ease the burden of a cold, there will never be any medication for obesity. The CDC estimates that medical costs associated with adult obesity top \$147-billion (Sander 1). It would be smarter if colleges and the government take preventive measures now rather than own up to this large sum of money in ten or so years. With substantial funding, the obesity issue in colleges can be fixed.

### Obesity in Rutgers College Students

While colleges around the nation combat this disease, the obesity epidemic has even spread to Rutgers University. The National College Health Assessment Data from the American College Health Association from the Fall 2010, provides substantial evidence to this problem. In this survey, one question asked, “How would you describe your weight?” (NCHA 30). In a small sample of close to 5,000 students, roughly 30% responded slightly or very overweight. With close to a third of Rutgers overweight, this substantiates the information provided from the previous section regarding college students in general. While 50% of students responded with “about the right weight” this does not prove if they are truly healthy or not. This question particularly leaves it up to the participant to decide what a healthy weight is. However, further analysis of follow-up questions provides the answer that many students do care about their weight. As seen in the figure below, around 72% of students either trying to lose weight or maintain their current weight, the importance of a balanced lifestyle is evident. It is not that students do not care about their weight, the issue is that they are not being provided with great resources in the dining halls to enforce their choices.

27. Are you trying to do any of the following about your weight?

	Male		Female		Unknown		Total	
	Freq.	Pct.	Freq.	Pct.	Freq.	Pct.	Freq.	Pct.
1 I am not trying to do anything	346	18	362	13	6	17	714	14.8
2 Stay the same weight	441	23	768	27	7	20	1,217	25.3
3 Lose weight	663	34	1595	56	15	43	2,274	47.2
4 Gain weight	481	25	123	4	7	20	612	12.7
Valid responses =	1931	40	2848	59	35	1	4,817	99.4

Students eating habits are pretty evident through this data as well. Almost 87% of students fail to eat the daily recommended serving amounts for fruits and vegetables. Is this because the dining halls do not offer enough healthy options? Or is this more related to a lack of nutritional information? Most

**3A8. Are you interested in receiving information on the following topics from your college or university?**

	Male		Female		Unknown		Total	
	Freq.	Pct.	Freq.	Pct.	Freq.	Pct.	Freq.	Pct.
1 No	951	50	946	33	25	46	1,922	39.9
2 Yes	972	51	1888	67	29	54	2,892	60.1
Valid responses =	1923	40	2834	59	54	1	4,814	99.4

Invalid responses include no response or multiple responses.

students are interested in receiving this information, but do they receive it from colleges? Problems in obesity and weight troubles with these students may not lie in themselves but perhaps the college itself is to blame. Sure Rutgers has some types of methods to help students, but more needs to be done. Students need to know how much they currently eat, how much they should eat and of what food items. Around 70% of students have multiple alcoholic beverages to drink here, this staggering number factored in poor nutritional values equals a life full of health problems. The data survey is bias in a sense because many of the questions revolve around sexual health or drug abuse. Rutgers emphasizes these two areas the most through this survey, and it is apparent through various appropriations of funds that nutritional health is pushed off to the side. The obesity rate among Rutgers college students will significantly decline with a stronger focus on nutritional health, greater information and guides throughout the campus.<sup>4</sup>

**Conclusion**

Obesity is such an issue at the nationwide stage that the only way to combat the problem is to start at the local level. As shown by this, the effects of obesity in America have a trickle down effect; they start at a national level, then move into statewide and local regions. Dealing with obesity in adolescents and especially the college student population is utmost important in order to protect the health of America’s future generations. Rutgers University should take this issue more seriously as many students suffer with this disease. A healthy balanced meal can be achieved with improved dining hall food and the daily choices that are made in choosing a meal. Hopefully, this change at the local level at Rutgers University will cause this health conscience thought to spread to other areas in the east coast. Eventually this ideology will lead to a food revolution where people will be more concerned about what goes into their mouths.

<sup>4</sup>Source: American College Health Association – National College Health Assessment Fall 2010

## Literature Review

Following a breakdown of the problem of obesity, it is essential that we take a look at what actions were taken against this issue. Models of success and failure are both key and teach significant lessons to what is helpful in this battle against obesity among college students. The most effective way for Rutgers to correct this situation is by looking and examining past and current examples. At Rutgers University, there have been several attempts at reducing obesity and all have had little effect and proved to be unsuccessful. Other large universities such as UCLA and University of Houston have implemented programs to reduce obesity on their college campuses. By studying what obesity does to the body, how information affects behaviour, and how to effectively use social media and narrative, Rutgers can become successful in combating obesity.

### What obesity does to the body

However, the impact of an unhealthy lifestyle is often overlooked, and has subsequent consequences. A majority of the population is unaware of the various bodily functions that are affected by obesity. In a healthy person, a healthy weight consists of lean muscles, bones, and other body parts to function efficiently for many years (Harvard 1). Recent statistics show that an increase in obesity is a significant factor in decreasing a person's lifespan (Kopelman 1). Excess weight is always associated with obesity and hinders the body's ability to function properly and efficiently. For example, an increase of fat in the chest and abdomen causes a reduction in lung volume and alters the pattern in breathing (Kopelman). This in turn causes a change in respiratory functions and poses a problem especially during sleep. As a result, changes in respiration during sleep, due to obesity, will lead to heart and respiratory failure (Kopelman). College students are at a higher risk to these changes because of bad habits that have accumulated over four consecutive years. What many of them fail to realize is that the myth of the "Freshman 15" only played a small role in their weight gain. Consequently, gradual weight gain over many years is harder for college students to create changes. These effects are long lasting, from high school to college and then the work force; eventually one begins to question where both exercise and a healthy diet fits in. The risks and complications of obesity are never ending. Additionally, obesity puts a great strain on the heart. A rise in body weight is accompanied with an increase in a person's surface area. This weight increase causes an escalation of cardiac output, complementing high blood pressure, and heart failures (Kopelman). If these are one of the two ways in which obesity hinders bodily functions, it is easy to see how obesity can hinder other body functions. The causes of obesity and their bodily effects are rooted in health problems popular within our nation primarily a product of the food industry and false advertising.

### How does information affect behavior?

The food industry has widely been accused of being the new tobacco industry. This is mostly due to their continued lobbying and mass advertising of products that have been known to cause adverse health effects. These products include cereals high in sugar, caffeinated beverages infused with hundreds of calories, and fast foods high in fat content. So the question remains, if people are fully aware of the adverse effects of these products, then why do they continue to be a large part of the public's consumption market? The answer to this question lies in advertising, and the relationship between marketing strategies and behavior changes.

Effective marketing strategies are born out of consumer analysis. This analysis includes separating the consumer by age groups, using psychology such as primary colors that attract attention, and the misuse of statistical information. A leading example of this is framing:

“framing influences the effect of nutrient and ingredient composition. For example, food is perceived to be leaner when labeled “75% fat free” rather than “25% fat”” (Chandon). Other strategies include branding the food with a certain characteristic in order to make the entire seem healthy. Such things, referred to “health halos,” are deceptively appealing to consumers, “when...consumers tend to categorize the entire food item as healthy, [it] leads them to underestimate calories and to overeat” (Chandon). Companies will also use vague phrases such as labeling a product as “good for you,” or “smart choice” to dupe consumers into believing that the product is healthy. This is especially a concern when taking into account the amount of money and resources the food industry spends on advertising. These crude strategies are effective as companies portray information to influence the way that people perceive a product: “food advertising represents one-third of television advertising in children’s TV programs; children are exposed to over 40,000 food ads per year” (Chandon). With a smart selection of words, advertising is able to pick apart an age group filled with innocence and naiveté. This is especially vital because if food companies are able to influence and brainwash consumers in a certain way, then it can be very difficult for health promoters to compete with them.

Researchers at Kent State University tested this theory that educating students about nutrition, and in their case, whole-grain consumption can really change their attitude and behavior. The study had 80 college students participating, with their ages varying from 18-24. The main goal of the study was to test whether the interactive introductory nutrition course meeting three times a week for fifty minutes would actually make any significant changes. Apart from simply modifying food intake, it labeled the importance of diet, disease screening, and exercise as important key components of a healthy lifestyle (Caine-Bish). In order to strategically allow the students to see the importance of whole-grain, the researchers devised one class period where an activity allowed students to monitor their own risks when it came to heart disease. Once they had assessed themselves and seen the risks, the next class focused on the physiological benefits of whole-grain consumption. This way, the students were able to independently make a selection to increase their consumption of whole-grain. The heart disease assessment activity was only one among many other activities that the students participated in. These activities included “dining quizzes,” where students would evaluate which McDonalds sandwich had the lowest calories. There was also a “Happy Body Log” that students kept, in which they would write about the small, everyday steps they took in order to live a healthier life. Finally, the students themselves were told to be advocates of eating healthy in an activity called, “Be an advocate!”. The students chose three people, who were either family or friends, and educated them on the positive effects of a healthy diet and ways in which to prevent chronic diseases.

Once the classes concluded, and the activities were done, the researchers found that there was a significant increase in whole-grain consumption among the students; the average being 0.37 ounces at the beginning of the course, and 1.16 ounces by the end of it (Caine-Bisch). The students were also able to better recognize food sources of whole-grain, which increased from 7 in the beginning, to 11 at the end of the course. A course, similar to this one, does not exist at Rutgers yet. As the study shows, the first and foremost step is to get students to change their behavior. This can be accomplished by: getting valid and important information out there, and increasing the public’s awareness in an effective way. Food companies understand this, and with their aggressive marketing strategies are causing millions to turn to products that they should be avoiding. As such, a plan must be devised that models itself on the success of the researchers at Kent State, and on the success of the food companies themselves.



One way to tackle the problem of obesity is to increase public awareness of the various health problems that are a direct result of it. Since this has been getting out of hand, the first Lady, Michelle Obama, has seen fit to get involved with her program “Let’s Move”. It simply encourages the kids to exercise and make more healthier choices (Wood 1). Obesity is such a problem at the national level that even politicians must get involved to correct the situation. Michelle Obama’s plan “Let’s Move,” creates an alternative environment to mandated physical education classes, where kids can play with each other and have fun. It is proven that weight loss is easier if a fun activity is being done, rather than something monotonous. Additionally, proper nutrition and dietary knowledge can be an effective tool for getting people to change their ways.

How can we successfully use social media and narrative?

The use of social media in today’s day and age is akin to learning another language. What makes social media so engaging, and how can we successfully use it to promote socially important issues? One way to better understand the influence of social media is to analyze entertainment-based education and its relationship with the audience, and to see why narratives succeed in getting a message across, or why they sometimes fail.

One of the theoretical models mentioned in the research is ELM, or the Elaboration Likelihood Model. The ELM theory is divided into two important factors that evaluate attitude and behavior change: central and peripheral. The central, or the “systematic processing” route, takes into account the “goals and purposes for a recipient in reading a persuasive message about a topic that will impact his or her finances, grades, [or, in this case, their physical well-being] and workload, [and whether the means] are self-evident,” (Slater). As such, the central route requires the audience to make the most use of cognitive processing; to evaluate whether the message is from a credible source, whether it is persuasive, and whether the ideas being presented deserve any merit. This kind of thinking requires a great deal of motivation from the audience, but if all criteria are matched, then the user’s attitude towards the subject matter is positively influenced. (Slater)



An example of when “central processing” is used. The following newsletter/flier from the RU Healthy Advocates team fills the entire page with info and chunks of paragraphs.

This is an unsuccessful means of tapping the college population, as only those who care to read, will invest time reading. <sup>5</sup>

Contrary to this sort of critical thinking is peripheral processing. In peripheral processing, the audience's mind is not as taxed with information, thus reducing the amount of time given to evaluating the information. (Slater) As such, not much thinking is required in order to achieve behavior change. A great example of this is the framing theory discussed beforehand. Shoppers go into a store, and unbeknownst to them, they are exposed to a myriad of small, but effective, marketing strategies such as slogans that state, "smart choice" on a box of cereal, and giving into the bias, the individual thinks he or she is making an independent decision, but in reality, it is just laziness, or a lack of motivation, to think and process information. In this particular scenario, the user simply accepts the information for what it is, and might only take into account miniscule details such as the design of the box, the visual appeal, and how well the slogan rings.

How do the two theories relate to entertainment-based education? Although there is no theory that explains why people are attracted to narratives, it is evident that dramas are compelling because they offer the audience a means of accessing "vicarious social relationships" (Slater). Just the same way as an advertisement plays on an individual's self-interest in the product, how compelling a drama is also depends on the level of motivation and involvement that an individual is willing to commit to the piece. However, unlike a typically persuasive message that is centrally processed, and the individual does so knowing he or she is evaluating information, drama that directs the viewer into such thinking is the least successful in getting its message across (Slater). Surprisingly, it is drama that is able to hide this intent and instead engross the audience into reading or viewing a story, while keeping its informative nature subtly in the background, which is most successful at influencing an individual. A great example of this is the film *Guess Who's Coming to Dinner* (1967). Had the film's intent been stated directly in the beginning, or had a character said outright, "Hey, my goal is to get you to think about race relations," then the film would not be as successful in persuading the audience.

In conclusion, using the "framing" theory in combination with ELM, it is evident that there is no *one* best way to influence the college population, or sway them towards thinking positively about nutrition. If a central route is chosen and students are taxed with information on the social media websites, then only those who care about nutrition in the first place will be motivated enough to view the information so as to make a lasting change in their lives. However, most students will choose a peripheral means of evaluating information, thus leaning more towards "framing"; given that health is probably not on the top of their worries, behind classes, exams, social relationships, and other issues that dominate college life. The social media campaign, and the plan, take this into account, while the proposal to include a reading into the expository classes factor in what makes for the best entertainment-education, and how to successfully get a piece of narrative to influence its readers, without being too obvious about it.

## ***Models of Success and Failure***

### **SNAC and UCLA**

In order to create an ideal introductory course and environment where students are able to make health conscience decisions, we must look at what other universities have successfully implemented in the past. The environment is a major factor that impacts how active a college

student is, as well as the nutritional choices he or she makes. Research done about college student eating habits has shown that “buffet style cafeterias and excessive portions served at dining halls have been implicated in overeating and poor nutrition,” (Boyle 195). The study was done about Brown University’s buffet style dining, similar to dining seen at Rutgers University. Few colleges have created classes to inform students on healthier eating habits. Among the select few is UCLA. The university initiated a program that encouraged students to take affirmative steps in the fight against unhealthy choices on campus. The program was known as the SNAC, “Student Nutrition Action Committee,” (Heckler). Along with spreading awareness around campus, SNAC appointed a committee that maintained a website accessible to all enrolled students. The website provided information about proper eating habits as well as exercising techniques to achieve certain results. The SNAC also provided handouts that complemented the lessons online for students who wanted more information.

### TIGER

The University of Houston introduced a program called TIGER, Training Interventions and Genetics of Exercise Response. The program allowed students to enroll in an exercise course that encouraged them to exercise, which in turn created a habit of exercising that had a positive impact on student health. Creating a form of habit, as previously stated, is crucial to a college student during their four year educational career. As a benefit for participating in the program, students received credits towards graduation. The more a student enrolled every semester, the more credits they would receive. “College presents an opportune time to establish healthy behaviors, yet research indicates that the decline in physical activity occurs in the early adulthood period, between 18 and 24 years of age” (Boyle 195). It is crucial that we educate the youth to create healthy habits in the areas of exercising and nutrition.

### NJ Institute for Food, Nutrition, and Health

This new institute, located on Rutgers’ Cook Campus, is home to researchers and staff dedicated to conducting multidisciplinary research to tackle the issue of childhood obesity. According to their research, New Jersey preschoolers rank second highest in the nation in obesity rates, with 17.9 percent. If children at such a young age begin to develop obesity related behaviors and diseases, then by the time they are in college, their eating habits and behavior towards nutritional food will only be of little to no significance to them. In order to prevent this, Rutgers University has taken an active initiative towards helping New Jersey residents find cures for obesity-related diseases, and promote a healthy diet. Rutgers plans on using “its nationally ranked programs in food science and policy, nutrition, agriculture, genetics and health” (NJIFNH) to create one central hub where Some of the institutes plans include: “educating a new cadre of professionals, generating and disseminating new research, formulating new policy related to food security and access, and implementing intervention programs based on the best available scientific evidence.” (NJIFNH) The institutes location and presence on campus can be used to promote healthy initiatives for students. They can be a home for events and information that students seek in order to help them overcome their problems. However, the Institute is currently primarily focused on research and has yet to market itself properly, lacking any kind of social media output. In addition, their plan proposes the implementation of intervention programs, as such, there is no current data that indicates any positive impact.

### EFNEP

Rutgers University is also a participant of, and a contributor to, the Expanded Food and Nutrition Program (EFNEP). This nationally recognized program, “is designed to assist limited resource audiences in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets, and to contribute to their personal development and the improvement of the total family diet and nutritional well-being” (National Institute). The program is currently offered in Camden, Essex, Hudson, Mercer, Middlesex, and Passaic county. Although the program mainly caters to a low-income community and is designed to help them better their nutrition information and diet, many of its components can be used to educate the college crowd on how to balance their own diets and adapt their attitudes and behaviors in order to lead a more healthy lifestyle. According to the national statistics, almost 94.2% of people who have participated in this program have reported a positive change in one or more food groups. The program in New Jersey, which is assisted by faculty and volunteers from Rutgers, consists of classes for adults taught by paraprofessionals. These one-hour classes meet once a week for six weeks and cover many topics not limited to nutrition, such as: food production, preparation, sanitation, and safety, and even show people how to manage their food budgets. This is something that can be especially useful for college students, who are known to opt for instant noodles for their ease of use and cheap pricing, but which offer little to no nutrition. The program’s success can be measured by the fact that, “48% more often used the "Nutrition Facts" on food labels to make healthy choices,” and “38% more often thought about healthy food choices when deciding what to feed their families.” (EFNEP, Rutgers). This program, which is supported by USDA’s National Institute of Food and Agriculture (NIFA) Smith-Lever funds, does not offer any kind of assistance specifically geared towards college students, however, they do have a similar program for youth, defined as between K-8 grade level. This youth program is modeled after the adult version, but only meets for twenty minutes instead of the full hour. The groundwork for this program, and the strategies they use to promote healthy information would be even more effective if the program were popularized using social media. This would ensure that more Rutgers students become aware such programs exist, and so that the EFNEP can also be aware that students are a key demographic they have missed in tackling New Jersey’s obesity problem.

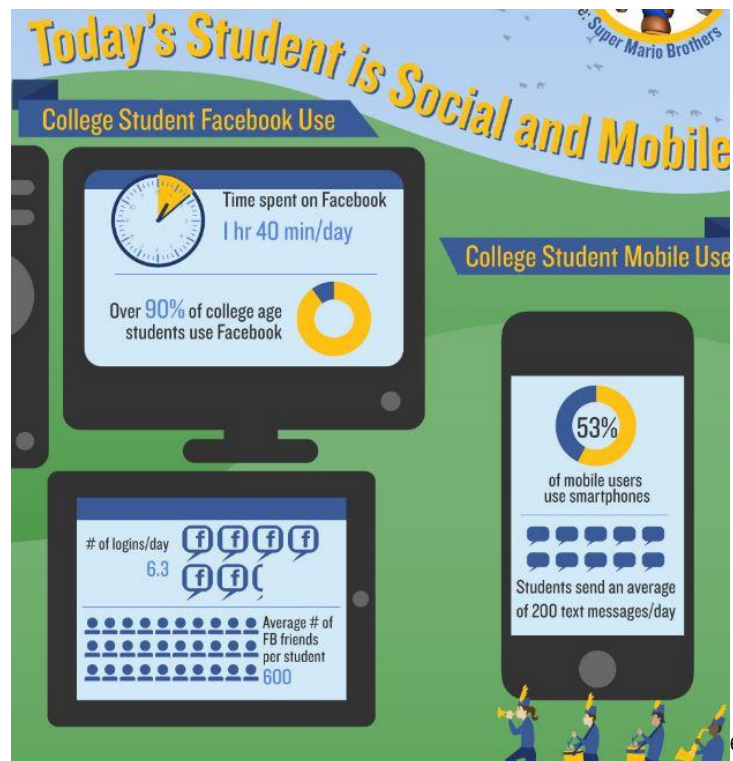
### RU Health Services’ H.O.P.E

The Rutgers Health Services, under their Health Outreach, Promotion & Education Program, offer a number of options to educate students on nutrition. On their website, under the “Nutrition” tab, there is a list of clickable information guides that illustrate some helpful facts. For example, the “What Am I Eating” url redirects to the user to a pdf version of the Health Services brochure; this handy brochure packs a lot of calorie information for on-campus food vendors, such as Subway and the famous Grease Trucks, that students frequent. Additionally, the “Nutrition Resources” tab offers a list of FAQ, or Frequently Asked Questions, that students ask; these range from alcohol intake and how it affects the body, to whether being vegetarian will help students lose weight. After interviewing Francesca M. Maresca, Coordinator for RU H.O.P.E, it was evident that the University does not have any statistical information that shows whether or not these online initiative, or any initiatives, are actually working. (Deshpande, Rugved. Personal interview. 4 Dec. 2012.) The main reason behind this, according to Dr.Maresca, is that students are a “transitioning population,” and because they are at Rutgers for only four years, there isn’t enough time to conduct a study, or gather data. However, four years is a significant time to conduct data; an isolated freshman population can easily be gathered for a

study, and their progress over four years can be tracked, thus allowing Rutgers to test whether or not any of the university's efforts to combat obesity are actually working. As such, H.O.P.E is both a model of success and a model of failure, as their efforts are clear, but there is potential for much more.

### Choosing the Right Social Media Platform

Social media is one of the most effective tools in reaching a desirable group of people. In "Small Change: Why the Revolution will not be Tweeted," Gladwell states how "[w]ith Facebook and Twitter and the like, the traditional relationship between political authority and popular will has been upended, making it easier for the powerless to collaborate, coordinate, and give voice to their concerns" (1). With everyone united, strong ties are developed and reaching a common goal for change is attainable. Since social media is so heavily emphasized within the college student age group: around 90% of students use Facebook. Pew Internet conducted a survey where "among the youngest internet users (those ages 18-24), fully 31% are Twitter users" (1). With engagement from students, the problems at Rutgers should be resolved more efficiently. We are planning to use: Twitter, Wordpress, Facebook, and a customized Phone Application.



### Twitter

Twitter is the search engine of social media, not only can people tweet interesting information they are able to comment, create and share proactively. Almost 73% of students perform one of these three activities, further demonstrating the hold social media has on college students (Genius Recruiter 1). However, people can post interesting links to other websites that

<sup>6</sup> Source: Recruiter, Genius. "Blog." *Genius Recruiter RSS*. N.p., 22 June 2012. Web. 12 Dec. 2012.

contain information about health and nutrition. As more and more people are becoming health conscious, Twitter can be used as a health information service where daily activities and habits that promote health can be tweeted. It can also be used to as a means to provide information regarding health and the effects that obesity can potentially bring later on in life to hundreds of “followers.” Due to its large 500 million active accounts, it will be a great way to reach out to the mass more easily and more quickly, in that it is more instantaneous in the ways house information and news can be shared (Lies & Statistics).



### Wordpress

Additionally, wordpress is a good blog because it is the most personalized aspect of social media. With Facebook and timeline, you do not have much of an option for formatting purposes and everything is open to many of your friends, acquaintances and family members. It allows for great interaction with visitors in the discussion area. On Facebook, it is harder to have a proper formal discussion because of the seriousness of the matter. Most times on Facebook colloquial language combined with other acronyms “LOL” etc. defeat the purpose of an intellectual conversation. A way of measuring the success of blogs is by evaluating how lawyers part of the AmLaw 200, or high-ranked law firms, have used them in order to promote their business. The numbers don’t lie: over 25% of AmLaw 200 law firms have blogs, 10% of AmLaw 200 law firms have over one blog, and there was a 49% growth (between 2007 and 2008) in total number of blogs being published by AmLaw 200 law firms (Keefe). It has also astounding that, “not one AmLaw 200 law firm has ever said blogging takes too much time or complained that the blog was not a success.” (Keefe)

### Facebook

Lastly, the group would like to use Facebook in order to further promote health information among the students. The RU Healthy Dining Team already had a Facebook page, but unfortunately it is not that popular and most of the statuses aren’t “liked” by a significant amount of people. However, as indicated by the Lies, Damned Lies, & Statistics website, Facebook is still the most popular social networking website out there, with over half of the U.S. population having active users. Additionally, Facebook can be a hub for the other two social media that we chose: Twitter and Instagram can be viewed on your Facebook homepage screen. As such, if people like the RU Healthy Dining Team’s Facebook page, then they can also get instant updates

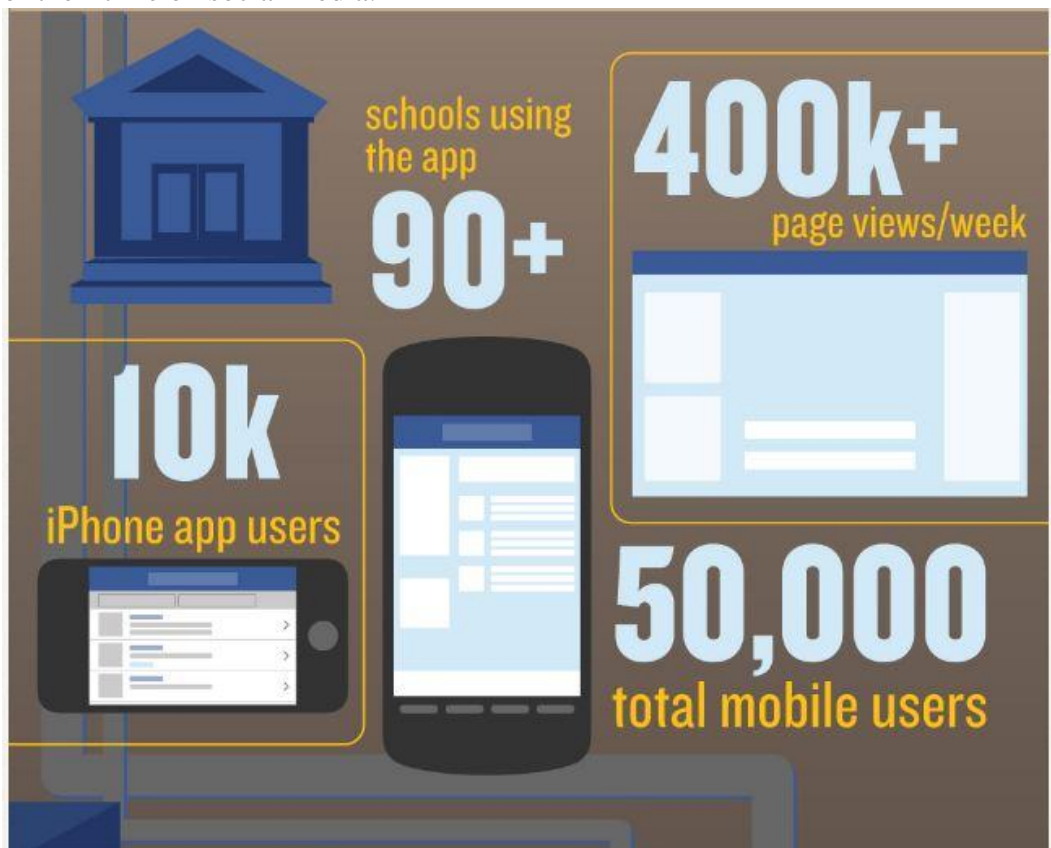
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<sup>7</sup> Source: Recruiter, Genius. "Blog." *Genius Recruiter RSS*. N.p., 22 June 2012. Web. 12 Dec. 2012.

on their Facebook from whatever the team tweets or uploads using Instagram. All three social media combined should be able to help promote nutritional information among the students, a majority of whom use all three of the social media frequently, and make the RU Healthy Dining Team a little bit more popular.

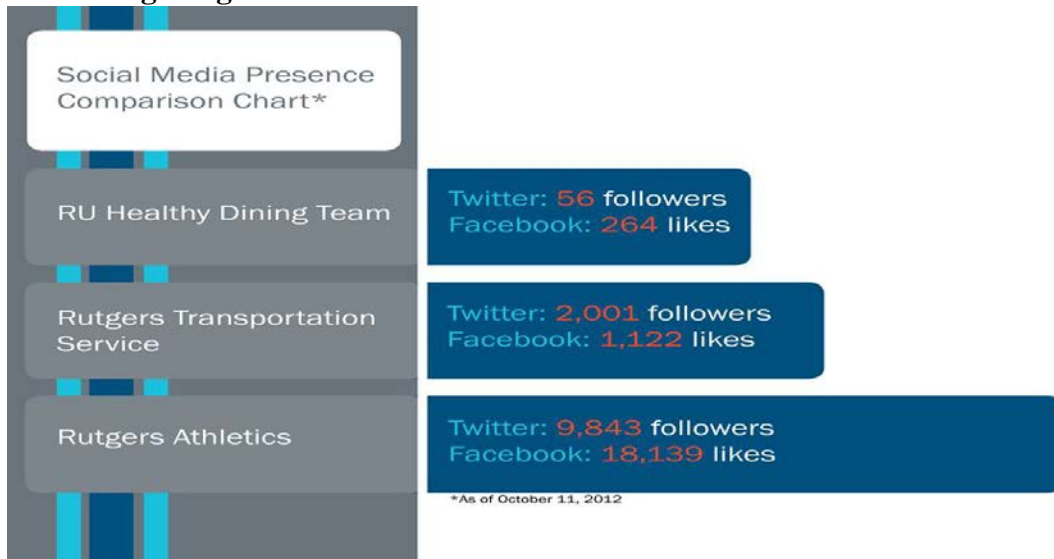
### Phone Application

According to Nielsen ratings, “for U.S. users, more than a third of the time spent using social networking sites on PCs and mobile devices comes from app activity, based on a report published on December 3rd 2012, besting by far the amount of user activity seen on mobile Web sites. That’s a big jump from the year previous. Total time spent using social networks via app is up to nearly 41 billion minutes yearly, the study said, close to seven times that of mobile Web activity” (Isaac). Genius Recruiter has a picture of how more than 90,000 universities use phone applications, and that there exists over 10,000 total iPhone app users (1). The Rutgers application is a social media networking application for the Rutgers community. By creating an application the focuses on nutrition, we will be able to reach a broader amount of people that use a majority of their time on social media.



<sup>8</sup> Source: Recruiter, Genius. "Blog." *Genius Recruiter RSS*. N.p., 22 June 2012. Web. 12 Dec. 2012.

## Evaluating Rutgers Social Media Presence



The first steps in reaching college students is public awareness about: student benefits the Rutgers Dining Services offers, more social media publicity, and the incorporation of nutritional information in other parts of the Rutgers experience (such as the class and the campus). The Rutgers dining services' website, [food.rutgers.edu](http://food.rutgers.edu), has a section dedicated to Healthy Dining. Dining Services, in conjunction with the Department of Nutritional Sciences, created the RU Healthy Dining Team. It is composed of eight students who work under the direction of a faculty member from the Department of Nutritional Sciences. Their mission is to "educate students about nutrition and encourage them to make healthier food choices" (Dining Services). They have created multiple social media accounts such as Facebook, a Wordpress blog, and Twitter. However, something the RU team lacks is public presence, popularity, and a consistent effort to get the message out to students. Currently, their Facebook has 264 likes, their Twitter account has 56 followers, and their Wordpress website was last updated in February 2012. As seen on Table 1, the RU Healthy Dining Team is one of the least recognized groups affiliated with Rutgers.





Screenshot 1.  
 Source: <http://food.rutgers.edu/enr-and-nutrition/healthy-dining/about-the-healthy-dining-team>

Screenshot 1 is the Rutgers Dining Services website. The Healthy Dining section of the website has links major social media platforms like Facebook, Wordpress and Twitter. However, a closer look shows a wide range of issues.



Screenshot 1  
 Source: <https://www.facebook.com/pages/RU-Healthy-Dining-Team/118069811580157>

Screenshot 2 is from the Healthy Dining Team Facebook page. As you can see the statuses created have very little interaction from online participants.



Screenshot 1  
 Source: <http://ruhdt.wordpress.com/>

Screenshot 3 is from the RU Healthy Dining Team Wordpress blog. As you can see the last post was from February 2012.



Screenshot 1  
 Source: <https://twitter.com/RUHDT>

Screenshot 4 is of the Rutgers Healthy Dining Team Twitter account, as you can see the tweets have no responses by the people that follow their account.

### **Conclusion**

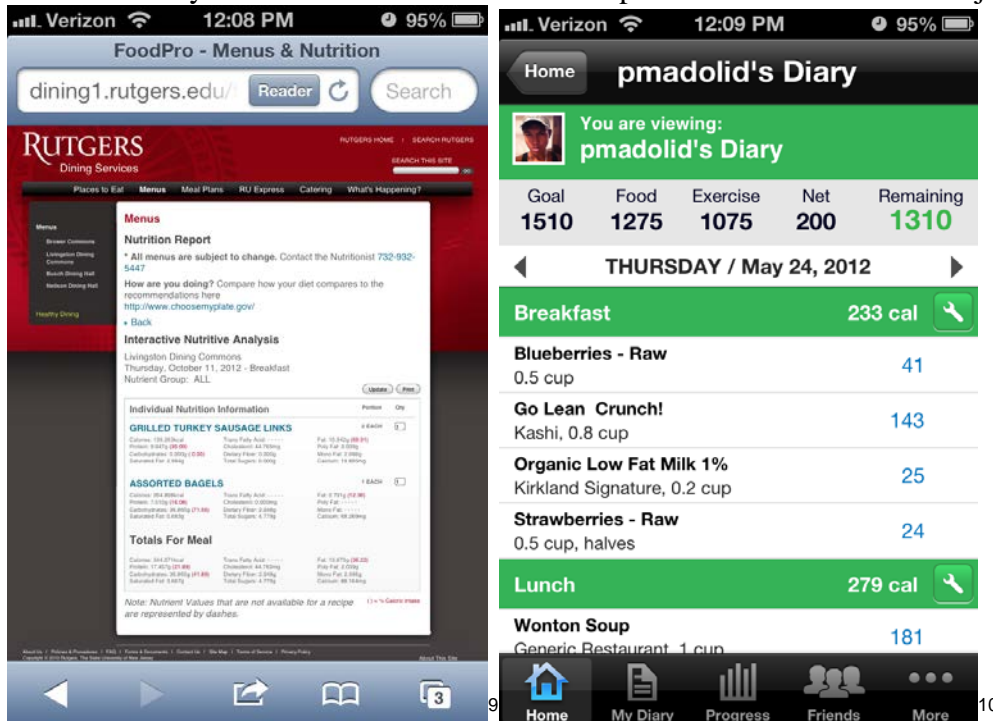
From the above models, many colleges do not take enough action to help out students in regards to weight control. Among the few, UCLA and University of Houston have taken an active role in reducing obesity on campus. Rutgers should analyze the universities that are currently trying to reduce obesity and fix the problem. Currently, the RU Healthy Dining Team, one of the university's attempts to reach the Rutgers population is a complete failure. Their lack of social media presence downplays all their efforts to create some changes around campus. Without strong enough supporters and a worthy plan, many students are left fending for themselves. Why must this be the case? There are still plenty of inexpensive and effective options that Rutgers can utilize to inform students.

## Plan

Due to the obesity epidemic being left untreated, Rutgers needs to take significant action. As other university such as UCLA taking an active role at trying to curb obesity, Rutgers University should do the same. The four-step-plan at tackling obesity will be illustrated below and will show that it will become an effective way to reduce obesity among college students. Most likely, due to a budget constraints the university finding any positive actions would be unattainable. We have developed a four-step-plan that saves money and is effective to reaching all the students on campus. Based on the aforementioned models of UCLA's flyers, and EFNEP's food labels, we have developed this subsequent plan.

### Phase One: Part A Introducing iPhone Application

The Rutgers Dining Services website has an interactive menu that allows users to look up nutritional information based on the food options offered for breakfast, lunch, and dinner. The students have the ability to plan foods ahead of time and print out the detailed nutritional summary for their meals. The downside to having an online application is the lack of informational mobility. The desktop version is also cluttered with information, and simply hard to read. Therefore, using a smartphone is more accessible and directs the student to the desktop version of the Dining Services website (as seen in figure 1). Introducing an application dedicated to the Rutgers Dining interactive menu (similar to the example in figure 2) as well as having a mobile friendly version would make the user experience easier and more enjoyable.



<sup>9</sup> Source: Rutgers Dining Services Website

<sup>10</sup> Source: iOS Application MyFitnessPal

## **Phase One: Part B** **Increasing Public Awareness**

However, a recurring problem is the lack of public knowledge, specifically that the Rutgers Dining Services offers these tools inhibits students' use. In order to reconcile this issue, we propose placing graphically designed flyers in clear plastic placement holders for every other table in the dining hall. This results in an inexpensive way to increase RU Healthy Dining and Dining Services publicity. The clear plastic placement holders, as seen in figure 3, will contain screenshots and a brief description of the interactive menu application. It will also have a panel dedicated solely to the social media contact information. Each section will have a QR code (figure 4) placed at the lower right hand corner in order to let users with smartphones gain direct access to both applications and contact information.



## **Phase Two: Tweaking the Dining Halls**

In order to accommodate users without smartphones, the desktop version of the interactive menu will still be readily available. However, to make the user experience more enjoyable and informative, we propose placing “calorie count per serving” labels next to each food label. These labels are similar to calorie labels seen in all New York City fast food restaurants since March 2008 (Hygiene). According to a study done for the *British Medical Journal*, “In spring 2009, one year after the trendsetting New York City law became effective, one out of every six fast food customers surveyed said they used posted calorie information to make food buying decisions and these customers purchased 106 fewer calories than those who did not see or use the calorie information” (Hygiene). By allowing students to visually see how many calories each item has before they choose, they have the opportunity to choose a lower calorie substitute.

## **Final Phase: Adding a more Personal Experience**

Providing nutritional information to students is not limited to the dining areas. We suggest adding a nutritional based reading into every freshmen Expository Writing class. The Expository writing class is a mandatory requirement for many incoming freshman. This will give us the opportunity to reach a population of students that are just entering their college careers. Furthermore, this would help these students transition better from high school to college. Students struggling with this would have some support from fellow students and their professor.

These readings will have a direct relationship with bad eating habits that form during the four year college experience. It will be chosen by the Rutgers Department of Nutritional Sciences and must pass approval from the English Department in order to be included into the Expository Writing curriculum.

For example, Rutgers can have the students write a paper on nutrition and health by introducing an essay that students have to read based on the relevant topic. One essay that can be of discussion is “Confronting the Obesity Epidemic at Community Colleges” by Robert Jaffe. This essay “explores the effects of the obesity among those who attend and work at community colleges, reviews research on obesity conducted mostly at four-year educational institutions” (Jaffe). The paper informs its readers the prevalence of obesity and the negative health effects are that associated with obesity (Jaffe). The paper examines the issue at a personal level and social level (Jaffe). Participants were ask to respond to open-ended questions regarding personal, environmental, and societal factors contributing to obesity (Jaffe). After reviewing the participants answers, key themes were identified. Some of the themes talks about how easy it is to go to McDonalds when there is no time to cook, saying that healthy foods are less accessible and more expensive (Jaffe). In addition, participants also mention that too many obligations is a major contributing factor towards maintaining a healthy body weight. These key themes explain how to tackle the problem of obesity at its root and reduce its prevalence. Similar to the research that was performed at Kent State University that increased grain intake by having students take a nutrition class, if the nutrition related readings positively influence the students, Rutgers should have a decreasing obesity rate.

- 1 Create a smartphone application that incorporates the Rutgers Dining Services interactive nutritional menu as well as a mobile friendly version.
- 2 Place visually appealing flyers in clear plastic placement holders for every other table in the dining hall.
- 3 Create “calorie count per serving” labels next to each food label in the dining halls.
- 4 We propose incorporating a nutritional reading into the Expository Writing course.

## **Conclusion**

In essence, treating the obesity problem at Rutgers begins with increasing awareness among college students. If students do not know all the things that have an influence in weight gain, they cannot take an initiative. More importantly, it is time to take the matter into their own hands because no one will be there telling them what to eat and what to do once they leave the convenience of their parents home. Therefore, it its important to provide the necessary information regarding nutrition and the affects it has on health. More online tools will allow students to research information for every meal that is available at the dining halls. Additionally labels in the dining halls showing the calories per serving will enable students to be health conscious in the eating choices that they will make in the future.

## Budget

With the help of the Rutgers community and other departments, the costs of implementing this plan are virtually nonexistent. The interactive menu similar to the one featured on the Rutgers dining hall website as well as the mobile web version could be created with the help of the Office of Information Technology as well as the Computer Science Department. These departments were responsible for the creation of the Rutgers application for Apple iOS and Android smartphone devices. By using resources already available in the Rutgers community, we are cutting costs by paying for wages for developers as well as modifying a pre existing application that had an average cost of \$6,453 (Tech Crunch 1). Another resource available to the proposal with the use of preexisting Rutgers resources are the nutritional readings. The department of Nutrition in conjunction with the English Department will provide an essay that recognizes the long term effects of unhealthy lifestyle choices to be incorporated in an Expository Writing class. Replacing the food labels in the dining halls are estimated at about \$2000. The plastic holders used to promote flyers for social media cost about \$3 each. If we were to supply every other table in all four of the campus dining halls, we estimate the cost to be about \$300. The overall budget is an estimated amount of \$10,000. While many problems exist at Rutgers, addressing the issues of public acknowledgement to drop the obesity rate is the most feasible.

Step	Cost
Interactive nutritional menu added on to Rutgers iOS and Android applications	Average cost of iOS application \$6,453 (Tech Crunch 1)
Wages for developers	The average iOS developer located in the tri-state area makes a salaried amount of \$118,000. However that does not put into account the hourly time spent on an application or fee per application created. (Indeed 1)
Nutrition related article implemented in Expository Writing Course	Free
Replacing food labels in dining hall with labels that incorporate food label as well as calorie per serving	\$2000 (American Metalcraft)
Plastic holders to promote visually appealing flyers	\$300 for 100 plastic holders @ \$3 each (PlasticFab 1)

## **Discussion**

Rutgers University is an institution that strives to give its students a promising gateway towards achieving higher learning. The university is also known for accommodating the personal and professional needs of its faculty and students. However, the environment presented within the dining halls is a direct contrast to this; the unhealthy food, and a lack of nutrition information efficiently available to the students is detrimental to the university's image, and efforts towards combating the nationwide problem of obesity. Additionally, Rutgers has a social media presence that is lacking in member participation and student popularity.

Students are entitled to information about the quality and nutritional content of the dining halls. Our use of various social media platforms and the mobile app cut out the need to hunt and gather that vital information. Students come into college unaware of the dangers of poor nutrition. Buffet style dining, as well as inadequate portion control, lead to expanding waistlines and take a negative toll on overall student health. Rutgers has the resources necessary to create an information-rich environment, however, they are lacking in organization. The excuse that -four years isn't enough time to test whether or not already implemented resources are successfully working for students- is pathetic, and showcase a lack of continuing efforts. Rutgers University has a responsibility to make sure their students not only achieve academic success, but also leave with their health intact.



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# Appendix A

## Facebook screenshot of our page

The screenshot shows the Facebook interface for the page 'RUNutritional?'. At the top, there is a search bar and navigation options like 'Home'. Below the navigation, there are tabs for 'Timeline' and 'Now'. The cover photo features a vibrant collage of fresh fruits including strawberries, kiwi, blueberries, and mango. The profile picture shows a counter with several pizzas. The page name 'RUNutritional?' is displayed with 122 likes and 12 people talking about it. A community post reads 'WE ARE HERE TO CHANGE RUTGERS DINING FOOD!!! JOIN US :)' with a photo of a person eating. Below this, there are buttons for 'About', 'Photos', 'Likes' (122), and 'Twitter'. The main content area is divided into 'Status' and 'Recent Posts by Others on RUNutritional?'. The 'Status' section shows a link shared by RUNutritional? 48 minutes ago, titled 'How to Stay Motivated to Finish Homework' with a video thumbnail. The 'Recent Posts' section lists several posts from other users, including Peter Sorrell, Tahmid Bhuiya, Beeloo Mohammad, and Alanna Liao, with their respective content and engagement metrics. On the right side, there is an advertisement for 'See Your Ad Here' featuring the same 'How to Stay Motivated' video thumbnail and a 'Promote Your Page' button.

## Appendix B Our Twitter Page

The screenshot shows the Twitter profile for Rutgers Nutrition (@RUnutritional). The header includes navigation tabs for Home, Connect, Discover, and Me, along with a search bar and settings icon. The profile banner features the Rutgers Nutrition logo (RU) and the text "Rutgers Nutrition @RUnutritional Collaborative Writing: Social Media For Business". Below the banner, statistics show 87 tweets, 50 following, and 19 followers. The main content area displays a list of tweets, including one about dining hall food, one about spinach, one retweeted by Rutgers Nutrition, one from Mayo Clinic about flu prevention, and one from the American Heart Association about stress management. The left sidebar contains navigation options (Tweets, Following, Followers, Favorites, Lists) and a "Similar to you" section with recommendations for Visit California, KarenMcCoy, and Scarlet Knight. A footer contains copyright information and links to various resources.

**Tweets** >  
Following >  
Followers >  
Favorites >  
Lists >

**Rutgers Nutrition**  
@RUnutritional  
Collaborative Writing: Social Media For Business

87 TWEETS    50 FOLLOWING    19 FOLLOWERS

**Tweets**

**Rutgers Nutrition** @RUnutritional 1h  
The Student Center food is so much better than what is at the dining halls. #RIPDiningHallFood  
Expand

**Rutgers Nutrition** @RUnutritional 1h  
@NaturalFoodsMD @YouTube Spinach is one my favorite vegetables!!!!  
View conversation

**Dr. Gerhauser MD** @NaturalFoodsMD 1h  
I love spinach too! (@YouTube you.ube/j6lLbvW4KsE?a)  
Retweeted by Rutgers Nutrition  
View media

**Mayo Clinic** @MayoClinic 1h  
MT @CDCFlu: Cover nose & mouth w/ tissue when you cough or sneeze. Throw tissue in trash & wash your hands #nbcnewshealth  
Retweeted by Rutgers Nutrition  
Expand

**Rutgers Nutrition** @RUnutritional 3h  
@American\_Heart During Final exam periods, this is the best way to stay sane lol.  
View conversation

**American Heart Assoc** @American\_Heart 4h  
Tip: Laughing and smiling more can reduce stress and improve your mood. More tips to help you de-stress and keep calm. bit.ly/iQNZn6a

**Similar to you** >

**Visit California** @VisitCA  
Promoted · Follow

**KarenMcCoy** @KarenMcCoy  
Follow

**Scarlet Knight** @RUScarletKnight  
Follow

© 2012 Twitter About Help Terms Privacy  
Blog Status Apps Resources Jobs  
Advertisers Businesses Media Developers

# Appendix C

## Our Wordpress blog screenshot

The screenshot shows a WordPress blog layout. On the left is a vertical sidebar with a repeating pattern of the letter 'R' in white on a red background, with some 'S' and 'TM' symbols. The main content area features two posts. The first post, 'Finals Week', is dated December 12, 2012, and discusses ineffective study habits. The second post, 'Quiet Study Music', is dated December 11, 2012, and includes a YouTube video player for 'Study Music Project - Time Castle'. The right sidebar contains a search bar, a 'RECENT POSTS' section with links to 'Finals Week', 'Quiet Study Music', 'Eating Through Finals', and 'Finals', an 'EATINGHEALTHY' section with links to 'Avoid the Guilty Trip of Weight Gain' and 'Specific Food Choices for Thanksgiving', and a 'RUNUTRITIONAL!!!' section featuring a Facebook widget for 'RUNutritional?' and a grid of 123 people who like the page, with names like Emily, Johnny, Ammaarah, Usman, Kedar, Tim, Tilak, Divya, Ruggie, Surbhi, Peter, and Zinal.

**Finals Week**  
December 12, 2012 | Leave a comment

Many Students fail to study effectively during finals week. They cram all the information into their brains the night before the exam, and then hope to do well. This is the worst way to study. Pulling all nighters, drinking excessive caffeinated drinks, and eating junk food during finals, are all ways to one's downfall. Studying **RIGHT!!!** It really is not that hard. Studying like this just takes some diligence, conviction, and a whole lot motivation.

[Edit this entry](#)

**Quiet Study Music**  
December 11, 2012 | Leave a comment

While it is important to take care of your health and eating right. Sometimes listening to quiet, peaceful, music enables one to study more effectively.

Study Music Project - Time Castle (Music for St... | Share | More info

0:00 / 4:36 | YouTube

[Edit this entry](#)

Search ... | Search

**RECENT POSTS**

- [Finals Week](#)
- [Quiet Study Music](#)
- [Eating Through Finals](#)
- [Finals](#)
- [Fascinating Visual Representation of the Problem](#)

**EATINGHEALTHY**

- [Avoid the Guilty Trip of Weight Gain](#)
- [AThinnerThanksgiving](#)
- [Specific Food Choices for Thanksgiving](#)
- [EatingRight](#)

**RUNUTRITIONAL!!!**

**RUNutritional?** on Facebook  
Like | You like this.

123 people like **RUNutritional?**

- Emily | Johnny | Ammaarah
- Usman | Kedar | Tim
- Tilak | Divya | Ruggie
- Surbhi | Peter | Zinal

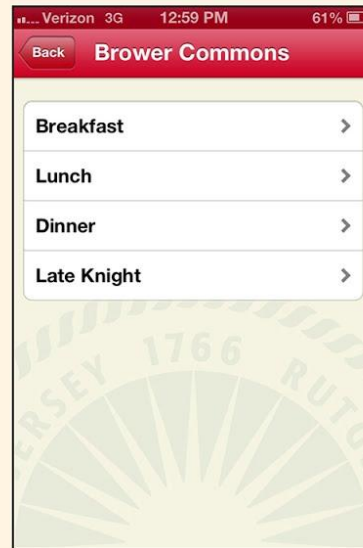
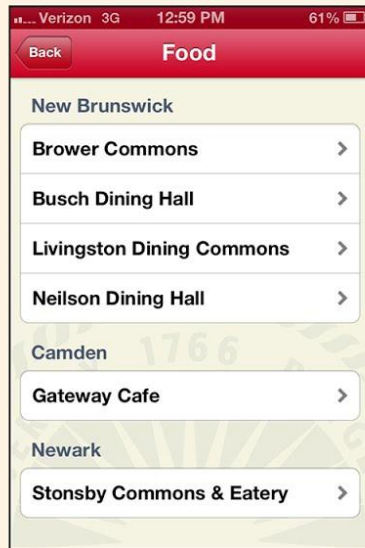
## Appendix D Our iPhone Application



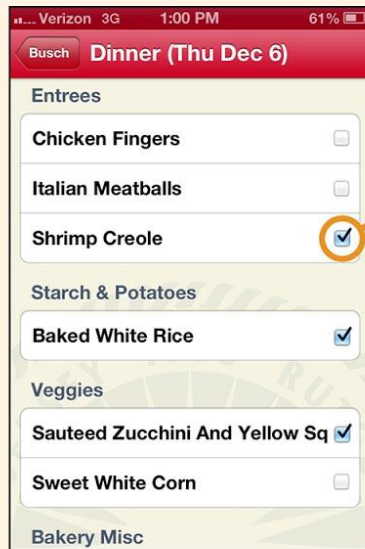
# Rutgers Nutrition

## Improvements On Current Rutgers Application

Steps 1 and 2: Choose a dining hall and meal (same as before)



Step 3: Item selection



The student is given the option to choose items offered that day at the dining hall. After the items are chosen the student scrolls down and clicks complete.





# Rutgers Nutrition

## Improvements On Current Rutgers Application

### Step 4: Type in quantity of each item (automatically 1 per item)

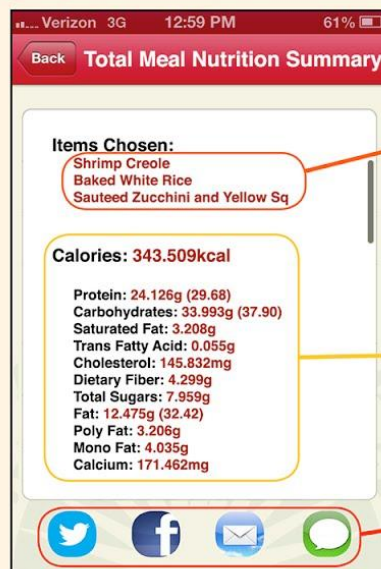


The student types in the amount of each item if it exceeds the standard quantity of 1.

The items have their nutritional information posted underneath each.

The application keeps a running tally of the total meal calories. When the student is finished, he/she will click the box for Total Meal Calories into a new window with a nutritional summary of the entire meal.

### Step 5: Total Meal Nutrition Summary



The items chosen are once again listed for easy retrieval when the student enters the dining hall.

The student is given the complete nutrition summary. This includes total amounts of Protein, Fat, etc...

The student is given the option to send their meal summary as a tweet on twitter, post on facebook, email, or message to another student.

**Appendix E**  
Social Media Flyer with QR Code



The flyer features a light green background with horizontal blue and green stripes. At the top left, there are three blue squares of varying sizes. The title 'RU Nutritional' is centered in a white font. A blue rounded rectangle in the top right corner contains the text 'Scan each QR code below with your smartphone'. Below this, there are four rows, each with a social media icon on the left, a text box in the middle, and a QR code on the right.

**RU Nutritional**

Scan each QR code below with your smartphone

**R**

Download our iOS app

The food section contains an interactive nutritional menu for items served at the Rutgers dining halls.

**f**

Like us on Facebook

[www.facebook.com/RuNutritional](http://www.facebook.com/RuNutritional)

**Twitter**

Follow us on Twitter

@RUNutritional

[twitter.com/RUNutritional](http://twitter.com/RUNutritional)

**W**

Follow us on Wordpress

<http://runutritional.wordpress.com/>