Obesity Prevention II

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Obesity is a prevalent health care issue into today’s society. Within Hampton Roads, the current obesity rate is 25.3% (Council on Virginia’s Future, 2012). Individuals who are obese have an increased risk of developing diabetes mellitus, cardiovascular disorders, asthma, and nonalcoholic fatty liver disease (U.S. Preventive Services Task Force, 2010). Approximately 17%, or 12.5 million, children and adolescents aged 2-19 years are obese (Centers for Disease Control and Prevention [CDC], 2012a). Despite misconceptions, obesity is also a health problem in the homeless population. This health problem among the homeless exists for two reasons. The first reason stems from a lack of availability of food. Due to the scarcity of food, the homeless population has a tendency to binge eat when food becomes available. The second reason for obesity within the homeless population is due to financial hardships. In order to evade hunger, the homeless population purchases low nutrient, energy-dense, inexpensive foods (Koh Hoy, O’Connell, & Montgomery, 2012).

To address the incidence of obesity of the homeless locally, the Haven House at ForKids was selected as an aggregate. The Haven House shelters a homeless population comprised of mostly adult females with children who are in crisis situations. Due to the high turnover rate of residents at the Haven House, the students created a health history survey to assess the health status of all the participants before our teaching interventions. According to the data obtained, there were a total of ten participants with an age range of 20-40 years. As part of the survey, the students asked participants to list their height and weight so that the students could calculate their body mass index (BMI). One participant chose not to list her weight. The other respondents’ weights ranged from 134 pounds to 315 pounds. The students then calculated each resident’s BMI using the CDC’s BMI table (CDC, 2011a). BMI’s for the participants ranged from 21 to
49.3 with two participants classified as normal, one as overweight, and six as obese. In addition, the students also assessed health issues that affect the population. It was discovered that two individuals suffer from hypertension, four from depression, five from anxiety, two from hypercholesterolemia, and one from diabetes mellitus type II. Other health issues that participants described include Factor V Leiden, fibromyalgia, asthma, bipolar disorder, post-traumatic stress disorder, schizoaffective disorder, migraines, and insomnia. Lastly, smoking and drinking status was assessed. The survey identified four individuals as smokers with a history of smoking from one to twenty years and, on average, the participants smoked one pack per day. None of the participants engaged in alcohol consumption.

To perform additional assessments of the population of the Haven House, the students surveyed the shelter to determine the average nutritional intake. Based on discussions with the social worker, it was discovered that the United States Department of Agriculture (USDA) provides $750 per month for groceries and dictates that meals must consist of vegetables, fruits, low fat milk, and meat or meat substitutes. The menu is decided primarily by the social workers who are responsible for the grocery shopping of the shelter. An important finding from the assessment was that residents are only provided with dinner and evening snacks; therefore, they must provide themselves and their children with breakfast and lunch. Additionally, the neighborhood surrounding Haven House has a vast array of fast food restaurants compared to grocery stores, which can contribute to obesity.

**Planning**

**Nursing Diagnosis**

Based on the assessments completed last semester, the primary nursing diagnosis for this aggregate was established as deficient knowledge related to healthy nutrition as evidenced by
unhealthy food selection in residents’ rooms and statements from the social worker regarding unhealthy food choices made outside of the shelter. From this nursing diagnosis, the students formulated applicable nursing interventions to address obesity prevention. Our interventions included three educational sessions with emphasis on healthier fast food menu options, shopping on a budget, reading nutrition labels, controlling portion sizes, and the importance of physical activity.

**Alternative Interventions**

Last semester, the obesity prevention group discussed alternative interventions that included programs such as: *Let’s Move* and *Healthy People, Healthy Suffolk*. The students mentioned ideas of developing a food drive effort at Old Dominion University, involving local supermarkets to increase fruit and vegetable intake at the Haven House, and constructing a recipe book using the Haven House’s pantry items in a healthier way. Based on the students’ scope of abilities and time availability, the *Let’s Move* and *Healthy People, Healthy Suffolk* programs were determined to be successful but not appropriate for the needs of the aggregate. Therefore, to address the aggregates health issue of deficient knowledge, it is important to select interventions that will address the teaching objectives of the educational sessions.

The Obesity Prevention group created and modified three interventions to incorporate into teaching sessions delivered at Haven House. In addition to the three interventions, it is important to establish alternative interventions that will provide sustainability and successful outcomes for the Haven House population. The students agreed upon alternative interventions that may increase the knowledge among our population. The alternative interventions include ideas such as a utilization of the *Health Bites* tutorial website, training the ForKids staff members
or a social worker as *BodyWorks* facilitators, and constructing a vegetable garden for the Haven House residents to maintain.

The *Health Bites* tutorial website is an online interactive educational tool created by the Virginia Department of Health (2013), which provides education for the whole family regarding nutrition, exercise, and healthy lifestyle choices based on different topic areas. The topic area, beneficial to the aggregate’s families, includes several options under the cooking tab such as family mealtime, healthy weight in children, portion sizes for toddlers and preschoolers, junk food, snacks, and eating out. Additionally, this resource offers fun games and interactive videos on nutrition and ideas for simple, healthy recipes. Furthermore, Women, Infants, and Children (WIC) participants may complete modules to receive nutritional education credits verses physically attending a class, which is not only time saving but also easily accessible (Virginia Department of Health, 2013).

Another alternative intervention would be to train several social workers or staff members at ForKids as *BodyWorks* facilitators to incorporate aspects of the program into the shelter’s weekly required training sessions for the residents (U.S. Department of Health and Human Services, Office of Women’s Health, 2011). Additionally, having on-site *BodyWorks* trainers would improve the residents’ commitment with making lifestyle changes and allows them direct access to the subject matter expert when questions arise. Moreover, the intervention would facilitate consistency throughout the year, which may be impossible to achieve by the nursing students in the Obesity Prevention group due to semester turnovers.

A third alternate intervention was to create efforts in developing a community garden maintained by the residents of the Haven House. This idea would create accessibility for the residents to fresh fruits and vegetables. The community garden would decrease costs of
purchasing fresh items in grocery stores, as well as increasing intake of healthy snacks. According to the U.S. Department of Agriculture’s Economic Research Service (2013), the Haven House shelter and the surrounding community are located in a food desert, which means that the access to fresh foods is very limited. Therefore, with time, this project could evolve beyond the responsibilities of the shelter’s management and become a joint effort of the community residents. However, there are several barriers to this alternative intervention, which may prohibit its successful outcome. Such barriers include a potential lack of commitment to uphold the garden, not having adequate supplies to start and maintain the garden, and it is unknown whether the land’s fertility would be sustainable for a fruit and vegetable garden. This particular intervention was identified by the students as offering a long-term sustainability measurement for the shelter. The students attended an educational presentation in the Hampton Roads area to relay the information back to the shelter’s representatives. Further implementation can be accomplished with the next round of Obesity Prevention students due to time constraints. All of the above alternative interventions offer more opportunities for the students when planning obesity prevention education sessions. Some of these interventions offer more long-term sustainability options for the residents of Haven House and next year’s obesity prevention group may choose to build upon this foundation.

Planning: Fast Food and Shopping on a Budget Objectives

The objectives of the teaching sessions revolve around education and promoting increased knowledge related to healthy eating, exercise, and weight-related disorders. Further, more specific objectives for each teaching session are described in the teaching grids of Appendices A, B, and C. The first teaching session includes information on healthier food options at fast food restaurants and shopping for groceries on a limited budget. The fast food
intervention’s objective is to increase the aggregates knowledge of fast food menu items through the use of menu comparison and visuals of sugar, fat, and sodium content per specific menu items. At the end of the teaching session, the aggregate will be able to choose healthier menu options and establish a means for reviewing nutrition information before ordering. The intervention for shopping on a budget allows the aggregate to plan and budget a set amount of money per week for groceries, buying in bulk, and buying items near the end of their shelf life. At the end of the teaching session about shopping on a budget, the aggregate will be able to determine a set weekly or monthly budget for food items, plan ahead before shopping, and understand cheaper alternatives to high priced items that many do not know about. Specific objectives include 80% of the aggregate being able to state three diseases related to obesity and unhealthy food consumption, 100% of the aggregate can identify three unhealthy foods and beverages containing high amounts of salt, fat and sugar content and be able to choose three healthier alternatives, and 80% of the aggregate is able to locate and purchase cheaper, but still healthy food alternatives from the grocery stores and fast food restaurants. Further information regarding the teaching objectives, goals, and methods are described in detail in Appendix A.

**Intervention: Fast Food and Shopping on a Budget**

**Primary Intervention**

The first teaching session was held on March 18, 2013 at the Haven House and was divided into two teaching objectives. This first part of the intervention focused on the fat, sodium, and sugar content within popular fast food menu options from McDonalds, Burger King, and Kentucky Fried Chicken (KFC). Sugar content was also utilized from sodas, juices, teas, and energy drinks. The nutritional values for popular fast food menu items were placed on a tri-fold board with visual representations of the amount of fat and sugar content within each
The fat content was represented through Crisco and the sugar content was represented as sugar. The second part of the intervention focused on comparing fast food meal prices to meal prices at a local supermarket, such as Walmart, emphasizing the cheaper food options and ability to have leftovers for the next meal.

The fast food meal comparison teaching session was a primary intervention, in order to prevent obesity and protect healthy people from consuming unhealthy foods. The goal of primary prevention includes “protect[ing] healthy people from developing a disease or experiencing an injury in the first place” (Institute for Work and Health, 2006). The premise for the fast food meal comparison relates to the low-income population’s popular place of employment being at fast food restaurants. Because of the cheap prices, ready-to-eat foods, and easy access, it can be expected that low-income populations will both frequent these locations and purchase food from the restaurants. The intervention focused on teaching residents how to modify their food choices they make at fast food restaurants.

The students started the teaching session by weighing the Haven House residents, calculating their body mass index (BMI), and taking blood pressure readings. The students tried to take blood glucose readings but the testing strips were not compatible with the glucometers. The residents were provided a short information sheet which their values for weight, height, BMI, and blood pressure were given to them and included normal values for easy comparison. The bulk of the teaching session began with information about diseases associated with obesity and how the diseases relate to food consumption. For instance, hypertension is associated with high sodium intake; coronary artery disease is directly caused from high fat intake; diabetes mellitus type II can be caused by excessive sugar intakes. By relating the diseases to commonly consumed foods, the students worked to increase the knowledge base of
the Haven House residents. At the conclusion of the presentation on diseases, it was expected that 80% of the aggregate would be able to state three diseases related to obesity and unhealthy food consumption and identify three eating behaviors associated with hypertension, diabetes type II, and coronary artery disease.

The next section of the teaching session involved the tri-fold presentation boards which included visual representations of fat and sugar content and a bar graph of sodium content. Residents were encouraged to verbalize unhealthy foods that they consume while at work or during meal times. The students expected 100% of the aggregate to identify three unhealthy foods and beverages consumed containing high amounts of salt, sugar, and fat. The residents all received nutrition information packets for all foods at McDonalds, KFC, and Burger King. A quick session was utilized on the basics of reading a nutrition label to include paying extra attention to the caloric content, fat content, sodium, and sugar content. Utilizing these menus and nutrition packets, the students expected 100% of the aggregate to identify three healthy food and beverage alternatives that they could implement in their daily meal planning that contain less amounts of salt, sugar, calories, and fat.

The second stage of this teaching session related to shopping on a budget. For instance, how can the Haven House residents implement healthier foods into their diet while staying within a tight budget? The students compared two complete meals for a family of four: one from McDonald’s and one from Walmart. For two adults and two children, the price of a McDonald’s meal came to $18.00 for two value meals and two Happy meals. For the same family, the price of chicken, rice, and vegetables came to $12.00 with extra rice left over. The purpose of this section of the intervention was to illustrate to the Haven House residents, that even though fast
food is fast, quick, easy, and inexpensive, it still requires more money and does not offer “left-over” options for the next meal.

**Research**

Lucan, Barg and Long (2010) found that “low-income African Americans tend to have diets that promote obesity, morbidity, and premature mortality; are low in fruits and vegetables; and are high in processed and fast foods” (p. 631). Convenience and availability promoted the use of fast food restaurants for low-income populations. The easiness and close spatial distance allowed this group quick and hassle-free meals. Cravings also influenced this population to choose fast food over vegetables (Lucan, Barg & Long, 2010). Barriers to fruit and vegetable consumption included preparation time and lack of freshness (Lucan et al., 2010). With the results of this study in the minds of the students, it is unrealistic for people in general to discontinue certain ways of life which they are accustomed to, such as eating at fast food locations. However, by acknowledging that this population frequents such restaurants, the students are in a position to influence the specific choices they make within the restaurants. For instance, the students demonstrated that ordering a side of fries is unhealthy; however, the students explained to the residents that substituting French fries for sliced apples offers an easy way to incorporate fruit even when eating out.

The students also based the intervention off of a study in which fast food employees detailed how each made food choices. This study described many themes as to why employees at fast food restaurants chose to eat the food within their place of employment. Because of the hectic nature of a fast food environment, time was the biggest constraining factor when making food choices (Mulvaney-Day, Womack, & Oddo, 2012). Even though an employee is supposed to have a set break time of 15-30 minutes, reality is that it does not happen often enough to grab
food and sit down to eat it. Employees recognized that salads were the healthier option, but cited that salads took more time to eat compared to grabbing a small box of chicken nuggets (Mulvaney-Day et al., 2012). Additionally, the time aspect of choosing fast food meals relates to the employees ability to continue working. One does not have to stop his or her day to make a meal. Instead, one is able to carry on with the task at hand. Also this study found that fast food employees often get burgers, nuggets, and French fries for free, whereas healthy options like fruit and salads cost money, even though the price is reduced (Mulvaney-Day et al., 2012). Another employee stated that working the grill or fry station for eight hours per day desensitizes one to the unhealthy ingredients within the food (Mulvaney-Day et al., 2012). Instead, they may snack throughout the day on fries. One theme that emerged that the students wished to inform Haven House residents related to the employees lack of knowledge about the nutritional value/content of the food prepared at these locations. This study showed that some employees assumed that even if the food was bad, eating it in moderation was acceptable (Mulvaney-Day et al., 2012). The researchers implicated that each intervention to combat obesity must relate to the populations’ eating behaviors specifically, which is why the students chose to document the food options at KFC, McDonald’s, and Burger King. All three of the restaurants are within walking distance to the Haven House shelter and such locations typically employ low-income individuals. The students utilized this knowledge to create this fast food intervention to encourage health-enhancing behaviors at these locations instead of health-undermining behaviors (Mulvaney-Day et al., 2012).

**Barriers to Implementation**

Unfortunately, being the first intervention, the students were not able to get a first glance at the characteristics of the Haven House population to include specific details of each person’s
employment. Instead, the students focused the fast food intervention by utilizing the restaurants within walking distance to the shelter. The students also utilized the Haven House’s social workers to describe the population, the type of employment most residents have, and the health characteristics of the population (weight status, marital status, past medical histories, chronic diseases, etc.).

Another barrier to implementation included the Haven House’s rapid turnover of residents. The residents living at Haven House during the first semester’s assessment were not the residents during the actual implementation of the intervention. Due to the nature of the shelter, it will always be difficult for students to plan specific interventions based on an ever-changing population.

Finding another room or location within the house may be more ideal for some of the interactive portions of the interventions. The dining room was ideal for the teaching aspect of the session but for group discussions, it was easy to lose the interest of the residents in the back of the room. If it is a nice day outside, the students could suggest holding the intervention outside, especially if it is one that involves physical activity.

It was also noticed that some of the social workers, while as involved as they could be, still seemed disconnected with the population. It was apparent by some of the residents’ lack of motivation. If the students could work out a schedule with the social workers to visit the Haven House once every week or two, the students may have more of an impact in the residents’ lives. The residents may become more motivated if they have a constant source of encouragement that can be provided by the students.
Evaluation: Fast Food and Shopping on a Budget

Plan for Evaluation

The teaching grid was utilized as a means for evaluating the progress of the implemented intervention. The objectives are detailed above (as well as in Appendix A) to include identification of obesity related diseases, identification of unhealthy eating behaviors, identification of healthier choices, and identification of cheaper alternatives found in local supermarkets. Outcome of the intervention include verbalization of the desire to make healthier choices, utilizing the pre-intervention assessments of height, weight, BMI, and blood pressure to make necessary changes, and verbalization that local supermarkets offer a greater quantity of food for a lower price as compared to fast food restaurants. Traditional pre- and post-tests were not utilized to gauge understanding. Instead, the students utilized question and answer/discussion formatting to gauge the understanding of the teaching session. The rationale for this type of evaluation relates to the high number of under-educated residents at the Haven House and the high population of those with less than a high school education. The students determined that there is a high probability that some residents may not know how to read, and therefore, a verbal question and answer format would be the easiest way for the students to determine comprehension of the material presented. To evaluate the understanding of how diseases are the result of eating behaviors, food cards were passed out to each resident. The students went around the room and asked each resident what disease the food item pictured on the card may cause. For example, a picture of French fries and salt should trigger hypertension due to high levels of sodium. To evaluate the resident’s knowledge of sodium, fat, and caloric content within fast food meals, visual representations were utilized to quantify how large 500 grams is, etc. These tri-fold boards help visual learners see the differences between a Big Mac
and a Fruit and Yogurt Parfait. Visualization of fat content in the form of Crisco can alter the perception of their favorite, but unhealthy, food to influence choosing another option. Again, the students went around the room and had each resident verbalize a sample meal they eat at fast food locations. After discussion about the recommended daily allowances for each of the nutritional contents, the same residents verbalized a different, healthier food option that they would be open to consuming at their next visit. The evaluation for the shopping on a budget aspect of the intervention was done by having the residents determine price values for chicken, rice, and vegetables compared to the prices for two value meals and two Happy meals. Most of the residents voiced surprise that Walmart offered so much food for such a cheaper price as compared to McDonald’s. The students discussed how to read the fresh meat label to determine price and nutritional content. Fresh fruits and vegetables were still hard to obtain due to price constraints, but emphasis was placed on canned fruits and vegetables still being healthier alternatives as compared to fast food options.

Limitations of the Evaluation Process

Some of the residents were very hesitant to discuss their shortcomings towards healthy eating. Many residents verbalized that they already eat healthy. However, this intervention was still important for continuing to live a healthy lifestyle. These issues can be resolved if, instead of focusing and assuming all low-income residents eat poorly, focus on the aspect of preventing obesity, preventing diseases, and enhancing everyone’s quality of life. By coming from a different, more positive angle, the residents might view the students’ efforts more positively as well.
Planning: Nutrition Label Reading and Portion Control Objectives

The second teaching session includes information about nutrition label reading. Label reading is an important aspect of healthy eating. At the end of the teaching session, the aggregate will verbalize a broad understanding of calories, fat, sodium, sugar, and carbohydrates as evidenced by verbalizing and selecting appropriate food choices based off nutrition label samples and a pretzel activity. The session will also include information to plan daily healthy meals by utilizing the daily values chart. At the end of the session, the participants will be able to identify the six key components of a food label, state the importance of each component, and verbalize the importance of limiting certain food items. The specific objectives and measurable outcomes for the Nutrition Label and Portion Control can be found in Appendix B.

Intervention: Nutrition Label Reading and Portion Control

Primary Intervention

The second intervention was implemented on March 28, 2013, and focused on educating the population on healthy eating, nutritional education, recommended daily nutrition goals, reading a nutrition label, and portion sizes. Education regarding how to read a nutrition label was performed because research shows that reading nutrition labels promotes diets that are lower in fat and total calories. A study conducted by Antonuk and Block (2006) demonstrated that participants who were educated about nutrition labels had a tendency to eat a decreased amount of total calories. In addition, these researchers also discuss the trends in perception of portion size within our society. Manufacturers have increased the size of products, which causes an increase in consumer consumption. Even when food is less palatable, consumers tend to eat more food when the packaging is larger (Antonuk & Block, 2006). Therefore, education regarding portion control is important.
Research

Education regarding portion control was supported from research conducted by Washington, Reifsnider, Bishop, Ethington, and Ruffin (2010). These researchers found a connection between cultural views on portion sizes and childhood obesity, where “a child may be encouraged to consume more when accompanied by a parent than when eating alone” (Washington et al., 2010, p. 31). Some cultures use food as an expression of love and this study found that mothers who sat with their children during meal times greatly influenced children’s food intake. Mothers in the study who were overweight related food with positive emotions and tended to have children who were also overweight. The results demonstrate that education on portion sizes is necessary in preventing childhood obesity. With education on portion sizes, mothers can act as role models in providing themselves and their children with appropriate portion sizes. Results of the study also suggest that families should find other activities, such as exercise, to express positive emotions between each other, which is addressed during the exercise intervention (Washington et al., 2010).

The intervention was a one-hour teaching session for the residents of Haven House with objectives to teach the participants how to read a nutritional label, as well as, how to identify appropriate portion sizes. The teaching plan was broken down into five different objectives. The first four objectives focused on teaching the aggregate how to read the components of a nutritional label: calories per package, calories per serving, daily-recommended caloric intake, and important nutrients to restrict and increase. The students also discussed the daily recommended intake for certain nutrients such as total fat, saturated fat, cholesterol, sodium, fiber, vitamins, and minerals. Disease processes associated with high intake of certain nutrients such as sodium, fat, cholesterol, and sugar were taught. Diabetes, hypertension, and
coronary artery disease were the main disease processes discussed. In addition, the benefits of a diet high in fiber, vitamins, and minerals were also taught, emphasizing the impact on digestive health. The fifth objective of the teaching plan included identification of proper portion sizes with the use of a portion guide focused on household reference items. Further information about goals, objectives, and methods of this teaching session are found in Appendix B.

**Barriers to Implementation**

There were several barriers that arose during the intervention. A few women were inattentive and had their heads down on the table during different points of the session. In addition, some of the teaching points stimulated side conversations between the women, which caused the students to have to speak over them. These side conversations also interrupted the teaching sessions and forced the students to stop and refocus the group. The room the session was held in did not have good sound quality; therefore, these side conversations were amplified causing the room to be very loud and the conversations to be very distracting to the presentation. Cell phones were also a distraction during the presentation and it was obvious that people were texting and browsing the Internet.

In addition, one woman held preconceived notions about the value of nutrition and the role that parents play in influencing their children’s nutritional habits. She made statements that contradicted the foundation of the presentation such as the fact that her mother provided her with healthy options and she now does not make healthy choices in her meal selections. Her personal beliefs were expressed at the conclusion of the teaching session, which included that if one does not expose a child to unhealthy eating, he or she will overindulge and make poor decisions in rebellion.
**Evaluation: Nutrition Label Reading and Portion Control**

**Plan for Evaluation**

The teaching plan, complete with objectives, expected outcomes, and evaluation techniques can be found in Appendix B. The first objective of the lesson plan was to teach the aggregate the difference between a single serving size and serving size per container. To evaluate the aggregate’s understanding of single serving sizes, the students performed a pretest by asking the participants to serve themselves the amount of pretzels from a bowl that they believed represented a single serving before the start of the teaching session. The students then demonstrated the location of a single serving size on the nutrition label and the serving size per package using a visual aid of a nutritional label. After discussing single serving sizes, the students performed a posttest by having the aggregate note the serving size on the nutritional label to determine how close they were to the single serving sizes of pretzels. A majority of the participants chose an amount very close to the actual serving size.

The students distributed nutritional labels for common foods found in resident rooms in the Haven House including Chef Boyardee Beefaroni and Jimmy Dean’s biscuits. A nutritional label of Steamfresh Rotini and Broccoli was also provided to demonstrate a healthier food option. The group provided demonstrations for finding the location of calories, total and saturated fats, and restricted and healthy nutrients on the Chef Boyardee Beefaroni nutrition label. The students then asked the participants for a return demonstration of the location of the same nutrition label components on the Jimmy Dean’s biscuits to assess their learning. The residents successfully identified the nutritional components.

The students discussed the location of the footnote on the nutritional label and the total daily values for nutrients listed in the table. Education was provided to teach the participants
how to calculate daily fat intake. A demonstration to calculate total fat and calories was given using the Chef Boyardee Beefaroni nutrition label. The participants then gave a return demonstration using the Steamfresh Rotini and Broccoli nutrition label. A discussion compared the difference in total fat and calories between the two options to encourage the residents to make healthier food choices. The residents were asked to identify foods that offered various nutrients. For instance, carrots offer a good source of Vitamin A, while milk is a good source of calcium. The residents’ responses indicated sufficient knowledge of each nutrient.

The final objective addressed portion sizes, specifically for foods that lack nutrition labels such as meats, vegetables, fruits, and homemade items. Using a portion size guide from WebMD (Zelman, 2012), demonstrations were given for portion sizes in relationship to common household items such as a baseball to represent one cup of cooked vegetables. A visual demonstration of a checkbook was given to represent three ounces of fish and a golf ball to represent two tablespoons of peanut butter (Zelman, 2012). The discussion included portion control through plate division of vegetables, proteins, and starches. In order to encourage proper portion size selection, wallet size portion guides were distributed to participants for reference. Additionally, a more in depth poster regarding portion sizes was left with the staff of the Haven House to display in the dining area for residents to reference. Through the discussion of portion sizes, the students educated the mothers on the importance of being a role model for their children in regards to portion sizes and nutritional selections. Making healthy food choices for children at an early age allows mothers to have an impact on the child’s health and weight in the present and in the future.

**Limitations of the Evaluation Process**

The main limitation in the evaluation of the nutrition and portion size intervention
focused on the portion control objective. There was no pretest performed to discover previous knowledge held by the residents regarding portion control. Additionally, the students did not perform post-testing on this section of the intervention. Instead, the students solely provided education and visual demonstrations of proper portion sizes rather than including a participation section. In order to resolve this issue, the students could have performed pre-testing by asking residents to identify what portion of their plate should contain vegetables, protein, and starches. After the intervention, the students should have had residents give a return demonstration of plate portion sizes by drawing on a plate the amount of vegetables, protein, and starches that should be consumed at every meal. Based on evaluation, the participants were able to meet the objectives of the intervention. Feedback from the residents after the intervention included an interest in portion sizes in regards to proper plate division. Based on this feedback, the students supplied Haven House with the portion size poster and made recommendations to the social worker to display the poster in the kitchen. The students also relayed the participant’s interest in portion sizes to the social worker for future education.

**Planning: Physical Activity Objectives**

The last teaching session was an interactive exercise session where the students teach and engage the aggregate in a basic exercise routine that is able to be incorporated into their daily lives. Emphasis during the teaching was be placed on getting participants up and active, and providing them with encouraging tips on family physical activity time outdoors and indoors. Objectives of the physical activity session include 85% of the clients are able to state three benefits of physical activity, 90% of the clients are able to demonstrate proper and safe exercising techniques, and participants will verbalize potential barriers about incorporating
exercise into their daily lives. Further explanations of objectives, goals, and teaching methods can be found in Appendix C.

**Intervention: Physical Activity**

**Primary Intervention**

The objectives utilized to accomplish interventions of the physical activity class session at Haven House were considered to be primary health promotion interventions. For this intervention, the group designed three objectives to provide the residents of the transitional house with information on how to incorporate more physical activity into their daily routines. Based on the information from the health surveys, the interventions could also be considered to be secondary prevention, as one of the residents was obese, six were overweight and one was a diabetic. In order to gain participants’ attention, the teaching session was created based on the principles of adult learning and required the residents to actively participate in demonstrations and discussions.

The goal of the physical activity session was to provide the Haven House residents with basic information and instructions necessary to encourage a safe exercise routine. The teaching session began by presenting the residents with information about the importance of physical exercise. Each resident received a copy of the materials to take back with them. Also, during that time the group reviewed information on nutritional labels and food portion control which was taught the previous week. The group utilized a poster retrieved from the *We Can!* campaign called *U R What U Eat* that would help the residents make healthy food choices every day (U.S. Department of Health and Human Services [U.S.DHHS], 2013a). The students provided residents with safety information about exercise, such as how to measure a pulse and the
importance of staying well hydrated. The group also taught the residents how to calculate each person’s target heart rate (SparkPeople, 2013).

The second objective of the session was accomplished by demonstrating to the residents a set of ten simple stretch exercises to incorporate in their daily routine (American Academy of Orthopaedic Surgeons, 2010). Here, the residents were asked to actively participate in a 20-minute exercise where they performed the ten stretching exercises. Additionally, the group gave residents safe, simple, and low budget tips on how to use household items such as cans of food or empty milk bottles as exercise equipment. Lastly, the group discussed with the residents possible barriers to physical activity routines. The group offered suggestions on how to stay committed to physical activity by using an activity log or a journal. A sample exercise log was presented so that the residents could track their family’s recommended amount of physical activity on a weekly basis (U.S. DHHS, 2013b). Another modified, detailed log was given to use as an individual physical activity tracker (CDC, 2012b).

Research

Physical activity is directly related with improved health and well-being. It is currently recommended that for adults to perform 150 minutes of moderate-intensity physical activity (CDC, 2011b). Parents are in a position to serve as role models and encourage kids to maintain healthy habits and stay active. A joint family physical activity strengthens and connects its members better (U.S. DHHS, 2013c).

In a study by Frenn, Pruszynski, Felzer, and Zhang (2013), the authors provided parents and children with interactive online modules regarding healthy eating and physical activity education. Interventions presented in the study included videos for children and online components for adults requiring them to identify healthy choices from fruit and vegetables. The
results of the study showed that “parental increase in physical activity correlated with an increase in child physical activity” (Frenn, Pruszynski, Felzer, & Zhang, 2013, p. 70). This statement was the basis for the efforts of providing the Haven House residents with the physical activity teaching session as a tool that would help them initiate activities with their families.

In another study by Kaiser and Baumann (2010), the authors identified the most common personal barriers to healthy behaviors and physical activity were lack of motivation and lack of time. Therefore, the group chose to incorporate weekly activity logs to help residents plan and track their weekly physical activity. Based on a study by Carels, Coit, Young, and Berger (2007), daily and moderate-intensity exercise has a positive impact on mood enhancement. The study showed that, overall, participants were less likely to engage in exercise when feeling negatively rather than when experiencing feelings of optimism. Additionally, the enhanced mood activity helps participants in maintaining a commitment to physical activity (Carels, Coit, Young, & Berger, 2007). The study’s participants exercised during various times of the day. The results showed that a moderate-intensity physical activity of about 57 minutes per day had the biggest influence on maintaining participants’ positive feelings. Moreover, the authors recommended for the participants to start a physical activity journal in order to help them deal with physical activity barriers such as decreases in motivation (Carels et al., 2007). The information from these studies supports the current physical activity recommendations and was used to introduce the interventions by the students. Following the interactive 30-minute exercises during the intervention, the residents expressed feeling better and were more enthusiastic about doing the exercises with their families.

**Barriers to Implementation**

According to Bastable (2008), “barriers to teaching are those factors that impede the
nurse’s ability to deliver educational services” (p. 620). Examples of such obstacles could range from shortage of time to acquire learning, limited literacy, inefficient health literacy, or behavioral characteristics of the client such as motivation and willingness to learn. Additional barriers can include absence of support and continuous encouragement provided toward the client, inconvenience of attending teachings, and the learner’s denial of a need for instruction on the topic (Bastable, 2008). During the implementation phase of the health teaching session, the group was faced with environmental factors such as the temperature of room, lack of space, and clients being improperly dressed for participation. The barrier of improper clothing was addressed by allowing time for the clients to return to their rooms to change into adequate clothing. Rearranging the furniture allowed for maximum use of the space in order to provide a safe environment to perform the stretching exercises. The increased temperature aspect was addressed by opening windows to allow for greater air flow and incorporating frequent water breaks.

The educational barriers encountered amongst the residents were consistent with limited literacy and inefficient health literacy. These were addressed by providing basic health teachings, using simple health terminology, increasing the amount of visual effects, and providing demonstrations rather than lectures. Barriers, such as time and motivation, were addressed by keeping the teaching under the length of an hour and making it very interactive to the point that the clients wanted to participate and engage in the activities.

Finding enough time in a day to complete the recommendation of 60-minutes per day of exercise may become another barrier. There were participants that expressed this concern and, therefore, the group provided activity logs as examples of how to track the exercise times. Another identified barrier was the fact that the physical exercise class had two additional
new members of the transitional house that seemed confused with information presented. A possible reason to that is that each of the sessions was built on the information from the previous sessions. Two participants were unable to take an active part in the exercise portion of the session, which could impact their retention of the information due to impaired participation and interaction.

**Evaluation: Physical Activity**

**Plan for Evaluation**

A health teaching grid was constructed to provide a plan for evaluation of the project (see Appendix C). This plan described objectives, content outline, method of instruction, resources, and time allotted for each portion of the teaching sessions. The purpose, goal, and methods of evaluation were included within the health teaching grid. A content evaluation process was conducted throughout the teaching session with methods such as discussions, question and answer periods, and demonstration with return demonstration styles. The group discussion method is effective in both the affective and cognitive domains. The demonstration-return demonstration styles of instruction are effective and enhance cognitive and affective learning by facilitating the instructor’s role as a coach verses an evaluator. This allows for a more relaxed environment and places the learner as an active participant.

The content evaluation “is to determine whether learners have acquired the knowledge or skills taught during the learning experience” (Bastable, 2008, p. 564). This was the rationale utilized for incorporating the question and answer method of evaluation into our teaching session (see Appendix D). A week and a half after the teaching session was completed, the group conducted an outcome/impact evaluation by asking the residents what they had learned from the
session. The residents were asked whether or not they had incorporated the teachings into their lives or if they made at least one behavioral change.

The physical activity students asked other members from the Obesity Prevention group to assess the opinions and effectiveness of the teaching session. This particular session proved to be the most interactive of all three classes. The residents were the most engaged and interested with the content, especially when one participant requested permission to change into proper exercise clothing. Another participant could not actively exercise with the group due to being one day post-hysterectomy. However, the resident made sure to actively answer questions and engage in the discussions about the importance of exercise and identification of barriers physical activity.

**Limitations of the Evaluation Process**

The major limitation to the evaluation process of the physical activity class was that it was mainly done orally. Due to a large turnover rate at the transitional Haven House, the group decided to avoid using a pre-test method to evaluate the residents’ knowledge regarding the interventions as these could largely differ between the classes. Similarly, the group decided to also abandon a post-test method of evaluation as the attendance between the given teachings also varied. In contrast, the group concentrated on using a question and answer approach after each of the objective’s content in order to discover any gasps in residents understanding of the content. However, the oral evaluations provided very broad and non-specific data. Therefore, creating a pre- and post-test specific to each teaching session would have more concrete and detailed evaluation information.

Time constraints also impacted the return demonstrations of the exercises. There was a total of eight participants and due to the limited time, the group was unable to evaluate the
performance of the last two stretch exercises and specific individual technique. A possible recommendation would be to provide a shorter routine but ensure that each participant performs the exercises safely and correctly. Videotaping the session may also provide an effective way of evaluating the residents’ performance and provide feedback; however, this would require consent forms. The time constraint can also be viewed as a limitation when it comes to the available dates to actually perform the teaching session. It was apparent that a large portion of the material was new to the audience and performing an additional session as reinforcement would be beneficial. A recommendation for this would be to create teaching plans for specific classes during December, which would allow for better scheduling of the sessions during the spring time.

Further limitations also exist due to the fact that the teaching session performed was done without a formal assessment of the residents’ willingness to learn the content. This is similarly associated with the lack of assessment data that would determine the residents’ interest for the presented content. The lack of evaluation for the residents’ readiness to learn may not be easily improved in the future, as the ForKids organization requires all residents of the transitional house to attend educational courses as a part of their stay conditions. A recommendation for this aspect would require a closer relationship with the shelter to gain more insight into the residents’ interests.

A second evaluation was performed a week and a half after the teaching session. Residents were asked how they felt about the physical activity intervention. It was truly visible that some of the new residents had no knowledge of the intervention and their responses could not be utilized in the overall evaluation of the group efforts.
Overall Evaluation

Recommendations for Further Action

Next year’s Obesity Prevention group should work to implement more population specific interventions. Due to high turnover rates of the aggregate, planning specific population interventions is difficult. However, if students were able to meet with the aggregate two weeks in advance of a teaching session to assess learning needs, the interventions can be more specific to actual aggregate learning needs. This will be addressed during our presentation during community health day to the next set of rising seniors who will hopefully build upon these recommendations.

Additionally, the group recognized that one of the identified alternative interventions, the community garden, offers a potential of a sustainable intervention for the ForKids residents and the surrounding community. According to Kaiser and Baumann (2010), a community garden initiative encourages social and community interactions as well as promotes community climate for healthy behaviors. With this view in mind, two members of the group participated in the community garden workshop on April 20, 2013, to build the foundations for a collaborative partnership between the Virginia Beach Mayor’s Action Challenge for a Healthy Lifestyle and Environment, Virginia Beach Master Gardeners, and the Virginia Beach Youth Community Action Team. The presentation, Plant It, Grow It, Eat It, was planned to educate the community on how to start a garden, how to plant vegetables, and how this facilitates community involvement (City of Virginia Beach, 2013).

Implications for Community Health Nursing

Community health nursing provides an important function to the Haven House community. This is a vulnerable population comprised of homeless, mostly single women with
children who are without stability in their lives, financial resources, and medical insurance. Community health nurses provide primary interventions regarding health education. These interventions are valuable resources for the community and can help prevent and identify a variety of disease processes, including childhood obesity. Community health nurses can empower this aggregate to take control of preventable health issues, which may be one thing that they can control in their unpredictable circumstances.
References


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