PROJECT CHECK:
A SERVICE LEARNING PROJECT TO PROMOTE CHOLESTEROL HEALTH EDUCATION IN FIFTH GRADERS

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SESSION DESCRIPTION

We will discuss Project CHECK (Cholesterol Health Education Concerning Kids), a service learning project implemented by Associate Degree Nursing Students in rural communities.
LEARNING OBJECTIVES

- Identify risk factors for the development of cardiovascular problems in a rural, pediatric population.

- Describe the project implemented.
Impact of cardiovascular disease from global, national, and state levels

- Healthy People (2020), describes the importance of identifying preventable threats to health in order to increase the length and quality of our lives and is referenced frequently in nursing education.
LEADING CAUSES OF DEATH WORLDWIDE

- CVD: 52%
- Cancer: 24%
- Infectious Disease: 19%
- Pulmonary Disease: 14%
- Violent death: 12%
- AIDS: 5%

Mortality (%)
Leading Cause of Death in the United States
LEADING CAUSES OF DEATH IN KENTUCKY

- CVD accounts for 35% of all deaths every year

<table>
<thead>
<tr>
<th></th>
<th>Kentucky</th>
<th>United States</th>
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</thead>
<tbody>
<tr>
<td>CVD</td>
<td>324 (46%)</td>
<td>278</td>
</tr>
<tr>
<td>CHD</td>
<td>161 (43%)</td>
<td>144</td>
</tr>
<tr>
<td>STROKE</td>
<td>51 (36%)</td>
<td>47</td>
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✓ Numbers represent deaths per 100,000 people

Heart Disease and Stroke Statistics, 2009 Update
HEALTH STATUS OF KENTUCKY

Health Status of KY

- CV deaths
- Smoking
- Obesity
- Sedentary
- Poverty

Rank
OVERVIEW OF THE ISSUE

- Significance
  - Modifiable factors for CVD which include cigarette smoking, physical inactivity, poor diet, obesity, high blood pressure and high cholesterol continue to be a growing problem for the state of KY and our nation.
OVERVIEW OF THE ISSUE

- Despite substantial success in reducing deaths from coronary heart disease in the past two decades, coronary heart disease causes 406,351 deaths each year.
- An estimated 16.3 million (7%) U.S. adults have coronary heart disease.
- Many of these adults have children who may have coronary heart disease risk factors.

American Heart Association, 2012
OVERVIEW OF THE ISSUE

- Pediatric Risk Factors
  - Screening results are as low as 35% for the pediatric population that have been identified with a family history of CVD.
  
  - Changes in the lifestyles of children in the US have led to higher fat diets and sedentary lifestyle habits.
  
  - Resulting in the emergence of hypertension, obesity, and diabetes mellitus for the pediatric population.
OVERVIEW OF THE ISSUE

Medical conditions that were once viewed as adult health concerns are now emerging in our children.

- Sleep apnea
- Asthma
- Coronary heart disease
- High blood pressure
- High cholesterol
- Stroke
- Diabetes
- Breast, colon or endometrial cancers
- Osteoarthritis
- Fatty liver disease
OVERVIEW OF THE ISSUE

- A major increase in the prevalence of obesity has led to a much larger population of children with dyslipidemia.
- 1 in 6 children and adolescents (16.2%) are obese.
- Evidence indicates that the atherosclerotic process begins in childhood and progresses slowly into adulthood.
NATIONAL CHOLESTEROL EDUCATION PROGRAM GUIDELINES

1992

- Recommended screening only children with a family history of heart disease or high cholesterol.

2011

- Recommended all children be screened for high cholesterol at least once between the ages of 9 and 11 years, and again between ages 17 and 21 years.
PROJECT GOAL

- To enhance health literacy of school age children through implementation of Evidence Based Practice (EBP) pediatric cholesterol screening education sessions by Morehead State University (MSU) Nursing Students.
PROJECT DESCRIPTION

MSU nursing students:
- Reviewed the National Cholesterol Education Program (NCEP) Guidelines.
- Developed and implemented cholesterol education modules through learning activities targeting 5th graders.
- Developed a teaching sheet for family members to provide parent education on pediatric cholesterol screenings.
- Reflected on how health literacy impacts pediatric health.
PROJECT DESCRIPTION

- Fifth grade students participated in education modules and learning activities developed by MSU nursing students and completed verbal post-testing at the end of the education session.

- Six months later students were tested again to measure knowledge retention.
FIFTH GRADERS LEARNING OBJECTIVES

- Define what cholesterol is.

- Identify health problems associated with high cholesterol levels.

- Identify healthy food choices and need for exercise to maintain normal cholesterol levels.
RESEARCH DESIGNS AND METHODS

- Thirty minute teaching session in October 2012 followed by assessment visit in May 2013.

- A five question true/false tool designed to evaluate the effectiveness of the program.

- No greater than minimal risk in the project and no information from students' educational records was utilized.
PROJECT MANAGEMENT

- Project CHECK was implemented within the clinical component of NURS 201 Nursing III and NURB 424 Public Health Nursing.
- Nursing students were identified within the nursing courses to implement this project as a service learning opportunity within local elementary schools.
- Teaching supplies needed to implement the project were purchased through a Center for Regional Enrichment grant.
- Other support was provided by the Gateway Cardiovascular Coalition and the Gateway School District.
ASSESSMENT TOOL

1) Cholesterol is a waxy, fatty-like substance found in your body and many foods.
2) Pizza is a heart healthy food.
3) Nutrition and exercise work together to keep your heart healthy.
4) High blood pressure is a condition that high cholesterol can cause.
5) Some factors you can change to improve your heart health, like your age.
Project Results

- School A
  - N=19
  - 9/19 (47%) achieved 100% on true/false items
  - 10/19 (53%) achieved 80% on true/false items
PROJECT RESULTS

- **School B**
  - N=53
  - 34/53 (64%) achieved 100% on true/false items
  - 13/53 (25%) achieved 80% on true/false items
  - 6/53 (11%) achieved 60% on true/false items
**PROJECT RESULTS**

- **School C**
  - N=78
  - 61/78 (78%) achieved 100% on true/false items
  - 14/78 (18%) achieved 80% on true/false items
  - 3/78 (4%) achieved 60% on true/false items
PROJECT RESULTS

- School D
  - \(N=58\)
  - \(47/58\) (81%) achieved 100% on true/false items
  - \(11/58\) (19%) achieved 80% on true/false items
PROJECT RESULTS

- School E
  - N=45
  - 37/45 (82%) achieved 100% on true/false items
  - 8/45 (18%) achieved 80% on true/false items
PROJECT RESULTS

Overall results:
✓ N= 253
✓ 188/253 (74%) achieved 100% on true/false items
✓ 56/253 (22%) achieved 100% on true/false items
✓ 9/253 (4%) achieved 60% on true/false items
WHAT WE LEARNED

- Nursing student reflections indicate many fifth graders were:
  - aware of what cholesterol was prior to learning sessions.
  - very receptive to educational information.
  - able to verbally describe cholesterol, identify associated health problems, and identify healthy food choices and the need for exercise to promote cardiovascular health.
WHAT WE LEARNED

- The most commonly missed items on the true/false assessment tool were:
  1) Cholesterol is a waxy, fat-like substance found in your body and many foods.
  2) Pizza is a heart healthy food.
Q&A

- Thank you for your time and attention!
- Any questions?
REFERENCES


- Kentucky Department for Public Health, 2009
  - [www.healthypeople.gov](http://www.healthypeople.gov)
  - [www.heart.org](http://www.heart.org)
  - [www.nlhbi.nih.gov](http://www.nlhbi.nih.gov)