Obesity Prevention

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Obesity Prevention

Obesity is a nationwide epidemic impacting more than one third of adults and 12.5 million children and adolescents in the United States (CDC, 2012c). Although stereotypes tend to depict the homeless as underweight and famished, this population has a high prevalence of obesity due to an imbalance in proper nutrition (Koh, Hoy, O’Connell, & Montgomery, 2012). In order to assess the incidence of obesity among the homeless, nursing students selected the Haven House as an aggregate. The Haven House, an emergency shelter owned by ForKids, is located in the Ocean View region of Norfolk, Virginia. ForKids is a corporation that provides families in crisis with a “safe place to stay while they gain essential skills, stabilize employment, reduce debt and work toward self-sufficiency” (ForKids, inc., 2012). The students’ clinical instructor recommended selecting the Haven House as an aggregate due to the strong relationship held between ForKids and Old Dominion University’s nursing program. After deciding upon the Haven House, the students contacted the ForKids volunteer coordinator to ask for permission to interact with their residents. The volunteer coordinator was very enthusiastic about the students’ proposal and an orientation to the ForKids organization was scheduled for the group. During the orientation, students were informed about the housing, education, and clinical services offered by ForKids. The students were also required to undergo criminal background checks.

Upon orientation completion, the students contacted a ForKids social worker to gain entry into the Haven House for an initial assessment. Two nursing students met the social worker at the shelter to evaluate and ask questions about the nutritional resources available to the residents. The social worker walked the students around to familiarize
them with the Haven House’s pantry, kitchen, yard, and residential living quarters. The pantry consisted of shelves for dry food storage and a freezer for storing meat and milk. The shelter’s kitchen consisted of a large stove and two refrigerators. The backyard had a large play area and playground for children. Within each room, residents were provided with a mini refrigerator and a microwave.

The social worker informed the students that the United States Department of Agriculture (USDA) funds the food supply at the shelter by providing $750 per month for groceries. In order to receive reimbursement for groceries, the USDA requires the shelter to provide a vegetable, fruit, 8 oz of 2% or skim milk, and a meat or meat substitute at each dinner. The shelter occasionally receives donations of fresh fruit and baking good items from the community and churches. The shelter provides residents with dinner and evening snacks. If residents are at the shelter for lunch, they have the option of preparing canned soup or making a sandwich for themselves. However, many residents are usually working or seeking employment and are not at the shelter during lunchtime. The students learned that the main focus of ForKids is to provide residents with resources necessary for sustainability upon leaving the shelter. Based on the data collected during the initial assessment, the Haven House stands as an appropriate aggregate for the implementation of nursing interventions towards obesity prevention.

**Socio-demographic Characteristics**

In the United States, 23% of the homeless population consists of families with children. Of these individuals, 51.3% are male, 24.7% are female. Thirty-nine percent of homeless persons are children under the age of eighteen and of this percentage, only 5% are children that are accompanied by an adult. Seventy six percent of homeless persons
are single. The homeless population in the United States consists of 38% of people with less than a high school diploma and 34% with a high school diploma or their G.E.D. The majority of the homeless population does not have regular weekly jobs and only 13% have jobs that are legal. Seventy one percent of homelessness is found in central city areas (U.S. Department of Housing and Urban Development, 2009).

These characteristics are consistent with that of the ForKids population. The ForKids organization aims to be a support system for children by way of helping homeless families. The socio-demographic characteristics of the shelter residents were evaluated in four different ways. Information was obtained during an orientation at the ForKids headquarters, through an assessment of the Haven House, through an interview with a social worker for Haven House, and from the ForKids website. ForKids owns five shelters throughout Norfolk and Suffolk, VA. Of the shelters, the students will focus interventions on the Haven House, a transitional home where residents can stay up to 120 days. Due to the high turnover rates at Haven House, specific demographic characteristics regarding the aggregate’s weight status were unable to be obtained.

The population at ForKids is comprised mostly of children from a variety of age groups. At the time of assessment, Haven House had twenty-eight children and eight adults. The adult population is made up of mostly single women, primarily in early adulthood. Many of the adult residents do not have higher-level education and many have never received a high school diploma. The adult residents of the ForKids shelters are required to complete a GED course as part of the effort to help them become self-sufficient. Some of the adults are employed at lower income level jobs, such as fast food restaurants, and others are unemployed. Given the fact that the population at ForKids is
dealing with homelessness, this population has a low socioeconomic status. This also correlates with the lack of education, poverty, and poor health that is seen in the population.

**Health Status of Aggregate**

Due to the high turnover rate of families residing at the Haven House, the actual health status of the aggregate has not yet been evaluated. The perceived health status of the homeless, however, is characterized by chronic disease, mental illness, and substance abuse (Schanzer, Dominguez, Shrout, & Caton, 2007). The homeless population has been associated with increased rates of chronic issues and infectious diseases, including human immunodeficiency virus (HIV), tuberculosis, pneumonia, cardiovascular disease, and chronic obstructive lung disease. Affective and psychological disorders, such as anxiety and major depression, are related to unstable living conditions. Due to lack of health insurance, homeless individuals tend to use emergency departments as their primary source of health care (Schanzer et al., 2007). According to Schanzer et al. (2007), “Homeless patients are admitted to inpatient units 5 times more often and have average lengths of stay that are longer than those of nonhomeless persons” (p. 464). Lower socioeconomic statuses and poor mental health place the homeless at risk for poor dental care, cancer, and foreshortened lifespan (Schanzer et al., 2007).

Among the ailments impacting the homeless community, individuals have an increased risk towards developing nutritional problems. Proper nutrition can be difficult to achieve and many homeless individuals are unable to fulfill their basic nutritional needs (Koh et al., 2012). The homeless tend to consume diets with, “a high prevalence of inadequate or imbalance nutrient, vitamin, and mineral content” (Koh et al., 2012). As a
result, the health status of the homeless population has shown an increase in the prevalence of obesity (Koh et al., 2012). Although interaction has not occurred with the residents of the Haven House, the social worker did suggest that the clients needed education about shopping for their families on a budget. By incorporating knowledge obtained from research on the health status of the homeless population, the students will be able to assist with the perceived needs of the residents.

**Comparison of Health Status**

The health status of the homeless population within Hampton Roads is close in comparison to health conditions of national homeless communities. Tri-morbid indicators, which are a combination of mental health problems, severe medical conditions, and substance issues, are prevalent in 13% of local homeless individuals compared to 24% of national homeless individuals (1,000 Homes South Hampton Roads, 2012). HIV and acquired immune deficiency syndrome affect 3% of the homeless nationally and locally (1,000 Homes South Hampton Roads, 2012). Four percent of national and local homeless communities suffer from kidney disease, end stage renal disease, and require weekly dialysis (1,000 Homes South Hampton Roads, 2012). Six percent of the Hampton Roads homeless population is affected by liver disease, cirrhosis, and end stage liver disease compared to 8% of the national population (1,000 Homes South Hampton Roads, 2012). Seventeen percent of local homeless have had three or more emergency department visits or hospitalizations within the past year compared to 21% of national populations (1,000 Homes South Hampton Roads, 2012).

Statistics show that there has been a dramatic increase in obesity within our nation
from 1990 – 2010. There are no states with an obesity rate less than 20% in the United States. Thirty-nine states have obesity rates greater than 25% and 12 states have an obesity rate greater than 30%. Obesity rates within Virginia continue to progressively increase as well. According to the Behavioral Risk Factor Surveillance System in 2011, the prevalence of obesity in Virginia was at a staggering rate of 29.2% (CDC, 2012b). Conferring with the Centers for Disease Control, (CDC), obesity incidence in children has tripled with findings that show 17% of children and adolescents ranging from ages two to 19 years of age are obese (2012a). Locally, Hampton Roads has the second lowest obesity rate in the state of Virginia at 25.3% (Council on Virginia’s Future, 2012). Due to the constantly changing demographics, exact estimates of obese residents living at Haven House could not be obtained. According to a study published in *Journal of Urban Health: Bulletin of the New York Academy of Medicine* in May of 2012, “obesity may be the new malnutrition of the homeless in the United States.” One staggering statistic cited was “homeless women were more likely to be obese than non-homeless women, with prevalence of obesity over 50% in certain ethnicity groups” (Koh et al., 2012). A possible explanation for this change in the stereotype, where homelessness is usually linked with being underweight, is the inadequate financial means that causing individuals to choose low-priced and energy-dense, low-nutrient diets, just in the hopes of avoiding going hungry (Koh et al., 2012).

**Internal and External Influences**

Nutrition and physical activity play major roles in obesity prevention. Influences impacting these two factors can be further classified within internal and external
categories. Internal factors consist of elements that are within the control of an aggregate, while external factors consist of elements that are mostly beyond their control.

Part of this project involved performing a windshield survey in order to determine what specific internal and external factors influenced the nutritional health and physical activity of the Haven House population. Information collected during the windshield survey indicate that a combination of internal nutritional and physical activity factors, as well as a combination of external nutritional and physical activity factors, play a role in the overall health of the Haven House population.

Internal factors that have the potential to influence the nutritional health of Haven House residents include general knowledge related to healthy nutrition, healthy food purchasing, and motivational desire to practice healthier eating habits in order to improve their overall health. It is possible that Haven House residents do not have the knowledge and awareness needed to make informed decisions regarding healthy nutrition and healthy food purchasing. In addition, they may simply not have the desire or motivation to participate in recommended healthy eating practices.

Other internal factors that have the potential to influence the physical activity of Haven House residents. These factors include general knowledge of healthy activity recommendations, and motivational desire to perform physical activity and increase health. As with nutritional health, it is also possible that Haven House residents do not have the knowledge and awareness that they need in order to decide what amount and type of physical activity is healthy for them, and they might not know how to perform these activities. Desire and motivational factors may also influence the level of resident participation in recommended physical health activities.
External factors have the biggest potential to influence the nutritional health of Haven House residents. Potential external factors include physical proximity to grocery stores, access to stores that carry healthy food options, the number of stores within a reasonable distance from Haven House, transportation issues getting to stores, the financial income available for grocery purchases, food item cost, the ability to store foods once purchased, and the effects of advertising. When performing the windshield survey, it was discovered that there are many grocery store locations within reasonable proximity to the Haven House location, though the number of health-oriented stores may be rather limited. Many of these stores are located within walking distance from Haven House, just two or three blocks away in the Ocean View shopping center. The only grocery store that has a considerable choice of healthy foods in close proximity is Farm Fresh. The shopping center has a significantly greater amount of fast food restaurants. Among them are Burger King, KFC, Taco Bell, Pizza Hut, McDonald's, Doug's Hot Dogs, Sub-Way, and 7-Eleven. Therefore, residents of the shelter have a wider offering of unhealthy food resources available to them, which negatively influences their nutritional decisions and increases their susceptibility to developing obesity. Higher prices associated with healthy food options may also turn away residents of Haven House who are likely on a budget. In addition, lack of personal transportation may also limit shopping opportunities in the city. However, families do have access to bus routes if they desire to travel longer distances. There is a bus stop on each side of the block.

External factors that have the potential to influence the physical activity of Haven House residents include access to recreation centers, gymnasiums, and parks, and access to motivational and instructional resources, such as physical trainers. When performing
the windshield survey, it was discovered that there are a rather limited number of locations dedicated to physical fitness in close proximity to Haven House. Fitness-dedicated areas within reasonable proximity to Haven House include Captain’s Quarters recreation center and Merrimack Landing Recreation, which are approximately one mile away. There is a protected playground behind Haven House that children can play in for physical activity.

Another factor that may affect the activities of residents at Haven House is safety. Safety affects both physical activity and nutritional factors related to Haven House residents. According to Norfolk Police Department (NPD), there have been 178 registered crimes over the last three months within a one-mile radius around Haven House, including one homicide, one rape, ten incidences of aggravated assault, and eighteen incidences of a simple assault. For comparison, Ghent, a safer neighborhood of about the same size, had only 101 criminal incidents with no registered cases of homicide, rape or aggravated assault, and only ten cases of simple assault (NPD, 2012). Walking to the grocery store, or waiting for a bus may pose a safety risk to family members. In addition, threats to safety may cause psychological concern and worrying that may influence residents to avoid some healthy behaviors, such as exercising outside.

**Review of Literature**

Obesity is just as big of a risk in the low-income or homeless group as compared to the general population. This is referred to as the hunger-obesity paradox, where hunger and obesity both dominate low-income families in an ironic fashion. A retrospective study was conducted to determine the distribution of weight status between the homeless, low-income population and the general population (Koh et al., 2012).
Electronic medical records from 5,632 patients from Boston Health Care for the Homeless Program (BHCHP) were reviewed for age, sex, ethnicity, and body mass index (BMI). The results were compared to the 2007-2008 National Health and Nutrition Examination Survey (NHANES), which represented the general population. The mean age of BHCHP patients were 47.8 years, 80.5% male, 46.7% Caucasian, 32.1% African American, and 13.8% Hispanic. Over three-quarters of the low-income population had education levels below that of a high school graduate, 67.3% were unemployed, 26% disabled, 3.6% worked part time jobs, and 2.1% held a full time job. The mean BMI of the BHCHP group was 28.4 with a range of 13.8-68.6. Of the patients, 65.7% were overweight, and 32.3% obese. Females were shown to be more obese than males at 42.8% versus 29.7%. Compared to the BHCHP, the general population from the NHANES consisted of 5,555 subjects, majority of which were Caucasian, 20.6% African American, 28.2% Hispanic, and 30% had not earned a high school degree. Those who were overweight comprised 68.1% of the group and 33.7% were obese. Results found that there was not a difference between obesity rates among low-income, homeless families and those in the general population (Koh et al., 2012).

There is a misconception among the population that obesity is a direct result of increased access to food due to an increased income. It’s also thought that a lack of access to food means homeless and low-income families will make up the underweight portion of the population. However, this study proved that homelessness was no more or less associated with obesity compared to the general population, thus forming the hunger-obesity paradox. The paradox is a direct result of variations to food availability. When food is readily available and in abundance, the homeless and low-income families binge
eat, in a sense, to compensate for periods of food scarcity (Koh et al., 2012). The body also becomes more efficient at storing food calories as fat when food is scarce. Additionally, when food is scarce, the low-income, homeless population turns to affordable, energy dense, but low nutrient dense foods in order to avoid hunger, thus contributing to the obesity rate (Koh et al., 2012).

Another study sought to determine the perceptions of low-income women regarding food choices with limited financial resources, reasons behind such choices, and the degree to which their diet, health, and weight status are impacted by their financial resources. In order to participate in the study, participants must be mothers or female guardians with at least one child aged 9-13 living in the household (Dammann & Smith, 2009). The 92 participants had a mean age of 37 years, half African American, 27% Native American, and 13% Caucasian. Of the participants, 84% received food stamps and 75% were overweight or obese, which is defined as a BMI of over 25 (Dammann & Smith, 2009). A majority of the participants rated their diet either “fair” or “good”. The study found four main themes within the low-income families to include food choices, multiple roles of female figures, environmental situation, and the impact of poverty on the diet and health status (Dammann & Smith, 2009).

The factor that affected food choice the most was affordability. Because a majority of the participants utilized food stamps, a common trend showed that food stamps did not supply the family for the full month, forcing many families to utilize cash or other food assistance programs. Employment was viewed as a detrimental factor because an increased income meant a decrease in food stamps per month despite low-income families usually working for minimum wage (Dammann & Smith, 2009). To
counteract this, many mothers had their children participate in federal food assistance programs such as the School Breakfast Program and National School Lunch Programs. This lessens the number of meals the families must provide and therefore allows more money to go towards one meal per day instead of three. In terms of the multiple roles females have within the household, the primary purpose of the mother figure was to ensure children had food. Mother figures often gave their own meals to their children when food was scarce (Dammann & Smith, 2009).

Additionally, this study found that mothers do have nutritional knowledge; however, they are not able to utilize the knowledge to provide for nutritious meals because they cannot afford the healthy menu items. Environmental restraints continuously posed a problem for the low-income families within this study. Their home environment or shelter often had a lack of storage space, coupled with dorm-room sized refrigerators. The lack of storage space has a negative impact on grocery shopping because mothers must make more frequent trips to buy food in smaller, higher priced packages to avoid the risk of spoilage (Dammann & Smith, 2009). Most low-income and homeless families live in inner, urban cities where grocery stores are scarce. Due to the lack of transportation, shopping must occur in the urban areas at corner, convenience stores or meat markets, which often have higher price tags when compared to suburban grocery stores (Dammann & Smith, 2009).

In terms of poverty impacting diet and health, low-income mothers mainly believe the Gene Theory in which one is born to be fat and therefore diet and exercise do not make a difference because it is beyond one’s control (Dammann & Smith, 2009). The study found that Native Americans had the highest BMI of the low-income groups at 35.9
and also viewed their diet as “fair” to “poor” (Dammann & Smith, 2009). This study also found that low-income households had periods of binge eating on inexpensive, calorie-dense foods after a lack of food. During this time, mothers encouraged their children to overeat, thus contributing to obesity. However, if healthy food, fruits, and vegetables were within their means, low-income mothers did express an interest in providing these foods to their children (Dammann & Smith, 2009).

In today’s society, larger body sizes have become the norm. Parents may not see their child’s weight as unhealthy especially when comparing the child to their own body size if they are obese (Dammann, Smith, & Richards, 2011). In another study about obesity, the goal was to determine how mothers perceived their child’s height and weight to actual measurements, how they perceived theirs and their child’s dietary intake, and determine how their diet was related to their socioeconomic status (Dammann et al., 2011). The study followed 257 low-income mothers and children. The mothers mean age was 35.3 years, and the majority were African American, 14% Indian, and 11% Caucasian. The children had a mean age of 10.9 years and were composed of 116 males and 141 females. Most mothers did not have education beyond high school, were homeless, unemployed, and on food stamps. Their average BMI was 32.8 with 75% of the adult population being overweight or obese. American Indians had the highest percentage of overweight/obese members, followed by Hispanics, African Americans, and Caucasians. About 50% of the children were obese or overweight. The study found that 60% of parents underestimated their child’s weight. Overweight and obese children had an increased likelihood of having obese mothers. These mothers were less accurate in determining their child’s weight compared to healthy weight children (Dammann et al.,
Those low-income mothers who were homeless rated their children’s diets significantly less healthy compared to low-income mothers who had a steady home.

Reasons for underestimating children’s weight have been associated with multiple factors. First, chubbiness at a young age is viewed as “cute” and being overweight isn’t viewed as unhealthy until adolescence. Second, larger body sizes are more acceptable within the African American communities. Lastly, obese mothers view their children’s size relative to their own body weight (Dammann et al., 2011). If an obese woman sees an overweight child, she may say that the child has a healthy weight compared to her own, which leads to a misconception since the child is overweight. This study is important because in order to combat obesity, mothers must understand that her child is also at risk for obesity even though the child may not be as large as the mother.

**Health Problems and Specific Population Needs**

Homeless population, as the one in the Haven House shelter, is affected by many different health problems due to their vulnerable status associated with the uncertainty of the day-to-day life and future outcomes (Maurer & Smith, 2009). As in the provided review of literature, obesity is a growing issue amongst homeless individuals with over 30% of homeless adults being overweight (Koh et al., 2012). Moreover, many among the homeless population are constrained by limited income, impaired transportation, and poor access to food shopping areas, all of which may hinder a use of nutritious items (Dammann & Smith, 2009). According to Koh et al., (2012), low income or homeless individuals may reach for cheap food sources that do not necessarily have nutritional value but may be high in calories, which may be a reason for a rise in obesity among homeless. Additionally, the inconsistent food intake in the homeless population may be
yet another factor in the homelessness-obesity paradox, together with binge eating where the body stores extra fat and nutrients for the periods of scarce resources (Koh et al., 2012; Dammann & Smith, 2009).

Based on the assessment data collected during the group’s visit in the ForKids Haven House shelter, the primary nursing diagnoses pertaining to the focus of the obesity prevention were identified as deficient knowledge: nutrition, readiness for enhanced knowledge: healthy food choices and risk for impaired nutrition: more than body requirements. These problems are related to the population’s compromised living situation and impaired knowledge regarding healthy diet provision with limited access to the resources. According to the shelter representative, the families need guidance regarding nutritious food choices. Also, the Haven House parents expressed an interest in receiving tips on how to make healthy food choices on a budget for the whole family and especially their children. Additionally, many of the Haven House individuals are at risk for obesity and inadequate nutrition as they hold low-income jobs at various fast food restaurants where they readily access unhealthy food choices as their daily meals.

The Haven House provides the homeless families with a temporary and steady help by offering basic food sources and shelter. It is crucial for the shelter’s families to be able to maintain a sufficient food intake to avoid long periods of no food, and to learn what is, and how to maintain a healthy diet beyond the walls of the shelter. Additionally, as the shelter residents expressed being ready to learn how to create and maintain a healthy nutritious diet, learning how to make good food choices will remain the focus of the future planning and interventions. Detailed strategies of the future interventions will follow in the next section. Interventions will include small budget healthy shopping
strategies so that the families will not run out of the food and can eat nutritional meals, teaching session on how to read food labels, and an opportunity to present the families with healthier choices through a fast food menus comparison. Physical activity is also going to be incorporated into the interventions by providing an interactive basic exercise routine to maintain wellbeing and healthy weight. Lastly, the overall goal of the stated future interventions is to provide the shelter’s families with the opportunity to learn tools that can improve their health and quality of life as they take control over their lives beyond the help of the ForKids shelters.

**Nursing Diagnosis: Deficient Knowledge**

After assessing the Haven House population and discussing nutritional concerns with one of the social workers, our group identified a prominent learning need for residents to learn how to provide a healthier diet for their children to reduce obesity while living on a low budget. While some families have part-time, minimum wage jobs, some are unemployable. Either way, the families at Haven House live with the challenge of eating healthy on a poverty level income. This is evidenced by the fact that most of their diet consists of canned corn or beans, or cheap, fatty meat or meat substitute, such as Jimmy Dean breakfast sandwiches or chicken nuggets. The USDA allots only $750 per month for the 30 people living at Haven House. That is $25 per month per person, or 83 cents a day. However, while the capacity of Haven House is for 30 people, Haven House at the time of assessment had 36 people living there, requiring the small allotment for food to be stretched even further.

With this in mind, the priority nursing diagnosis established for the population at ForKids is deficient knowledge related to healthy nutrition as evidenced by unhealthy
food choices seen in resident rooms upon assessment and statements from the social worker regarding the population eating frequent meals at fast food restaurants. The nursing objectives focus on reversing deficient knowledge through the following teaching interventions: comparing the nutritional values of food from different fast food chains, how to get the most nutritional bang for their buck when shopping for healthy food, how to read nutritional labels, nutritional goal setting to reduce obesity and an exercise intervention to encourage physical activity. By providing the knowledge and resources to make better choices, we also teach the families how to advocate for their own health.

Generalized outcomes of all the teaching programs include understanding the importance of healthy eating, learning to modify daily food choices to incorporate healthier options, and moving more. The interventions will allow families to understand their own perceptions of health and body image, which according to Dammann, Smith, & Richards (2011), is a key factor in combating childhood obesity. Utilizing journals, setting nutritional goals, and learning to choose healthier fast food options while working will help increase knowledge regarding obesity prevention. Having parents attend the interventions discussed below will increase their knowledge base to incorporate exercise and healthy eating into the residents daily lives. Evaluation of the learning will be measured through return demonstrations of exercise, nutritional goal setting, and ability to choose healthy food options from all food groups.

**Proposed Nursing Interventions**

**Fast Food Meal Comparison**

Haven House residents are often employed at fast food restaurants near their shelter, increasing their access to quickly prepared food throughout the entire day. With
the incentive of employee discounts, convenience, and easy accessibility, many employees order items off of the menu for consumption on lunch and dinner breaks (Rice, McAllister, & Dhurandhar, 2007). For this population, the even cheaper cost of the meals outweighs the potential health benefits of bringing food from home. This is increasingly apparent with the rise in popularity of dollar menus such as those found at McDonalds which include the McDouble, McChicken, side salad, ice cream cone, sweet tea, and fruit and yogurt parfait (McDonald’s, 2012). The McDouble and McChicken specifically should be avoided because of the double patty hamburger and the fried chicken. For instance, at Burger King, a Double Whopper, medium fries, and a 16 oz Coke yields approximately 1380 calories (Burger King Corporation, 2012). A better alternative would be the Whopper Jr., small fries, and a 16 oz diet coke, yielding 680 calories (Burger King Corporation, 2012). The alternative meal still incorporates a hamburger, fries, and soda all while cutting 700 calories from the meal, making it a healthier alternative (Paul & Robinson, 2012).

A proposed intervention is to teach the residents how to modify the food choices they make at fast food restaurants. It’s unrealistic to expect that these families will stop eating at fast food restaurants when the food is very inexpensive and accessible. Instead, by acknowledging the fact that these purchases occur, an intervention should be tailored to compare menu option prices and nutritional value to determine the best selections. The proposed intervention will compare menu options at fast food locations nearest their home, all of which are within walking distance, and include McDonalds, Burger King, Taco Bell, KFC, and Subway. Additionally, the intervention will compare menu options between the restaurants to determine which location offers the healthiest options. At the
end of the teaching intervention, the population in attendance will be able to identify healthier options at the fast food restaurants they most frequent. The population will also be able to determine if their place of employment is the healthiest fast food location, or if other restaurants in the same shopping center would yield healthier options.

**Shopping on a Budget**

Grocery shopping can be a challenge for many families, including the Haven House residents, for a variety of reasons. A study presented in *Public Health Nutrition* examined the shopping behaviors of 92 low-income women, of whom 76% were overweight and had at least one young child (Wiig & Smith, 2009). Results of the study indicated that shopping behaviors were most influenced by individual and family member preferences, and the economic and environmental situation (Wiig & Smith, 2009). The price of an item, distance from a store location, limited ability to store food items, and personal taste preferences of family members all influenced grocery purchases of the participants. Transportation and store accessibility were listed as the primary determinants of shopping frequency (Wiig & Smith, 2009).

For many families, cost is often the primary factor affecting food selection decisions. Families often have to buy groceries several times a month, and sometimes even several times a week. Over the course of a year, the total amount of money spent on family grocery purchases can easily exceed thousands of dollars. Constant price inflation in the wake of a deteriorating economy now makes shopping on a budget a necessity for many families, especially those families already experiencing financial difficulties, and those relying on food stamps. The low-income status of many Haven House residents likely makes shopping for food more difficult, and it is likely one of the leading factors
that affects their shopping behaviors. However, despite the difficulties associated with making grocery purchases, it is still possible for parents to make healthy food choices for their family members. By following a few simple rules, Haven House parents can still provide food for their families and make healthy food purchases on a budget. One proposed intervention involves teaching residents of Haven House instructional guidelines on how to shop for groceries on a limited budget. These guidelines pertain to effective pre-shopping planning, selecting a store to purchase from, and making healthy, cost-effective food selections. The following paragraphs lay out the proposed teachings.

One of the most important parts of shopping on a budget is planning. In order to save money at the grocery store, Haven House parents must plan ahead before going shopping. This allows parents to determine which foods they need to purchase, where to shop for the items they need, and where to shop for the cheapest price on these items. The first part of effective planning involves making a list of needed food items and setting a maximum budget that can be put towards buying these list items. It is important to do these two things before going to the store, so that purchases aren’t influenced by impulsive decisions. When shopping, it is also extremely important for Haven House parents to hold themselves accountable and stick to the actual preplanned budget, because just a few extra purchases can quickly inflate the total cost.

Choosing a store to purchase from is next on the list of importance for Haven House residents. As previously mentioned, transportation plays a huge factor in how often a buyer goes to the store to purchase groceries. Luckily, there are a number of stores located within walking distance of Haven House. These stores include a Farm Fresh, Rite Aid, Tiny Giant, Dollar Tree, Family Dollar, and Beach Bay Food store.
Beyond location, a budget-conscious buyer should first attempt to locate “budget” stores in your area, some of which are listed above. These stores often offer less-wanted or damaged items, such as a dented canned item, for discounted prices. Although there are none within walking proximity of Haven House, “big-box” stores are also offer a good place to find deals if residents have access to one of them. These stores sell bulk items for discounted prices. Buying in bulk typically allows the purchaser to buy foods for cheaper prices, at any store. Next, residents should look for coupons and food sales in the local newspaper or on a store’s website. Residents should shop where the deals are greatest, and stock up when great deals are offered. Over time, residents should be able to determine which stores typically offer better deals. Haven House residents will likely have to go to more than one store to get all of the items that they need, for the price that will satisfy their budget requirements.

Once at their selected store, Haven House residents check for in-store deals and “manager’s specials” on fresh meats, vegetables, and grain products. Such deals offer expensive foods for greatly discounted prices just because the items are approaching the end of their shelf life and are less likely to be bought by others. Items, such as fresh meats, are often more expensive than canned or frozen items. Residents should make food substitutions, such as substituting canned or frozen fish for fresh chicken, to save money. They should avoid buying pre-assembled meals, as these ready-to-eat items are often more expensive. Instead, they should buy individual items and put meals together themselves. Residents should not be afraid to buy off-brand or store-brand items. Though their packaging may not look as flashy and satisfying, these items are often significantly cheaper than name-brand items. Also, Haven House residents should stay away from
buying snacks, which often add little nutritional benefit to the diet, and are frequently unhealthy to consume. Similarly, if an item is not on the necessity list, it should not be purchased. When it comes time to make a purchase, residents should pay for items with cash, not credit. When using credit cards to make purchases, buyers often buy more than they can afford.

When attempting to shop for groceries on a budget, there are a few other important tips for Haven House residents to remember. If possible, residents should try to do their grocery shopping without bringing children to the store with them. Children can be a distraction, and their impulsive requests can influence purchases. One participant in the aforementioned study stated that she doesn’t take her children shopping with her because she spends two times as much money as she plans on spending, because they want “the chips, the pop, the gum, the candy, [and] the ice cream” (Wiig & Smith, 2009, p. 1729). For similar reasons, grocery shopping should not be done when rushed or on an empty stomach, which can lead to increased spending since everything looks appetizing when hungry. Finally, just because a person is shopping on a budget does not mean healthy foods are not an option!

These guidelines provide guidance for Haven House residents to purchase healthy meals on a limited budget. Following the intervention, Haven House residents should be able to demonstrate that they can recall and explain the purpose for adhering to these guidelines.

**Reading a Nutritional Label**

“The NLEA [Nutrition Labeling and Education Act] was passed by Congress in 1990 and requires that almost all packaged foods under the jurisdiction of the US Food
and Drug Administration carry nutrition labeling information presented as standardized Nutrition Facts” (Satia, Galanko, & Neuhouser, 2005, p. 392). The purpose of NLEA is to make nutrition facts easier for consumers to decipher and encourage healthier eating by making consumers aware of nutritional content of foods. The purpose of a study conducted by Satia et al., (2005), was to describe the prevalence of nutrition label use and its association with demographic, behavioral, and psychological factors and diet among African-American adults. A group of 658 African American participants from North Carolina were surveyed regarding lifestyle behaviors, dietary intake, and use of nutritional labels. Thirty-five percent of the participants were overweight and 40% were obese. Results of the study revealed 78% of the surveyed population used nutrition labels frequently when making food choices. In addition, those who used food labels when making food choices demonstrated a diet that was low in fat and higher in fruit and vegetable consumption. Interestingly, the study found that obese participants used food labels twice as often as those participants who were of normal weight. “However, higher label use among obese persons was restricted to those who were actively trying to lose weight” (Satia et al., 2005, p. 400). The study also found that people who had healthy lifestyle characteristics such as moderate activity or attempts to lose weight were associated with an increased use of nutrition labels. Satia et al., (2005), encourage healthcare professionals to “continue to include nutrition label use in dietary interventions and nutrition education programs, particularly those with a weight control component” (p. 401).

The proposed intervention will teach participants how to read a nutrition label and how to use that information to make healthy, informed decisions regarding food choices.
The U.S. Food and Drug Administration (FDA), has an online learning tool that emphasizes six key components of a nutritional label, which will be the focus of the intervention. The first two components of the nutritional label, which will be taught are the serving size and number of servings and the calories per serving. It is important to emphasize the number of servings shown on a food label because this component can be easily underestimated. The third and fourth components of the nutrition label that the FDA emphasizes are the amount nutrients in the food. The intervention will demonstrate how to locate fat, saturated fat, trans fat, cholesterol, and sodium content on the nutritional label, as well as teach the importance of limiting the intake of these nutrients (FDA, 2012). Satia et al., (2005), emphasize that diets high in fat are associated with health problems such as type II diabetes, obesity, cardiovascular disease and some cancers. In addition to encouraging decreased intake of fats, cholesterol, and sodium, the FDA emphasizes the importance of ensuring adequate amounts of fiber, vitamins, and minerals. The intervention will demonstrate how to locate these nutrients on a nutrition label and describe their importance in a healthy diet. The fifth component of the food label the FDA emphasizes includes the foot note at the bottom of every nutritional label that includes information on recommended daily values for total fat, saturated fat, cholesterol, sodium, total carbohydrates, and dietary fiber. The intervention will teach participants how to use the daily values chart to make healthy food choices and plan a healthy diet. Finally, the sixth component emphasized by the FDA is the percent of daily value for nutrients. The intervention will teach what the percent of daily value is and how to use it when choosing food options (FDA, 2012).
After describing and pointing out each aspect of the food label, food labels will be distributed to participants. Sample labels will include labels on foods commonly seen in the Haven House, including Chef Boyardee cans, Jimmy Dean Breakfast Sandwiches, Pop Tarts, and fast food menu items and participants will be asked to locate the six key components on the food labels. At the end of the intervention, participants will be able to identify the six key components of the food label and state the importance of each component. The outcomes will be measured by a physical demonstration from the participants to identify the components of the food label and by engaging the participants in a discussion of the importance of each component.

**Body Works**

Another resource that the ForKids community might be referred to is the BodyWorks program, which is a project of the U.S. Department of Health and Human Services (USDHHS), Office on Women’s Health. The program is designed to help parents and caregivers of adolescents improve family eating and activity habits. BodyWorks is designed to be carried out under a direction of a trainer. Research was conducted between 2006-2008 in order to evaluate the effectiveness of the BodyWorks program. According to the report, BodyWorks changed parent intentions, motivation, and immediate behavior. Authors of the study concluded that the program was a promising parent-focused intervention, targeting parents and caregivers as agents of behavior change (The Altarum Institute, 2009). Even though a certification is required to be an official trainer for this program, BodyWorks toolkits are free. Therefore, select information from ten teaching sessions of BodyWorks will be included into our own teaching of Haven House residents.
An intervention geared towards setting goals related to meal planning has been adapted from the BodyWorks program. Utilizing a weekly planner, the students will explain the importance of setting goals, such as only eating two fast food meals per week or providing at least one meal per day with a serving of fruits and vegetables. Emphasis will be on setting realistic, achievable nutritional goals. The intervention will stress that implementing too many goals will be difficult to achieve. Nutritional goals will be based around choosing food from each food group to include fruits, vegetables, calcium-rich foods, grains, and proteins. Additionally, parents will be educated regarding better alternatives when choosing vending machine foods and drinks. The parents should pass this information on to their children and assist them with making proper choices.

Education will also be given regarding the preparation, handling, and storage of food. Serving sizes will be compared to common household items such as a computer mouse, a baseball, or a deck of cards. Learning will be evaluated by having parents select food from a variety of samples to test their knowledge about proper food choices. Residents will verbalize examples of healthy meals they can prepare for the family. Residents will also verbalize nutritional goals that they would like to set.

Get Active

An intervention promoting physical activity will be a focus of a teaching session at Haven House. The purpose of this session is to provide the families with basic tips and strategies on an exercise routine, as well as why it is important. The utilized resources will be retrieved from the BodyWorks toolkit provided by the USDHHS, Office on Women’s Health (2012) that will provide the families with a monthly log to track their exercises together with the meals for each day. Also, as recommended by the CDC
(2012), adults and kids should participate in at least 60-minute moderate to vigorous exercise each day. In order to provide the parents with appropriate information and strategies of how to accomplish that, the group representative will use tips retrieved from the government initiative *We Can* (National Institute of Health [NIH], 2012). The *We Can* initiative and the BodyWorks program encourage parents to participate in joint exercise with their kids to promote bonding and a healthy lifestyle. The teaching session will provide examples of inexpensive activities that do not require gymnastic facilities memberships. The parents will be encouraged to perform daily walks with kids to school, scheduling time to play ball outside, use some of the house’s furniture to do exercises such as sit-ups and lunges, and tips that cleaning time can be a fun and active time (NIH, 2012). Parents will also be educated that the physical activities may be divided throughout the day so that their kids do not tire out and so that the parents have time to fulfill their own schedules.

The Get Active teaching session will also incorporate safety facts to keep in mind when preparing for physical exercise, such as proper hydration, clearing indoor areas to remove obstacles to prevent injuries, and turning off electrical appliances. Also, the families in the Haven House are actively seeking resources to improve their family’s status and accomplishing 60 minutes of daily exercise may be difficult. Therefore, the session will also set a realistic goal for the families to exercise at least 30 minutes a day, for at least four to five days a week as a joint family time effort.

The desired outcome of the “Get Active” intervention is for the families to realize that physical activity does not have to be expensive and require specialized equipment. Additionally, this class is meant to provide the families with quality time where parents
can serve as role models, which will hopefully influence the families to incorporate these activities into their daily living. At the end of this intervention the families will be able to demonstrate back the presented activities and use the sample of a tracking grid provided by the Body Works program (U. S. Department of Health and Human Services Office on Women’s Health, 2012). The use of a tracking system will be able to serve as a reflective tool on the family progress as well as install a low degree of competitive spirit about the members. Furthermore, the parents will be able to state the importance of incorporating a steady physical routine for their families, which is to improve their health and to lower the risk of diseases associated with a sedentary lifestyle.

Alternative Interventions

The goal of the interventions described above is for the families at ForKids to improve their knowledge related to healthy eating and physical exercise, and to incorporate this new knowledge as a permanent part of their lifestyle. However, community health work may sometimes offer challenges, such as high turnover rates of the families at the Haven House shelter, or limited resources, which can affect the implementation of the interventions as well as their desired outcomes. Therefore, the obesity prevention group must remain flexible in their efforts of implementing the planned interventions in order to provide relevant care. Hence, additional or alternative interventions were discussed and the proposed options include: involving local supermarkets as resources to increase fruits and vegetable intake at the Haven House, creating a food drive campaign at the Old Dominion University –School of Nursing campus, and setting up a recipe book using the Haven House’s pantry items but in a healthier way. The above alternatives can be further expanded based on the group’s evaluation of the
aggregate needs as the planned interventions begin to take effect during the spring of 2013. Additionally, the group may take advantage of other existing efforts and program such as: Let’s Move and Healthy People, Healthy Suffolk.

Let’s Move initiative has been launched by First Lady, Michelle Obama, and concentrates on preventing and solving the problem of childhood obesity. This program is directed towards encouraging healthy eating habits, physical activity as well as fostering environments, in schools and local areas, which support healthy choices, and allow families access healthy and affordable foods. The Let’s Move campaign was created because childhood obesity in American has tripled, and food portions, physical activity and unhealthy eating habits are continually rising. Similar to the BodyWorks and We Can! programs, the Let’s Move initiative offers free education and tips for the whole family on nutritional diet and physical activity, which also makes these resources useful when planning alternative interventions for the Haven House aggregate (Let’s Move, 2012).

Healthy People, Healthy Suffolk is a community-based program in Suffolk, Virginia created by the city’s government representatives, private businesses and civic individuals. The program is designed to improve the community’s health by tackling “obesity and obesity-related chronic illness through three goal areas: healthy eating, active living and citizen engagement” (Healthy People, Healthy Suffolk, 2012). The program is directed towards all age groups, Suffolk residents as well as the non-residents. The joint forces in the above coalition provide education on healthy food choice and also strive to make healthy foods easily available. Furthermore, the program directs efforts towards encouraging physically active lifestyle in families and individuals by providing
safe recreational areas and improving existing ones. The city of Suffolk also aims to engage civic, government and business individuals in becoming active participants in improving the health of the community by taking on and designing strategies to promote healthy weight and active lifestyle (Healthy People, Healthy Suffolk, 2012).

**Conclusion**

Obesity is a worldwide problem that affects families and individuals of different income levels, and the homeless population is no longer an exception. Populations such as the families at the Haven House require help with resources but most importantly they need guidance and education to create long-term skills. The interventions are designed to result in successful and realistic outcomes that will empower the Haven House families to incorporate achievable healthy habits into their lifestyle.

The Obesity Prevention group will focus on providing interventions that include comparing the nutritional values of food from different fast food chains, how to get the most nutritional bang for their buck when shopping for healthy food, how to read nutritional labels, goal setting to reduce obesity and an exercise intervention to encourage physical activity. Overall, the teaching sessions that were described will begin during the spring 2013 semester. Ultimately, the nursing interventions should equip the Haven House families with knowledge regarding a nutritious diet and physical activity to promote a healthy lifestyle while living on a budget.

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