

Master of Public Health
Integrative Learning Experience Report

COMMUNITY HEALTH EDUCATION IN RILEY COUNTY

by

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submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

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Summary/Abstract

Chronic diseases are on the rise in the American population and as such, the top killers have shifted from nonpreventable diseases to those that are preventable. Many of these diseases could be prevented through better diets and food choices (Slawson, Fitzgerald, & Morgan, 2013). Local health departments, health educators, and extension offices play a major role in this prevention through providing education, resources, and support for building healthier habits in families. These resources can be a leading force in making changes toward healthier families, which can help reduce the number of youths, and consequently adults, who develop obesity, Type 2 diabetes, and other chronic diseases (Ogagata & Hayes, 214).

Chronic disease prevention, primarily through better nutrition and better diets, was the public health issue that was the main focus of my time at Lafene Health Center and the Riley County Extension Office. While at Lafene I worked with the Health Promotion office, whose purpose is to provide leadership in health maintenance promotion, and disease and illness prevention for Kansas State University students, staff, faculty and surrounding community members. The primary focus of my projects were to provide healthy eating tips, tricks, and education that is feasible with college students' busy schedule, limited resources, and tight budget. This information was handed out at various health promotion events on campus. While at the Riley County Extension Office I planned and executed a healthy eating course for families, as well as a freezer meals class for community members. The healthy families course consisted of four one-hour classes that provided families with tools and resources to facilitate dialog, planning, and activities that would assist in developing healthier eating habits for the entire family. Due to unforeseeable circumstances, half of the courses had to be canceled but an increase in vegetable consumption was still reported among participants. At both locations, addressing the different socio-ecological barriers faced by the intended audiences increased the likelihood that participants would make healthier changes to their diets.

Subject Keywords: Chronic Disease, Nutrition, Community Education

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Chapter 1 - Public Health Issue and Literature Review

The Problem with Chronic Disease

According to the Centers for Disease Control and Prevention, chronic diseases can be widely defined as condition that last one or more years, requires ongoing medical attention, or can limit daily activities or both (“About,” 2019). Chronic diseases include conditions such as cancer, diabetes, hypertension, stroke, heart disease, respiratory diseases, arthritis, obesity, and oral diseases. These diseases are some the most prevalent and costly health conditions in the United States, with nearly half of population, 45% or 133 million, suffering from at least one chronic condition. This number is only expected to increase in coming years (Raghupathi & Raghupathi, 2018). Most chronic diseases are linked to at least one of the following four behaviors: tobacco use or exposure to second-hand smoke, poor nutrition which includes diets low in fruits and vegetables and high in sodium and saturated fats, lack of physical activity, or excessive alcohol use (“About,” 2019). Without appropriate lifestyle interventions, the number of those living with one or more chronic conditions is only expected to increase (Slawson, *et al.*, 2013).

The prevalence of chronic diseases is becoming a major area of concern in the United States. Chronic diseases have not only impacted the quality of life for many citizens but have driven an increase in healthcare costs (Raghupathi & Raghupathi, 2018). Currently, chronic diseases account for the largest percentage of the nation’s \$3.3 billion spent on health care costs each year (“About,” 2019). It is estimated that in the U.S. alone an average of \$5300 per person annually is spent treating one or more chronic conditions. According to the National Association of Chronic Disease Directors, a recent study determined that the treatment of the seven most common chronic diseases, when combined with productivity losses, will cost the U.S. economy more than \$1 trillion dollars annually. Furthermore, modest decreases in unhealthy behaviors could postpone or even prevent, 40 million cases of chronic illness annually (“Why”, n.d.)

Chronic diseases are of major concern not only because of their high cost but also because of the number of deaths each year. In the U.S. more than two thirds of all

deaths, or seven in every 10 deaths, are caused by chronic diseases such as heart disease, cancer, stroke, chronic obstructive pulmonary disease, and/or diabetes, killing more 1.7 million Americans each year (Raghupathi & Raghupathi, 2018). What makes treating these conditions difficult is that many of them do not exist alone, four in 10 U.S. adults have two more chronic conditions (“About”, 2019).

Community Health Education in Riley County

The public health issue of chronic disease prevention, specifically the risk factor related to nutrition, is what I chose to focus on for my Applied Practice Experience (APE). I completed my APE at the Lafene Health Center and at the Riley County Extension Office. The Health Promotion office at the Lafene Health Center serves the student population at Kansas State University and also participates in various health promotion activities within the community (Kansas). During my time with Lafene I assisted with health promotion activities on campus, created informational materials, and attended wellness coalition meetings to learn more about health issues being faced within the community. The Riley County Extension Office serves the population of Riley County through educational courses, 4-H Youth programs, and other events within the community (Riley). During my time at the Extension office I planned and taught both a healthy families course and a freezer meals course, updated community resource guides, and created educational materials to be distributed to area schools. These activities will be discussed more in detail in Chapter 2.

Literature Review

For my literature review, I examined multiple studies that focused on healthy home environments, good nutrition, and other healthy habits. Poor nutrition is linked to a majority of chronic diseases, particularly obesity, heart disease, and Type 2 diabetes, and was also the focus of all of the projects performed during my APE. I focused on

studies that targeted families with young children since these were the populations I worked predominantly with for my main project during my APE.

The first study I examined by Appelhans et. al. (2014) measured the factors by which the physical and social home environment may promote childhood overweight/obesity in low-income households. Previous studies have found that low income greatly affects the overweight/obesity risk of children, but little is known about the specific health behaviors and home environments that have the greatest impact. Few studies have studied participants solely from low-income households. For the purpose of their study, the home environments of normal weight and overweight or obese children from low-income households were compared. Data were collected from 103 households in the Chicago area that had at least one child aged 6 to 13 years that was either normal weight or overweight or obese. The reported household income was required to be less than or equal to 250% of the Federal Poverty Threshold. Height, weight, physical activity, screen time, dietary intake, sleep duration, household characteristics and socioeconomic status, home food environment, home activity and media environment, social home environment, and chaotic home environment were all assessed. In the first stage of analysis that included health behaviors only sleep duration was significantly associated with child weight status, on average normal-weight children slept 33.3 minutes longer per night than overweight or obese children. The second stage of analysis focused on showing associations between the social and physical home environment and child weight status through mediating paths involving sleep duration. The third stage analyzed all other home environment variables that were not included in stage 2. The study concluded that chaos in the home environment, lower caregiver screen time monitoring, inconsistent implementation of bedtime routines, and the presence of a television in a child's bedroom were all linked to childhood overweight or obesity through effects on screen time and sleep duration (Appelhans et al, 2014).

Weaknesses of the study included the method in which participants were recruited and the very limited racial background of the participants. The use of convenience sampling methods limits the generalizability to a broader population. The generalizability is further limited since the sample was composed primarily of African

American households. In addition, the socioeconomic position was determined solely by household income, which could allow confounders such as occupational class, wealth, and assimilation. The emphasis placed on the frequency of intake of specific food categories also limited the true dietary composition of the participants. Prospective studies, versus the cross-sectional method used, are necessary in order to truly assess causality. As far as strengths, the use of in-home data collection eliminated the need for transportation or childcare, which can oftentimes be barriers for low-income populations. By focusing solely on low-income households, income can be eliminated as a confounding factor, which is an asset to the development of future studies or interventions that are also solely focused upon low-income populations. Based on the listed factors, I would say that the study is internally and externally valid but further studies would need to be done in order to determine the true factors that impact childhood weight status.

In another study focused upon socioeconomic status performed by You and Choo (2016), the associations between socioeconomic statuses (SES), fruit and vegetable intake, and adolescent overweight and obesity were considered. Previous studies have reported that there are inverse associations between SES and overweight and that obesity in adolescents differs significantly by gender, with a much stronger association in girls than in boys. Other studies have demonstrated that not only are fruit and vegetable intakes vital to fostering good health, low fruit and vegetable intake is a correlate of overweight and obesity. It has also been demonstrated that low fruit and vegetable intake is associated with low SES. While these factors have been studied independently, You and Choos's study was the first study that investigated the links between fruit and vegetable intakes and overweight/obesity in adolescence with the parallel consideration of SES. This cross-sectional, population-based study included data of 63,111 boys and girls aged 12-18 residing in Korea. Data were extracted from a questionnaire sponsored by the Korea Centers for Disease Control and Prevention that is repeated annually via a web-based self-administered questionnaire in all Korean schools for grades 7 thru 12. For the study sociodemographic, behavioral, and anthropometric characteristics were extracted from the 2013 results. It was found that among girls, low SES was significantly and positively associated with

overweight/obesity and significantly and inversely associated with fruit and vegetable intake. Fruit and vegetable intakes were significantly and inversely associated with overweight and obesity after adjusting for SES. A low SES also had a direct significant influence on overweight and obesity even after adjusting for fruit and vegetable intakes. Among boys, it was found that low SES was not significantly associated with overweight and obesity but was significantly and inversely associated with fruit and vegetable intakes. Fruit and vegetable intakes were not significantly associated with overweight and obesity with adjustments for SES. The authors therefore concluded that adolescent overweight and obesity are significantly linked to low SES and fruit and vegetable intakes and that in girls, low SES, specifically via low fruit and vegetable intakes, may indirectly increase the risk for adolescent overweight and obesity (You & Choo, 2016).

Strengths of the study included adjustment for all possible confounders, which can often times sway the resulting data. In addition, the use of data that are collected for other purposes eliminates the possibility of participants altering answers to suit the study. Weaknesses again include the use of a cross-sectional method, which eliminates the ability to infer causality. Alternative research would need to be done to truly understand the causal relationships. Secondly, the use of self-reported anthropometric data may under- or over-estimate the actual prevalence of overweight/obesity. The biggest weakness in this study is that the results may not be generalizable to other ethnic populations. This study provides a basis for further research, but more research, specifically in the United States, would need to be done to determine the true relationship between socioeconomic status, adolescent weight, and fruit and vegetable intake.

The first intervention study I examined by Fulkerson *et al.* (2018), targeted childhood obesity prevention through the promotion of healthy family meals via a course called Healthy Home Offerings via the Mealtime Environment (HOME) Plus program. Other studies (Stockmyer, 2001) have found that there is a positive association between frequent family meals and children's dietary intake, but few have examined the promotion of healthy family meals as an avenue of change for key food environment and nutrition-related behavioral outcomes (Fulkerson *et al.*, 2018). The participants were recruited from community centers in the Minneapolis/St. Paul area and all children

were required to be ages 8-12 years old, have a body mass index (BMI) for age above the 50th percentile, and live with the participating parent/guardian most of the time. In addition, the children could not be moving from the area within six months, have severe food allergies or limitations, or be able to speak/write in English. Initially, 302 individuals applied for the study but 142 were excluded due to not meeting inclusion criteria or declining to participate. The remaining 160 participants were randomly allocated to either the intervention (91 participants) or the control (79 participants) group. The intervention program was delivered at six Minneapolis park and recreation community centers, where all intervention families were invited to participate in 10 monthly, in-person group sessions that included activities for both children and parents. Intervention parents also had the opportunity to participate in five bi-monthly goal setting calls with trained staff. The control group received 10 monthly family-focused newsletters that contained information on family physical activities in the area, healthful recipes, etc. (Fulkerson *et al.*, 2018). Trained data collection staff obtained the following data from participants at baseline, 12 months post-baseline, and 21 months post-baseline in order to measure the effectiveness of the HOME program: parents completed the Home Food Inventory to measure home food availability of 26 different fruits and 21 different vegetables, the Evening Meal Screener for seven days to determine if dinner included fruit and green salad, a personal assessment of their own meal planning abilities, cooking skills, and self-efficacy for identifying appropriate portion sizes, and children were assessed on their own cooking skills, food neophobia, fruit and vegetable preferences, dietary intake, and screen time. It was found that in the intervention parents only self-efficacy scores for identifying appropriate portion sizes increased statistically when compared to the control group. Both groups did exhibit a slight increase in parental meal planning and cooking skills scores, but there was not statistically significant difference between the two groups. In children, a statistically significant difference in sugar-sweetened beverage intake was seen between the two groups, with the control group being more likely to report consuming at least one sugar sweetened beverage per month. Though no other changes were significantly different, children's behavior for all factors in the intervention group did improve over the course of the study (Fulkerson *et al.*, 2018).

Strengths of the study include the randomized control trial method, with participants being divided into groups via a computerized model. The intervention was also presented in real-world community settings and a wide range of income levels was represented in the sample, which increases the study's generalizability to other populations. The use of a validated instrument for recording the quality of food being offered at meals also strengthened the study. That being said, the weaknesses of the study far outweigh its strengths. The generalizability of the study is very limited, as all the participants reported a fairly high family dinner frequency at baseline and were well educated. Further studies would need to include families with less resources, education, and skills to begin with. In addition, many of the tools used to assess skills and food intake had high internal validity but have very low test-retest reliability and psychometric properties were absent at the beginning of the study. Based on these factors, overall, I feel that the study was valid due to the protocol followed and the use of an RCT approach but further and more inclusive trials need to be done in order to truly assess the effectiveness of the HOME program.

The second intervention study by McGowan *et al.* (2013) explored the effectiveness of an intervention program that promoted the parental habit formation of serving fruit/vegetables, healthy snacks, and non-sweetened drinks. The outcomes assessed were parental habit strength for each category and children's food intake. A habit-based approach has been effective for improving the health of adults, but no interventions have utilized this same method to improve parental feeding behaviors, which could in turn influence food intake in children (McGowan *et al.*, 2013). A cluster-randomized, parallel-groups design was used, and the trial took place between May 2010 and January 2012. Parents were recruited from Stay and Play sessions at Children's Centers in London, which are the equivalent of American Head Start Centers. Initially, 126 participants were selected to participate, with 106 completing the program through the follow-up period. Parents were eligible if they had a child between the ages of 2 and 6 years who had no medical problems and if they spoke adequate English. If a parent had more than one eligible child, they were asked to pick a child to use as the "target." Parents were asked to provide initial baseline data before being randomly assigned to either the intervention or control group. The intervention was delivered by

trained researchers in four home visits over the course of an eight-week period. Each visit lasted approximately one hour, and children were not directly involved. Parents were given information on habit formation and practical advice specific to each feeding habit. They were also given trackers to use during the habit formation process. Each visit focused on a specific feeding habit and parents were encouraged to discuss why that habit is important, when they would like to start making the changes, and any barriers they foresaw having to overcome. At each subsequent visit parents were encouraged to continue the previous habit(s) while starting a new habit. Questionnaires were completed at baseline and following the eight-week intervention period by both the intervention and control groups. At baseline, child fruit intake and parent automaticity for healthy snacks appeared higher in the control group and parent automaticity for milk/water appeared lower. Apart from these factors, there was no significant difference between the two groups. At follow-up, the automaticity scores for all three behaviors were significantly higher in the intervention group when compared to the control. In addition, a significant increase in children's vegetable intake, healthy snack intake, and water intake were all seen in the intervention group postintervention. No significant difference was seen for fruit, unhealthy snacks, and sweet drinks. As predicted, an increase in parent automaticity was seen to be associated with positive effects on the child/s diet. Parents in the intervention all reported it to be enjoyable, simple, and easy sustainable over the course of time (McGowen *et al.*, 2013).

The strengths of this study include its effectiveness, sustainability, and ease of use. Executing the intervention required little time upfront, few resources, and minimal cost. The study was able to retain most of its participants for the duration of the intervention. Weaknesses of the study include limited sample size and demographic background. Though a majority of the participants lived in average housing, they were all highly educated. Another concern is that all of the data were collected via parent-report, which can lead to inaccurate data collection, due to response bias. In addition, the control group did not receive any face-to-face contact, which could potentially skew the results. Overall, the results of this study are very promising and could provide a potential option for improving children's overall diets by directly targeting the creation of parental habits.

Chapter 2 - Learning Objectives and Project Description

Learning Objectives

The main learning objective of my APE was to see first-hand the role that various community organizations can play in health education and promotion, specifically in Riley County. My goal was to gain experience, knowledge, and insight into this topic so that it could be applied to any future jobs I may hold. Specifically, I wanted to learn more about the programs provided, events that occur, and different opportunities within the community. The main focus of all of the programs I was a part of was bettering the nutrition and diets of the individuals reached.

While at Lafene my main project was to create informational material to be handed out to students at various events on campus. The main purpose of these handouts was to provide students with health-related information, such as appropriate diet, portion sizes, and lifestyle habits that would be applicable to their stage in life. Lafene hosts and helps put on many events on campus each semester that serve to promote healthy living, better choices, and mental health to the student body at K-State. They also assist with health-related events such as 5Ks that are open to the entire community.

During my time at the Riley County Extension Office my main project was developing and executing a healthy families course for low-income families with young children. This course was initially to be geared towards Head Start families but was ultimately open to the general public instead. This four-week program was designed to educate parents on how to implement healthier habits in their homes. It consisted of four one-hour long sessions that would meet weekly over the course of one month. The lessons covered topics such as meal planning, setting and following a grocery budget, dealing with picky eaters, and basic nutrition information. The lessons emphasized whole-family involvement in order to instigate change for all family members, including children, not just parents. The curriculum was based on MyPlate resources (“Choose,” n.d.), combined with other information provided by the CDC and additional resources.

Project Description

My project was completed at two different locations in Riley County, with some overlap between the two. Completing my project at these two different locations allowed me to interact with individuals of all ages, walks of life, socioeconomic background, and educational levels. The first half of my project was completed with the Health Promotion office at Lafene Health Center at Kansas State University. While there I created informational materials, assisted at events on campus, and attended meetings with the Director, Julie Gibbs. The informational materials I created were handed out at various events on campus, farmers' markets, wellness week activities, and a 5K open to the community. An example of these handouts can be found in Appendix A. The purpose of these handouts was to provide college students with information on how to eat healthy on a limited budget, with few resources available, and while eating at campus dining centers. In order to best reach my target population, I had to ensure that the handouts were eye-catching, concise, and easily accessible to students. The information provided detailed things like affordable and healthy recipes, tips for navigating campus dining centers, how to grocery shop on a budget, and simple food swaps to make meals healthier. In addition to handing out this information at events I also was able to talk with students and provide information on portion sizes, food groups, and daily calorie intake. In addition to creating these handouts and assisting at the events where they were passed out, I was also able to attend several meetings regarding the planning of these events. Most campus events require months of preparation beforehand and are only possible through the joint effort of several different organizations on campus. I was able to observe and be a part of effectively working together on interprofessional teams in order to successfully put on these events. Apart from her on-campus responsibilities, Julie Gibbs is also an active member of the Flint Hills Wellness Coalition, which serves to create a healthy community for the members of Riley County through policy, system, environmental, and personal change ("Mission", 2019). I was able to attend several of their monthly meetings with her and learn more about how they are able to make an impact in the community.

The second half of my project was completed at the Riley Extension Office with Megan Dougherty who serves as the Family and Consumer Science Agent. My main responsibility while there was to create, execute, and lead two different classes that would be open to the community, a healthy eating class geared towards lower income families with young children and a freezer meals class to encourage families to eat more meals at home instead of eating out. The healthy families class was to take place over the course of four weeks during a one month period. Each one-hour lesson would cover topics such as the main food groups, portion sizes, dealing with picky eaters, how to eat healthy on a budget, and meal planning. The content for each lesson was taken from MyPlate ("Choose," n.d.), the CDC website ("Nutrition," 2019), recommendations by the Academy of Nutrition and Dietetics ("Eat Right," n.d.), and other reliable sources. The first 20 minutes of each class consisted of a lesson on the given topic for that session, followed by 20 to 30 minutes of activities and discussion to involve all family members and apply the material covered in the lesson, and concluded with a short assessment to measure the progress of each family. The final lesson was to be a cooking class where all the families could work together to cook a healthy, affordable, and kid-friendly meal. The objective of the class was to improve eating habits for both parents and children, increase the number of meals eaten at home as a family unit, improve child involvement in meals, and increase the amount of fruits, vegetables, and whole grains consumed. Unfortunately, due to inclement weather, rescheduling conflicts, and unreliable transportation for the participants only half of the sessions were able to be taught before the course had to be canceled.

The second class I created and taught was a three-hour class about freezer meals where participants were able to assemble and take home ten family size freezer meals. The main objective of this class was to educate and show participants how easy it can be to have healthful meals on hand that could help them reduce the number of meals eaten out for convenience sake. For this class I had to first select the recipes that would be prepared and make any adjustments necessary to make them freezer friendly. Once the recipes had been finalized ingredients and supplies for the 12 participants had to be prepped, organized, and arranged to allow the class to run as

efficiently as possible. Before assembling the meals, I gave a short presentation on the benefits of eating meals at home as a family and eating less fast food.

In addition to creating and teaching the two different courses I also assisted with 4-H events in the community and updating various materials for the Extension Office. The materials I updated were a community resource guide and materials for Book In a Bag, a nutrition program offered within Riley County schools. The community resource guide consists of all possible resources within the Riley County area that provide food, shelter, or financial assistance to individuals in need. In order to update this guide, I had to contact all possible resources to verify their information and the support they provided. This activity gave me a much broader view and understanding of what resources are available in Riley County, many of which are underutilized. The Book in a Bag program serves to educate children on nutrition, through activities and cooking lessons associated with various children's books. For each children's book selected, I had to create an activity that could be done within a typical elementary classroom, an informational handout for parents, and a nutritious recipe that went along with the book and could be made within the classroom. This program is available to all elementary teachers within the Riley County School district to present to their classrooms.

Chapter 3 - Results

At both the locations, I completed my APE, the impact of the programs I assisted with was unable to be measured. For the projects I assisted with at Lafene, I provided information to students but was not able to measure whether this information was applied. I was able to measure the number of students reached, which was 340 students. The total enrollment for the semester I completed my project was 20,799 students, with 17,789 taking at least one course on campus. From these numbers it can be estimated that roughly 2% of the student body was reached. While handing out the information I also asked students to participate in a game that tested their nutritional knowledge. Questions were asked regarding food groups, serving sizes, caloric intake, smart shopping, and nutrient intake. One in every 10 students who participated could name all of the food groups and only one in every 18 could correctly identify a serving size. None of the students who participated knew how many servings of each food group need to be consumed each day.

For the projects completed at the Riley County Extension Office, many of them consisted of updating resources, with no estimation of how many individuals would actually utilize these resources. For the healthier families course I taught, we had intended to measure the effectiveness of the course, but since it had to be canceled before completion this was not an option. Initial data and data following a second session, were collected from the two families who attended both sessions and are summarized in the following tables. The intent was to ask these same questions at the end of the course and assess any changes in behavior and parental self-efficacy. Self-efficacy was measured based upon self-given parental confidence scores, which was based upon the tenets of the social cognitive theory (Bandura, 1991).

The initial session taught covered food groups, portion sizes, and how to create a healthy meal. The lesson plan and materials used for this lesson can be found in Appendix B. Following the presentation of the material, hands-on activities such as creating balanced meals from images, food group sorting, and matching portion sizes, were done to further emphasize the material taught, assess the participants' understanding of the material, and involve all family members in the session. Children

were asked to name some of their favorite meals and categorize the food in these meals. These meals were then discussed as a group to determine what food groups were missing and how healthier swaps could be made. Each family also created a sample weekly plan that included the consumption of the appropriate amounts of each food group each day. Throughout the session, children were encouraged to participate and name example foods from each food group.

A second session was able to be taught that combined the topics to initially be discussed in lessons two and three. This session covered meal planning, setting a grocery budget, and dealing with picky eaters. Activities included creating meal plans and grocery lists using affordable, family-friendly, healthy recipes and grocery store ads. Children were encouraged to pick new foods to try and participate in planning the meals to be consumed. Parents were also provided with tools to assist them in expanding their children’s diets and were given the opportunity to discuss problems they face at home and ask questions. Open dialog between the families allowed them to discuss things that have worked for their families and encourage the other parents to continue offering their children new foods.

Table 3.1 Summary of Initial Data

Question Asked		Response 1	Response 2
Number of adults in household		2	2
Number of children in household		2	1
Ages of children in household		5-15 years	5-10 years
Highest level of education completed by adult member		Bachelor’s	Associate
Race		White	White
Marital Status		Married	Married
Employment Status		Both full-time	Both part-time
Annual income		\$70,000-\$79,999	\$30,000-\$39,999
Frequency children eat breakfast at home		4-6 x/week	Daily
Frequency family eats dinner together		4-6x/week	4-6x/week
Frequency dinner is eaten in front of a TV		1-3x/week	Daily
Frequency family eats fast food		1-3x/week	1-3x/week
Frequency family eats pre-prepared meals		1-3x/week	4-6x/week
Number of family meal planned in advance		4-6x/week	1-3x/week

Frequency children are involved in planning meals	4-6x/week	1-3x/week
Frequency children eat fruits and vegetables at meals and snacks	4-6x/week	1-3x/week
Frequency children eat 2 or more food groups at meals	7+x/week	1-3x/week
Frequency children eat 3 or more food groups at meals	4-6x/week	Never
Frequency children eat 4-5 food groups at meals	1-3x/week	Never
Frequency children drink pop or sweetened beverages	1-3x/week	1-3x/week
Frequency children drink milk at meals or snacks	1-3x/week	1-3x/week
Frequency family uses food as a reward	1-3x/week	4-6x/week
Frequency family encourages children to be active	Daily	4-6x/week
Frequency family does physical activity together	4-6x/week	1-3x/week
Frequency children do physical activity	1-3x/week	4-6x/week
Frequency children participate in organized sports or activities	4-6x/week	Never

Table 3.2 Summary of Data Following Session Two

Question Asked	Response 1	Response 2
Frequency family plans meals together	4-6x/week	Never
Frequency a family goes to the grocery store	1x/week	1-3x/week
Frequency children help in the kitchen	Always	1-3x/week
Frequency children are introduced to new foods	1-3x/week	1-3x/week
Frequency a different meal is prepared for children	Never	Always
Frequency meals contain all food groups	4-6x/week	1-3x/week
The following phrases assessed parents self-efficacy following that evenings session		
I feel better prepared to deal with my picky eaters.	Agree	Agree
I feel better prepared to create weekly meal plans.	Agree	Strongly Agree
I will start introducing my children to new foods.	Agree	Strongly Agree
I will stop making different meals for my children.	Strongly Agree	Agree
Meal planning healthy meals is expensive.	Disagree	Neither agree nor disagree
Meal planning healthy meals is time consuming.	Neither agree nor disagree	Neither agree nor disagree

Chapter 4 - Discussion

Interpretation of Results

The initial data collected from the healthier families class supports the literature that states that socioeconomic status (SES) is closely related to the fruit and vegetable intake of children and healthy habits performed at home. The family from a lower SES reported more meals eaten in front of a TV, less child participation in meals, less fruits and vegetables consumed, and an inadequate amount of food groups consumed throughout the day. In addition, they were more likely to eat pre-prepared meals and use food as a reward for good behavior. In order to truly determine the effectiveness of this program all courses would need to be administered to a much larger sample size.

Riley County is predominantly composed of college students and families who are considered to be just below the national average for middle income. The median household income for Riley County is \$7,000 below that of the rest of the state. In addition, 18.2 percent of Riley County residents are living in poverty, which compares to only 12.1 percent in the rest of the state (U.S. Census, 2018). The projects I created targeted these specific populations, yet very few members were actually reached. There are several potential reasons for this: lack of reliable transportation, lack of knowledge on the importance of healthy eating, and lack of time. Lack of reliable transportation was a major factor in the cancelation of the healthier families course that was taught through the Extension Office and is a common barrier they face for many of their programs. When individuals do not have a reliable source of transportation it can be difficult for them to commit to regularly attending a program that could potentially be beneficial to them. Even when reliable transportation is available individuals must understand why it is important for them to gain knowledge on a given topic. Even after these barriers are taken away a lack of time hinders many individuals from participating in programming that may be available to them. Many of the individuals who are participants in, and are targeted by the Extension Office programs, come from lower- to middle-income homes and are difficult to reach due to these unique disparities faced by these populations.

RE-AIM Framework

In order to fully assess the effectiveness, sustainability, and impact of a program it is important to take into consideration the reach, efficacy, adoption, implementation, and maintenance of a given program (RE-AIM, 2019). The RE-AIM framework is used to assess all of these characteristics for the healthier families course created for the Riley County Extension Office.

The reach of the program was quite small in comparison to the number of individuals who were eligible to participate in the program. According to the 2018 Census data, 16.7% of the Riley County population is under the age of 18 (U.S. Census, 2018), and yet, only three individuals from this age bracket attended the course, creating a very low participation rate. This could be due to a lack of interest in the course, poor advertising, and difficulty reaching this age bracket.

The healthier families course targeted increased consumption of all five basic food groups, more meals eaten at home as a family, and stronger parental confidence in providing healthy meals for their families among lower-income families in the Riley County area. Though initial data on the effectiveness of the program is not available, the potential effectiveness can be assessed. By building the skills and knowledge of both parents and children there is potential for all of the targeted outcomes to occur. Incorporation of techniques found within the Social Cognitive Theory and Theory of Planned Behavior, as well as previous research, provides an evidence base for supporting the effectiveness of the program. Previous research indicates that programs that target both parents and children are more effective than programs that focus on only one of these groups. In addition, parents are who often make food choices for their children, so their involvement is vital in order to truly make a change.

Adoption of the healthier families course by other organizations has yet to occur, but interest has been shown by organizations other than the Riley County Extension Office. Three other organizations have inquired about using the materials to teach their own courses. The potential for this course to be adopted by other organizations is quite

large as it has the potential to maximize effectiveness while minimizing the amount of time and cost to provide education on the topic when comparing the cost versus impact.

The implementation of the healthier families course did not go as initially planned. The course was intended to be implemented at a local Head Start school but was instead implemented within the broader Riley County community. Participation was low and unreliable, resulting in the only a portion of the intervention to be implemented. That being said, the intervention components that were implemented were done so in a manner to maximize the effectiveness of the program. From the initial pilot data, when combined with previous research, broader implementation of the program has the potential to increase healthier habits among families.

The maintenance of the healthier families can be assessed on two different levels, the individual and the community-wide. At the individual level, the skills taught in the program were maintained by the families who participated throughout, and even after the course ended. Data on long-term maintenance is not available. At the community level, Riley County as a whole could potentially maintain the habits formed within the program on a long-term basis. Other initiatives that target similar behavior changes have been shown to do well in the area, giving this program the potential to have a similar impact.

Health Behavior Theories

Many theories can be used to describe behavior change and be applied when assessing the various projects completed during my APE. These behaviors change theories can be used to create targeted intervention strategies to promote and sustain changes at the individual, community, and social levels ("Theory," 2005). Greater success can be seen when interventions are based on one or any combination of these theories. In addition, they provide a tool for understanding barriers that can stand in the way of instigating behavior change. Two major types of behavior change theories were utilizing when designing the course materials for the healthier families class and the handouts for the Farmers' Markets, the Social Cognitive Theory (Bandura, 1991) and the Theory of Planned Behavior (Ajzen, 1991).

The Social Cognitive Theory (SCT) considers three main factors that affect the likelihood that a person will change a health behavior, self-efficacy, goals, and outcome expectancies, with the basis that if an individual has a sense of self-efficacy, they can change a behavior, even when faced with an obstacle. It includes six concepts: reciprocal determinism, behavioral capability, expectations, self-efficacy, observational learning, and reinforcements ("Theory," 2005). To lead to behavior change, the course material for the healthier families class emphasized self-efficacy, increasing participants' knowledge and skills, modeling healthful behaviors, and reinforcing these behaviors. In addition, it focused on addressing environmental barriers that can influence these attitudes and beliefs. The same concept was used when creating the handouts for the Farmers' Markets. Information was shared with the participants that provided them with the essential tools and knowledge to achieve a behavior change. Goals such as increased fruit and vegetable intakes, more meals eaten at home, and sticking to a budget while grocery shopping were set to specifically address the expectations and anticipated outcomes of the behavior change. Based upon the SCT, self-efficacy played a critical role in the success of the participants. Strategies for improving self-efficacy include experience, vicarious experience, social persuasion, and emotional arousal (Bandura, 1991). Experiences are obtained from a history of doing something of a similar nature. Some of the families mentioned attempting to eat healthier meals, widening their children's palettes, and create meal plans but experienced little success. This type of failure can lead to low parental self-efficacy, making it difficult to insight behavioral change. Vicarious experience was gained through interactions and discussions with other participants in the course who had experienced success, motivating others to continue working towards their own behavioral change goals. The participants shared success stories, tips that had worked in their own home, and motivational statements during the open group discussion times. Emotional arousal and verbal persuasion was provided by the course instructor through words of encouragement and emphasis on lifestyle changes that would result in positive outcomes instead of an emphasis on restrictions.

The Theory of Planned Behavior (Ajzen, 1991) investigates the relationship between an individual's beliefs, attitudes, intentions, behavior, and an individual's

perceived control over that behavior. This theory is based upon three concepts: behavioral attitude, subjective norm, and perceived behavioral control. ("Theory," 2005). Behavioral attitude focuses on the individual and also takes into consideration their individual beliefs related to the intended outcomes. Individual's attitudes were assessed via a survey administered at the first session. The results of these surveys were discussed and barriers were addressed in the following courses. Assistance from the course instructor was offered to help families overcome barriers and facilitate further progress towards making behavior changes. Subjective norms focus on the social and environmental factors that can contribute to behaviors, specifically whether key people approve or disapprove of behaviors. Materials created for the healthier families course, as well as the Farmers' Market handouts, addressed common misconceptions related to healthful habits. The purpose of these materials was to negate these misconceptions and raise awareness of the simple steps that can be taken to create healthier habits. By negating these misconceptions the program aimed to modify the societies prospective on the cost and ease of healthful eating habits. Perceived behavioral control is the belief that an individual has, and can exercise, control over performing behaviors ("Theory," 2005). This is based upon a combination of perceived knowledge and resources available, as well as social influence. Participants who allowed these factors to have more power over their choices, versus those who were open to behavior change, made slower progress towards their goals.

Chapter 5 - Competencies

Competency # 9: Design a population-based policy, program, project or intervention.

To design a population-based policy, program, project or intervention I created a course geared towards lower-income families with young children to teach them about healthier eating habits. Two very common misconception are that eating healthy cannot be done on a limited budget and that children will not eat healthier foods (Wolfram, 2018). The purpose of this course was to teach families that not only are these misconceptions not true, but also give them the knowledge, tools, and resources to implement healthier diets within their homes. The material was presented in such a way as to ensure that it was understandable by all participants and was reinforced by hands-on activities at the end of each session. Much of the material was based upon the information provided on ChooseMyPlate.gov (Haven et al, 2014). This course was offered by the Riley County Extension Office and I had the opportunity to teach two lessons before the class had to be canceled due to inclement weather and conflicts with rescheduling.

Competency #10: Explain basic principles and tools of budget and resource management

To explain basic principles and tools of budget and resource management I included a section in my healthy families course on how to meal plan on a budget. This section utilized many of the tools found on ChooseMyPlate.gov. I discussed how to figure how much you should spend on groceries and how to stick to this budget while shopping at the store. I taught them how to utilize grocery store ads, strategic meal planning to minimize costs, and the importance of using what you have on hand instead of purchasing different ingredients. I was able to explain and demonstrate to the participants how to properly calculate the amount of food needed, in order to minimize food waste. By minimizing food waste, as well as utilizing the other techniques I taught them, they were able to create healthy menus that fit within their families' budgets. My main objective with this lesson was to show the participants that eating healthy does not

have to be expensive or impossible on a limited budget, which was a misconception the majority of the participants had at the start of the course.

Competency #11: Select communication strategies for different audiences and sectors

The competency of selecting communication strategies for different audiences and sectors was addressed when creating the informational material to be handed out at a farmers' market on a college campus. This material was created based upon the principles within the social cognitive theory (Bandura, 1991). This was done by creating material that was both eye-catching and informational, as the majority of college students will not take the time to read something that does not look interesting or is lengthy. In order for this material to be useful and make an impact it also needed to be applicable to a college students busy schedule, limited budget, and minimal resources. I included information that applied to both on and off-campus students in order to maximize the reach of this information.

Competency #19: Communicate audience-appropriate public health content, both in writing and through oral presentation

The communication of audience-appropriate public health content, both in writing and through the oral presentation was also addressed via the healthy families course. Content was delivered through the information in multiple PowerPoints, handouts provided to all families, and also orally presented. The PowerPoints included information on why and how to create healthier habits, how to handle picky eaters, meal planning, and the five main food groups. I also created several different handouts for parents to take home in order to assist them in implementing the information we had covered in the sessions. I had the opportunity to teach these courses and facilitate discussions between family members on how they can create healthier habits. By utilizing both written and oral presentation methods, as well as hands-on, activity-based components, I was able to better reinforce the material that was being presented.

Competency #21: Perform effectively on interprofessional teams

The competency of performing effectively on interprofessional teams was addressed via the planning of on-campus events including the Farmers' Market and other events during Wellness Week. These events took months of planning and meetings with various organizations and departments on campus. I created material to be handed out to students during these events that addressed healthy eating. I regularly attended other meetings with Julie Gibbs, who is the Director of Health Promotion at Lafene Health Center, during my time there. At these meetings I was able to observe and interact with individuals from many different entities who were all working towards one common goal or objective.

Table 5.1 Summary of MPH Foundational Competencies

Number and Competency		Description
9	Design a population-based policy, program, project or intervention	I addressed this competency by creating healthy families course for lower-income families with young children. This course was offered by the Riley County Extension Office.
10	Explain basic principles and tools of budget and resource management	This competency was addressed by teaching families how to meal plan on a budget and how to utilize foods they have on hand.
18	Select communication strategies for different audiences and sectors	This competency was addressed by creating handouts for events on a college campus that would be eye-catching and easily obtained by college students.
19	Communicate audience-appropriate public health content, both in writing and through oral presentation	I addressed this competency through PowerPoints, handouts, and oral presentations for the healthy families course that covered topics such as healthy eating habits, dealing with picky eaters, and the main food groups in a balanced diet.
21	Perform effectively on interprofessional teams	This competency was addressed via meetings attended to plan campus events such as Farmers' Markets, a 5K, and Wellness Week activities. I created materials to be handed out at these various events.

Table 5.2 MPH Foundational Competencies and Course Taught In

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				
20. Describe the importance of cultural competence in communicating public health content		x			x

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	

Student Attainment of MPH Emphasis Area Competencies

Competency #1: Information literacy of public health nutrition

Each of the nutrition emphasis specific competencies was addressed through my coursework, but two competencies were specifically addressed through my projects. The competency of information literacy of public health nutrition was addressed both at Lafene and at the Riley County Extension Office. At Lafene the informational materials handed out provided college students with nutritional information that could be applied to their daily lives. Not only was this information provided, but I also had the opportunity to explain the information and answer any nutrition-related questions. Students were encouraged to get involved by winning a prize for answering a nutrition-related questions correctly. This opened a door to allow me to explain the correct answer if needed and expound on any information that may not have been initially understood. This competency was also addressed through the healthy families course offered by the Extension Office. Participants were provided with nutrition education for each session. This information was not only provided but also clearly explained to each of the participants. I made an effort to present the material in a manner that would make it easy to understand and also seem feasible for them to integrate into their day to day lives. In order to make the information easier to comprehend, and also to involve all members of the family, each lesson was followed up by an activity that reinforced and applied the concepts covered. This activity also gauged their level of understanding regarding each specific topic and allowed open dialogue to take place. My goal by incorporating an interactive activity, was to help the participants understand the material better, and also get the children excited about trying new foods and being a part of the meal planning and cooking process.

Competency #3: Population-based health administration

The second competency I specifically addressed through my projects was the population-based health administration competency. This competency was addressed by observing how multiple health service programs were administered. I observed how information was presented in each setting, how it was altered for the target audiences, and how well it incorporated factors from the social ecological framework. In addition, by utilizing the knowledge taught in my course work, I was able to analyze the potential effectiveness of the programs observed.

Table 5.3 Summary of MPH Emphasis Area Competencies

MPH Emphasis Area: Nutrition		
Number and Competency		Description
1	Information literacy of public health nutrition	Inform public health practice through analysis of evidence-based policy, systems, and environmental change.
2	Compare and relate research into practice	Examine chronic disease surveillance, policy, program planning and evaluation, and program management, in the context of public health nutrition.
3	Population-based health administration	Critically examine population-based nutrition programs.
4	Analysis of human nutrition principles	Examine epidemiological concepts of human nutrition in order to improve population health and reduce disease risk.
5	Analysis of nutrition epidemiology	Describe criteria for validity in nutritional epidemiological methodology.

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Appendix A - Example Informational Handout for Farmers' Market



HEALTHY EATING AS A COLLEGE STUDENT

Yes it can be done!

TIPS FOR NAVIGATING CAMPUS DINING CENTERS

1. Avoid fried food. Fried foods have high fat and calorie content which increases your risk for numerous health problems, including obesity, stroke, and diabetes. You want things like chicken, potatoes, and vegetables to be grilled or baked, not fried.

2. Drink lots of water. Your need water, and lots of it. Our bodies rely on water to function properly, but a lot of us are dehydrated. Instead of grabbing soda, juice, or energy drinks, fill up on water. Don't like the taste? Try adding in some fruit.

3. Eat real food. Real food is food that is harvested, farmed, picked, or raised. Your diet should consist of vegetables, fruits, high quality lean meats, beans, nuts, and whole grains. So make a trip to the salad bar, get creative, and don't be afraid to customize your meals.

4. Moderation is key. All you can eat meal plans tend to encourage us to eat more than we actually need. Start with one plate of food, eat it slowly so that your body has time to digest it, and then think about whether or not you need more to eat.

5. Splurge every now and again! It's ok to enjoy a plate of fries and chicken nuggets or a slice of pizza occasionally, just don't make it a habit.

Most college students think that eating healthy is too expensive, but with a little smart shopping, planning ahead, and time in the kitchen, it can be done, even on a limited budget. Always check your local grocery ads, what's in season in your area, and what you already have when planning out what you are going to eat.



CHICKEN, AVOCADO, AND ORANGE SALAD

A simple salad made with in season produce and precooked chicken is a healthy (and easy!) dinner option that won't brake the bank or leave you still feeling hungry.

In a small bowl, whisk together 2 tablespoons red wine vinegar, 2 tablespoons orange juice, and a dash of pepper until well blended. In a large bowl combine 10 ounces spinach leaves, 1 diced avocado, 1 thinly sliced red onion, and 2 large oranges that have been sliced into thin rounds. Add 1 pound precooked chicken to bowl and top with the prepared vinaigrette. Makes 4 servings.

March is National Nutrition Month and there is no better way to celebrate than incorporating a few healthier habits into your routine.

A FEW SIMPLE SWAPS CAN MAKE A BIG IMPACT

Breakfast

Do you typically start your day with donuts, pastries, or muffins? Or even worse, skip breakfast all together? Try eating a yogurt parfait or oatmeal topped with fruit and nut butter to keep you full until lunch and avoid the mid-morning sugar crash. Things like hard boiled eggs, bananas, apples, oranges, or overnight oats all make great grab and go options for morning when you are rushing to get to class on time.

Lunch and Dinner

Instead of stopping at the nearest fast food restaurant or ordering a pizza, keep healthy food on hand that can quickly be thrown together to make a meal. Better yet, plan ahead and make your meals in advance when you know you are going to have a busy week. Whole grains breads and pasta are great staples that can be used as the base for many meals. Try to incorporate at least one vegetable and one lean protein source into your meals in order to stay full longer.

Snacks

Avoiding vending machines can save you hundreds of calories (and dollars!) every semester. Make sure to always have healthy snacks like nuts, popcorn, raw vegetables and hummus, and tortilla chips and salsa available for those late night study sessions or whenever hunger strikes.

Appendix B - Example Lesson Plan and Materials for Healthy Families Course

Healthy Eating for the Whole Family

Lesson 1- MyPlate, Food Groups, and Servings

Lesson 2- Dealing with Picky Eaters

Lesson 3- Meal Planning on a Budget

Lesson 4- Cook a cheap, easy, and healthy meal

Lesson 1

Supplies Needed:

- Projector
- Writing Utensils
- Coloring Utensils
- Lesson 1 PowerPoint
- MyPlate Poster
- Post-Assessment #1
- Handouts: My Food Card, Menu Planner, and Sensible Portion Sizes
- Plates of various sizes

Begin session by asking these key questions

- What do you think it means to be healthy?
- What do you think it means to eat healthy?

Introduce MyPlate

- Illustrates the five food groups a person should eat each day and each color represents a different food group
- Helps you know which foods you should increase and which foods you should reduce
- Before you eat, you should think about what goes on your plate or in your cup

Talk about each food group, how much you need, and what falls into each food group

- Focus on budget friendly foods
- It can take up to 50 introductions for a child to like a food
- Have a food they like, something they have tried before, and 1 new food on every plate/each day
- Get kids involved by asking them what some foods from each category are

Activity- What food group is this?

- What is missing? How could we add that?
- If you are missing a food group at a meal try to get that in as your next snack

Activity-Complete the My Food Card worksheet and then describe what food groups are included

- Have kids share what foods they drew
- Work as a family to put it into food groups

Activity- Menu Planner Worksheet

- Involve ALL family members
- Studies show involving kids make them more likely to eat something

Questions and/or group discussion

Post-Assessment, thank you, and dismissal



1



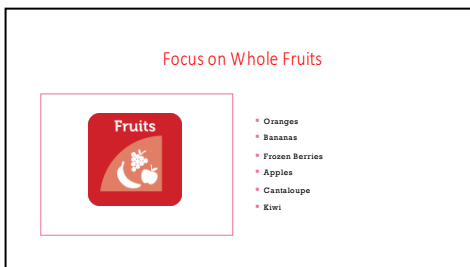
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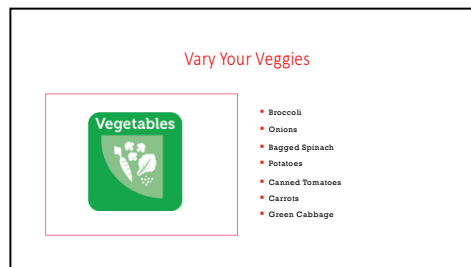
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6

Make Half Your Grains Whole Grains

Grains

- Brown Rice
- Oatmeal
- Whole Wheat Bread
- Air Popped Popcorn
- Whole Wheat Pasta
- Tortillas

7

Vary Your Protein

Protein

- Canned Fish
- Pork
- Eggs
- Chicken Breast
- Beans
- Peanut Butter

8

Choose Low-Fat or Fat-Free Dairy

Dairy

- Cottage Cheese
- Yogurt
- Milk
- Cheese
- Soymilk

9

What food group is this?



10

What food group is this?



11

What food group is this?



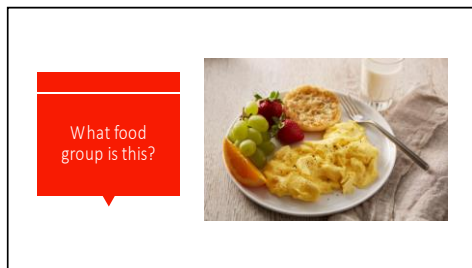
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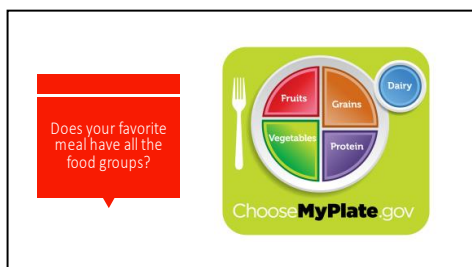
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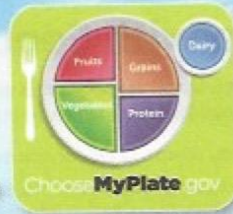
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18

Choose Sensible PORTION SIZES

Get your personal MyPlate Plan at



Find Your Balance
Between Food and
Physical Activity.

Grains



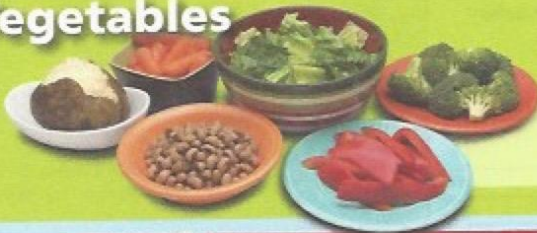
Make half your grains whole

Choose whole grains instead of refined grains.

For a 2000-calorie
diet eat daily:
6 oz.*

1 oz. = 1 slice bread, 1 oz.
ready-to-eat cereal, OR ½ cup
cooked pasta, rice or cereal

Vegetables



Vary your veggies

Eat more dark green and orange vegetables
and cooked dry beans.

For a 2000-calorie
diet eat daily:
2 ½ cups*

1 cup = 1 cup raw or cooked
vegetables or juice, OR 2 cups
raw leafy vegetables

Fruits



Focus on fruits

Eat a variety of fruit — fresh, frozen,
canned, or dried.

For a 2000-calorie
diet eat daily:
2 cups*

1 cup = 1 cup fruit or juice,
OR ½ cup dried fruit

Dairy



Get your calcium-rich food

Go low-fat or fat-free when you choose milk,
yogurt, and cheese.

For a 2000-calorie
diet eat daily:
3 cups*

1 cup = 1 cup milk, 8 oz. yogurt,
1.5 oz. cheese, OR 2 oz.
processed cheese

Protein



Go lean with protein

Choose low-fat or lean meats and poultry.

For a 2000-calorie
diet eat daily:
5.5 oz.*

1 oz. = 1 oz. lean meat, poultry,
or fish, 1 egg, ¼ cup cooked
dry beans, 0.5 oz. nuts, OR
1 tablespoon peanut butter

Physical Activity

* Amounts recommended for each food group will vary
depending on age, gender and physical activity.

Be physically active for at
least 30 minutes a day.

My Menu **PLANNER**

FIRST COURSE • REPRODUCIBLE 2



Name: _____ Date: _____

Plan your dinner menu for a week. Work with a partner to make a full, balanced, and healthy meal for each day. Remember to make sure each meal has one food item from each of the five food groups. You may use one of the food groups for a drink.

When finished, bring it home to share, and try the meals with your family!

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Fruits:	Fruits:	Fruits:	Fruits:	Fruits:
Vegetables:	Vegetables:	Vegetables:	Vegetables:	Vegetables:
Protein:	Protein:	Protein:	Protein:	Protein:
Grains:	Grains:	Grains:	Grains:	Grains:
Dairy:	Dairy:	Dairy:	Dairy:	Dairy:



<http://teammnutrition.usda.gov>

MY Food Card

FIRST COURSE • REPRODUCIBLE 1



Name: _____ Date: _____

Fill in the sentences below, then draw a picture or make a collage of your favorite food item.

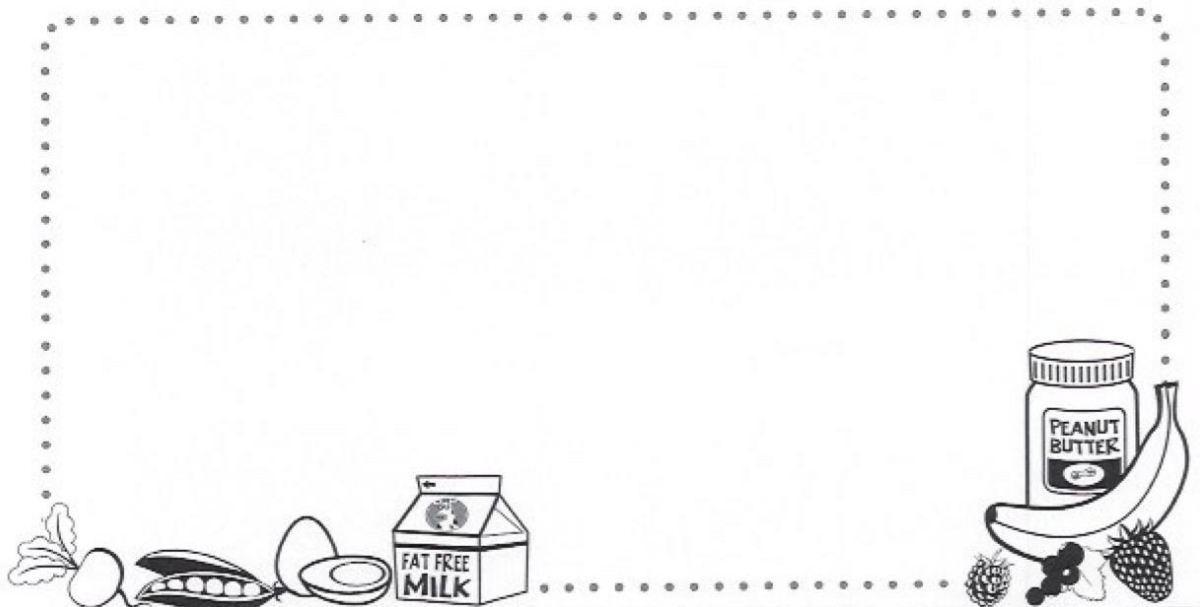
I like to eat _____,
(My favorite food)

which is part of the _____,
(Food group)

at _____.
(Mealtime)

I like to eat it with _____,
(Other food items)

because _____.
(Explain why you like to eat it)



Healthy Eating for the Whole Family

Lesson 1 Post Assessment

Thank you for attending Week 1 of the Healthy Eating for the Whole Family series. We hope you enjoyed this class and will be back in the following weeks. In order to best serve you and ensure that subsequent classes are applicable to the you and your family please answer the following questions about yourself and/or your family. If more than one answer applies please mark ALL answers that are applicable.

1. How many individuals in your household are over the age of 18?

- 1
- 2
- 3
- 4 or more

2. How many individuals in your household are under the age of 18?

- 1
- 2
- 3
- 4
- 5 or more

3. What are the ages of all children in your household?

- 0-2 years
- 2-5 years
- 5-10 years
- 10-15 years
- 15-18 years

4. What is the highest level of education completed by the adult members in your household?

- Less than high school degree
- High school degree or equivalent
- Some college but no degree
- Associate degree
- Bachelor degree
- Graduate degree

5. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, or some other race?

- White
- Black or African-American
- American Indian or Alaskan Native

Asian
Native Hawaiian or other Pacific Islander
From multiple races
Some other race (please specify) _____

6. Are you now married, widowed, divorced, separated, or never married?

Married
Widowed
Divorced
Separated
Never Married

7. Which of the following categories best describes your employment status?

Employed, working 1-39 hours per week
Employed, working 40 or more hours per week
Not employed, looking for work
Not employed, NOT looking for work
Retired
Disabled, not able to work

8. How much total combined money did all members of your household earn in 2018?

\$0-\$9,999
\$10,000-\$19,999
\$20,000-\$29,999
\$30,000-\$39,999
\$40,000-\$49,999
\$50,000-\$59,999
\$60,000-\$69,999
\$70,000-\$79,999
\$80,000-\$89,999
\$90,000-\$99,999
\$100,000 or more

9. My child eats breakfast at home.

Never
Sometimes (1-3 times per week)
Usually (4-6 times per week)
Always

10. Our family eats dinner together.

Never
Sometimes (1-3 times per week)
Usually (4-6 times per week)
Always

11. Our family eats dinner while watching TV.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

12. Our family eats fast food.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

13. Our family uses pre-prepared, heat-and-serve meals such as microwave dinners, frozen pizza, or macaroni and cheese.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

14. Our family plans out what meals they are going to eat in advance.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

15. My child(ren) is involved in choosing what will be eaten at meals.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

16. My child(ren) eats fruits and vegetables at meals or snacks.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

17. My child(ren) eats 2 or more food groups at every meal.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

18. My child(ren) eats 3 or more food groups at every meal.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

19. My child(ren) eats 4 or more food groups at every meal.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

20. My child(ren) eats all 5 food groups at every meal.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

21. My child(ren) drinks soda pop or sweetened beverages.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

22. My child(ren) drinks low-fat or non-fat milk at all meals or snacks.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

23. Our family monitors eating of chips, cookies, and candy.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

24. Our family uses candy, ice cream or other foods as a reward for good behavior.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always (7 or more times per week)

25. Our family encourages our child(ren) to be active every day.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

26. Our family does physical activity together (for example: playing in the park, playing soccer, or dancing at home).

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

27. My child does physical activity during his/her free time.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always

28. My child is enrolled in sports or activities with a coach or leader.

- Never
- Sometimes (1-3 times per week)
- Usually (4-6 times per week)
- Always