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Participation in a variety of nutritional education classes and conversations with their participants made apparent a gap that exists between the information taught by the programs and its use in practice. Participant observation in these classes, in addition to a series of interviews with nutrition educators, was conducted in order to determine the causes of this gap between knowledge and practice and to what extent cultural and social practices influence this gap. It was concluded that as taste preferences are culturally determined and socially bound, nutritional educators need to increase their access to students' parents and also influence the accessibility of healthful foods in order to make a more immediate impact.

Disciplines

Anthropology

AN ASSESSMENT OF PHILADELPHIA'S NUTRITIONAL PROGRAMMING

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Abstract

Nutritional education programming is one of the primary methods used to combat obesity. Philadelphia has a network of nutritional programming organized through the school district's EAT.RIGHT.NOW program and presented at a majority of Philadelphia's public schools. Participation in a variety of nutritional education classes and conversations with their participants made apparent a gap that exists between the information taught by the programs and its use in practice. Participant observation in these classes, in addition to a series of interviews with nutrition educators, was conducted in order to determine the causes of this gap between knowledge and practice and to what extent cultural and social practices influence this gap. It was concluded that as taste preferences are culturally determined and socially bound, nutritional educators need to increase their access to students' parents and also influence the accessibility of healthful foods in order to make a more immediate impact.

Introduction

According to a report published by the Center for Disease Control and Prevention in August 2010, more than seventy-two million American adults were battling obesity (Centers for Disease Control and Prevention 2010). Between 2009 and 2010, more than one-third of adults and almost 17% of young people were obese (National Center for Health Statistics 2012). Obesity is defined as a condition in which a person's body mass index (BMI), a measure of one's weight in relation to one's height, is thirty or higher (National Center for Health Statistics 2012). There are significant health risks associated with obesity, including stroke, diabetes, heart disease, sleep apnea and certain types of cancer (Centers for Disease Control and Prevention 2010). This epidemic has affected the entire United States, where no state has an obesity rate of less than 15% (Centers for Disease Control and Prevention 2010). In response to this growing problem, national and local policy and programming have been created in order to educate the public about healthy eating and nutritional food options, as well as to fulfill concrete goals such as eliminating food deserts, areas of the country without access to fresh fruits, vegetables and other whole foods (American Nutrition Association 2010). In Philadelphia, multiple nutritional education programs, centered on both schools and community centers, have been created to combat this issue.

In order to analyze of the programming offered in Philadelphia, I conducted interview and participated in a variety of nutritional programming organized by the Agastan Urban Nutrition Initiative (AUNI), Investing in Ourselves (I.O.), EAT.RIGHT.NOW (ERN), the Nutrition Education Program at Drexel University, and The Food Trust. The varieties of educational programs that exist provide Philadelphia's students with a wealth of information that is currently available. However a discrepancy exists between knowledge and practice. The

programs do not seem to have significantly impacted behavior. I therefore aimed to assess factors that prevent real dietary change. My intention was to assess as many different types of programming as possible, and see how different programs approach closing this gap. I assessed the recipes provided, the participants' opinions of the recipes and the likelihood that the participants will make similar recipes at home for their families. From participant observation and formal and informal interviews, I have concluded that, regardless of program, despite an appreciation for their goals and recipes, lasting change remains a challenge. This is due in part to limited parental participation, relative inaccessibility of healthy foods, and also to entrenched previously established habits.

Methods

My data was compiled from participant observation and informal interviews in a variety of programming during my past three semesters at the University of Pennsylvania. Beginning Spring 2012, I compiled data through participant observation and informal interviews throughout nine classes of the AUNI and I.O. Healthy Cooking Night at the Sayre Recreation Center, as part of an Academically Based Community Service Class, Anthropology 305: Anthropology and Policy. Field notes were taken after each class. During Spring 2013, I conducted participant observation and interviews during three Family Health Night classes held by AUNI's Rebel Gardeners program at Pepper Middle School. Field notes were taken after each class. Interviews were also conducted with eleven high school students in AUNI's Youth Development program, and as well as with two parent Family Health Night participants. Each of the high school students volunteered to be interviewed after an announcement was made through the Youth Development program. The parents were asked to participate in interviews after Family Health

Night sessions. I conducted in depth interviews with representatives from The Food Trust and the Nutrition Education Program at Drexel University. I additionally shadowed and conducted informal interviews with a nutrition educator from Drexel University for a day at Kensington Creative and Performing Arts High School, and I acted as a participant observer in a Parent University nutritional education course offered by ERN. Field notes were taken after each event.

A Brief Overview of Nutritional Programming in Philadelphia

EAT.RIGHT.NOW is the Pennsylvania Nutrition Education Tracks program for the district of Philadelphia. It is funded by USDA Supplemental Nutrition Assistance Program (SNAP) and provides nutrition education to SNAP eligible adults and children in Philadelphia. There are very specific qualifications for families to receive SNAP assistance; for instance, a family of four can only receive SNAP aid if [its](#) net monthly income falls below \$1,921 (Food and Nutrition Service 2013). ERN's goal is to help promote behavioral improvements related to nutrition and physical activity (EAT.RIGHT.NOW 2013). The educational components to the ERN program are shared with their community partners, including AUNI, The Food Trust, and the Nutrition Education Program at Drexel University. The people whom I interviewed and the programming that I participated in were all under the ERN umbrella. However, although receiving funding from the same sources, these programs were all independently run and operated. ERN acts as a way to distribute funding from TRACKS and distribute nutritional programming evenly throughout Philadelphia schools and communities.

The Agaston Urban Nutrition Initiative and Investing in Ourselves Healthy Cooking Night at Sayre Health Center

The Agaston Urban Nutrition Initiative (AUNI) is a program of the Netter Center for Community Partnerships at the University of Pennsylvania. The idea for AUNI came from an Academically Based Community Service course at the University of Pennsylvania in 1995 as a way to address issues of poor nutrition and physical fitness in West Philadelphia. AUNI organizes after school, school day and summer learning opportunities for approximately 10,000 students and their families at 20 different public schools, including University City High School, School of the Future, John Bartram High School, Sayre High School and George W. Pepper Middle School (Agaston Urban Nutrition Initiative 2013). Through this programming, students are able to learn about nutrition through growing, selling and cooking healthy foods. AUNI's emphasis on youth empowerment is explicit in its mission statement, which states that AUNI "... engages, educates and empowers youth, university students and community members to promote healthy lifestyles and build a just and sustainable food system" (Agaston Urban Nutrition Initiative 2013). This focus on youth empowerment and engagement highlights AUNI's focus on teaching students that they themselves can impact change and make a difference.

In this specific Healthy Cooking Night program, AUNI teamed with Investing in Ourselves. Investing in Ourselves (I.O.) is a non-profit organization started by Jill Bazelon in the summer of 2011. Bazelon is the former education director at Sayre Health Center. After working at Sayre in this community for five years, Bazelon was able to assess what programming worked and what did not at the health center. With this knowledge Bazelon decided to develop a more comprehensive program to address the deep health and education disparities that the Sayre community faces. The I.O. website states that "I.O. addresses core issues faced by underserved populations: high obesity rates, high rates of debt and bankruptcy, and low educational achievement and employment" (Investing in Ourselves 2012). Bazelon's program is therefore

split into two challenges: the Health Challenge and the Financial Health Challenge. Both challenges comprise of attending a certain number of classes or events in order to complete the levels of each challenge, and completing each level is rewarded with a prize. Healthy Cooking Night was a part of the Health Challenge, which also included visits to Fruit Kiosks, logging in a certain number of healthy home-cooked meals, and six weeks of regular fitness activity. Bazelon expressed that she uses a Community Empowerment Model that allows community members to gain control over their lives within the context of change (Investing in Ourselves 2012). The I.O. website states that “community members act as both teachers and learners,” which is consistent with Bazelon’s goal of not only building the confidence of the community members, but also creating a program that will be self-sustaining on the part of the community members (Investing in Ourselves 2012).

Healthy Cooking Night is a collaboration between these two organizations. There are multiple components of the cooking class that each group provides. AUNI organizes the logistics of the class and provides the Penn students, the Sayre High School students and the recipes. The Penn students are in charge of running the class, and the Sayre High School students act as helpers. I.O. makes it possible for the class to use the Sayre Recreation Center, arranges the partnership with West Philly Produce (who provide the fresh fruit and vegetables), and brings the community members – called the Sayre Vets by I.O. – to the class. AUNI was therefore able to organize Healthy Cooking Night by adding it to the I.O. programming and by using Bazelon’s facilities and membership. Both programs are responsible for food accessibility and the cultural relativism of the class and the food offered, but menu planning was AUNI’s responsibility.

Healthy Cooking Night involves three groups of participants: the Penn students, the Sayre High School students, and the Sayre Vets and their children. The generational differences

in eating habits and taste preferences were clear. Although there existed some differences in taste within each generation, it was very clear that the Sayre Vets were trying to change their lifestyles and eating habits and were therefore more open and receptive to new foods. Although there were some foods that were not at all appealing to the Sayre Vets, in general the majority of participants were willing to try almost everything that was offered. Shonte, an African American woman in her thirties, made a point to emphasize in each class that she promised herself and her young daughter, Janese, that she would taste everything offered – even though she hates beans, tomatoes, and peppers (Healthy Cooking Night 4/16/2012). In the first week of the class, we made a vegetarian chili. I noticed everyone trying the chili, but many complaints were made about disliking beans and tomatoes (Healthy Cooking Night 2/6/2012). Complaints about beans and tomatoes persisted throughout the weeks of Healthy Cooking Night. After two weeks of complaints about beans, during the third session, Gail, a middle aged African American woman who came to the class each week, went through lengths to pick beans out of her salsa, and made sure many people were aware of her efforts (Healthy Cooking Night 2/27/2012). Gail was clearly frustrated with returning to class each week to find an ingredient that she strongly dislikes featured on the menu. However, Gail always tried the menu items including beans, and she was even pleasantly surprised once. During the second session, we made red bean and rice patties. Although bean complaints persisted, many Sayre Vets were surprised about how good the patties were, as the beans were barely noticeable once mashed up into a patty (Healthy Cooking Night 2/13/2012). Transforming ingredients such as beans was one way in which this particular session of Healthy Cooking Night excelled – the bean patties were an example of taking something familiar such as a patty or burger, and transforming it into a healthier option.

In contrast to the Sayre Vets, the high school students working at the cooking class were not motivated to try all of the food prepared. The Sayre High School students were paid members of the AUNI Youth Development program, and were therefore paid to come to class each week. Tamera, a Sayre High School student, decided to work at Healthy Cooking Night as a resume booster (Healthy Cooking Night 4/9/2012). She wants to become a nurse when she is older, and felt that participating in a class such as this would look good on her resume, and also teach her some information about nutrition (Healthy Cooking Night 4/9/2012). I worked with Tamera at the welcome table, and she was incredibly diligent and organized about her job (Healthy Cooking Night 4/9/2012). A few weeks prior, I had worked with another Sayre High School student, Corey, at the kids' table. He was also extremely helpful. It was clear that he had experience working with young children. He not only helped the children focus and stay at the table, but was also conscious of safety measures and making sure the children were using equipment, such as can openers, properly (Healthy Cooking Night 4/9/2012). In contrast with their care about their roles, and in Tamera's case her future ambitions, neither Tamera nor Corey ate the food at Healthy Cooking Night. Tamera was very insistent that the only vegetables she eats are corn, potatoes and green beans, and therefore it was difficult for her to find food to eat at our vegetarian class (Healthy Cooking Night 2/27/2012). She said that she sometimes tries [the food](#), but she rarely likes it so she goes home and eats what her parents have prepared for dinner. One day, the class menu consisted of a vegetable ratatouille and whole-wheat pasta, which Tamera could not even conceive of trying. However, she emphasized to me that she would not go hungry as she would go home to eat her mother's fried chicken and mac and cheese (Healthy Cooking Night 4/9/2012). As I wrote in my field notes, "*I was still impressed with Tamera's drive to become a nurse and learn about nutrition through this class, however it seemed to me*

that the focus of the class was lost on her. She seems to understand the health benefits of eating healthy and of vegetables, but she would not even try the ratatouille” (Healthy Cooking Night 4/9/2012). The differences in motivation to even try the food between the majority of the high school students and the Sayre Vets emphasizes the importance of having the participants acknowledge their need for change to the success of nutrition programs.

An additional factor that impacted the Sayre Vets’ and high school students’ impressions of the program was the fact that the program was entirely vegetarian. Although the Sayre Vets widely appreciated learning how to create filling, delicious meals entirely of grains and vegetables, they also expressed how difficult it would be to share this way of eating with their families. Sherry was a middle aged African American woman who started coming to sessions midway through the class. Sherry expressed to me how she is the main cook at home, that she cooks almost every day and both enjoys eating and preparing vegetables (Healthy Cooking Night 3/26/2012). I then asked Sherry how her family would be receptive to vegetarian cooking, and noted her response in my field notes: *“Sherry looked at me and emphasized how lucky she was that her husband would eat everything. He might not like everything, but he would try it once. And, he also loves vegetarian cooking and vegetables. Sherry said, ‘Oh, my husband will eat vegetarian! ...But only if there’s a side of meat!’ She then started laughing”* (Healthy Cooking Night 3/26/2012). Sherry’s response regarding her husband seemed typical of the participants’ perceptions of their families’ likely reactions to vegetarian meals. This idea falls in line with Tamera’s reaction to the vegetarian meals. Although Tamera’s dislike of vegetables resulted in her not even trying many of the dishes, her philosophy of complete avoidance of food she does not like seemed to align with Sherry’s husband’s reluctance to have a meal without meat. Given the apparent difficulty for Sherry, and many other women in the class, to bring these meatless

recipes and eating style home to their families, I began to question whether these eating practices are sustainable for the Sayre Vets.

At Healthy Cooking Night, the discrepancy between knowledge and practice was incredibly apparent. The Sayre Vets, although motivated to become healthier and improve their diets, were widely unable to translate the recipes that they learned at Healthy Cooking Night to their homes due to their own personal taste preferences and to the class' limitations of providing only vegetarian foods. The high school student employees of AUNI were largely unmotivated to even taste the vegetarian foods. The monetary and resume-building incentives were the primary reasons for them to choose to participate with AUNI. Therefore, although Healthy Cooking Night did teach its participants new, healthy, vegetarian recipes, it was apparent that the majority of Sayre Vets and high school students did not, and were not likely to, implement their knowledge outside of class.

The Agaston Urban Nutrition Initiative Rebel Gardeners Program at Pepper Middle School

One of AUNI's largest and most established programs is the Rebel Gardeners, located at George W. Pepper Middle School. Pepper provides a gender-separate education to approximately 700 fifth through eighth graders in Eastwick, Southwest Philadelphia. Pepper's system of gender-separation divides the middle school into two academies: the Young Ladies' Academy and the Young Men's Academy. Classes, recess, hallways, and lunchtime are all separated by gender. I participated in the Rebel Gardeners' Family Health Nights, held at the school. From my observations, Pepper is predominantly African-American, and enrolls a fairly large concentration of Muslim students. The Rebel Gardeners were African-American students spanning Pepper's four grades. On average, around seven students participated in each class,

including both males and females. They all elected to participate in the program, and received parental/guardian permission to do so.

Rebel Gardeners was formed in 2010 through collaboration between Pepper Middle School, AUNI, and the School District of Philadelphia (Rebel Gardeners 2011). Rebel Gardeners offers a variety of programming, including building and maintaining garden plots, cooking and serving healthy foods, and creating and selling a healthy granola bar snack (Rebel Gardeners 2011). Its namesake project is the Pepper Pride Garden, which consists of garden and orchard plots cared for by the Rebel Gardeners students. AUNI labels the garden as an “outdoor educational space,” where the gardeners grow healthy food for their school and community (Agaston Urban Nutrition Initiative 2013).

The nutritional education that the Rebel Gardeners offers does not stop at harvesting the fruits and vegetables. Programs like the Rebel Salads and the Family Health Night teach students and their families how to incorporate this fresh produce into a healthy diet. In Rebel Salads, students build healthy salads with raw ingredients from the garden, while the Family Health Night encourages families to cook together and make healthy, vegetarian recipes. Additionally, the Good Food Bag program provides families with the resources to make the recipes provided at home. AUNI develops the recipes itself, and according to its website, AUNI also looks for “heirloom recipes from different community members to preserve food traditions that are passed from generation to generation” (Agaston Urban Nutrition Initiative 2013). According to AUNI their recipe motto is: “think AHEAD, or Affordable, Healthy, Easy, Accessible and Delicious” (Agaston Urban Nutrition Initiative 2013).

Family Health Night is an effort to involve the parents of the Rebel Gardeners, and other Pepper Middle School families in AUNI. The idea was for the families and the Rebel Gardeners

to cook AUNI recipes together, and then all share a meal so that parents and children can incorporate the nutritional education together. Despite the fact that Rebel Gardeners' is such an established program at Pepper, the level of participation in Family Health Night is disappointing and is its biggest problem. The Pepper students who work as Rebel Gardeners, and who were therefore required to attend the class, were there, but very few parents or other families attended. AUNI decided in the spring of 2012 to reduce the program to one night per month so that there would be more time to plan, organize and promote the class, hopefully to improve attendance. Much of the planning for Family Health Night involved marketing the classes to the Rebel Gardeners, their families, and the rest of the Pepper community. AUNI sent flyers advertising Family Health Night home with the students to give to their parents. However, there is no confirmation that a majority of parents actually received these flyers, as only one of the four participant parents learned of the class in this way. Additionally, the Sunday before Family Health Night, the parent or guardian of each Rebel Gardener was contacted and invited to the cooking class. Despite promising results and many RSVPs (one week nine parents gave positive responses), on average only one parent or family member of the participating student Rebel Gardeners came to each class. Lack of family participation is a major barrier to this program's success.

Family Health Night used recipes from AUNI's files, and over the course of the semester there was a degree of experimentation when it came to deciding which recipes would work best in the Family Health Night environment. The organizers of Family Health Night emphasized making the recipes fast and easy, so that the class would run smoothly, and so that families would be more inclined to make the recipes at home. The recipes consisted of rice and beans, a carrot and apple salad, and whole-wheat pasta with fresh tomato sauce and an Israeli salad. Each

of the main components is a commonly found, relatively inexpensive ingredient. However, AUNI also added a few twists of unfamiliar ingredients, such as cilantro, into its recipes in order to introduce fresh, healthy ways of adding flavor to dishes. Some of these ideas, such including the aromatics in the beans and the tomato sauce, went over well or were unnoticed by the students. Others, like the cilantro, were strongly disliked by the majority of participants. One student, a sixth-grade girl, even associated the taste of cilantro with bleach (Family Health Night 3/18/13). Parsley was another ingredient that was offensive to many of the Rebel Gardeners.

The main controversy that the Family Health Night crew encountered when planning the menus was how to frame the meal – whether or not to market the class as dinner or as an educational investment. The goal of the class in which we made the carrot and apple salad was to focus on one relatively unfamiliar dish, and then provide the ingredients to the families. The Family Health Night crew wanted to show the students and their families the different and unique forms that salads can take. Although, despite the cilantro, the participants enjoyed the salad, there was disappointment among the students about the small amount of food available, as in prior classes there were two hearty recipes, as opposed to just one salad. This sense of disappointment led the AUNI crew to alter the menu to simulate a dinner for the next class, with both a pasta and salad. This concern with food quantity as opposed to food quality led me to question what exactly the students were gleaned from classes such as Family Health Night. More specifically, I wondered about the extent to which these middle school students participated in order to receive a free meal, as opposed to being genuinely interested in cooking and nutrition.

In order to assess the impact of AUNI programming, interviews were conducted with some of AUNI's high school student interns, and a few parents of Rebel Gardeners, both selected

based upon their availability and willingness to be interviewed. The goals of the interviews were to see if the students and parents implement AUNI lessons at home and in their daily lives. Both sets of interviews took place outside of the Family Health Night. They took place at the AUNI offices after the Family Health Night program had ended. The high school students are involved in AUNI outside of their respective schools, and do not participate in Rebel Gardeners as this program is specific to Pepper Middle School. Interested high school students can participate in AUNI's Youth Development program, which involves being a part of a cooking or gardening crew, as well as attending College Access and Career Readiness workshops. Positions in AUNI's Youth Development program are paid internships; therefore many of the participants initially learned of AUNI while looking for a job. For instance, a male senior at Sayre High School, when asked about his motivation for joining AUNI, stated, "I needed a job and it gave me something productive to do while making money" (Interview 4/5/13). Many other students echo the sense of productivity that this student mentions, and even further this sentiment by emphasizing how AUNI has become more than a job for them. A female senior at John Bartram High School, mentioned how "at first [AUNI] was based on the money because I needed a job and something to do after school. Then I grew to have a passion for it and the knowledge that I have been getting from it" (Interview 4/5/13). The students enjoy that through AUNI, they have the opportunity to make some money, change their lives, and impart knowledge onto others.

The impact of the Youth Development program is varied. The students who view AUNI as more than just a paying job, but also an educational program, tend to reap the most benefits. However, not every student is able to do this. The degree to which the students are working to change their lives varies on a case-by-case basis, based upon both the student's dedication to and belief in AUNI's cause, as well as his or her openness and willingness to try new foods.

Additional factors, such as control over grocery shopping and cooking, also impacts the students' ability to bring AUNI's lessons to their homes. A male junior at Sayre High School expressed his dislike of AUNI's food: "It doesn't taste good" (Interview 4/5/13). A female junior at Sayre had a more open perspective towards AUNI's food, "[At first] I don't be wanting to try it because I be like no I ain't used to stuff like that. But then once I start trying it, [I realized] it's different but it's good. And now I start trying everything" (Interview 4/5/13). This student was also able to implement much of what she learned from AUNI at home, by encouraging her family members to watch their intakes of salt and processed foods. She explained, "Because [my mom's] always getting snacks for the kids, but I be telling her it ain't that good for them. So she started getting fruit and healthier stuff" (Interview 4/5/13). Other students also emphasized that the path to significant change was through making small changes. A female senior at Sayre stated that altering her diet was "not challenging, because I just change little things. We used to use butter, but now I use oil. So we just make small changes" (Interview 4/5/13). For the students, recipe replication often is dependent upon their parents. Many of the student respondents neither buy their own groceries nor prepare their own meals. This prevents many of the students from preparing the AUNI recipes at home. A junior at Sayre said that there was one AUNI recipe that she would make, honey chicken stir-fry, but she has not yet made it "because my aunt never bought the groceries that was inside the meals" (Interview 4/5/13). In contrast a male senior from Sayre did make an AUNI recipe for his family. He emphasized that this recipe, salmon cakes, was the one AUNI recipe that he really liked, so he made it despite the fact that he knew his mother would not eat them (Interview 4/5/13).

One of the primary goals of the Rebel Gardeners' Family Health Night is to bridge the gap between AUNI's students and their parents and guardians so that AUNI's message can be

carried out at home. Unfortunately, parent attendance is a problem with which AUNI constantly struggles. AUNI tried to organize Family Health Night at a time convenient for most working parents, on Monday nights at 5:30 pm. However, parents expressed that regardless of this time, attendance is still difficult due to other commitments and gas money (Family Health Night 4/8/13). A mother of four whose daughter is a student at Pepper Middle School, stated about her participation in Family Health Night, “No, not that I didn’t want to come. If I had a reason to be doing something else, I would’ve been doing something else. However, this was something I agreed to participate in. I have four children, a full-time job, and I go to school, so I have a really busy schedule” (Interview 4/5/13). She emphasizes that it was her daughter’s desire to participate in Family Health Night that brought her to Pepper. She stated, “I didn’t want to participate, basically, but I wanted her to, and my other children” (Interview 4/5/13). This woman’s attitude towards the class coincides with her perspective about healthy eating. When asked if she tasted the carrot and apple salad, she responded, “I don’t eat roughage. [My daughter] likes it, but I don’t” (Interview 4/5/13). This parent’s taste preferences and perceptions of certain foods are so firmly established that she is resistant to change. Her daughter, although expanding her food horizons through AUNI, is unable to implement what she has learned at home, due to habits of her family. Parental and familial restrictions can greatly influence the impact of nutritional programming.

Another parent participant, a mother whose son is an eighth grade Rebel Gardener at Pepper, is also hindered by her work schedule. She emphasized how much her son likes to cook, “He is constantly watching the cooking network – you know, most kids would watch the cartoon network but that’s what he does. Being a single mom, I choose to partake when my schedule allows” (Interview 4/5/13). Overall she appreciates the nutritional education that her son has

received, and wishes that the school took a larger role in promoting Family Health Night and the Rebel Gardeners. “The school should back you guys a little more as far as advertising,” she said, “Even if it’s a little note being sent home with the kids” (Interview 4/5/13). Teaching young kids the importance of healthy eating strikes a chord for this woman, as she did not realize the implications of her diet until later: “I suffer from fibroids, and I didn’t even realize that it’s affected by what you eat” (Interview 4/5/13). Despite her, and her son’s, motivations to maintain a healthy diet, she still emphasizes how much her schedule dictates her diet. She explained, “I think I eat healthy. I don’t know all the time, but four days of the week! Again, depending on my schedule” (Interview 4/5/13). The respondent who is a mother of four expanded on this subject, “It’s not that [AUNI] is a bad program, but we’re people of habit. If it’s easier for us to do something that’s bad for us, that’s what we’ll do. It’s unfortunate, but that’s what it is” (Interview 4/5/13). Addressing habits, and habit-forming behaviors, should therefore be the aim of nutritional programs. The ease and availability of unhealthy foods ties into greater problems of urban food deserts. Nutritional programs need to highlight the importance of making the best decisions possible given the options available.

Tackling habit and convenience items are two of AUNI’s goals. Many of the students, even those who emphasized AUNI’s impacts, cited fast food or chips as the last food items they purchased. The female senior at John Bartram High School said that the last food item she purchased was Cheetos, and explained, “I was thinking ‘I’m hungry,’ and it was closest to me. I was at school and I got it from the corner store. It was only a dollar. But my ideal snack is carrots and hummus or apples” (Interview 4/5/13). A male senior at Sayre High School said, “Today, I had some Burger King. I was thinking ‘I’m hungry’ and Burger King is the closest around. I got two double stacks, a medium fries, and a medium juice. It was good” (Interview 4/5/13). A

female junior from Sayre purchased a slushie: “I was thinking that I was thirsty. I don’t even eat all the slushie, I just wanted it because I see it and it looked good, and it’s red. So I wanted the slushie” (Interview 4/5/13). These interviews shed light on important barriers impeding closing the gap between knowledge and practice. Lack of parent and guardian participation and of inexpensive, available food options create controversy and conflicting ideas for even the students who are fully engaged in AUNI’s lessons.

Drexel University’s Nutrition Education Program at Kensington Creative and Performing Arts High School

The Nutrition Education Program at Drexel conducts both school and community programming. Drexel nutrition educators regularly conduct nutritional classes in Philadelphia elementary, middle and high schools. An educator will conduct classes at each school monthly, however the students that have access to these courses change, as the educators will partner with different teachers. Parent and caregiver workshops complement these courses. Individual educators are assigned to a certain number of schools, so that there is a consistent presence and the educator can familiarize himself with the school. I shadowed nutrition educator James DiDomenico as he taught a variety of high school nutrition courses at Kensington Creative and Performing Arts High School (KCAPA). DiDomenico created his lesson plans around the theme of breakfast. One class included a pumpkin pancake cooking demonstration, another an art project revolving around what a healthy breakfast “looks” like, while the three remaining classes were basic lessons about breakfast. By acting as a participant observer, I worked to analyze what exactly the high school students gleaned from the nutritional education classes, and how much they worked to implement their knowledge.

Kensington Creative and Performing Arts High School is a Philadelphia public school that places emphasis on the arts. Each student is required to participate in arts-focused extracurricular activities. From my observations, the majority of students at KCAPA were African-American. However, there were a few, smaller groups of white and Hispanic students. Although the classes that I observed were each intended to be for a specific grade level, due to the changes in the school system resulting from the budget cuts, the majority of classes that I observed were mixed grade-level. Regardless of age, none of the students were introduced to nutritional education on this day. They were used to a variety of nutritional educators coming to their school, and DiDomenico, or “Mr. Jim” as the students know him, was a familiar face to many of the students.

The students who participated in the pumpkin pancake cooking demonstration were the most attentive. There was a core of students who volunteered to participate in cooking the pancakes, while the rest of the students loitered at the fringes of the classroom. No official nutrition lesson took place during this class, just a basic discussion of breakfast and of pancakes. The pumpkin pancake recipe was a new one that DiDomenico was testing out with the students. The students responded positively to them. The familiarity of pancakes and the seasonal flavors made the lesson special, and masked the flavor of the whole-wheat flour. The pancakes were a delicious, healthy treat that the students enjoyed. However the nutrition lesson fell by the wayside as conversations revolved around students’ indulgent weekend breakfasts of pancakes, eggs and bacon. The lesson of the importance of eating a healthy breakfast every day of the week, as well as the benefits of substituting whole-wheat flour for regular, was lost.

DiDomenico’s approach to teaching the other lessons that did not revolve around cooking demonstrations was very different. DiDomenico emphasized the importance of eating a healthy

breakfast every day. He asked the students to share what they actually eat in the mornings, and what they believe they should eat in the mornings, and he then proposed alternatives or suggestions for what the students can eat without altering their lifestyles. Although KCAPA provides breakfast for its students everyday, it was clear that many students were unable to, or did not want to, arrive at school early enough to take advantage of it. One tenth grade girl, when asked why she did not eat breakfast at school, said that she was responsible for getting her three younger siblings to school each day and therefore she neither has time to prepare breakfast for herself, nor to get to school early enough to eat there. This reasoning for missing breakfast seemed fairly common. Students also seemed resistant to changing their lifestyles for multiple reasons, including responsibilities, routine and taste. During DiDomenico's art lesson, he instructed the students to draw a healthy breakfast and provided pictures of a wide variety of foods to serve as guides. He encouraged the students to be creative in their composition of foods, and to imagine what they could ideally eat for breakfast. Although some students took his lesson and guidance to heart and drew a stereotypically healthy breakfast, some the pictures offered contradictory lessons. Although DiDomenico hoped that the students would select pictures of healthy breakfast items, such as the fruits, grains, and cereals, some students began drawing pictures of fried chicken, cakes and cookies. This exercise led me to question how many students were actually paying attention to DiDomenico.

DiDomenico acknowledges that the immediate efficacy of his lessons is questionable. During an informal interview he stated: "The students receive so many conflicting messages about nutrition. At home, their parents cook one way and their friends eat snacks from the corner stores. At school, I try to teach them rules for healthy eating, which are often contradicted by the school lunches" (Interview 10/25/2013). When the school itself almost immediately challenges

DiDomenico's lessons, the difficulty of making an impact on the kids is very apparent. For instance, many of the students in the art class completely ignored DiDomenico's lesson on healthy breakfasts, and instead drew whatever they like to eat. However DiDomenico has an optimistic attitude notwithstanding his frustration about this topic: "I hope that one day, my students will realize the importance of changing their diets. Maybe it will be in a few months, or a few years, but regardless, I want to provide them with a basis of knowledge that they can dip into when this realization takes place. I want them to be able to remember what Mr. Jim taught them in high school about eating a healthy breakfast, and be able to reform their lifestyles at any time." This focus on creating a reserve of knowledge for the future helps maintain DiDomenico's morale in a consistently challenged environment.

EAT.RIGHT.NOW Parent University

Parent University is a program provided by the School District of Philadelphia, and taught by ERN nutritional educators. The Parent University class that I attended was the first session provided that was geared towards nutritional education. The goal of this class was to teach parents and caregivers similar lessons that their children learn at school, so that change can ideally be implemented in the home. The nutritional educator in charge of the class emphasized that the parents have the purchasing power of the household. She therefore implied that real nutritional change for their children starts with them.

Eight female parents or guardians came to the nutrition class, which was located in a small conference room at the offices of the School District of Philadelphia. The educator presented an introduction to healthy eating by discussing easy ways to add more fruits and vegetables to their diets, the importance of reading nutrition labels, and the MyPlate diagram,

which shows portion sizes of different food groups on a plate. She engaged the parents in the classroom by asking them questions, such as if they ever experiment with their diets or know the reasons why we need all of the food groups. The educator really focused on ease. She presented simple and cost effective choices that parents can make to feed their children more nutritious foods. For example, she encouraged experimenting with brown rice, whole wheat and other unfamiliar grains gradually, by first mixing them with grains that they are used to. Significant emphasis was also placed on drinking water, managing sodium levels, and increasing levels of fiber. Healthy preparations of foods were also emphasized. The nutrition educators gave each participant a booklet of information, including a page with a chart showing how different food preparations can drastically increase the calorie count. For example, a grilled chicken breast was compared to a fried chicken breast, which was compared to a fried chicken leg and thigh. The educator additionally cautioned the parents to keep in mind their reactions to and opinions of new foods. She emphasized how much parents can influence children's taste preferences in positive and negative ways. The educator stated, "If you say in front of your child that something looks disgusting or gross, your child likely will not eat it either. Always encourage them to taste new foods" (Field notes 10/24/13). Therefore, the educator presented what may have been an introductory course on nutrition for high school students, but tailored it to parents and guardians.

By working with Parent University, ERN has a better chance of directly affecting children's diets. Communication and shared information between the schools, the students, and their parents could shrink the discrepancy that exists between knowledge and practice. Making parents more aware of the benefits of nutritious eating and providing them with easy, affordable steps to do so is a step in the right direction. The only way to ensure that students put their knowledge to use to is make healthy food accessible to them. Providing parents with the same

quality of nutrition education as the students would streamline knowledge, and hopefully result in children receiving the same messages about healthy eating at home and at school. As this was only the first session, and only eight parents and guardians attended, the ERN Parent University program has a long way to go before implementing widespread change. However the combined forces of the ERN school and parent programs could go a long way in impacting the foods that are available to children, and that they choose to eat.

The Food Trust: A Conversation with Dr. Sandy Sherman

Dr. Sandy Sherman is the Director of Nutrition Education at The Food Trust, an organization working to improve food access through nutrition education and increasing the availability of nutritious, affordable food. The Food Trust organizes a wide variety of programming throughout the Philadelphia area. The Food Trust not only works with schools, but also with corner stores, supermarkets, community centers and farmers markets (website). In Philadelphia, The Food Trust works with one hundred schools throughout five counties. Therefore The Food Trust accommodates an incredibly diverse population of students and parents. As Director of Nutrition Education, Dr. Sherman oversees the majority of educational initiatives operated by The Food Trust. I met Dr. Sherman at her offices in The Food Trust's headquarters on September 27, 2013 and spoke to her about the diversity within The Food Trust's programming.

The breadth of The Food Trust's programming is quite large. According to Dr. Sherman, there is not too much variation in terms of school programming. Dr. Sherman emphasized how children who eat in schools are more accepting of different foods. The adult programming differs, as the adults want to be introduced to new foods and see how different foods fit into their

current diets. Therefore The Food Trust educators bring more options into the adult programming, and tailor their lessons to answer questions, such as this: “How does hummus fit into what we know now?” (Interview 9/27/13). Dr. Sherman stated, “There’s a general agreement in this regard: if you can buy [a food item] at an affordable price in the community, then introducing it is a benefit. We avoid introducing something that someone cannot follow up on” (Interview 9/27/13). The Food Trust therefore takes account of what is available in community supermarkets and corner stores, and works to introduce foods locally and regionally throughout the city. Sherman explained, “For example, there is a different availability of foods in Chinatown than in other areas of the city. We work to use foods that people will find in their own communities, so that they can easily recreate the recipes” (Interview 9/27/13). Therefore despite working with a variety of different communities throughout Philadelphia, The Food Trust does emphasize organizing its community and parent-based programming in a culturally sensitive manner.

According to Dr. Sherman, The Food Trust is working on increasing its acknowledgement of cultural sensitivity. At the time of our conversation, The Food Trust was developing a training program for its staff on this topic. This program is intended to teach the staff to appreciate what cultural eating has been like historically for the groups that they are working with, regardless of what people’s diets are like now. However Dr. Sherman believes that working within culturally sensitive boundaries is not as important or feasible when working with students. A study conducted in 2009 by Dr. Sherman shows that regardless of ethnic background, children will buy the same calorie-dense snacks from corner stores (pediatrics article). Dr. Sherman found that kids want to fit in and be a part of social norms. Students will eat what their peers are eating, regardless of what they grew up with. Therefore The Food Trust has been

working to incentivize corner stores to offer healthier items. Through their Healthy Corner Store Initiative, The Food Trust has worked to increase store capacity to sell healthier items, teach store owners how to make healthy changes profitable, conduct in-store nutrition education lessons, connecting corner stores with community partners, and beginning nutrition education programs at schools nearby targeted corner stores (website). As Dr. Sherman stated, “The corner store owners know their clientele and what they like. We work with the owners to provide healthier alternatives to the already popular items. For example, we encourage store owners to switch to low-sodium beans” (Interview 9/27/13). By improving the quality of food offered at corner stores, Dr. Sherman and others at The Food Trust are hoping that students and community members will put their knowledge of nutrition into practice.

The Food Trust utilizes multiple methods in order to evaluate its programming. In schools, The Food Trust surveys the students at the beginning and the end of the year to assess behavioral outcomes. The evaluations will ask about changes in fruit vegetable, soda and fruit drink consumption. These tests are intended to measure change over time. Additionally, Dr. Sherman mentioned that people self report, by lauding themselves on their own progress or praising certain foods and recipes. If the survey evaluations do not measure change, the educators reassess the students with an updated evaluation. Educators are required to figure out if their evaluation methods are faulty and resulting in negative results, or if their students are not changing. Dr. Sherman emphasized the difficulty of this aspect. She stated, “Measuring behavioral change is hard. We are currently doing a five-year study on breakfast. You can’t see change quickly” (Interview 9/27/13). According to Dr. Sherman, in order to change behavior these long term programs and studies are necessary to assess the change as much as possible. Sherman stated that change occurs at the “intersection between access and education” (Interview

9/27/13). By organizing such a diversity of programming, The Food Trust is working to make this intersection much wider.

Discussion

Eating is a social practice. Families, friends and communities gather around a communal table to eat a meal together. Although food primarily provides nourishment, its symbolism is involved in creating and maintaining social relations (Gumerman 126). Therefore it is important to focus not only on the food itself, but the social context and location in which and where it is being served. George Gumerman IV, in his article “Food and Complex Societies,” describes the integral nature of food to communities and social interaction and the multiple ways that scholars can study societies through food choice, distribution, and disposal. Gumerman states: “The nature of complex societies creates an extremely elaborate food system – the conditions under which food is produced and distributed, prepared and consumed, and finally, discarded” (106). The study I conducted of nutritional programming in Philadelphia shows how this “elaborate food system” affects a specific type of consumer – the urban individual of a low socioeconomic status. These programs, and the statements of their participants, evidence the differential allocation of foods as well as the gap of nutritional knowledge based upon socioeconomic status. My observations of these programs also reveals how eating, in its intrinsically social nature, is difficult to reform. Participants in the AUNI and I.O. class at Sayre Health Center foresaw their difficulties translating the recipes to their homes, as they believed their families would not enjoy them. Students who participate in ERN programming at school are still reliant on their parents’ food choices at home. So these programs need to find better ways of engaging the entire family not just the members who attend. Additionally, young children want to fit in. They will eat what

their peers are eating, regardless of ethnic background. This is one component of the conflicting messages described by DiDomenico. According to the sample from Dr. Sherman's study, chips are the most commonly purchased food from the corner stores (Borradaile et al. 1295). There are certainly elements of peer pressure and social influence at play in this regard. It is a social event to go buy snacks at the corner store – one that over time becomes almost ritualized. Breaking from the group and buying a healthier item, may lead to social stigma. Although society has been becoming more and more complex, and individuals are now eating independently of their families and friends more often, food and eating remains a social experience. This is not only due to ritual celebrations and family meals, but also to media such as restaurant review websites, food blogs and cooking television shows. Families today may not eat dinner together nightly; however food preferences are still transmitted through social interactions and pressures. Therefore to change eating practices, it is necessary to change a group's outlook on food. Those who choose to participate actively in nutritional programming have to accept the roles as the innovative voices of their communities, and work to change the conservatism that pervades amongst their peers. As evidenced by the AUNI student employees, this is easier said than done as the monetary and resume-building incentives attract these students to the programs rather than a desire to be leaders in a nutritional education effort.

However there are additional factors that impact change apart from social pressures. The most important of which is that the food market is continuously changing. Supermarkets, bodegas and corner stores are shelved with calorie-dense processed foods that cost little money, making them appealing to those who shop hoping to maximize the quantity of food available to them on their budget. For instance, a mixed-method study researching Hispanic immigrant women's perspectives on nutritious foods showed that this subset of women has a comparable set

of food preferences to the wealthier non-immigrant classes, as both prefer fresh, organic, local produce. This is the type of food that the immigrants were accustomed to in their country of origin (Park et al. 9). However their immigration to America resulted in a transformation of their diets. The foods accessible to them changed from the fruits and vegetables of their local farm to McDonalds and frozen dinners. The respondents began “acquiring the tastes and patterns of consumption prevalent in the obesogenic environment of the U.S.” (Park et al. 9). Despite original taste preferences, these women began adapting to the quality of foods available to them. Their tastes changed to adopt the calorie-dense, low-cost food options that were available and inexpensive. This element of change is important, as it means that if healthier food options became available and affordable to those in low-income brackets, people would eventually develop a taste for them. For instance, the red bean and rice patties were a hit at the AUNI and I.O. cooking class. This recipe transformed an ingredient that was generally unappreciated into a familiar patty, expanding the participants’ ideas of beans and building their appreciation of the flavor. In this instance, change is occurring. A reversal is necessary in order to effectively change food purchases and impact preference.

Conclusions

As all of the programs that I participated in or whose staff members I interviewed are under the EAT.RIGHT.NOW umbrella, each program works with similar restrictions and guidelines in terms of their recipe base and funding. All of these programs work by engaging students and community members, although some place more emphasis on the students. Student reactions to nutritional education classes are clearly similar across the various programs. Students engage with the material in the classroom, but fail to take what they learn to heart and

implement it outside of the classroom. This occurs for a variety of reasons. As Dr. Sherman mentioned, children want to fit in. Additionally, programs need to ensure that they tailor their recipes and food offerings to the communities that they are serving as much as possible. Unlike at Sayre Health Center, where participant feedback about specific ingredients used was not taken into account efficiently, programs should do their best to use participant feedback to steadily improve their programming. Furthermore, in order to really impact students' purchases and choices, it is important to improve the quality of food that is readily available. In this regard, I believe that the Healthy Corner Store Initiative and programs aimed at parents and guardians are crucial to making more immediate, lasting changes. Although it is important to provide students with a basis of education that they can utilize in their futures, as DiDomenico emphasized, in order to enact more immediate change it is crucial to improve the availability of healthy food around them. Although, as with the AUNI program at Pepper Middle School, it is difficult to organize programming for working parents, the multiple nutritional education organizations in Philadelphia could come together to offer different programming catering to parents and guardians around a variety of schedules. Unified by EAT.RIGHT.NOW's funding and policies, these organizations could benefit from collaboration in terms of maximizing variation of parent program offerings. To fully minimize the gap that occurs between knowledge and practice in terms of nutritional education, it is important to intervene with multiple approaches. By working to increase access and the education of caregivers, healthy foods will be more available to students. Therefore they will hopefully be encouraged to tap into their bank of nutritional information sooner rather than later. By standardizing the contradictory nutrition lessons that students receive and increasing the availability of healthy foods, students will be more likely to

develop taste preferences for nutritious options earlier on. If groups of students are able to begin this transition, more students are likely to join.

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