

Reflective Project

Is it ethical to teach food tracking in school health class?

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Introduction:

Public health is a scientific branch that works to prevent disease, promote health, and prolong life(1). Public health workers and policies aim to improve the lives of others and advance safety in an effort to preemptively limit health disparities(1). A significant branch of public health is education and advocacy(1). Without proper knowledge of general health care, a community may take on an unhealthful lifestyle which increases the risk of disease. Proper nutrition, a key component of public health, is a neglected practice (see appendix A) proven to decrease the risk of communicable and non-communicable diseases(2). My goal is to work in public health or as a general physician or dietitian. These career paths all focus on the health of patients by focusing on the importance of a balanced diet.

To understand the best method of improving nutrition, diverse socioeconomic groups and possible causes must be first compared. Dr. Rebecca Diamond, an assistant professor at Stanford Graduate School, examines why obesity and unhealthy eating rates are disproportionately higher in low-income communities. Her findings surprised many. Her studies rejected the hypothesis that food deserts (an absence of grocery stores in poor neighborhoods) and accessibility to fresh foods were the root cause for unhealthy eating(see appendix B). The most supported answer is education(18). Almost 30% of nutritious food consumption is done by people of higher nutritional knowledge and education level(18). This suggests that more in-depth nutrition education could reduce the nutritional gap and increase overall public health. While individuals licensed in nutrition (General physicians, Dietitians, Nutritionists) are optimal for teaching health, a more universally accessible resource for nutrition information is mandated health class(5). Increasing the standard of nutrition education in middle and high school may be our best bet at combating obesity and unhealthful eating(18).

School health classes may be a person's primary source of nutrition education so it is essential that these classes are dependable(6). However, the credibility of health classes is controversial. One topic of debate is a newly implemented curriculum including nutrition tracking. Nutrition/food tracking is dieting in the process of quantifying intake by recording data such as calories, macronutrients(carbs, fats, protein), minerals/vitamins, water, and sugar. The concern behind nutrition tracking is that counting what one eats can turn into an obsession and lead to disordered habits. The praise is that it efficiently teaches students how to eat in an individualized balanced manner.

This raises the question: **Is it ethical to teach food tracking in school health class?** Are students learning useful knowledge that allows them to develop and lead healthful lives or being put at risk for eating disorders. I will continually face these dilemmas around how to teach nutrition education and I hope to have the opportunity to make a change in the health curriculum.

Dietitians - Ethical:

Dietitian, Clair Brailer, describes how quantitative nutrition can teach students composition of food, how to fuel their bodies, and empower them to reach personal goals(8). Brailer specifically talks about macronutrient tracking because it promotes eating a balanced ratio of macronutrients based on a person's lifestyle, "you're focusing on WHAT you're eating, not just the numbers." She says that this form of nutrition, which is being introduced in schools, educates students on eating whole foods to reach each individual's specific goals and

follows a form of flexible dieting. Tracking one's macronutrients can be a structured way of thinking about food that may ease some students(8).

Dietitians - Unethical:

Some dietitians, however, believe tracking should not be taught in school because it is detrimental to students with underlying obsessive characteristics and is harming students' body image (7). In American culture, diet obsession is prominent, and students are an at-risk demographic for eating disorders. NEDA finds that 35-57% percent of adolescent girls engage in crash-dieting, fasting, self-induced vomiting, or taking laxatives (15)(16). While unhealthful relationships with food may be common, an article by Leslie Shilling, a registered dietitian, makes it clear that none of these behaviors should be considered normal(7). After recounting her interaction with students when food logging assignments were implemented she states, "Like so many students...[they] learned disordered eating practices disguised as health behaviors in a required school lesson." Students may have restricted food just based on the fact that the tracking tool gave them a specific amount of food that is considered 'healthy'. Tracking tools provide generalized information which may be inaccurate for an individual depending on factors such as activity, pubertal development, familial history, etc. Students are met with a positive grade once they have tracked their food; this is positive feedback encouraging students to continue to track food. The effects on students after completing food tracking is noted in a survey at University of Michigan Health System where parents of students participating in nutrition tracking lessons reported that 30% of their children demonstrated 1 or more concerning behaviors associated with the onset of an eating disorder(7). The onset of such behavior after a food-tracking lesson suggests a correlation between tracking lessons and disordered eating(7).

Execution of nutrition tracking lessons, in addition to the curriculum, is also a concern. Anna M. Lutz, a certified eating disorder dietitian, explains how teachers' education alone does not often cover the risk factors of eating disorders to an extent where a teacher can know if tracking exercises are safe for a specific child(7). Underlying anxiety and a tendency for obsessive thinking may be overlooked, "A simple message such as 'avoid salt' can turn a child into an anxious mess" says Lutz. She explains how teachers commonly share anecdotes which may be taken out of context and increase the risk for eating disorder development. Children react differently when keeping a food record and for some students, focusing on the numbers of food combined with categorizing food as good and bad, can lead to disordered eating or progress into an eating disorder. Any development of these eating patterns can be detrimental to a child's future health (17).

Medical Professionals - Ethical

Doctors and practitioners hold an additional perspective as these individuals have a more general health view of nutrition education as they have the ability to watch a patient at all different stages of life. Dr. Brian Benter, a Ph.D. from intake health(performance practitioner group), talks about the long history of food tracking. He references different types of teachings including approximation using 'fist' measurements and more meticulous recording methods which break down nutrition by finding a food's exact weight/portion(9). "These techniques are useful because we do a horrible job of naturally estimating our nutritional intake," says Bender referencing a pooled analysis that shows an average 28% underestimation for caloric intake alone(9)(10). Inaccuracy in estimation explains why nutrition tracking is used to learn portion sizes. From his

perspective, once a person understands basic nutrition, they can more accurately estimate their nutrition even if they no longer track their food(9). Professionals have pointed out that tracking food for years (unless necessary for a specific goal) is likely not the end goal but rather to become aware of how to fuel your body, through a short tracking experience such as one being introduced in school health class(8)(9).

Without enough nutrition education, improper eating habits can develop; this can be displayed by student-athletes(11)(12). Gatorade Sports Science Institute states that “Research frequently reports that women athletes have energy intakes that do not match their high level of energy expenditure.”(12) This may occur for a variety of reasons but as Dr. Bender previously suggested it may be because of limited knowledge when it comes to food labels and how much food one actually needs to consume as an athlete. Tracking one's food allows a person to compare how much they are eating with recommendations based on lifestyle, weight, height, and sex. The CDC states that between 2000 and 2014 schools engaging in required nutrition education decreased from 84.6% to 74.1% providing a reason why athletes and students in general struggle with poor nutrition. Teaching food tracking may be a way to cover many areas of nutrition that are currently lacking.

Medical Professionals - Unethical

Dr. Katherine Hill, a specialized eating disorder pediatrician says the process of food tracking may single students out based on their economic state or culture. In an interview she says that students who are unable to access fresh foods or foods classified as more healthy (because economics, food desserts, and proximity) may feel embarrassed when they see they are under/over a dietary recommendation (19). In addition to the social economic implications there are also cultural norms and traditions where a certain type of food or food group is more/less common to eat, “different cultural attitudes toward food can impact a child's ability to eat what their teachers would consider a ‘healthy’ diet”(19). When students are shamed (by tracking tools or teachers) for eating food that is culturally significant to them, these classes and lessons become biased against students of diverse cultures.

Food tracking is dieting and studies show that teaching adolescents to diet can be harmful. A study performed by Project EAT in 2016 which followed teens for 5 years while they were enrolled in Project Eating Among Teens found that dieting doubles the risk of an individual becoming overweight and increases the risk of binge eating by 1.5 times(15). This study suggests that dieting that aims to empower overweight children to drop to a healthy weight range may backfire. Another large cohort study that followed 14 and 15-year-olds for 3 years concluded that dieting was the most significant predictor of someone developing an eating disorder(13)(14)(15). Those who dieted were 5x more likely to develop an eating disorder. Those who practiced extreme restriction were 18x more likely to develop an eating disorder than those who did not diet. These studies provide evidence that teaching dieting is not the way to lower obesity rates in children and dieting can increase the already high risk of an eating disorder(15).

Video regarding 70 participant survey: https://youtu.be/c5Ip_VSWb9M

Conclusion:

After investigating the ethicality of teaching food tracking, the most important information I discovered are the experiences around food tracking from dietitians and students as well as studies on how dieting precedes eating disorders in adolescents. While obesity and unhealthy diet rates in our nation provide a reason for teaching students how to eat a healthy diet, this can not be fixed with teaching food tracking as this also causes harm. During my research, I have noticed that more dietitians are against teaching tracking; these professionals directly see the consequences of food tracking and are licensed in the topic which makes their opinion reliable.

I have personally experienced the disordered eating that food tracking can provoke. Unfortunately, I know this is not a unique experience, which is reflected in the survey I distributed. When I first started this project I was in a decent place with food tracking and my opinion of it was fair. My relationship with tracking quickly became disordered and my opinion was swayed by my personal experience. Since, I have realized there is a lot of evidence that suggests food tracking can be damaging which has developed my opinion of food tracking to be more scientific and less emotional. I know that tracking is beneficial to certain people but these people, from my survey at least, are in the minority.

When speaking with experts in the field I learned that Beaverton School District is one of the first in our state to have banned food tracking from the curriculum starting with this year. This progress is fantastic and I hope I can provide evidence that encourages other school districts and other states to do the same in my future. I will bring the values and conclusions from this project with me to make the necessary reformation to our nutrition education system no matter the field of health I pursue.

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Appendix A

A study done by the U.S. department of agriculture(USDA) using a healthy eating index(HEI) and the population ratio method finds that adolescents(ages 2-18) of 2018 held a mean score of 53 out of 100 points on the HEI(3). This low number accounts for the underconsumption of adequate dietary components(ex. whole vegetables, total protein) as well as improper moderation of certain foods(ex. Added sugars, sodium) means that overall reflects a poor healthy eating index of adolescents(3)(4).

Appendix B

Studies done by Dr. Diamond and colleagues found that food desserts, at most, were responsible for 9% of the nutrition gap between rich and poor. "Statistically we couldn't even reject the possibility that it's zero percent," Dr. Diamond says. Dylan Walsh summarized another groundbreaking finding by Dr. Diamond, "Poorer families don't...maximize calories per dollar, which would incline them toward healthier purchases; nor is the relative expense of healthier foods a decisive factor in whether people choose to purchase healthy foods.". Excluding fresh produce, Dr. Diamond and her team found that 'healthy' foods are about 8% less

expensive than ‘unhealthy’ foods. Geographic normalities and convenience of preparation are additionally rejected.