Emporia: Changing the Lives of a Community

Jennifer Keith, Gina Kime, Tiffany Kinker, Pamela Johnston, Brittany Jones, and Jodith Jones

Old Dominion University

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As nurses, it is common to see many death attributed to changeable risk factors. It is not surprising to see someone with lung cancer have a history of smoking 3 packs a day for 20+ years. It is also not surprising to see cardiovascular disease in someone whose main dish was fat and cholesterol for their whole lives. Lifestyles are changeable factors of people’s lives that can make a dramatic influence on their health. Two of the most important risk factors for a lot of health issues include diet and exercise. Unfortunately, as simple as it sounds, to change someone’s lifestyle is harder than it may seem.

Cardiovascular disease (CVD) is an issue all over the world but can be managed for the most part by following an active and healthy lifestyle. A lot of these unhealthy behaviors are carried over from their childhood because that was what they did then, so they will continue doing it now. Additionally, the way children are brought up today is dramatically different than it was a decade or two ago in regards to video games and other non-active activities. Lu, Kharrazi, Gharghabi and Thompson (2013) go as far to say that childhood obesity is a global epidemic.

Today, cardiovascular disease is a leading cause of death in the United States. (Centers for Disease Controls and Prevention, 2010) To combat this community issue, the solution needs be able to change people’s lifestyles. The easiest way to do that would be to start in childhood. By teaching a middle school gym class about possible healthy and active lifestyle changes, it would set them up for a healthier and more active life later on when cardiovascular disease becomes a real issue.

This project hopes to teach E. W. Wyatt Middle school kids in Emporia, Virginia about cardiovascular disease in terms that they can understand and how their behavior now can affect their health later. The ultimate goal would be to reduce the number of deaths associated with cardiovascular disease in the long term in Emporia. In the perspective of the community nurse, it would be an ultimate goal to not have to primarily just treat cardiovascular disease but to play the main role in the prevention of it. This city is an ideal candidate for a CVD prevention project because of its high occurrence of CVD in the population.

Assessment

Emporia is a city in Virginia with approximately 5,700 residents. (Community Health Indicator, 2009) According to the Centers for Disease Control and Prevention (CDC), this city has the highest rate of avoidable strokes and heart disease in the state of Virginia. (Richmond Times Dispatch, 2014) In Emporia, there are 130 (per 100,000 people) deaths related to cardiovascular disease. Compared to surrounding areas, this number is extremely high. For example, Richmond has a death rate of 91.7 (per 100,000 people), Henrico County has 48.9 and Fairfax has 26.5 deaths. These statistics prove that there is a definite need for improvement.

Geographically, the city of Emporia is situated about sixty-five miles south of Richmond and eighty miles west of Norfolk. Demographical information about Emporia includes that the population is 55% African American and 42% Caucasian. (Community Health Indicator, 2009) The majority of people in this city make between ten and forty thousand dollars per year with the mode being in the ten to twenty five thousand range. This translates to a low income community. The educational statistics for this area show that only sixty-six percent finish the eighth grade and fifty-six percent finish high school. While thirty percent finish some college, only seventeen complete their associates’ degree. (Areavibes, 2010) Overall, Emporia includes a large population of low income and low education level families which puts them at higher risk.

According to Winkleby, Jatulis, Frank and Fortmann (1992), the most accurate indicator for increased risk for CVD is the level of education. This finding holds true in Emporia since the CVD is higher here than in other parts and a large part of the population does not have a high school diploma. A ten year study actually revealed that non high school graduates can be up to fifty percent more likely to have CVD. (Franks, Winters, Tancredi, and Fiscella, 2010) This same study revealed that families in the low income bracket were also more likely to have cardiovascular problems compared to their higher income counterparts due in part to the extra levels of stress on the heart by being raised in a low income environment. People with lower incomes and educational levels also have limited access to health care and generally do not adhere to medication regimens and health plans. Additionally, according to the American Heart Association (2013), African Americans are at high risk for CVD than any other ethnicity and Emporia has a African American population greater than fifty percent. Although Emporia has experienced damaging effects due in part to living in such an environment, there is a wealth of opportunity for developing a community teaching project to negate these socioeconomic risk factors.

The need for a project is very evident in the demographic and statistical information but it is also evident in the lifestyle of teens today. The Centers for Disease Control and Prevention (2013) have targeted specific behaviors in children and teenagers which lead to obesity. Obesity and physical inactivity can ultimately lead to cardiovascular disease. Today’s youth spend their time much differently than they use to. Youth Risk Behavior Survey indicates that among U.S. high school students 15% did not participate in at least 60 minutes of physical activity in the past week. It also revealed that 52% did not attend physical education classes in the past week; 33% watched television 3 or more hours per day on an average school day; 41% used computers 3 or more hours per day on an average school day; 4 6% did not play on at least one sports team run by their school or community groups in the past year. (CDC, 2013) These numbers represent the growing physical inactivity of school age children that later on translates into their adult life.

In response to the Youth Risk Behavior Survey, several needs in high school students with regard to promoting physical activity were suggested and enforced. Today, 95% of U.S. high schools require students to take physical education as a required course and 45% of U.S. high schools offered opportunities for the students to become involved in physical activity clubs or sports. One third of U.S. high schools taught physical activity related topics in required health education courses. (CDC, 2013) Based on these high school requirements, the priorities identified are requiring physical education courses and strongly encouraging involvement in extracurricular physical clubs or sports. These steps are important when tackling the growing problem of cardiovascular disease but there is still much to do. By getting in touch with children before they go to high school will engrain a type of lifestyle that will then be reinforced by the community efforts later on in high school.

When promoting physical activity in youth, it is important to evaluate how they feel about exercise and how they plan to incorporate it in their life as a permanent behavior. Interventions can be better geared towards the students based on their opinions and review of physical activity. The main theme related to motivational factors was that physical activity should be “fun.” A student interviewed in a survey said, “I think it’s [physical activity] fun and like if you’re at home all day, it’s great to get out for a couple of hours (Belton, O’Brien, Meegan, Woods, & Issartel, 2014).” Barriers to physical activity were lack of time, distance, and physical education related factors such as competitiveness and lack of choices. To illustrate this point, one student described how he perceived physical education to be. “PE: ‘It’s very like; only the team can play, you can’t really choose how you want to do it, and you don’t get to choose what you do.” And another student, “the guys played and it just got really competitive and it was not fair.” (Belton, O’Brien, Meegan, Woods, & Issartel, 2014) The opinions of these adolescents are important to grasp in order to prioritize their needs and create a teaching project geared towards their needs. The focus of the teaching project should be to make our physical activity intervention convenient, fun, and most of all, a permanent part of the teenager’s life.

Planning

A healthy diet is a major factor in reducing your risk of heart disease (National Institute of Health, 2013). Adding exercise will decrease your risk even more. The sooner we can teach students this concept, the better. The plan is to meet with the students at the start of the year, during their health and physical education classes and discuss nutrition and physical activity. There will be a monthly check-in with the students for six months that includes a presentation, an activity and a mini post quiz. The main goal for these presentations will be to teach the students how to be healthy by proper nutrition and exercise.

At the beginning there will be a two part baseline test to determine the level at which the students activity levels are and their nutritional lifestyles. The first part of the survey will include questions about how often they eat fast foods, vegetables, fruits, fried foods and junk foods. The second part of the survey will include questions about their physical activity, such as how much exercise they get, do they know how much exercise they need, and what kind of exercise they do. Secondly, we will complete a short activity test. This test will include the student performing as many laps around the gym, sit-ups, push-ups and jumping jacks they can in one minute. After collecting the surveys, they will show who is at high, moderate or low risk for heart disease. These will then be compared to the final posttest given at the end of the six months.

There will be multiple presentations, one every months, which will include topics such as what is CVD, the relationship between food and energy levels, difference between the types of fats, atherosclerosis and what causes it. During these nutrition presentations, the students will learn healthy alternatives and the impact it can have on their life. The students will begin to understand that although they may feel healthy; they really do not know what is going on inside their bodies and the damage they are causing.

Throughout the presentations there will be a plethora of handouts that include pictures of health versus unhealthy foods and the foods that will give us energy versus rob us of energy. During the atherosclerosis teaching session, there will be a picture of a healthy heart and a heart damaged by atherosclerosis. This will benefit the visual learners to ensure they are learning the best way.

As for the physical activity portion of the presentation, the students will be reminded of how much and what kind of physical activity they need. They need to learn to put down the videogames and enjoy any activity that will raise the heart rate. There will be an interactive discussion about why exercise is important and how it correlates to cardiovascular disease.

In the beginning there will be a demonstration of many different types of exercises that are easy to do in essentially any type of setting. This type of intervention will help those who need to do an activity to learn. This can be jumping jacks, crunches, push-ups, planks, running in place, and even dancing. Other activities should also be explained to the students as exercise, such as taking the stairs, playing with the dog, washing the car, playing with siblings, and riding a bike. The purpose is to provide many alternatives that the students will be able to choose the ones that they find the most fun, and hopefully will stick with for years to come. After showing the exercises, it is important to stress the importance of doing them for at least sixty minutes so it may be beneficial for them to pick four to five favorite activities and do them every day.

As for the environmental considerations, the middle school gymnasium will provide adequate space for the students to perform the exercises and will provide enough teaching space for the presentation about nutrition and exercise. The students will receive handouts so they can follow along during the presentation. In addition to that, there will be a need for a PowerPoint presentation for each presentation and also a projector and screen.

Evaluation

At the completion of our teaching lessons at E.W. Wyatt Middle School in Emporia Virginia, we will evaluate the program by ensuring our objectives were met through immediate and ongoing timeframes. This will be accomplished monthly following each class over the course of 6 months through quizzes, active discussion with questions and answers, along with group participation in playing games designed for this class and physical exercise activities.

The students will receive a pre survey to complete before any formal teaching begins to obtain a baseline assessment. After each teaching presentation, there will be an interactive game of either Jeopardy, Family Feud or TIC TAC TOE, followed by a quiz to measure effectiveness of the teaching. At the completion of the program, students will receive a final posttest to measure the success of this classroom intervention along with a survey to assess the student’s receptiveness to continue on with this education and build upon the principles laid down at this basic level.

By the end of the 6 months, the following objectives will be met: Nutrition objectives number one includes seeing a 75% decrease in fast food consumption. The baseline number from the first test will be compared to the post test at the end of 6 months.

Nutrition objective number two is the ability of having the students verbalize three foods high in saturated or trans-fat. This objective will also be measured by the final test by a fill in the blank form of a question.

Nutrition objective number three is having the students identify a healthy heart versus a heart damaged by atherosclerosis. All of the students enrolled in this series will be able to properly identify these photos on a posttest and in a Jeopardy game, thus giving the success of this objective a 100% success rate.

The final objective for the nutrition section will address the student’s ability to properly name and identify foods that fuel the body verses foods that deplete and drain a person’s energy. The success of this objective being met will be measured through the fun game of Family Feud and the final test by having 90% of the students answer correctly.

The mini quizzes after each presentation will be peppered with these topics throughout these lessons to reinforce the material for greater retention and recall at later stages in the students career. The goal of making the game show idea is multi-faceted in measuring the success of these classes. These games encourage fun when learning with a goal of increased knowledge.

As for measuring the physical activity part of the project, there are four objectives as well. Objectives one through three consists of stating back information. Objective one is the ability of the students to state three important facts of the importance of physical activity, objective two is stating four different types of physical activity and objective three is the ability of the student state three ways to increase exercise for a minimum of 60 minutes. These objectives will be measured immediately following each lecture through interactive games of TIC TAC TOE, Jeopardy and Family Feud, as 90% of the students are able to actively participate and answer these questions correctly. These principles will be sprinkled throughout the class; therefore, the repetition will help the children retain this information, as it will be incorporated in the post quizzes monthly.

Objective number four is related to a physical test the children will take at the beginning of the class and will repeat at the conclusion to assess improvement of physical agility testing. The goal is to have the children improve by 50% through practice and increased stamina.

The success of this overall program will be assessed through surveys before the series begins and again in 6 months, pre and post lecture quizzes, active participation within the class lecture through answering of questions during the game show competitions and lastly during the markedly improved physical activity score of the student. Due to the fun and interactive nature of this series our goal is to have a 90% pass rate of all students for this class.

The surveys pre and post lecture could give the course direction for future educational series as the students give their feedback on their preferences and what appealed to them. In giving the children the autonomy to say what works for them or what information/techniques needs to be changed in the future, is powerful as the students essentially shape the format in which the information is delivered and received by the students.

In the future, this would be a class that would be nice to incorporate throughout a student’s career as it is introduced in middle school with the proposal to follow a student through high school in their health and PE classes. Body mass indexes would be concrete tool that could be used to follow the success of this program that a school nurse could track and trend for the students and the city.

The goal of this program in Emporia is to decrease the need for community health nursing in an acute setting or clinic due to a decrease in the amount of cardiovascular disease, especially within the African American community. Side effects of inactivity and poor diet lead to a host of complications with cardiovascular disease being the biggest problem in this area. Hypertension, stroke, type II diabetes and renal disease all stem from this problem. This class can have a direct effect on the implications of the community nurse as her focus can change from an acute and management focus to a preventative focus, as the students are educated and followed through their school career. These simple, low cost interventions can trickle down and have a profound impact on the community as they become healthier through proper nutrition and exercise.

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Name: Jennifer Keith, Gina Kime, Tiffany Kinker, Pamela Johnston, Brittany Jones, Jodith Jones

**Community Health Nursing**

**Health Planning Project Proposal**

**Grade Rubric**

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| --- | --- | --- |
| **Criteria** | **Comments** | **Points** |
| **Introduction** [10 points]   1. Identify yourself and your interest in making the proposal   **Assessment**  [20 points]   1. Specify level of aggregate selected for study.    * Identify and provide a general orientation to the aggregate.    * Include why this aggregate was selected and the method used for gaining entry. 2. Describe specific characteristics of the aggregate including    * Socio-demographic characteristics    * Health status    * Suprasystem influences 3. Provide relevant information gained from literature review, especially in terms of characteristics, problems or needs that one would anticipate finding with this type of aggregate.    * Include comparison of health status of chosen aggregate with other similar aggregates, the community, the state, and/or the nation. 4. Identify health problems and/or needs of specific aggregate based on comparative analysis and interpretation of data collection and literature review.    * Include (when possible) input from clients regarding their perceptions of needs.    * Give priorities to health problems and/or needs and indicate how these priorities are determined. |  |  |
| **Planning**  [20 points]   1. Select one health problem and/or need for intervention and identify ultimate goal of intervention.    * Identify specific, measurable objectives as (mutually agreed on by student and aggregate, when possible) 2. Identify environmental planning considerations (space, resources) 3. Describe alternative interventions necessary to accomplish objectives.    * Include consideration of interventions at each systems level where appropriate.    * Select and validate intervention (s) with highest probability of success. (Note: Interventions may include using existing resources and/or developing resources.) |  |  |
| **Evaluation**  [20 points]   1. Develop a plan for evaluation of the project including:    * Strategies (tools if appropriate)    * Timeframe( immediate, ongoing) 2. Make recommendations for further action based on evaluation and how to communicate these to appropriate individuals.    * Discuss implications for community health nursing |  |  |
| **Conclusion** [10 points]   1. Provide a summary of your proposal 2. Include your recommendation for “the next step” |  |  |
| **Organization** [20 points]   1. Includes ODU SON title page 2. Adheres to APA format (including in text citations and reference page) 3. Uses correct spelling, grammar, syntax 4. Includes Honor Code (1 point) 5. Includes Grade Rubric(1 point) |  |  |
| **Total 100 points** |  |  |