Health Psychology, HSS 332

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We pledge our honor that we have abided by the Stevens Honor System.

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Our intervention project is aimed at promoting healthy eating specifically in schools. Children generally lack knowledge on healthy eating, whether they come from a generally overweight family, or they grew up watching and seeing advertisements promoting junk foods. The goal for this intervention is to spread knowledge about healthy eating to children and their families.

Obesity is a growing problem in America as the obesity rates have grown rapidly in recent decades. The increased establishment of fast food restaurants coupled with the growing number of American families choosing to eat out for dinner, healthy foods becoming less accessible and affordable, and advertisements promoting junk foods have led to the increase of obesity. We’re hoping that by educating children and their families, that we will be able to reduce obesity in young children, and can further use these intervention techniques to reduce obesity across the country.

Similar techniques have been done by several researches around the globe, all resulting in reducing obesity during the study. A study completed in Denmark tested if giving free school lunches had an effect on the quality of food intake, and concluded that when the school offered free lunch, the quality did in fact go up, due to more kids eating the free lunch at school than bringing a lunch from home (1). As a baseline, the control group and the intervention group were nearly identical, there were no significant differences in the demographics or in their Meal Index of dietary Quality (Meal IQ), which measures meal quality by evaluating “dietary adequacy, variety, moderation, and balance” (1). At the first follow up, the intervention group had a significant increase in Meal IQ, however there was no significant difference as compared to the control group at the second follow up. It was also found that children in the control group were less likely to eat lunch, while the intervention group saw significant increases in how many children ate lunch each day. There were no significant differences in the intervention group after the second follow up. All in all, this study found that offering a free lunch significantly increases how well and how often children are eating lunch.

A study done in the United Kingdom had schools enforce a healthy eating policy. Although the study does not explicitly say the policy, the results concluded that “Benefits were seen in terms of healthier food choices at school lunchtime and school snack-time.” They reported that while healthier choices were made inside school, healthier choices were not observed outside of school. This is a factor that was used in the design of the intervention (2). This study was part of a group of studies done on young children and adolescents, and showed that along with healthier choices in school, there were also improvements in self-esteem and psychological health. In all, these studies have demonstrated the promise of health interventions and health initiatives in schools for promoting good health behaviors.

Having parental support is a big issue for school aged children. They must have their parents support, and rely on their parents knowledge to buy the appropriate health foods. Parents are the ones feeding the children, therefore it is mostly in their hands to provide nutritious meals. A study in Belgian middle schools tested an intervention with parental support and without parental support. The study used self-reporting questionnaires to measure fruit intake, fat intake, and soft drink and water intake per day. Throughout the intervention, there were no significant changes to fruit intake or soft drink and water intake per day. There was no significant changes among boys, however, there was a significant decrease in fat intake among girls, especially those with parental support. The girls with parental support were successful in making healthier choices (3). Considering the baseline in the study showed 69% of children exceed recommended fat intake and 85% do not meet the recommended fruit intake, researchers concluded that it may be necessary for “governmental laws that restrict the at-school availability of low-nutritive products” (3) to be put into effect to assist in increasing healthy decisions in children. In another study in massachusetts where health sessions were implemented in the criteria resulted in the reduction in baseline obesity in girls(4). The factors that best predicted changes in obesity were reduced television hours and increased fruit and vegetable consumption. Baselines showed that there were no significant differences between girls and boys, however there were some small differences within different ethnic groups. Obesity rates decreased in both the control group and intervention group for boys, but in girls, the obesity rates decreased only in the intervention group, and increased in the control group.

It has become apparent that having a curriculum that works with students on healthy eating is beneficial, however there is an issue with the affordability of health foods. In a study done in Philadelphia, with a population of students greater than 50% that were on free-reduced lunch. The results concluded that reduction was prevalent when the schools implemented a nutrition policy (5). There are tons of factors factor into the obesity epidemic, our goal is to factor in as many of them as possible without making the intervention unrealistic. Important factors to consider is parental support, socioeconomic status coupled with accessibility to health foods, and school nutrition policies and curriculum.

There have been many studies over the years looking at how in school interventions have helped reduce obesity rates and reinforce healthy behaviors. However, research conducted in these studies are lacking. Many of the studies rely heavily on self reported assessments and questionnaires, which is not the most accurate way to collect this data. Many of these studies also do not account for health behaviors at home. It is for these reasons that we have designed our study to include health interventions at home. If we study how health habits at home are observed, we can get a more complete picture as to what children are eating on a daily basis and how it affects their health.

Many programs already exist across the country that seek to educate children on nutritional values and what it means to be healthy. However, our group has noticed that at the end of the day, the parents are the ones deciding what their children are going to eat. With this knowledge, we wanted to design an intervention that focused on how we could get the parents to help their children. Our group wanted to design a study that looked at how parent involvement can influence the health and diet of their children and see if we could design an effective intervention for the parents. We are specifically targeting the parents of elementary school children. We hypothesize that by providing parents with an education on nutrition and a tangible plan for them to follow through with, we will see an improved diet for their children.

The premise of our study’s methodology is to divide our subject pool into three treatments. Before beginning the study, each group will be given a baseline survey to gain baseline knowledge of how they currently eat, demographics (SES, race, ethnicity, etc), and BMI. The resources that each group has access to will serve as our independent variable for the study.The first group is assigned the control, which will have no intervention. The second and third group will sit in on an educational course on the importance of good nutrition followed by a cooking class that teaches them how to prepare a well-balanced meal for the family. Only the third group will be supplied with groceries and recipes to follow for three months after the educational course. All treatments will be provided with a food journal to log their meals and snacks on a daily basis. We will follow up with all of the participating families 3 months after the course and 6 months after the course and record how their meals and snacks have changed in comparison to their baseline survey. The types of food they are eating after the educational course will be the dependent variable and will be measured by using the food journals that they filled out. By doing this, we would be able to see how their diets have changed over a half year period and observe if providing the ingredients to the families will make a difference in their willingness to cook well-balanced meals for their children.

Several studies that focused on individual aspects of this experiment have been done before, focusing on access to healthy food and the roles parents play on influencing student diet. There hasn’t been a study to combine these yet, though by examining the individual findings, they could be pieced together to predict what would actually happen. In this case, the sudden ability to access healthy food, and reduced cost of healthy food on diet have separate research, and by combining those findings was a major component of our prediction. This was then followed by a review of parental support with changing unhealthy habits, as that is a major component of this study as well.

By providing food easily to subjects, we may be breaking a “food desert”, a place in which there are no nearby or easily accessible grocery stores, which are found to be related to a number of healthy conditions, primarily obesity (10). Several attempts have been made to combat food deserts, but many are successful (9). This is presumed to be due to the issue that people simply transfer their previous eating habits even when faced with a greater amount of available food, both because this was their habit, and because the healthy food remained expensive, even though they could now buy it (9).

The next topic concerns schools and their impact on students habits. Multiple studies have found that implementing changes at the school level, whether through meal changes or other health conscious programs have been successful (1) (4). These show that there exists a solid basis for implementing this study at the location and through the institutions proposed, as they have shown success on wide range of methods previously.

Finally, studies examining parental support show that its inclusion in this program will at least not be detrimental. Girls seem to respond better than boys when this is included, and the boys do not show a negative link, just a lack of correlation (3). This likely means that implementing this will support changes in the students and make this study more impactful. This may be even more effective in the proposed study as parents have to show up and cook with their children, potentially allowing them to bond and cooking healthy becoming a regular healthy activity. The culmination of these effects means that we predict that many, but not most or all, of the subjects in the experimental groups will be eating healthier after the study, and the percentage will be higher in the group with comped supplies.

One of a few roadblocks that may be encountered during the intervention is that children will continue to consume junk food at their homes that will cause them to still be exceeding the recommended daily nutritional limits. A way to encourage healthy eating throughout the day and not just at school would be to ensure that the children are well educated on the importance of healthy eating so that they may carry some habits to their home lives. Another roadblock that we may encounter would be that people would become uninterested in healthy eating since they have yet to see any results. It would be beneficial to help people to set small, measurable goals that they can achieve like an increase in hours of exercise during the week and to for overweight people to lose weight. Additionally, parents may be unwilling to incorporate healthy eating into their homes, even after the class taught on how to prepare healthy meals. This is the most difficult of the roadblocks to overcome, but it may encourage parents to cook healthy if the children are sent home with meal ideas and recipes that are both healthy and taste good.

Our intervention project would have a very beneficial impact on both society and individuals. Obesity is one of the lead causes of heart disease which is the biggest killer in the United States (11), so it is a problem that is worth addressing although it may face resistance from some. On top of looking and feeling better, healthy eating leads to weight loss, reduced cancer risk, diabetes management, and increased life expectancy (12). According to an Organization called the State of Obesity, estimates for the annual healthcare costs in the United States estimate to range between $147 billion to $210 billion (13). Encouraging weight loss would be very beneficial to every individual, as well as society as a whole.

Our goal through our intervention project is to promote healthy eating to children through their schools. As the epidemic that obesity is, many people, and children in particular, are uninformed on what a healthy diet is. Our main method of promoting healthy eating is to place more of an emphasis on it to children in grade school so that they can learn healthy habits as early as possible. However, this is not effective enough because the majority of the eating done throughout the day will be at home. To try to circumvent this, our projects seeks to inform both the children and their parents on ways that they can seek to improve their diets, as well as having the parents go through a cooking class that teaches them different healthy recipes to incorporate into their meal ideas. Since obesity is so detrimental to the individual and to society, it would be very beneficial to the health of our country to promote healthy eating for all.

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