

Childhood Obesity: An Oversized Problem in Kent County

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Abstract

The prevalence of childhood obesity in America compared to that of Kent County, Michigan was examined. Obesity within the confines of Kent County was analyzed, with attention paid to adolescents aged 13 to 18. Benchmark comparisons with the national average of obese children were made. Factors that contribute to the onset and increase in childhood obesity focusing on food choices and portions sizes were examined. The most affected groups within Kent County were described. The current available programs for addressing childhood obesity were researched. The authors then discuss the level of community interest and developed a community problem statement. An evaluation plan for the community intervention was then proposed.

Obesity: An Oversized Problem in Kent County

Childhood obesity is a growing problem. There are many health risks associated with childhood obesity. These risks include “pre-diabetes and diabetes, heart disease, hypertension, hyperlipidemia, sleep apnea and breathing problems, bone conditions such as hip problems, gastro-intestinal diseases, early puberty, and psychological problems like poor self-esteem and depression” (“Your child”, 2008, para. 4). This issue is of special importance to Michigan because Michigan has ranked as one of the top ten most overweight states (Spectrum Health, 2007) for the past fourteen years. Due to the increase in childhood obesity, it is necessary for the community nurse to assess this issue, plan and implement interventions, and evaluate the results of the intervention.

Analysis of Obesity in the Youth of Kent County

Childhood obesity affects approximately 17% of all children in the United States (Centers for Disease Control and Prevention, 2011). Childhood obesity rates tripled from 1960 to 1990, and continue to increase today (Centers for Disease Control and Prevention, 2011). Childhood obesity is of great concern to healthcare professionals at every level and in every discipline. Childhood obesity can lead to poor self-esteem and depression, as well as varying other health problems that were once considered exclusive to the adult population (“Childhood obesity”, 2010.) In a study by the Centers for Disease Control and Prevention (CDC) it was publicized that the number of children between the ages of six and eleven years who were overweight has doubled in the past twenty years, and the adolescent rates have tripled (Centers for Disease Control and Prevention, 2011).

Obesity, as defined by the Mayo Clinic, is “having an excess amount of body fat” (Mayo Clinic, 2011, para. 1). This measurement of body fat is generally determined by a formula based

on a person's height and weight called the Body Mass Index (BMI). A BMI over 30.0 classifies a person as obese. According to the Mayo Clinic staff, childhood obesity is defined as "a serious medical condition that affects children and adolescents. It occurs when a child is well above the normal weight for his or her age and height" (Mayo Clinic, 2010, para. 1).

The statistics are astounding and impossible for any health professional to ignore. According to Dr. Wood of Helen DeVos Children's Hospital "The National Center for Health Statistics estimates thirteen percent of children ages six through eleven are overweight and sixteen percent of adolescents aged twelve to nineteen are overweight. The crisis is particularly acute in Michigan with the state ranking one of the ten most overweight for the past fourteen consecutive years" (Spectrum Health, 2007, para. 2). As Kent County attempts to define itself as a health care leader, it is imperative that measures are taken not to just identify problem areas in the health of the community, but also to implement measures that remedy the problems that are found.

Benchmark Comparison

In Michigan approximately thirty six percent of the adult population is considered to be overweight and another twenty eight percent obese: having a BMI over 30.0 (Centers for Disease Control and Prevention, 2011, para. 3). It is also estimated that half to three quarters of youth who are obese become obese adults ("Project Obesity", 2001.)

In Michigan, the problem of obesity is not limited to adults alone. According to surveillance data collected by the CDC in 2007; "over sixteen percent of Michigan youth are overweight and another twelve percent obese" (Centers for Disease Control and Prevention, 2011, para. 5). These numbers place Michigan youth at the high end of the national average of youth obesity.

Contributing Factors

Contributing factors of obesity include a sedentary lifestyle and unhealthy food options. According to a study conducted by the CDC in 2007, over half of the school aged youth does not meet the current recommended physical activity levels. Approximately 80% of school aged youth does not eat the recommended amount of fruits and vegetables each day, and approximately 70% watch three or more hours of television each day (Centers for Disease Control and Prevention, 2011).

It is a little known fact that the food industry spends over \$30 billion a year to convince people to eat their products ("The top ten factors contributing to obesity," n.d.). Most of these foods are highly processed and contain a great deal of fat ("The top ten factors contributing to obesity," n.d.). A second identified problem with the food industry is the increase in portion sizes. Twenty years ago, portion sizes were one-third the size they are today. This illustrates that Americans are eating more food with a higher fat content than they were twenty years ago. This has been a key contributor to the corresponding increase in obesity in the country.

Given the fact that children are under the guidance of their parents, the evidence related to adult obesity correlates directly to childhood obesity. Children learn from example, and by observing their parent's dietary habits, a child is likely to imitate their poor food choices. As obesity continues to increase in the adult population, it is likely to increase in childhood obesity as well. In the same manner, as obese children age, they will become obese adults.

Special Groups

The youth population of Kent County can be identified by many factors including race, ethnicity, or economic status. The population may be divided by race, ethnicity, or economic status. The population of youth in Kent County will be examined by these factors.

Poverty

According to research by the Child Poverty Action Network (CPAN) there is a higher incidence of physical and mental suffering in lower income homes (Child Poverty Action Network, n.d.). There may be a correlation between financial status and obesity. Contributing factors include prices of food and a lack of health education and available resources. Highly processed and unhealthy foods are more reasonably priced than fresh fruits and vegetables. Safe and regular exercise is also difficult for those in poverty to achieve. Many fitness centers, such as the YMCA of Greater Grand Rapids, offer reduced rates to lower income families. Many families, however, may find the financial assistance process complicated. To obtain financial assistance a person must provide the corporate offices with a copy of the previous year's tax return and a current pay or social security check stub (YMCA of Greater Grand Rapids, 2009).

In addition to the difficult process of obtaining a membership to a fitness center, transportation may be an issue. For many families living in poverty, available transportation is a commodity not everyone has access to. For many the cost of owning a reliable vehicle is out of reach, for others there is a lack of available public transportation (Child Poverty Action Network, n.d.). Those who have utilized the public transportation system in the Grand Rapids area are aware that the system and schedules can be confusing to some consumers.

There are many who would conclude that physical fitness is not reserved for those who have memberships to fitness centers, there is the argument for persons to 'take a walk' and create their own physical fitness program. Many youth who live in poverty reside in less than adequate housing and in neighborhoods where crime rates are higher (Child Poverty Action Network, n.d.). It is not safe for children to independently pursue physical fitness.

Race and Ethnicity

According to the CDC, there are considerable differences in obesity among race and ethnic groups (Centers for Disease Control and Prevention, 2009). There are many different ethnic groups represented in Kent County. The statistics for obesity by race was the first evaluated across the country as a whole. In America, “Blacks had 51% higher prevalence of obesity and Hispanics had 21% higher obesity prevalence compared with whites” (“U.S. Obesity Trends”, 2011, para. 6). In Michigan 25-29% of whites are considered to be obese, 30-34% of Hispanics, and greater than 35% of non-Hispanic Blacks are considered to be obese (Centers for Disease Control and Prevention, 2011).

According to a study of childhood obesity by the CDC, Hispanic and black girls are at higher risk for becoming obese than non-Hispanic white girls. In adolescent boys, Mexican Americans run a higher risk of being obese than either white or non-Hispanic blacks (Centers for Disease Control and Prevention, 2009). Although race itself does not contribute to obesity, the poverty levels experienced by both Hispanics and non-Hispanic Blacks are important elements to consider. Cultural traditions related to food choice and body image are important factors to consider. In a study by the American Nurses Association, it was revealed that “Latina mothers do not acknowledge overweight and hold the perception that health and weight are poorly associated. Although Latina women may prefer a thinner figure for themselves, they often preferred a plumper figure for their children” (Berkowitz & Borchard, 2009, para. 9).

Existing Resources

Due to the current increase in awareness of childhood obesity, many programs have been established to combat the problem. Currently the Kent County Coordinated School Health Program (KCCSHP) is sending trained facilitators to lead school staff through the Healthy

School Action Tool (HSAT). The HSAT is a free online tool which will help schools assess their nutrition, physical activity, asthma management, violence and injury prevention, and tobacco free policies and environment. It supplies access to local community resources to help schools implement their action plan giving three years of direct support for action planning, implementation, and evaluation. It also provides up to date resources to develop sustainable and measurable environmental changes in their school. The goal is to assist the schools to offer consistent messages about the importance of healthy eating and physical activity (Kent County Health Department, 2011).

There is also a pilot program being launched by Helen DeVos Children's Hospital, Michigan Medical, P.C, (MMPC), Kent/Michigan State University Extension, and the YMCA of Greater Grand Rapids which targets childhood obesity (Spectrum Health, 2007). "The program Kids in Action, is designed to motivate children and their families to make healthy lifestyle changes with medical oversight" (Spectrum Health, 2007, para. 3). The program components include exercise, education on nutrition, and behavioral modification. The goal of this program is to increase physical activity and provide expert advice on nutrition, exercise, and behavior (Spectrum Health, 2007).

Another program is the 'Kent Steps Up' program sponsored by the Kent County Health Department. This program is designed to "increase physical activity and encourage healthy behaviors through a fun, pedometer-based competition for 3rd and 4th graders." (Kent County Health Department, 2007, para. 1). The program encouraged increased activity by challenging the children to walk 10,000 steps daily. Their progress was measured using pedometers that they were allowed to keep at the end of the program.

Each of these programs is directed at school aged children. The purpose is to fight excess weight through healthy diet and increased physical activity.

Appropriateness for Community Nursing Intervention

The area of childhood obesity is appropriate for community nursing intervention as it affects such a large portion of the youth within Kent County. According to the CDC, childhood obesity is an epidemic (Centers for Disease Control and Prevention, 2011). There are so many problems associated with childhood obesity, and the consequent development into obesity in adulthood, it is necessary for all health care professionals to involve themselves in fighting childhood obesity.

The role of the nurse in the community is to promote health within the community through assessment, planning, and evaluation of the populations at risk (Maurer & Smith, 2009). Through the use of this framework, it is obvious that working to eradicate childhood obesity is well within the expectations of the community nurse. The assessment of the community reveals that childhood obesity is an increasing problem in Kent County as approximately 15% of the youth population is considered to be obese. The causative factors are less healthful foods, increased portion sizes, and sedentary lifestyles (Centers for Disease Control and Prevention, 2011). Community nurse planning, implementation, and evaluation of methods to combat these causative factors will potentially result in a decrease of childhood obesity in Kent County.

One of the primary responsibilities of the community health nurse is prevention of disease (Maurer & Smith, 2009). There are many health risks and complications associated with childhood obesity including high blood pressure and cholesterol, cardiovascular disease, diabetes, breathing and joint problems, fatty liver, gallstones, and gastro esophageal reflux (Centers for Disease Control and Prevention, 2011). It is imperative that nurses intervene before

these issues become irreversible. Other risks associated with childhood obesity include a higher risk of psychological and social problems stemming from discrimination and poor self esteem. These issues will follow the child into adulthood. Obese children are more likely to become obese adults. Obesity in adults that were obese children is often more severe ("Overweight and obesity: a growing problem", 2011).

Community Interest

Childhood obesity is a matter of community interest for Kent County primarily due to the issue of prevalence, as previously stated. Childhood obesity is also a matter of nationwide importance, and received an increase in media attention. The youth of America are the future. It is vital that nurses do everything within their power to nurture, educate, and enable the youth of our nation to continue to make America great.

Childhood obesity is already a matter of community interest in Kent County as well, as evidenced by the increasing number of programs developed to combat childhood obesity. It is imperative that it also be a matter of interest to the community nurse to educate the population and expand on the current awareness. The community health nurse must use this increased awareness by providing educational efforts aimed at educating on the severity of childhood obesity. Childhood obesity is more than an anomaly- it is a serious health problem and is becoming increasingly widespread. Without timely intervention, obesity can destroy our nation from within.

Community Problem Statement

The community problem statement that has been developed regarding childhood obesity for Kent County is detailed as follows: All school age children between the ages of five and eighteen years who reside in Kent County at risk for unhealthy body fat content and obesity

related to sedentary lifestyles, insufficient knowledge of healthy food choices and portion sizes, lack of nutritious food choices as evidenced by the measurable indicators of increased weight and body mass index (BMI)

Evaluation Plan

The outcome measure for our intervention would be a decrease in the percentage of childhood obesity in Kent County as measured by weight and body mass index (BMI). It would be expected that there would be a decrease in the number of obese children within Kent County from the onset of our intervention plan to the prearranged conclusion point of thirteen years from the start of the community intervention plan. The use of weight in pounds and BMI were chosen because they are measurable tools that can be easily obtained and compared.

The evaluation plan for this program would involve continual yearly evaluations as well as a final evaluation upon completion of the community intervention plan. The intermediate evaluations would be assessments to determine the progress of the community intervention plan. Measurements of youth weights and BMI's would be obtained upon the beginning of each school year. The data would be separated by grade level, regardless of students who were held back. The final evaluation would be completed in thirteen years when the first groups of approximately five year old children graduate from high school. Because this is an ongoing program involving intervention at every grade level, those who join the school system at any time will enter into the intervention program.

The core group of students who are involved in the program from kindergarten to twelfth grade will be assessed as one population. This group is expected to decrease in number given the likelihood that students will move out of the region or drop out of school. The numbers from this specific population will be compared to the total numbers of all those in each

grade level. The data that will be obtained each year will then be compared to the corresponding data of students who reside outside of Kent County.

References

- Berkowitz, B., & Borchard, M. (2009, January). Advocating for the prevention of childhood obesity: a call to action for nursing. *14(1)*. Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace>
- Centers for Disease Control and Prevention. (2009). *Obesity still a major problem*. Retrieved from <http://www.cdc.gov/nchs>
- Centers for Disease Control and Prevention. (2011). [Http://www.cdc.gov/obesity/data](http://www.cdc.gov/obesity/data)
- Centers for Disease Control and Prevention. (2011). <http://www.cdc.gov/obesity/stateprograms>
- Child Poverty Action Network. (n.d.). <http://www.renfrewcountycpan>
- Childhood obesity. (2010, October 9). *Mayo Clinic*. Retrieved from <http://www.mayoclinic.com>
- Kent County Health Department. (2007). *Kent steps up!*. Retrieved from <http://www.heathykent.org>
- Kent County Health Department. (2011). *School wellness*. Retrieved from <http://www.accesskent.com>
- Maurer, F., & Smith, C. (2009). *Community/public health nursing practice* (4th ed.). St. Louis, MO: Saunders Elsevier.
- Mayo Clinic. (2010). *Childhood Obesity*. Retrieved from <http://www.mayoclinic.com/health>
- Mayo Clinic. (2011). *Obesity*. Retrieved from <http://www.mayoclinic.com/health>
- Overweight and obesity: a growing problem. (2011). Retrieved from <http://www.cdc.gov/obesity/childhood/problem>
- Project Obesity. (2001). Retrieved from <http://www.cdc.gov/obesity>

Spectrum Health. (2007). *Pilot program targets childhood obesity: kids in action*. Retrieved from [Http://um.spectrum-health.org/body](http://um.spectrum-health.org/body)

The top ten factors contributing to obesity. (n.d.). Retrieved from <http://www.womenfitness.net>

U.S. Obesity Trends. (2011). Retrieved from <http://www.cdc.gov/obesity/data/trends>

YMCA of Greater Grand Rapids. (2009). *Membership: financial aid*. Retrieved from <http://www.grymca.org>

Your child. (2008). Retrieved from <http://www.med.umich.edu>