K-STATE RESEARCH AND EXTENSION

- Serves all 105 counties
- Provides information on a variety of topics

Preceptor
- Virginia (Ginny) Barnard, MPH
  - Family and Consumer Sciences Agent
  - Focus:
    - Food and Nutrition
    - Food Safety
    - Health and Safety
    - Indoor Environments

http://www.hodgeman.k-state.edu/about/
RILEY COUNTY SENIORS’ SERVICE CENTER

Provides services and activities for those 60 years old and older in Manhattan and Riley County

Programs & Services:
- Health and Wellness
- Personal Growth
- Arts and Crafts
- Safety
- Financial Planning
- Community Involvement

http://www.seniorsservicecenter.org/
WHAT

- 6-week course on basic nutrition
- Met once a week for six weeks
- Combination of PowerPoint presentation, hands-on and interactive portions, and take-home material
- Encouraged attendees to ask questions before, during, and after sessions
LAST SESSION

Photos courtesy of Ginny Barnes
WHY

- The proportion of older adults in the United States continues to steadily rise
- Few educational programs focus on older adults’ nutritional needs
- Preventing illnesses can reduce burden on the healthcare system
- Fixed income and limited resources
Figure 2. Population 65 Years and Older by Size and Percent of Total Population: 1900 to 2010

(For more information on confidentiality protection, nonsampling error, and definitions, see www.census.gov /prod/cen2010/doc/sf1.pdf)

Sources: U.S. Census Bureau, decennial census of population, 1900 to 2000; 2010 Census Summary File 1.

WHY

- National Institutes of Health
- National Institute on Aging

What's On Your Plate?

Let's eat for the health of it

NIH Senior Health
Built with You in Mind
WHY

- Older adults account for 65+ years old:
  - 44% of hospital care
  - 38% of emergency room medical services responses
  - 35% of prescriptions
  - 26% of physician office visits
WHY

- A large percentage of older adults live on a fixed income
- Maslow’s Hierarchy of Needs
- Many local resources are available to help find the basic needs
CREATE AND PRESENT A BASIC NUTRITION PROGRAM  

FOCUS AND SCOPE OF FIELD EXPERIENCE
LEARNING OBJECTIVES

Understand how to organize and implement a nutrition program to an underserved audience.

Identify recruitment methods or ways to reach target population.

Recognize and implement methods to keep participants motivated and engaged.

Evaluate program using pre- and post-assessments created based on material presented during the duration of the program.

Gain an understanding of community-based public health programs.
ACTIVITIES PERFORMED

1. Created materials for recruitment.

2. Before the program, get feedback from target population about class they would attend and information they would be interested in learning more about.

3. Prepare, organize, and conduct a minimum of six nutrition education lessons.

4. Evaluation and assessment of program design and implementation, as well as participant behaviors.
PRODUCTS DEVELOPED

- Flyer for program recruitment
- Weekly presentation
- Take-home material
- Pre- and post-assessments for program evaluation
Do you have questions about nutrition and how it affects you?

What’s on My Plate?
a program to help you get the most out of your food

What: a 6-week course about nutrition
Where: Riley County Seniors’ Services Center
When: Tuesdays at 9:30am starting April 5

Lesson 2: Nutrition Labels

Food nutrition labels provide a lot of important information in a quick-to-read format.

Nutrition labels include the following information:
- Serving size
- Servings per container
- Calories per serving
- Calories from fat
- Total Fat
- Saturated Fat
- Trans Fat
- Cholesterol
- Sodium
- Potassium
- Total Carbohydrate
- Dietary Fiber
- Sugars
- Protein
- Various Vitamins

The first thing to look at is the serving size of the food item, as well as how many servings are in each package.

Second, the label lists the calories per serving and calories from fat.

★ Remember, if you consume the entire package and it has multiple servings, you have to multiply the rest of the label by the number of servings you consume.

Those nutrients should be limited, especially saturated fat, trans fat, cholesterol, and sodium.

Get enough of these nutrients, vitamins, and minerals.

Limit added sugar in foods and drinks.

The % Daily Value is based on a 2,000 calorie diet. If the recommended calories for you are lower than 2,000, these values will be larger. If the recommended calorie intake for you is higher than 2,000 calories, these values will be smaller.

Nutrition Facts

Serving Size 2/3 cup (55g)
Servings Per Container About 6

Amount Per Serving Calories 230
Calories from Fat 72

Total Fat 8g
Saturated Fat 1g
Trans Fat 0g

Cholesterol 0mg
Sodium 160mg

Total Carbohydrate 37g
Dietary Fiber 4g

Sugars 1g
Protein 3g

Vitamin A 10%
Vitamin C 8%
Calcium 20%
Iron 45%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

Calories: 2,000 2,500
Total Fat 65g 80g
Sat Fat 20g 25g
Cholesterol 300mg 300mg
Sodium 2,400mg 2,400mg
Total Carbohydrate 300g 375g
Dietary Fiber 25g 30g
Lesson 4: Healthy Living

Metabolism
- How your body gets energy from food
- This slows with age
- You need less food to get the energy your body needs

“Calories In, Calories Out”
- The more calories you eat, the more active you need to be
- If you eat more than your body needs, you gain weight.
- If you eat less than what your body needs, you lose weight.
- If you need nutrients, but you also need less calories, you need to eat more nutrient dense foods.

Nutrient Dense
- Foods that give you tons of nutrients without a lot of calories
- Examples: high-quality proteins (chicken, turkey, fish), tomatoes, cabbage, low-fat or fat-free dairy, dark green leafy vegetables, berries & stone fruit

Calorie Dense
- Foods that high in calories for the amount of food
- ***These may or may not have helpful nutrients***
- Examples: regular dairy products, non-lean meats, vegetable-based oils

Empty Calories
- High calorie foods with little nutritional value
- Examples: potato chips, sugar-sweetened drinks, candy, baked goods, and alcohol

Water
- Benefits of water:
  - Proper food digestion
  - Absorbing nutrients from food
  - Helps to get rid of waste
- Rough estimate for intake needs:
  - Take body weight and divide in half
  - The number that you get is the amount to drink each day in ounces

Tracking
- Writing down what you eat is a great way to track
- There are many different ways to track what you eat
  - Notebook or food journal
  - Websites (supertracker.usda.gov)
  - Phone application (MyFitnessPal)
  - Printable forms

Balancing Calories
- It is important to balance calories from eating and drinking with physical activity.
- Track to know:
  - One way to know that you are active enough is to track food intake for a few days and see how much you eat and drink

Remember to visit the Go4Life website to see great resources for physical activity and tracking tools!
(www.nia.nih.gov/Go4Life)
SESSIONS

1. Nutrition Basics
2. Nutrition Labels
3. A Focus on Nutrients
4. Healthy Living
5. Shopping Tips
6. Food Safety
Pre- and post-assessments were performed at the first and last sessions.

The average of each question were used in a paired $t$-test to see if the program was effective or not.

The table below summarizes the information from the paired $t$-test:

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>$t$-Statistic</th>
<th>$p$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>3.6</td>
<td>0.46</td>
<td>7.58</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Post</td>
<td>4.2</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparison of Pre- and Post-Assessment Averages

![Graph showing comparison of pre and post-assessment averages for 14 questions. The y-axis represents the scale, and the x-axis represents question numbers from 1 to 14. The graph compares the average scores for each question, with 'Pre' represented by teal bars and 'Post' by purple bars. The bars show a general increase in scores from pre to post-assessment.]
Please choose the best answer to the following questions based on your current behaviors. Use the following scale: 5=Agree Completely, 4=Agree, 3=Neutral, 2=Disagree, 1=Disagree Completely.

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am confident that I am eating the correct amount of calories daily.</td>
<td>5</td>
</tr>
<tr>
<td>I know what kinds of food I need to eat on a daily or weekly basis to get the nutrients that I need.</td>
<td>5</td>
</tr>
<tr>
<td>I am familiar with common serving sizes.</td>
<td>5</td>
</tr>
<tr>
<td>Food labels are easy to read, and I know what nutrients are important on the labels.</td>
<td>5</td>
</tr>
<tr>
<td>I use nutritional labels on foods to make decisions on what to eat or what not to eat.</td>
<td>5</td>
</tr>
<tr>
<td>I know what foods are important for healthy fats, protein, and carbohydrates.</td>
<td>5</td>
</tr>
<tr>
<td>I know what vitamins and minerals I need to consume.</td>
<td>5</td>
</tr>
<tr>
<td>I prepare meals without adding salt, fats, or sugars.</td>
<td>5</td>
</tr>
<tr>
<td>I understand the difference between nutrient-dense and calorie-dense.</td>
<td>5</td>
</tr>
<tr>
<td>I know how to lose weight, maintain weight, or gain weight.</td>
<td>5</td>
</tr>
<tr>
<td>I am active on 3 or more days in a week.</td>
<td>5</td>
</tr>
<tr>
<td>I am confident in my ability to obtain and prepare food.</td>
<td>5</td>
</tr>
<tr>
<td>I compare prices (unit price and total price) before making purchases.</td>
<td>5</td>
</tr>
<tr>
<td>I know the correct temperatures that food needs to reach in order to be safe.</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I am confident that I am eating the correct amount of calories daily. 

Change of 0.88

7. I know what vitamins and minerals I need to consume.

Change of 1.1

9. I understand the difference between nutrient-dense and calorie-dense.

Change of 1.1

12. I am confident in my ability to obtain and prepare food.

Change of 0.87
ALIGNMENT WITH PUBLIC HEALTH COMPETENCIES

- **Biostatistics**
  - Presented the many ways to collect and interpret data
  - **Field Experience**: Analysis of pre- and post-assessment results

- **Environmental Health Sciences**
  - Understanding the risk of toxic events and response
  - **Field Experience**: Applied in session six, which covered food safety

- **Epidemiology**
  - Introduction to natural history of disease, study design, issues with health prevention and promotion
  - **Field Experience**: Used as a base to design sessions and determine evaluation type
ALIGNMENT WITH PUBLIC HEALTH COMPETENCIES

○ Health Services Administration
  ○ Understanding of past and current healthcare systems, problems with healthcare system design, values of health
  ○ Field Experience: Foundation for program to prevent intervention of healthcare system

○ Social and Behavioral Sciences
  ○ Individual vs. social responsibility of health, individual behavior change theory, community interventions, social structural factors of health
  ○ Field Experience: Used when preparing sessions on healthy living and community resources
Loved the ability to transfer coursework into reality

Gained insight into community health programs and why they are important

Solidified love for helping others and building relationships with attendees
ACKNOWLEDGEMENTS

- **Major Professor**
  - Dr. Ric Rosenkranz

- **MPH Committee Members**
  - Dr. Mark Haub
  - Dr. Sara Rosenkranz
  - Dr. Linda Yarrow

- **Riley County Research & Extension**
  - Virginia (Ginny) Barnard

- **MPH Program**
  - Dr. Ellyn Mulcahy, Director
  - Barta Stevenson, Program Assistant

- **Family, friends, and co-workers**
REFERENCES


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QUESTIONS?
thank YOU