School-Aged Children Living with Obesity in Hillsborough County

Sarah Ashour

University of South Florida

Children’s Obesity in Hillsborough County

Hillsborough County is located in the mid-west coast of the state of Florida. The county seat is Tampa, Florida. According to the Hillsborough Chamber of Commerce (2011), it is 91.3% urban setting with the rest of the county being rural. Hillsborough County has a total distance of 1,072 square miles, and has a population of 1, 245, 870, running as the fourth populous in the state of Florida (Hillsborough County, 2011).

Major employers in the area include Hillsborough County School district at the top with 25, 487 employers, Verizon Communications, Macdill Air force Base, and the University of South Florida (Hillsborough County, 2008). There are also many healthcare systems located in the county. The major ones include, Tampa General Hospital (TGH), University Community Hospital (UCH- multiple locations), Brandon Regional Hospital, South Florida Baptist Hospital, St. Joseph’s Hospital, and Town and Country Hospital (Hillsborough County, 2011). H. Lee Moffitt Cancer Center, located in the University of South Florida campus, is also a major health care system for cancer patients. The Hillsborough County healthcare system also includes health care clinics, dental clinics, and neighborhood service centers (NSC) (Hillsborough County, 2011). The NSC are sites located throughout the county and are a trademark of the Department of Health and Social Services, Division of Social Services. They are used to address the social and health needs of the neighborhood residents are also used to determine eligibility for health care and financial assistance (Hillsborough County, 2011).

The population group that comprises the largest percentage in Hillsborough County is White Americans with a percentage of 71.3%. The second largest percentage is Black Americans with a percentage of 16.7% (U.S Census Bureau, 2009). When comparing the percent of families below the poverty level in Hillsborough County compared to that of the state of Florida, it accounts for 15.2% compared to the 15% in the state of Florida (U.S Census Bureau, 2009). Additionally, when comparing the population greater than age 25 with a high school diploma in the county compared to that of the state percentage, it is 85.4% in Hillsborough to that of 84.9% in the state of Florida (U.S Census Bureau, 2009). Lastly, the population of those greater than age 5 that do not speak English compared to the state percentage is 24.2% in Hillsborough County to 25.8% in the state of Florida (U.S Census Bureau, 2009).

**Overview of *Healthy People 2020***

Healthy People was started by the United States Department of Health and Human Services with a vision for people to live long and healthy lives. It provides 10 years worth of objectives, which are science based, to help promote health and disease prevention. It reflects input from various groups and organizations all to help improve the overall health of the community. As stated in the *Healthy People 2020* website, the overachieving goals are: “Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death”, “achieve health equity, eliminate disparities, and improve the health of all groups”, and “promote quality of life, healthy development, and healthy behaviors across all life stages” (HealthyPeople, 2011).

*Healthy People 2020* uses MAP-IT as a guide for implementation. MAP-IT stands for, Mobilize, Assess, Plan, Implement, and Track. It is used to plan and evaluate the interventions to help achieve the objectives made by *Healthy People 2020*. Each section of MAP-IT provides questions and answers, tools, and overview, and links to resources that may help (HealthyPeople, 2011). The data that informs the assessment of the county of interest is the Department of Health and Human Services. The leading health indicators are also a crucial part of *Healthy people*. They are 10 objectives that are used as a means of goals that serve as a model or guideline to achieve health promotion and disease prevention. They include Physical Activity, Overweight and Obesity, Tobacco Use, Substance Abuse, Responsible Sexual Behavior, Mental Health, Injury and Violence, Environmental Quality, Immunization, and Access to Health Care (HealthyPeople, 2011).

The status of those same leading health indicators previously listed can provide a large amount of information when inputted into the county. By doing this, major trends can be identified to help reach the identified goal. For example, a few leading health indicators were picked out to describe some trends seen between Hillsborough County and the state of Florida. They include, Obesity & Overweight, Physical Activity, Tobacco use, Sexual Behavior, and Injury & Violence.

**Obesity and Overweight**

Obesity In Hillsborough County had a 24.8 percentage compared to 24.1% of that of the state. The *Healthy people 2010* goal was 15% (Florida Department of Health [FDOH], 2007). By looking at this rating, we can see that Hillsborough County has a .7% higher rate of obesity than that of the state. Those who were overweight also had a higher percentage in the county than that of the state, with 39.4% in Hillsborough, to 38.0% in Florida (FDOH, 2007).

**Physical Activity and Tobacco Use**

When looking at physical activity and tobacco use, there was also a decline in the county compared to the state. The percentage of adults who engage in no leisure time physical activity was 27.4% in Hillsborough County to 26.4% in the state of Florida (FDOH, 2007). The goal for *Healthy People 2010* was 20%. With tobacco use, the percentage of adults who were current smokers was 22.1% in Hillsborough County to 19.3% to that of the state. The goal for *Healthy People 2010* was a percentage of 12% (FDOH, 2007).

**Sexual Behavior and Injury/Violence**

The total STD cases from January through December of 2010 were 9,308. This included Syphilis, Chlamydia, Gonorrhea, and HIV+. When comparing county to state, the percentage was 2.4% to 2.9% (FDOH, 2010). We can see that this would indicate a strength rather than a need. With the leading indicator Injury and Violence, the rates were a lot higher than that of the state. All external causes deaths, the percentages were 71.3% for Hillsborough County and 65.8% for the state of Florida (FDOH, 2009).

**Strengths and Needs in Hillsborough County**

Three strengths and three needs were picked out and used for analysis for Hillsborough County. This was based on the research conducted through the County Health Profile. Binge drinking among middle school students, BMI in high school students, and births with first trimester prenatal care, are three areas that demonstrate strengths in the health of Hillsborough County and had favorable rates compared to the state of Florida. Lower binge drinking rates among middle school students and BMI below 95th percentile in high school students were few of the most favorable in Hillsborough County compared to the state of Florida. Upon researching, it was also shown that a higher amount of births received first trimester prenatal care in Hillsborough County compared to the state. The supporting data is shown through percentages. The percent of students reporting binge drinking was 5.2% for Hillsborough County compared to that of Florida with 6.2% (FDOH, 2008). The percentage of students reporting BMI at or above 95th percentile was 9.5% for Hillsborough County and 11.0% for the state of Florida (FDOH, 2008). Lastly, the percent of births with first trimester prenatal care was 83.7% for Hillsborough County and 77.0% for the Florida (FDOH, 2007-09)

There were also three areas of concern or that need improvement in the county. Percentage of marijuana used among high school students, reports of STD cases ages 15-19, and percentage of middle school students reporting asthma are three health indicators that are worse than the state average or pose a threat to the health of the residents of the county. The percentage of marijuana used among high school students was lower when compared to the state of Florida. The reports of STD cases for teenagers’ ages 15-19 was higher when compared to the state of Florida. Lastly, the percentage of students among middle school who reported having Asthma was higher when compared to the state. The supporting data has been introduced by percentages. The percent of students using marijuana/hashish in the past 30 days was 18.6% for Hillsborough County, and 16.2% for the state of Florida (FDOH, 2008). The reported STD cases ages 15-19 (3-year rate; per 100,000) was 3239.8 cases to that of Florida with 2410.4 cases (FDOH, 2007-09). To finish, the percent of middle school students who report having asthma was 21.7% for Hillsborough County compared to 16.9% for Florida (FDOH, 2008).

**Priority Health Issue**

The priority health issue that will be explained in this paper is school-aged children living with obesity in Hillsborough County. As stated previously, obesity is .7% higher in the county than that of the state. It has been a major problem throughout the years in the U.S and is the main contributor to heart disease, hypertension, and diabetes. By promoting health early on, prevention is at its best.

**Determinants-of-Health Model**

This model is used to help have an impact on health and illness. It is said that many factors can combine to have an effect on the overall health of an individual or community. The individual is not the only determinant of his/her health status, rather many circumstances and the environment around us also plays a role. Thus, this model would assist a community nurse by helping narrow down the causation of health issues. It gives us more options and information to look at to help us identify specific issues and develop interventions for that health problem (WHO, 2011). There are multiple factors that can contribute to the priority health issue identified for this paper, both through human biology and health systems.

Through the factor of human biology, studies have shown that obesity may be linked to genes. However, it has been said that genes alone cannot be the sole reason of obesity; rather the environment has to play a role as well. According to the Indian Journal of Medical Research, studies showed that gene mutations that occur naturally produced obesity. Leptin, a protein hormone used to regulate energy, was also noted to be deficient with obese individuals. Although obvious resemblances among family members, twins, may show obesity as genetic, it has still been very difficult to identify these genetic factors (Raj & Kamur, 2010).

The health system is also another contributor factor to obesity. The health system as a whole may not be doing its part when it comes to the issue of obesity. It is one of the major problems in the U.S, and as the years pass, the rates are still increasing. Educating parents and their children about the severity and risks of obesity is still lacking. For this issue to improve, health systems should be the number one place to start. If health professionals are not doing their part in teaching the public, no one will.

Another issue to consider is the cost of obesity. Because it is on the rise, so is the cost of other ailments common for those who are overweight. These include diabetes, heart disease, and cholesterol. Upon research, it was noticed that 10% of all health care spending is related to obesity. This all goes back to the issue of preventative care. By better educating the public about the risks associated with obesity, what to eat, and even how often to exercise, not only will health care costs decrease, but the general public as a whole may see some improvements in obesity that this country is lacking (Associated Press, 2009) (Raj & Kamur, 2009).

**Interventions Wheel**

The intervention Wheel, developed by Minnesota Department of Health, uses 17 public health interventions to define the scope of public health nursing practice. The wheel is population-based and is divided into three levels. These levels include, individual, community, and system focused. Each of the interventions and levels contributes to improving population health. The wheel shows how public health is necessary to improve population health (Clark, 2008).

The intervention Wheel is used as a guide for community health nurses when they are documenting or implementing interventions. By grouping the interventions and dividing them into levels, it makes it easier for the nurse to relate real life scenarios to the interventions listed and implement and document accordingly (Clark, 2008).

The main focus of the intervention wheel is to help improve the population health and improve/protect health status. It defines the scope of public health nursing practice by type of intervention and the level of practices used. According to the intervention wheel, following this model will produce communities and surroundings that promote health and prevent disease and illnesses (Clark, 2008). The goal is to improve the population health and promote public health using the interventions, which will serve as a model of practice (Clark, 2008).

**Population Diagnosis (Negative Nursing Diagnosis)**

Overweight and obese children between the ages 6-11 were at a significantly higher risk of developing hypertension, altered lipid fractions, and high C-reactive Protein related to BMI > 85% on the CDC BMI-for-age charts as evidenced by consumption of fatty foods, low or no physical activity, and genes (Saha, Sarkar, & Chatterjee, 2011).

**Primary Prevention**

Primary prevention is the measures taken for general health in an individual. They are preventions that are in progress before any health complication even occurs. In primary prevention, the main goal is to educate the public about different health conditions before they develop. They are used to avoid a particular health problem. An example of primary prevention is vaccinations, which may prevent a particular disease (Clark, 2008).

A community/population-based intervention at the primary level of prevention can be to educate the child and parents about the importance of healthy eating, physical activity, and risks involved with obesity. The level of recipient of the intervention would be the individual and/or the community, depending on what the intervention is. Promote this by planning, implementing, and then evaluating the interventions for school-aged children living with obesity. The goal is to establish a healthy meal plan, exercise regime, and an active lifestyle in general. It is also important to decrease the BMI between the 5th and 85th percentile. This is a healthy weight according to age-chart (Chatterjee et al., 2011).

The role of the community health nurse in developing, carrying out, or following up on the intervention is very crucial. One of the most important jobs of a nurse is to go back and evaluate her nursing plan. It is an essential part of evaluating your work as a nurse. Follow-up appointments are very important in this case. Allowing your patient to come back and discussing the importance of a follow-up can give you a better glimpse of things that need to be improved. Measuring the BMI will help determine whether the regime is working or if adjustments need to be made (Raj & Kamur, 2009).

It is important to describe the intervention in terms of health promotion. The intervention promotes health by adjusting the meal plans, adding an exercise regime, and more active lifestyle in general. By educating the individual and family, the family as a whole may participate in the intervention. Also, by offering school presentations and educating the population in general, teachers may get involved to allow the child to benefit both at school and home (Raj & Kamur, 2009).

**Secondary Prevention**

In secondary prevention, the individual has acquired the health problem and is in the early stages of diagnosis. Asymptomatic individuals who have developed risk factors, or individuals who have symptoms that are just emerging and have not taken full effect can express this. It occurs after the health issue has already occurred. The goal in secondary prevention is to eliminate the health problem completely, slow its progress, or prevent further complications from occurring. An example of this would be screening for hypertension or hyperlipidemia. This may help diagnose before the health issue has created complications (Clark, 2008).

An important community/population-based intervention at the secondary level of prevention aimed at the identified obesity health issue is screening. It is important to evaluate for height, weight, BMI, waist circumference, and blood pressure. Follow up may also consist of lab testing and include fasting serum lipid fractions, insulin level, fasting blood glucose, and C-reactive protein (Chatterjee et al., 2011).

**Tertiary Prevention**

In tertiary prevention, the main goal is to decrease the progression of a certain health problem. With this type of prevention, diagnosis has already been established. The motive is to prevent further decline in health and try to promote the highest level of functioning possible. It is also used to prevent the reoccurrence of the condition on the individual and prevent disease-related complications. A few examples of tertiary prevention would be the use of Aspirin (anti-platelet) for someone who has suffered a Myocardial Infarction (Clark, 2008).

Three Community/population-based interventions at the tertiary level of prevention would be monitoring treatment effects, preventing further negative impact on health, and monitoring compliance. With monitoring, the obese child has already developed complications, such as hypertension or hyperlipidemia, on a tertiary level; you may monitor interactions and effects of medications being given. With BP meds, some may lower heart rate and others may cause angioedema or a cough (ACE inhibitors). Preventing further negative impact on health is also important. For example, preventing more weight gain may prevent further negative impact on health. This may prevent metabolic syndrome, which is at a high prevalence when it comes to health consequences of childhood obesity (Chatterjee et al., 2011). Lastly, you want to monitor compliance. As a nurse, I would want to make sure that my patient is following directions properly and that medications, exercise regimes, etc. are followed on time. Follow-up appointments in this situation would be of extreme importance.

Health Policy Proposal

The health policy proposal is related to promoting health by establishing healthy eating, better nutritional status, and a more active lifestyle with increased physical activity. One intervention, the primary intervention, will educate the children and their parents about the risks and importance of the adjustments made to the child’s lifestyle. By education, you are addressing the needs of the population and allowing them to learn about something they may not even know. Thus, it enhances the population. The realization of all this information will permit the individuals to become healthier, which will hopefully decrease the obesity in these children.

The goal or the desired outcome is to prevent obesity in school-aged children, and for those who are already obese or overweight, to lose the weight. The goal is also to confirm that school-aged children are educated about the dangers of obesity and to allow them to know that they play a huge role in their own lifestyle. (Chatterjee et al., 2011) (Raj & Kamur, 2009)

**The goals of the health policy proposal are**:

1. Provide resources for school-aged children that will reduce their risk of obesity by using preventative measures mandated by the state.
2. Prevent obesity by educating children and their parents about its dangers.
3. Ensure that education is individual specific and culturally competent.
4. Children will employ behaviors that prove healthy lifestyle, exercise regime, and healthy meal plan.
5. Ensure health access and information to children and their families that will allow those who are obese to get the care they need.
6. Evaluate interventions used for prevention and treatment to see the effectiveness of the plan.

Those who are affected in the health policy proposal are school-aged children who are at risk or are currently obese/overweight. The supporters identified include, but are not limited to, family, friends, school nurses, teachers, physicians, and the health department. There may also be opposing forces identified. Not all family members or parents may like to see their children limit their satisfactions, in this case food, or may see them “suffering” if they are still hungry or can not handle the physical regime. This may play a role in the effectiveness of the goals and plans. The child himself may also be an opposing force, who may not want to commit to a different lifestyle.

For my general ‘game plan’ of the policy to be put into action, I will research and create a nursing plan that I feel will appropriately represent the basis of my goal. I will then get feedback from those around me, and will finally take it to the higher person in charge to get my plan approved. If it is accepted, I will recruit nurses from around the county to help go to different schools and present my plan. I will keep in mind the importance of planning, implementing, and evaluating the plan.

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