

Improving Nutrition in Immigrant Youth

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Introduction

Human physiology requires nutrients to perform almost any function. When proper amounts of each nutrient are consumed, the body performs efficiently. Interacting systems work together without being hindered by a weak part. Adequate nutrition can improve performance in sports, it can lower medical bills, and it can increase test scores. However, inadequate nutrition can inversely affect these areas. Inadequate nutrition means someone is consistently not meeting daily dietary guidelines, possibly eating too much of one food group or not enough of certain foods. Ultimately this means someone is not receiving enough vitamins, minerals, proteins, carbohydrates, or fats to sufficiently supply their body's daily needs. After a few days of not meeting proper intake levels, there will be less available nutrients for cells to use. This decreases cell function, resulting in fatigue or errors in simple tasks. When daily dietary intake levels are not met, it becomes harder to accomplish goals in all areas of life. Immigrant youth have a disproportionately higher risk of inadequate nutrition compared to U.S.-native youth due to economic status, educational status, and targeting by large corporations (Chilton et al. 2009). Immigrants are challenged by these barriers because they may not be able to afford healthy foods and may not realize which foods are truly good for them. It is crucial to take steps to reduce inadequate nutrition in immigrant youth, so they can have equal opportunities for success.

Economic status is closely related to nutritional opportunities and the availability of foods to a family. While a wealthy family will be able to afford healthy foods, a family under the poverty line may have trouble traveling because they do not have access to a car and may not have time to use the bus system. Furthermore, poor families may not be able to afford healthy foods because they tend to be expensive, especially when compared to junk food. Nationally, many immigrant families have a higher prevalence of living below the poverty line (21%) versus U.S.-born families (15%) (Potochnick and Arteaga 2016). Education level can also play a role in inadequate nutrition as knowledge of perceived healthy foods can dictate eating patterns. Furthermore, knowledge of how to cook food and ways to manipulate a recipe to make meals healthier are crucial to healthy eating choices. 65.4% of immigrants reported one to four servings of fruits and vegetables per day as the nutritional recommendation when experts recommend five to nine servings. Along with this, immigrants reported having misunderstandings about serving sizes and vitamin consumptions, which can lead to inadequate intake (Yeh et al. 2008). Immigrants also face a barrier to adequate nutrition when they are targeted by fast food corporations as consumers. To increase profits, corporations often target minority populations who have a history of spending money on a product. This creates a cycle in the fast food industry as low-income families purchase fast food the most, so they are targeted the most by advertisements, which influences those families to purchase more fast food (Chilton et al 2009).

Population

I am working with middle and high school-aged youth in the STUDIO program in High Point, West Seattle. This program is offered through Neighborhood House, which provides

services and teaches various classes to low-income immigrant populations. The High Point community is a high-immigrant population area, with high concentrations of immigrants from East African countries such as Somali, Egypt, and Ethiopia. This population has an average household income of about \$60,000 and about 32% of the population is below the poverty line, compared to \$80,000 and 7% in Seattle. Part of this low income can be due to three out of every ten households being owned by a single mother (“High Point” 2013). Another contributor to this low income may be the inability to speak English well, as this affects 6% of the population in High Point (“High Point” 2013). The immigrant and low economic statuses of people in High Point create many barriers to accessing healthy foods, making the people vulnerable to inadequate nutrition.

Impacts

Inadequate nutrition can be harmful to an individual as well as a community. It is a contributing factor to obesity, which directly costs Americans about \$70 billion per year (Colditz 1999). One study reinforces that fast food is associated with inadequate nutrition by finding that regular fast food consumption increased odds of being obese (OR=1.23) (Fraser et al. 2012). So as immigrants are exposed to fast foods more, they have a harder time meeting daily dietary guidelines, which increases their odds of becoming obese (Fraser et al. 2012). Poor nutrition is associated with medical conditions such as obesity, diabetes, hypertension, and cardiovascular diseases; therefore, poor nutrition may contribute to increased medical costs with those diseases (Dharod, Croom, and Sady 2013). A problem with consuming cheap fast foods is the ultimate costs in resulting medical conditions. This is especially harmful for low-income families who consume cheap food because they cannot afford to eat healthy. If medical conditions develop, they will pay for doctor’s visits and treatments. Unfortunately, this contributes to a cycle of poverty as high medical bills will decrease family funds, which contributes to more fast food, which leads to more medical problems. And if families cannot afford to pay for these treatments, the cost of medical service will be placed on the community. Inadequate nutrition can affect energy levels, ability to fight off illnesses, and psychological status. This impacts how youth perform in school and how adults work at a job, which can limit future opportunities. The effects of inadequate nutrition in school and work is most clearly shown in studies of obese individuals, which reveal there is a much higher rate of absenteeism (average of four school days missed per month). Being absent from school or work can be due to many issues; however, obesity creates more barriers to attending school or work, such as doctor’s appointments, illnesses, slow performance, and lack of energy. Absenteeism is harmful to communities as it decreases performance in work and school and limits an individual’s social mobility (Taras and Potts-Datema 2005).

Stakeholders

When talking with stakeholders, I learned of many things currently being done for communities and techniques they thought were best. Elizabeth Kimball, who works at King County Public Health as a Healthy Eating Program Manager, believes that inadequate nutrition is a problem in this community because it’s associated with the high prevalence of diabetes in the Somali refugee population. She also commented, “U.S. adolescent Somali refugees learn about healthy eating in school; however, peer influence and easy access to junk food, fast food, and

sugary drinks, in addition to eating traditional foods at home, may increase their risk of developing diabetes.” She believes the most important and changeable factors that need to be addressed are the unfamiliarity with healthy foods and how to prepare them. If adolescents become familiar with healthy foods, learn how to prepare them, and gain resources to access them, they will be better equipped to maintain healthy eating behaviors and avoid diabetes. Zev, who works at Neighborhood House, directly interacts with the community and believes inadequate nutrition is one of the greater problems the community needs to address. There is a high prevalence of fast food restaurants and not many places to access healthy foods. Access is especially challenging because most students do not have cars or reliable transportation, so they can only access stores or restaurants within walking distance of their homes.

What is Currently Being Done

Currently, there are many programs and resources around High Point that address the issue of nutritional deficiencies. The agency we are working for, Neighborhood House, offers cooking classes to teach parents how to cook healthy foods for their families (Neighborhood House 2017). This program takes place at the local community center and lasts about an hour. In addition, High Point Health and Neighborcare Health are clinics that focus on nutrition counseling and how nutrition affects other areas of life (High Point Health 2015; “Patient Programs” 2017). Public Health in King County has created the Partnerships to Improve Community Health Coalition, which allocates funding from federal government to be used for community health. In 2015, this Coalition received \$8 million to improve access to healthy environments and implement practices to improve nutrition (“Partnerships” 2015). Nationally, the Healthy Hunger-Free Kids Act targets inadequate nutrition, allocating funds to improve school foods. This act was implemented in 2010; it requires more fruits and vegetables to be included in school meals, low/fat-free milk varieties, lower calorie food options, and reduced sodium and fat (Bostock 2015).

Inadequate nutrition is a great burden on the community of High Point because of its association with obesity, medical costs, and daily functioning. These outcomes limit the social mobility of residents, trapping the community in a state of low income and high poverty. While many interventions are in effect to reduce economic barriers, education barriers, and targeting, these interventions are not stopping the problem of inadequate nutrition. Barriers that can be further minimized by an intervention is the economic and education status of community members. Because of their economic status, they have limited access to healthy foods and because of their educational status, they do not know strategies to make healthy food more affordable. To address these areas, I plan on introducing a nutritional program to teach the kids how to grow healthy foods in a nearby garden, so it is accessible and cheap.

Recommendation

To reduce the public health burden of inadequate nutrition, I am recommending a curriculum to teach kids a way to access inexpensive, healthy foods. This curriculum would be implemented at Neighborhood House, where youth from this community currently go for afterschool programs to learn more about STEM fields and college preparation. STUDIO is already based on six-week curriculum topics designed to introduce kids to certain fields. These fields can range from coding to photography to music, so I believe a six-week nutrition program

could easily be implemented. Each of these programs are taught by mentors who attend the University of Washington and are knowledgeable in certain fields. While these mentors may not be experts in a topic, there is usually pre-designed curriculum to help them teach the youth. I created a curriculum for Neighborhood House, so it can provide gardening and nutrition information to mentors, who can teach the topic in the future.

To complete my recommendation, I have added slides, videos, and websites to a six-week curriculum to teach the youth. My curriculum has sections on gardening techniques and nutrition to teach the youth an inexpensive way to access healthy foods. It also aligns with STUDIO's focus on tinkering, meaning the youth can be creative and have the freedom to explore gardening in their own way. To plant foods, I will use the bee garden, which is located next to the Neighborhood House, so it is easily accessible through the six-week program. Teaching the youth gardening techniques is beneficial because they can apply the techniques at home to directly provide healthy food to their families. This curriculum would take place during spring when the weather is nicer as plants will be more likely to grow and the kids would want to be outside.

Specifically, this curriculum would be carried out by the STUDIO mentors or Neighborhood House staff each spring. By creating a curriculum for Neighborhood House, any mentor can teach kids about this topic. Because STUDIO mentors come from UW every year to teach the youth, there will be a consistent supply of people who can teach the curriculum. Furthermore, these mentors are volunteers, so they would not need to be paid. The only costs associated with this intervention would be purchasing seeds for the kids to plant, any fertilizer to help the plants grow, and gardening equipment, if needed. The low cost of this intervention and long-term stability will make it an easy program to implement.

I am making this recommendation because it is cheap, effective, and is different from many current strategies being done in High Point. The program itself is not expensive, and it also teaches youth in this community how to grow healthy foods in an accessible and inexpensive fashion. In High Point, there is an unused P-patch; I hope kids will take the techniques they learn to grow foods at this P-patch to provide healthy foods to other members of their community. Many schools use techniques like this to improve healthy eating in students and have found positive results (Gatto et al. 2017; Ratcliffe et al. 2011; Gibbs et al. 2012). These schools have found that a school-based gardening intervention increases a kid's willingness to try new fruits and vegetables and improves their ability to identify healthy foods (Ratcliffe et al. 2011; Gibbs et al. 2012). These are important beginning steps to improving nutritional health, especially in kids that tend to be picky eaters. If we can increase kids' willingness to try foods, they are going to be more likely to eat healthy foods, which may be perceived as gross before tasting (Gibbs et al. 2012). A school in L.A. introduced a 12-week gardening program to immigrant youth and found the program was associated with a reduced risk of obesity. Furthermore, this intervention directly increased fiber intake of participating students (Gatto et al. 2017). This L.A. school program is similar to the one I plan on designing and targets a similar population, so similar results are expected on the community of High Point. Most importantly, this intervention is unique from other programs in High Point as it targets a different population than most other interventions. Most other local interventions in High Point target parents or families; while these are helpful, it is important to create good habits in the next generation to stop a cycle of poor eating and low socio-economic status. While there are national programs that benefit youth, they do not target immigrant youth and these national programs can lose effectiveness on the individual level. For instance, the Healthy Hunger-Free Kids Act improves the nutritional value of foods at school,

but does not teach kids the benefits of healthy foods, so kids may simply avoid eating school meals. Furthermore, stakeholders from Neighborhood House recommended using the P-patch to teach kids how to garden. By implementing this intervention, I will teach kids how to better utilize their neighborhood P-patch. In addition, this curriculum satisfies another stakeholder's idea in that it would make the youth more familiar with healthy foods, which can increase their likeliness to try healthy foods (Gibbs et al. 2012).

By teaching immigrant youth techniques to grow their own healthy foods, accessibility will be improved in High Point. This intervention will eliminate economic and educational barriers, which should lead to healthier eating. Furthermore, other research shows the positive effects of school gardening on youth nutrition. By implementing this cheap and sustainable curriculum, I hope to reduce inadequate nutrition in immigrant youth of High Point, which can reduce their risk of obesity and improve their daily functions. If successful, this intervention will improve the lives of kids and the socio-economic status of this community.

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