Capstone Title: Improving nutrition education communication materials used by WIC staff: An effort to effectively counsel parents of children who are at risk of being overweight

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ABSTRACT: The purpose of this study was to improve existing nutrition communication materials in an attempt to better educate parents of children in the WIC program about the influence that they have on their child's health and weight. Data analysis: qualitative analysis of subjective comments given during the focus group. WIC clients favored positive messages and suggestions on how to decrease a child's risk for becoming overweight, over messages that addressed the fact that if a parent was overweight then their child was at risk for becoming overweight. The enhanced WIC nutrition education handouts will effectively and sensitively address the issue of overweight among WIC clients due to a thorough evaluation of the handouts, which involved both WIC staff and WIC clients.
NORTHERN ILLINOIS UNIVERSITY

Improving nutrition education communication materials used by WIC staff:
An effort to effectively counsel parents of children who are at risk of being overweight

A Thesis Submitted to the
University Honors Program
In Partial Fulfillment of the
Requirements of the Baccalaureate Degree
With Upper Division Honors

Department of
Family, Consumer, & Nutrition Sciences
By
Crystal Graber
DeKalb, Illinois
May 2007
Abstract

Purpose: The purpose of this study was to improve existing nutrition communication materials in an attempt to better educate parents of children in the WIC program about the influence that they have on their child’s health and weight. Implementing the use of a handout that respectfully addresses the child’s risks and the parent’s role could result in not only a more comfortable counseling atmosphere for WIC staff and clients, but could also influence eating behaviors of children as well as the number of children at a healthy weight.

Methodology: Data analysis: qualitative analysis of subjective comments given during the focus group. The focus group evaluated two existing handouts, created by previous community nutrition students, designed to assist WIC staff members when speaking with the parents of children that are at risk for being overweight. These nutrition communication materials were designed specifically for the WIC population (this includes low-income women that are either pregnant or mothers of children up to age five).

Results: WIC clients favored positive messages and suggestions on how to decrease a child’s risk for becoming overweight, over messages that addressed the fact that if a parent was overweight than their child was at risk for becoming overweight. Clients also enjoyed the recipe ideas provided, and suggested including serving sizes for each recipe. Additionally, clients proposed that the Food Guide Pyramid on one of the handouts include, not only the number of servings per day that a child should have of a particular food group, but what specifically a serving size is for each food group.
Implications: The enhanced WIC nutrition education handouts will effectively and sensitively address the issue of overweight among WIC clients due to a thorough evaluation of the handouts, which involved both WIC staff and WIC clients. The enhanced nutrition education handouts will be used at multiple WIC locations.
Improving nutrition education communication materials used by WIC staff:

An effort to effectively counsel parents of children who are at risk of being overweight

Crystal Graber

Northern Illinois University
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Overweight as a WIC Population Concern

For over thirty years, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) has provided beneficial services for those that are considered nutritionally at risk, and qualify for the program. Because WIC is a federally funded program, operations vary from state to state, however, all WIC programs work to achieve similar goals. WIC has focused much of its efforts on improving the nutritional quality, as well as the quantity of the foods, that participants are consuming (Partington & Nitzke, 2000). Now, efforts have been directed at decreasing overweight in the WIC population.

Nearly 30% of children and adolescents are now overweight, or at risk for becoming overweight (Murnan, Price, Telljohann, Dake, & Boardley, 2006). The increase in overweight represents the widest spread concern among children and adolescents in the United States due to the injurious effect that it may have on a child’s psychological, physical, behavioral, and social health (Murnan et al, 2006). Additionally, an individual that is overweight as a child is likely to encounter increased health risks as an adult (Murnan et al, 2006). With the increase in overweight individuals, which is also seen among the WIC population, it is apparent that WIC must now turn their attention to providing health and nutrition education to assist in decreasing overweight among their clients.

Several factors influence a child’s weight status with two being eating behaviors and physical activity levels. Childhood overweight and over consumption of high fat, high calorie foods is gaining increased attention within the WIC target population. Low-income populations are at an increased risk for food insecurity (lack of assured access through socially acceptable means by an individual or household to enough food for a
healthy, active life) (Harrison, 2006). However, they are also at an increased risk for obesity; this has been termed the obesity-hunger paradox (Harrison, 2006). Overweight and obesity can result from excess consumption of high fat, high calorie foods long term; unfortunately, these foods are often more affordable to low-income populations. Food insecurity can occur in the household over both short and long term periods of time. As a result, food insecurity is associated with both underweight (in those individuals that do not consume the needed nutrients frequently) as well as overweight (in those individuals that do not consume the needed nutrients at times). Ironically, two contradictory situations such as hunger and obesity are occurring simultaneously (Harrison, 2006).

Additionally, the problem of overweight among children can in part be attributed to a decrease in physical activity (Bosch et al, 2000). To learn more about this problem, a WIC study in Framingham, Minnesota held focus groups with WIC clients. Within these focus groups, barriers to physical activity were identified as having a lack of time and energy, as well as limited resources (Bosch et al, 2000). Educational materials including a calendar, brochures, a poster, and a magnet were developed for WIC clients based on focus group results. These materials were developed in an attempt to increase physical activity levels among children and their parents. When mothers were interviewed two months later, many indicated that they had used the materials, and found them to be valuable tools in increasing their child’s physical activity levels (Bosch et al, 2000). Additional resources such as these may prove beneficial to parents in promoting healthy behaviors within their families.
Developing Effective Nutrition Education Materials

While there are educational materials available regarding childhood overweight concerns, the messages in the materials may not be sensitive to overweight issues. Materials distributed by the American Academy of Family Physicians repeatedly notes what children should not have and should not do (Information From Your Family Doctor, 2004). This associates negativity with overweight, which may prove detrimental to a child’s self-esteem and psychological well being (Muman et al, 2006). Because overweight is often a very emotional issue, it should be addressed carefully. Educational materials that are upbeat and positive may have a greater impact on eating behaviors and physical activity levels.

This positive approach can be seen within the “Fit WIC” program that was created in Virginia to address the prevention of childhood overweight through application of the Social Cognitive Theory (McGarvey, Keller, Forrester, Williams, et al 2004). This program addressed the need for an increase in physical activity, as well as fruit, vegetable, and water consumption by children in the WIC program. Also addressed were activities that may promote healthy living such as monitoring mealtime behavior, limiting television-viewing time, and increasing active family time (McGarvey et al, 2004). “Active kids are healthy kids. Encourage your child to get moving every day” was one positive message used in this WIC campaign (McGarvey et al, 2004). The difference between this program and other similar programs is its focus on what parents can do to prevent or decrease the overweight status of their child versus the focus of behavior change within the child. Following the implementation of the educational sessions and materials that constructed this particular Fit WIC program, it was found that parents were
more likely to offer their children water than sugary beverages, and more likely to increase their active play with the child (McGarvey et al., 2004). Because parents and children are both participants of Fit WIC, targeting parents as motivators for change and using positive messages of how to enhance behavior, rather than focusing on what one is “not doing right”, appears to work well.

**Targeting Effective Methods For Behavior Change**

Additional avenues for behavior change exist outside of the family unit. Children spend a great deal of their lives at school, thus making it the perfect location for the implementation of behavioral changes. Schools are capable of altering food choices made available to students, as well as how much physical activity students get during the school day (Muman et al., 2006). According to Murnan et al. (2006), an alliance between the family, schools, and the community would undoubtedly prove beneficial in the prevention of overweight in children. A questionnaire was developed by Muman et al. (2006) using the School Health Index to assess parent’s perceptions of how Ohio schools were dealing with overweight. Overall, parents were more interested in the implementation of preventative measures by the school, than in the efforts to determine which children were overweight and which children were not (for example being mailed their child’s body mass index {BMI} information) (Murnan et al., 2006). On the other hand, a study involving a sample of Minnesota schools indicated that parents were interested in receiving their child’s BMI information on a yearly basis, and noted that this information would lead them to increase their child’s physical activity levels (as opposed to restricting their diets) if overweight status was indicated (Kubik, Fulkerson, Story, & Rieland, 2006). While the use of school-based BMI and parent notification programs
remains controversial, this may be a future tool in the prevention of childhood overweight, if implemented properly.

Limiting television-viewing time, is another important factor in addressing overweight within children. A New Zealand study observed the televised advertisements on a popular network during what was considered prime viewing time for children. The results of this study indicated that 63% of the food product/retailer advertisements were for foods that were classified as being high fat and/or sugar according to dietary guidelines (Wilson, Quigley, & Mansoor, 1999). Fast-food meals were the next highest at 14%, with no advertisements for items such as bread, rice, pasta, or vegetables being seen during this block of time (Wilson et al, 1999). Overwhelmingly, 76% of the foods advertised were for snack foods (Wilson et al, 1999). A diet including only the foods advertised would be low in a number of important micronutrients and fiber, and high in fat, saturated fat, protein, sugar, and sodium (Wilson et al, 1999). This indicates that by watching television, children are not only missing out on time that could be better spent being physically active, but they are being exposed to media advertisements that may prove detrimental to their health. Wilson et al (1999) has provided sufficient evidence that limiting television-viewing time may decrease childhood overweight. Children participating in WIC are no exception to this, and it is likely that a decrease in television-viewing time may decrease their risk for becoming overweight.

Implementing Behavior Change Through WIC

There are a number of factors that contribute to the increasing number of overweight children participating in WIC programs. In an attempt to discover methods for addressing childhood overweight, the Fit WIC program was developed (Serrano,
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Gresock, Suttle, Keller, & McGarvey, 2006). Through this program it has been discovered that WIC staff are uncomfortable discussing childhood overweight, and at risk for overweight, with parents (Serrano et al, 2006). At risk for overweight is determined not only by a child’s current age and BMI, but also by the weight status of his or her parents. A child that is not currently overweight may be classified as at risk for becoming overweight, if one or more parents are overweight or obese (Serrano, 2006).

In the past, WIC has offered a number of beneficial programs to their clients. Currently, WIC is attempting to address overweight through the development and implementation of the Fit WIC program. It is anticipated that this program will assist WIC staff in managing childhood overweight sensitively and effectively. It is also crucial that this program discover methods for comfortably addressing the parents of children that are classified as being at risk for becoming overweight. To achieve such goals, the use of educational materials may assist WIC staff members. However, materials that are developed for this purpose will undoubtedly need to sensitively address the issue of overweight with both parents and children. The prevention and treatment of overweight is crucial to the improvement of America’s health status both now and for the future.

Current Study

Previously, nutrition education communication handouts were created through focus groups done with WIC DeKalb County Health Department staff. These focus groups identified the need for effective nutrition education communication materials for use by WIC staff when addressing the parents of children participating in the WIC program that were at risk for being overweight. The WIC staff at the DeKalb County Health Department felt that overweight was an issue that needed to be addressed
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sensitively and felt they did not have a counseling method that effectively addressed this issue. As a result of the implemented focus groups, two nutrition education communication handouts were developed (appendix A). The first handout provides facts about childhood overweight, risk factors for identifying whether or not a child may be at risk for becoming overweight, and suggestions on how to include the family in decreasing a child’s risk for becoming overweight. The second handout contains the Food Guide Pyramid with supplemental WIC foods depicted in each of the food groups, as well as seven recipes using foods that may be provided by the WIC program. Both handouts have been created in an effort to sensitively address the issue of overweight between WIC staff and WIC clients. The handouts were created by previous community nutrition students based on the Health Belief Model (perception of the health problem and appraisal of proposed behavioral changes are central to a decision change {Boyle & Holben, 2006}). (Components of The Health Belief Model include perceived susceptibility, perceived impact, perceived advantages of change, appraisal of barriers, and self-efficacy {the belief that one can make a behavior change} {Boyle & Holben, 2006}). Due to the involvement of the WIC staff as well as the application of the Health Belief Model, in the creation of the handouts, it is likely that these will be effective nutrition education communication materials.

Hypothesis

It was hypothesized that WIC clients, especially those who were overweight, may be uncomfortable discussing the issue of overweight. In addition, it was hypothesized that these clients may not be have been responsive to nutrition education materials if the materials were not sensitive to the issue of overweight. To investigate effective methods
for addressing the parents of children that were at risk for becoming overweight or were already overweight, a focus group using two existing WIC handouts was held with current WIC clients.

**Research Questions**

- Are current WIC nutrition education communication materials effective at addressing risks associated with overweight in both parents and children?
- Are messages within WIC nutrition education communication materials sensitive in the eyes of the WIC client to the issues of overweight?
- Are messages about health and nutrition viewed as positive by WIC clients in the nutrition education communication materials?

**Methodology**

The data analysis was a qualitative analysis of subjective comments given during the focus group. Prior to conducting the focus group, Institutional Review Board (IRB) permission was obtained (appendix B), and correspondence for setting up the focus group was made with a WIC staff member. A flyer was developed and hung at the Stephenson County Health Department to recruit WIC clients for this focus group (appendix C). In compliance with IRB regulations, WIC clients were asked to sign age appropriate consent forms (appendix D), and informed that their feedback would be kept confidential, prior to the start of the focus group. Additionally, as indicated on the recruitment flyer, WIC clients participating in the focus group were awarded a five-dollar Wal-Mart gift card as an incentive. The two existing WIC handouts were distributed, and WIC clients were given a few moments to look each one over. The focus group was led by a facilitator who asked questions that were neither biased, or leading (appendix E), to obtain feedback
from WIC clients regarding their opinion of the two handouts. Feedback from the WIC clients was documented by two recorders. Questions were developed in an effort to present any problems that WIC clients may have with the handouts. Feedback obtained from the focus group has been used to enhance the existing handouts for the possible use at multiple WIC facilities in the future.

Results

As evidenced by the implementation of the focus group held at the Stephenson County Health Department with ten WIC clients (1- Hispanic, 6- Caucasian, 3- African American), results indicated that the proposed hypothesis (overweight WIC clients may be uncomfortable discussing the issue of overweight) was correct. During the focus group, overweight parents were offended by messages that addressed overweight issues related to parent weight. Multiple WIC clients stated that they felt certain messages on the handout seemed accusatory in tone (i.e., blaming the parents for the child’s overweight), specifically a risk factor that was listed “Has one or more parents that is overweight or obese”. Clients suggested that this statement be left off of the handout completely in order to be more sensitive to addressing the issue of overweight. Other changes mentioned included the addition of positive measures that a parent might take to reduce their child’s risk for becoming overweight, and the reduction of the number of times the word “overweight” is used on one of the handouts. One WIC client identified this change because she felt that children should not be labeled as “overweight”. In addition, WIC clients appeared much more comfortable discussing the healthy recipes provided on one of the handouts, than the sections of the handouts that discussed
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overweight facts and risk factors. (See Table 1 for subjective comments provided by WIC clients during the focus group).

<table>
<thead>
<tr>
<th>Table 1. Subjective comments from WIC clients</th>
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<tbody>
<tr>
<td><strong>Handout 1: Fit Families = Healthy Families</strong></td>
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<tr>
<td>• “It has conflicting messages; one side says give children seconds, while the other side talks about overweight and obesity.”</td>
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<tr>
<td>• “Are these servings sizes all that children should have? Is it bad to have more? My child drinks a gallon of milk.”</td>
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<tr>
<td>• “This helps identify what ‘at risk’ means.”</td>
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<tr>
<td>• “Alternatives to sweetened beverages would be good to have on the handout.”</td>
</tr>
<tr>
<td>• “A child being at risk for becoming overweight if a parent is overweight, my child is at risk, that is what I’ll remember.”</td>
</tr>
<tr>
<td>• “Maybe you should hint around the overweight part.”</td>
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<tr>
<td>• “Say what we can do about overweight.”</td>
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<tr>
<th><strong>Handout 2: Food Guide Pyramid &amp; Recipes</strong></th>
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<tbody>
<tr>
<td>• “More pictures for the grain group would be better because we eat more than just cereal.”</td>
</tr>
<tr>
<td>• “It’s misleading, we don’t get fruits and vegetables through WIC.”</td>
</tr>
<tr>
<td>• “Different ways to use peanut butter would be good.”</td>
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<tr>
<td>• “What’s the point of calling them ‘hearty’ oatmeal muffins?”</td>
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<tr>
<td>• “Healthy finger foods to get kids involved in the kitchen would be good.”</td>
</tr>
<tr>
<td>• “Hot tuna and cheddar sandwiches doesn’t sound good, but if you called it a tuna melt it would.”</td>
</tr>
<tr>
<td>• “Change the ginger carrots to glazed carrots, I know what that is.”</td>
</tr>
</tbody>
</table>

In regard to the handout with the recipes and Food Guide Pyramid on it, clients stated that they preferred the old Food Guide Pyramid (which was used in the current handout) be used because it was easier to apply to the supplemental food provided by the WIC program. However, it was suggested that the Food Guide Pyramid be color coded to match the new mypyramid food group colors to assist WIC clients in transitioning from the old pyramid to the new pyramid. The reverse side of that handout provided seven recipes, which use supplemental foods offered by WIC. Clients were unfamiliar with the quiche and the bean soup recipes provided and stated that they were unlikely to try either
of these. Suggested recipe additions included pastas, peanut butter snacks (clients stated they typically choose peanut butter over beans as their source of protein), cream soups, and healthy desserts. Overall, WIC clients liked the idea of the existing handouts, and stated that after the above-mentioned changes were made, the handouts would likely have potential for effective nutrition education among WIC clientele.

**Discussion**

Findings suggest that WIC clients that are overweight are uncomfortable discussing their child's risk of becoming overweight. While this had been previously hypothesized, the focus group results identified that parents were specifically uncomfortable with the idea that their child's weight status could be influenced by their own weight status. WIC clients did not like this and stated that they felt as if they were being blamed for their child's weight. While clients suggested that the risk factor listed "Has one or more parents that is overweight or obese" be left off of the handout for the sake of sensitivity, this is information that parents may benefit from knowing. It has been decided that the enhanced handout will leave off the word "obese" in an effort to make this statement more sensitive to the client's feelings. Additional handout changes included recipe alterations, and substitutions (most clients did not know what quiche was, and so this was replaced with peanut butter finger foods for kids). (Appendix F lists all changes made to existing handouts). It was identified that parents were interested in positive measures that they may take to reduce their child's risk of becoming overweight. As a result an additional section was included to address this factor. Given the findings, it is hoped that the enhanced nutrition education materials (appendix G) will address the issue of children at risk for being overweight more sensitively, and effectively.
Limitations

A single focus group containing ten WIC clients (1- Hispanic, 6- Caucasian, 3- African American) may not provide an adequate demographic representation of all WIC programs. Additionally, during the focus group, some clients were more inclined to participate than others; this may be due to the nature of a focus group setting. Opinions may have been more accurately recorded through other means. There were also two handouts discussed simultaneously during the focus group; client responses may have differed if one handout had been discussed at a time. Lastly, all WIC clients participating in the focus group had their children with them. This resulted in an environment filled with distractions (some children were talkative, and others walked around the room). During the focus group a WIC staff member came in and took a few children to the play area which helped decrease the participants distraction. Responses may have differed if there had been no children in the room during the focus group.
References


Information from Your Family Doctor: Obesity and Children: Helping Your Child Keep

Information from Your Family Doctor: Obesity and Children: Helping Your Child Lose

School Students Weigh in on Height, Weight, and Body Mass Index Screening at

of a Parent-Focused Preschool Child Obesity Intervention. American Journal of
Public Health, 94(9), 1490-1495.

Perceptions of Curricular Issues Affecting Children's Weight in Elementary

of WIC children Wisconsin and children form 1994 CSFII. Journal of Nutrition

Appendix A
Existing WIC Nutrition Education Handouts
Is your child at risk for becoming overweight?

Your child could be at risk if he or she:

- Spends four or more hours a day watching television & playing video or computer games
- Has one or more parents that is overweight or obese
- Lacks physical activity (children need to move!)
- Consistently eats foods high in fat and sugar
- Drinks two or more sweetened beverages a day

Encourage healthy eating as a family!

- Keep meal time as pleasant as you can!
- Provide whole or mixed grain breads, cereals, etc.
- Don't force feed!
- Eat many fruits and vegetables of all different colors!
- Eat as a family at the table or at least sit with your child when he or she eats!

Involve the whole family in physical activities!

- Go for a picnic in the park!
- Try going for bike rides on Sunday afternoons!
- Teach your child a new sport or play a game of catch!
- Take the dog for a walk!
- Walk to school (if possible) together!
- Everyone helps with yard work and cleaning the house!
Feeding your child is a shared responsibility!

- **Parents** are responsible for **WHAT** foods are offered, **WHEN** foods are offered and **WHERE** foods are offered!
- **Children** are responsible for **WHICH** foods they eat and **HOW MUCH** food they eat.
- Give children seconds if they want them.
- They can also choose not to eat the foods at all.

The facts:

- Overweight children are at greater risk for becoming overweight adults!
- Risks for heart disease and diabetes increase dramatically in overweight children.
- Overweight children often have poor self-esteem and can become depressed.
- Overweight children are being described as an epidemic!
- The rate of overweight children has more than tripled in 30 years!

Help your child AVOID this unhealthy trend!

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**U.S. Increase in Overweight Children, 6-11 years old**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1971-74</td>
<td>2%</td>
</tr>
<tr>
<td>1976-80</td>
<td>4%</td>
</tr>
<tr>
<td>1988-94</td>
<td>6%</td>
</tr>
<tr>
<td>1999-2002</td>
<td>18%</td>
</tr>
</tbody>
</table>

Adapted from various references by the Northern Illinois University Community Nutrition Students: J. Albig, S. Kalivas, A. Kiederlen, J. Klepal, V. Lane, S. Miller. May, 2006. For questions or permission to use, email Amy D. Ozier PhD, RD aozier@niu.edu or call 815-753-6343
Fit Your Coupons In The Food Guide Pyramid

**Milk and Cheese**
- **2-3 servings**
  - 1-3 yrs. = 12-16 oz. Milk
  - 4-5 yrs. = 16-24 oz. Milk

**Peanut Butter, Dry Beans or Peas and Eggs**
- **2-3 servings**
  - 1-3 yrs. = 2-3 1/2 oz.
  - 4-5 yrs. = 5 oz.

**Vegetable group**
- **3-5 servings**

**Cereal**
- **6+ servings**

**Fruit Group**
- **2-4 servings**

Juice
- “No more than”
  - 1-3 yrs. = 4 oz.
  - 4-5 yrs = 6 oz.

*Through the Farmers’ Market Nutrition Program (FMNP), participants are provided with additional coupons that can be used to purchase fresh fruits and vegetables at participating farmers’ markets. (FMNP is currently in a limited service area.)*

Adapted from various references by the Northern Illinois University Community Nutrition Students: J. Albig, S. Kalivas, A. Kiederlen, J. Klepal, V. Lane, S. Miller. May, 2006. For questions or permission for use, email Amy D. Ozier PhD, RD aozier@niu.edu or call 815-753-6343
**Egg Casserole**
7 slices of white bread, crust removed
4 c of shredded Cheddar cheese
6 eggs
1 tsp salt
1 tsp dry mustard
2 cups milk
Lightly butter each slice of bread; cut bread slices in half.
Arrange bread slices in a 9 x 13-inch buttered baking dish. Sprinkle cheese over bread slices.
In a mixing bowl, whisk together eggs, salt, dry mustard, and the milk until well blended. Pour egg mixture over bread, and cheese. Cover pan with foil and refrigerate overnight. Remove from refrigerator and let stand for 15 to 20 min. Preheat oven to 350°. Remove foil from pan. Bake casserole for 45 minutes or until casserole is bubbly and lightly browned on top. A knife inserted into the center should come out clean. Let stand for 15 to 20 minutes after baking. **SERVES 8-10**

**Ginger Carrots**
1 lb Carrots, Baby
2 tsp. Sugar
1 tsp Cornstarch
¼ tsp Salt
¼ tsp Ginger, grated
¼ c Orange Juice or Butter
Cook carrots just until fork tender. 7-10 minutes is simmering water. Drain thoroughly and keep warm. While carrots cook, make sauce:
Stir together the sugar, cornstarch, and salt. Gradually stir in the orange juice. Heat the sauce while stirring continuously. Bring to a boil and continue to boil for 1 to 2 minutes. Remove from heat then stir in the margarine, ginger, and lemon peel. Toss the carrots until they are coated. **SERVES 6-8**

**Hot Tuna and Cheddar Sandwiches**
2 cans (6 oz) of water packed tuna, drained
½ c chopped celery
1 small onion, chopped
1 c (4 oz) shredded Cheddar cheese
½ c mayo
4 hamburger buns, split
Preheat oven to 350°F.
In a large bowl, combine tuna, celery, onions, cheese, and black pepper. Divide tuna mixture evenly among buns. Wrap each bun loosely in aluminum foil.
Place on baking sheet. Bake 15-20 minutes or until heated through. **SERVES 4**

**Easy Quiche Lorraine**
1 nine-inch pastry shell, unbaked
2 c of Swiss cheese, shredded
4 eggs, lightly beaten
¼ c Milk
1 Tbsp of all purpose flour
½ t of salt
1/8 tsp of nutmeg
Preheat oven to 450°F. Bake pastry shell 7 minutes or until lightly browned.
Reduced oven temperature to 325°F. Sprinkle cheese on bottom of pastry shell. In medium bowl, combine eggs, milk, flour, salt and nutmeg. Pour egg mixture into pastry shell. Bake at 325°F for 35-40 minutes. Cool for 10 minutes. **SERVES 6**

**Tuscan Bean Soup**
1 ½ c of dried beans
2 stalks celery, chopped
1/2 lb froz. cut green beans
1 Tbsp vegetable oil
1 tsp black pepper
1/2 c of vegetable broth
2 Tbsp lemon juice
2 Tbsp of parmesan cheese
Soak the dried beans overnight.
Cook in plenty of gently boiling water until tender. (water should cover about 1 in. above beans). Discard cooking water.
In a large kettle, sauté the garlic and all the vegetables, salt and pepper in the combined butter and oil mixture, over medium heat for about 5 min. Then cover, turn the heat way down, and cook gently 10 to 15 minutes.
Add beans and 1 1/2 cups vegetable broth. Cover and simmer for 30 minutes. Add lemon juice and simmer over 10 minutes more. Serve hot, topped with parmesan cheese. **SERVES 4-6**

**Hearty Oatmeal Muffins**
1 ½ c all purpose flour
1 c rolled oats
1 c packed brown sugar
1 Tbsp baking powder
1 tsp ground cinnamon
1/8 tsp salt
1 egg
1 c milk
¼ c vegetable oil
TOPPING;
2 Tbsp rolled oats
½ tsp ground cinnamon
1 Tbsp sugar
Grain Group
Preheat oven to 400°. Lightly grease 24 mini muffin tins or line with paper liners.
In a large bowl, combine flour, oats, brown sugar, baking powder, cinnamon and salt. In a small bowl, whisk egg, milk, and oil. Add liquids to dry ingredients.
Spoon batter into prepared muffin cups, filling each cup three-fourths filled. For topping: combine oats, sugar, and cinnamon in a small bowl. Sprinkle evenly over batter. Bake 18-20 minutes or until golden brown. Let muffins stand a few minutes. **SERVES 4-6**

**Orange Blast Smoothie**
Whirl together 1 cup of OJ and 1 cup of low fat vanilla yogurt by hand or with a blender. Share with a friend!
Appendix B
Application for Institutional Review of Research Involving Human Subjects
APPLICATION FOR INSTITUTIONAL REVIEW OF RESEARCH
INVOLVING HUMAN SUBJECTS

Note: Please complete this form and provide brief responses to the issues raised, keeping in mind that the primary concern is the potential risk, (economic, ethical, legal, physical, political, psychological/emotional, social, breach of confidentiality, or other), to the subjects. Provide copies of all stories, questionnaires, interview questions, recruiting materials, or other documents to be used in the investigation. The Institutional Review Board (IRB) must have enough information about the transactions with the subjects to evaluate the risks of participation. Assurance from the investigator that subjects are at no risk, no matter how strong, will not substitute for a description of the transactions.

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E-mail: z107496@students.niu.edu

Project Title:
Improving nutrition education materials used by WIC staff in an effort to effectively counsel the parents of children who are or are at risk of being overweight.

Data Collection Start Date:
☒ Upon IRB approval ☐ Other (specify):

Note: Unless the authorized departmental reviewer (e.g., chair or designee) has deemed on the screening form that IRB review is not needed, all projects must receive formal written clearance from the IRB Chair (or an IRB member designated by the Chair) prior to the start of data collection.

Type of Project (Check one)
☒ Externally Sponsored Research
A complete copy of the grant proposal or contract must accompany this application form for IRB review to take place.

Source of Funding:

☒ Title of grant proposal (if different from IRB protocol):

☒ Name of principal investigator on grant proposal:

☒ Office of Sponsored Projects file number (Note: this is not the grant number):

☐ Departmental Research

☐ Graduate School Fund

☐ Thesis/Dissertation (IRB application should be submitted AFTER proposal defense)

Advvisor/Committee Chair (& e-mail):

☐ Other

Specify: University Honors Program Independent Study (Capstone) project.

Faculty Advisor: Amy D. Ozier PhD, RD, aozier@niu.edu

Revised 12/05
1. Briefly provide, in nontechnical, lay-terms (for reviewers outside your area), the following information:

   a) Describe the purpose of your study and the reason(s) this study is needed. Include a description of your hypothesis or research question.

   As the prevalence in overweight in children and adults continues to increase, there are a myriad of issues that arise. One issue is how to address weight issues in this population. The Special Supplemental Program for Women and Children (WIC) serves to safeguard the health of low-income women, infants, & children up to age 5 who are at nutritional risk by providing nutritious foods to supplement dietary intake, information on healthy eating, and referrals to health care providers. In the performance of their job responsibilities, WIC staff frequently encounter children who are 'at risk' of becoming overweight or overweight, and parents who are overweight. Currently, if a parent who is a WIC client is assessed as overweight or obese, this automatically places the child 'at risk for overweight' (called the "E factor" on WIC assessment forms). Then, the WIC staff are faced with the challenge of how to effectively and sensitively address this issue with the parents. Nutrition education materials provide a venue for addressing these issues "gently" with WIC clients. However, it is not known how the WIC clients perceive the nutrition education. Through a service learning project in spring 2006 at the Dekalb County Health Department WIC, FCNS 410 Community Nutrition students created handouts, based on the results of a WIC staff focus group. These handouts addressed parenting issues of children being 'at risk of overweight' and optimal health habits with sensitivity to promote nutrition education (See Appendix A). These handouts now need to be validated in the WIC client population. Thus, the purpose of this study is to conduct qualitative research to identify client perception of the current nutrition education handouts through a WIC client focus group. The hypothesis is: WIC clientele will positively respond to the two current nutrition education handouts that addresses overweight in parents and children. It is hoped that with the information from the WIC clients, the nutrition education materials can be further improved.

   b) Explain precisely the procedures of the study (what will your subjects be asked to do, provide, answer, etc.).

   **Phase I: IRB approval & Review of Literature**
   The review of literature will provide insight about the current status of how WIC staff counsel overweight parents and their children. Additionally, it will provide insight about what is being done to ameliorate the issue of uncertainty regarding how to appropriately and sensitively counsel parents about how their own weight status puts their child at risk for being overweight.

   **Phase II: Personal Evaluation of Historical Documents Used in Making the Existing WIC Handout**
   To acquaint the researcher with how and why the current WIC handouts were created, historical documents and WIC staff focus group results, will be reviewed. This will provide insight about why the contents of the handout were used.

   **Phase III: Focus Group Implementation**
   The researchers will be collaborating with WIC staff at the Stephenson County Health Department WIC to coordinate a focus group consisting of WIC clientele. Participants will be recruited through fliers and WIC staff word of mouth. Participants will be given a nominal incentive of a $5 Wal-Mart gift card for attending the focus group. During the focus group, all clients will be given an informed consent to sign. They will be informed about the purpose of the study and also be told that overweight issues will be addressed in the group. They will be informed that if at any time, they feel uncomfortable, they can decline to finish the focus group. Participants will be asked to review the two nutrition education handouts (Appendix A) for readability, sensitivity, content, visual appeal & appropriateness, overall effectiveness, and address any other comments they have about the handout. Please see Appendix B for a sample schedule of the focus group questions. During the focus group session, a facilitator will be asking the questions and keeping the group on task while a recorder will be documenting comments.

   **Phase IV: Evaluation of Focus Group**
   Qualitative analysis will be completed to identify the participants overall response to the handouts. Specifically, the researchers will analyze the extent to which the handouts were sensitive to the subject of overweight, understandable, visually appealing and appropriate, and were overall effective.

   **Phase V: Handout Modification**
   Based on the results of the focus group, the nutrition education handouts will be modified.

c) Attach copies of all questionnaires, surveys, interview questions, listing of all information/data to be collected, etc. If the research involves an oral interview or focus group discussion that could evolve as it progresses, include a list of discussion topics and any "starter" questions for each topic that can reasonably
be expected to be covered. If a draft of a written questionnaire or survey is attached, it should be clearly labeled as such and a final version must be submitted before data collection begins.

2. Risk/Benefit assessment: Explain the following:
   a) The knowledge/benefit(s) to be gained from the study;
   The knowledge gained from this study will assist in further enhancement of WIC nutrition education handouts. Currently, the handouts were made from a staff perspective. Obtaining client feedback will ensure that the handouts are optimally serving nutrition education purposes for the target population using them.
   b) The benefit(s) to the subject(s) (if any) from the proposed research;
   By reviewing the nutrition education handouts, WIC clients might walk away with a better understanding of the benefits of eating healthy and getting physical activity while also identifying that parents who are overweight increase the risk for their child being overweight. Additionally, clients will receive a nominal gift card.
   c) Any potential risks (economic, ethical, legal, physical, political, psychological/emotional, social, breach of confidentiality, or other) to the subjects posed by the proposed research. (Note: Some studies may have “no reasonably foreseeable risks.” It is the content of the questions asked and answered, not the risk of completing a questionnaire, etc., that must be considered in describing risk. Investigators are required to report all unexpected and/or adverse events to the IRB. Incidents that have not been listed as anticipated risks are considered protocol deviations and NIU may be required to report them at the federal level.
   Risks are minimal. However, the sensitive issue of overweight status will be discussed.
   d) What procedures will be used to minimize each risk and/or deal with the challenge(s) stated in “c” above.
   Issues revolving around overweight will be addressed appropriately in a sensitive manner. Contacts for a WIC counselor will be provided if clients feel they need to discuss these issues further.
   e) How the potential benefits of the study justify the potential risks to the subjects.
   The benefits to the client outweigh the risks to the client. Obtaining feedback through this focus group will allow further development of the handout for use by WIC staff.

3. Provide the following information about the study participants:
   a) Participant demographics:
   • Gender: M □ F X Both □
   • Are any subjects under age 18? Yes X No □
   • Age(s):
     Participants recruited will range in age from early adulthood to middle adulthood.
   • Vulnerable populations
     □ Pregnant women & fetuses
     □ Prisoners
     □ Decisionally impaired/mentally disabled
     □ Specific ethnic group(s) (list in box):
     WIC provides support to women during pregnancy and to mothers of children from birth to five years of age.
     If any “vulnerable populations” have been indicated above, please explain the necessity for using this particular group, or if specific groups are excluded from the study, please indicate the exclusion criteria used.
     The population being served by WIC includes low-income women and children and so although not an absolute, there is a possibility that clients under the age of 18 and/or who are pregnant may sign up for the focus group. Also, woman may be obtaining services from WIC for themselves, while pregnant, or for their existing children. Given the concern regarding sensitively addressing weight issues among all WIC clients, if mothers that are less than 18 years of age and/or pregnant volunteer to participate in the focus group session, that opportunity would be open to them.
   • Number of participants in study (including controls):
     estimated 8-12

b) Explain in detail how and where subjects will be recruited or introduced to the study.

Revised 12/05
A WIC coordinator will recruit subjects. Flyers will also be displayed at the WIC clinic (Appendix C). Clients will be provided a nominal incentive of a $5 gift card for attending the focus group session.

c) Attach all subject recruitment/introductory materials (advertisements, mailings, fliers, Internet postings, etc.) to be used in the study.

4. Describe the procedures for obtaining informed consent, assent, and/or parental permission (e.g., verbal explanation of study, forms, debriefing).

Prior to the implementation of the focus group, the purpose of the study will be explained to the focus group participants. In the event that some participants may have limited skills with literacy, the informed consent will also be read to the group. Participants will be assured that if at any time they feel uncomfortable with questions implemented in the focus group, that they can leave. Confidentiality guidelines related to what is discussed in a focus group setting will be reviewed. Consent forms will then be signed. (Appendix D). In the event a participant is less than 18 years of age, the attached assent form with corresponding parental consent form will be reviewed and completed (Appendices E & F). (Please note that the consent forms were made using the SMOG readability formula to develop forms that were close to the sixth grade reading level. This level of readability is appropriate for this target population.)

- Append any form(s) to be used. Appropriate informed consent documents should be prepared for each group of subjects participating in the study. Consent forms should be prepared for adult participants (age 18 or over). Assent forms should be prepared for minor subjects appropriate to their ages, and permission form(s) for parents or legally authorized representatives should also be prepared. For children too young to comprehend a simple explanation of participation, parental permission is sufficient only if the research will provide direct benefit to the subject, a member of the subject's family, or other children with the same condition as the subject.

5. Does this study involve deception? Yes ☐ No ☒
   - Describe the deception and why it is necessary and attach a copy of the debriefing statement.

   - For projects requiring Subcommittee or Full-board Review, if requesting a waiver of the requirement for obtaining the written informed consent of research participants, justification for the requested waiver is required. Complete and attach the “Request for Variation/Waiver of Consent” form.

6. Explain what, if any, support services will be provided in the event of harm to a subject (a resource list for the DeKalb area is available on the ORC website).

Although foreseeable risks are minimal, information will be provided to participants regarding the WIC counselor who will be available to discuss any issues that arise from the focus group.

7. Confidentiality:
   a) Describe precautions to insure the privacy of the subjects, and the confidentiality of the data, both in your possession and in reports and publications.

There will be no identifying information collected in the study, and no names will be used in reports or publications.

b) Will audio, video, or film recording be used? Yes ☐ No ☒
   If yes:
   i. Specify the recording format to be used.

   ii. Specific consent must be sought in the informed consent document(s) by including a separate signature/date line giving consent for recording. This is in addition to the signature/date line giving consent to participate in the research project.

   c) How will the records (data and recordings) be stored and/or disposed when the research is completed?

The records will be stored in Dr. Ozier's data filing cabinet that remains locked, and inside of her office, which also remains locked when not occupied.

8. State the research qualifications of the individuals who will have direct contact with the subjects.

Revised 12/05
a) In addition to listing the investigators’ names, indicate their qualifications to conduct procedures to be used in this study.

| Amy Ozier, PhD, RD, Assistant Professor of Nutrition, Dietetics and Hospitality Administration |
| Beverly Henry, PhD, RD, Assistant Professor of Nutrition, Dietetics, and Hospitality Administration |

b) List the Human Subjects Protection training program(s) completed by the individuals listed in 8a and the date(s) of completion. Indicate any workshops, courses, tutorials, or other educational experiences attended, at NIU or elsewhere, which have covered issues relevant to human subject research. (Note: NIU Policy requires that research investigators must complete appropriate training before conducting human subject research.)

Dr. Ozier and Dr. Henry went through an IRB workshop with Sandy Amtz and completed the National Institute of Health IRB training.

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REQUIRED SIGNATURES: ALL PROJECTS

CERTIFICATION

I certify that I have read and understand the policies and procedures for research projects that involve human subjects and that I intend to comply with Northern Illinois University Policy. Any changes in the approved protocol will be submitted to the IRB for written approval prior to those changes being put into practice unless it involves an immediate safety issue for the subject during a procedure. (In such instances, the researcher is required to promptly notify the IRB after the fact.) I also understand that all non-exempt projects require review at least annually.

Investigator(s) Signature(s) Date

Signature of Faculty Advisor (Student Project Only) Date

Revised 12/05
To be completed by investigator and confirmed by advisor (if student project) and departmental reviewer. Initials indicate all required parties ratify that application is complete:

Checklist of items required to accompany completed application form:

1. _____ Complete grant proposal/contract (for externally funded projects)
2. _____ All surveys, questionnaires, interview questions, or other instruments to be used
3. _____ Subject recruitment/introductory materials
4. _____ Informed consent documents (must select at least one):
   - Consent form for adults (if participants are age 18 or over)
   - Assent form for minors (if participants are under age 18)
   - Parental permission form (if participants are under age 18)
   - Waiver of written consent requested (for Subcommittee and Full-board Review projects, must complete and attach Request for Variation of Consent Attachment form in order to provide justification that requested waiver meets criteria listed in 45 CFR 46.116(c) or 45 CFR 46.117(c))

Initial indicating all listed materials are attached and application is complete; INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. The investigator will be notified of deficiencies in the application via e-mail from the Office of Research Compliance (ORC); if no response is received by the ORC within five (5) working days the application will be considered void.

Investigator _____ Advisor (if student project) _____ Department Chair/Designee _____

Departmental Determination according to 45 Code of Federal Regulations 46: (to be completed by Department Chair or Designee)

☐ Project qualifies for Administrative Review.
   Cite the appropriate exempt category:

☐ Project qualifies for Subcommittee Review.
   Cite the appropriate expedited category:

☐ Project is referred for review by the convened IRB.

Signature of Authorized Departmental Reviewer __________ Date __________

Please print ADR’s name

Return this form, together with necessary documentation, to the Office of Research Compliance, Lowden Hall, 301. For information or additional assistance with the approval process, please call the office at (815) 753-8588 or access the ORC web page at www.grad.niu.edu/orc.

Revised 12/05
Appendix C
WIC Focus Group Flyer
Help us improve nutrition materials given to you.

Monday, April 16th, 2007
10:15-11:00 a.m.
WIC Nutrition Education Room

Participate in a short focus group session with other WIC clients. We will look at nutrition materials used currently by WIC staff, and identify how these can be improved.

Sign up today
and receive a $5.00 Wal-Mart gift card!

1.) ____________________ 5.) ____________________
2.) ____________________ 6.) ____________________
3.) ____________________ 7.) ____________________
4.) ____________________ 8.) ____________________

We look forward to seeing you there!

Focus group implemented by NIU student and faculty
Appendix D
WIC Focus Group Consent Forms:
  Child Assent Form
  Parental Consent & Signature Page
  Adult Consent Form
My name is Crystal Graber, and I am a student at Northern Illinois University.

I want to improve the nutrition handouts used at WIC.

To do this, I would like to talk with WIC clients about current handouts used at WIC. During this group discussion I am hoping that you will be able to help me find ways to make these handouts better. Thanks so much for your time. I look forward to hearing your thoughts about the handouts!

Our group discussion will last from 10:15-11:00am on Monday, April 16th, 2007. If you do not want to take part in the discussion you do not have to. You are allowed to leave at anytime.

Signed ______________________  Date___________________________
April 5, 2007

Dear Parent:

Your child is invited to take part in a research study being done by Crystal Graber, a Northern Illinois University student, and Amy Ozier PhD, RD, Northern Illinois University faculty member.

The purpose of this study is to improve nutrition materials used by WIC.

This study will last forty-five minutes from 10:15am until 11:00am on Monday, April 16th, 2007. Your child will be asked to look at existing handouts about how people eat, physical activity levels, and childhood overweight with a focus on the family. She will then be asked to take part in a group to talk about the handout and suggest any changes that may make the handouts better.

Potential risks to your child are minimal. However, possible discussion of childhood overweight may occur which tends to be a sensitive subject.

The intended benefit of this study is to improve nutrition materials used by WIC staff and given to WIC clients.

Information obtained during this study may be published in journals or shown at meetings, but any comments made from your child will be kept strictly private along with her name.

Helping with this study is voluntary. Your decision whether or not to allow your child, as well as her choice to participate in, will not in any way negatively affect you or your child. Additionally, WIC benefits will not be affected by participation or the lack thereof. Your child will be asked to decide whether or not she wants to be involved in the study before taking part in, and will be free to leave at any time without penalty.

Any questions about the study should be addressed to:

Crystal Graber (Researcher); 1307 W. Lincoln Hwy #6127, DeKalb, IL 60115;
(847) 334-0495

Dr. Amy Ozier (NIU faculty advisor) Northern Illinois University, Wirtz Hall 165, DeKalb IL 60115; (815) 753-6343.

If you wish further information about your rights or your child's rights as a participant, you may contact the Office of Research Compliance at Northern Illinois University at (815) 753-8588. If you would like information after the study is completed, please contact Crystal Graber, or Amy Ozier, and it will be provided to you. I hope that you and your child will take the time to help improve WIC nutrition materials.
Please complete this page after reading the attached form and return it to WIC with your child. You may keep the first page and a copy of this page for your records.

Thank you for your consideration.

I agree to take part and to allow my child to take part in helping to improve WIC nutrition materials. Please circle one:

Yes

No

I confirm that I have received a copy of this consent form.

________________________________________
Signature of Parent/Guardian                           Date

Researcher contact information:
Crystal Graber
1307 W. Lincoln Hwy #6127
Dekalb, IL 60115
Z107496@students.niu.edu
(847)334-0495

Amy D. Ozier, PhD, RD
Northern Illinois University
School of Family, Consumer, & Nutrition Sciences
Dekalb, IL 60115
aozier@niu.edu
(815)753-6343
CONSENT FORM

ADULT (18 or older)

I agree to participate in a research project to improve nutrition materials used by WIC being conducted by Crystal Graber (undergraduate student), Amy Ozier PhD, RD, and Beverly Henry, PhD, RD (faculty members) at Northern Illinois University. I have been informed that the purpose of the study is to improve current nutrition educational materials currently being used by WIC. I am aware that the focus group I will be taking part in will last from 10:15-11:00am on Monday, April 16th, 2007.

I understand that if I agree to take part in this study, I will be asked to do the following: look at existing handouts that address nutrition, how people eat, physical activity levels, and childhood overweight with a focus on the family. I agree to take part in a group to talk about the handouts, and any suggested improvements that may enhance the use of the handouts.

I am aware that my participation is voluntary and I can leave at any time, and that if I have any more questions about this study, I may contact Crystal Graber at (847) 334-0495, or Amy Ozier PhD, RD at (815) 753-6343. I understand that if I wish further information about my rights as a participant, I may contact the Office of Research Compliance at Northern Illinois University at (815) 753-8588.

I understand that the intended benefit of this study is to improve materials used by WIC staff and given to WIC clients.

I have been informed that risks are minimal. However, possible discussion of childhood overweight may occur which tends to be a sensitive subject. I understand that all information gathered during this project will be kept confidential within a locked filing cabinet in the office of Amy Ozier PhD, RD; however, I also understand that, when taking part in a focus group, confidentiality among the members of the group cannot be guaranteed.

I realize that Northern Illinois University policy does not provide pay for nor does the University carry insurance to cover injury or illness that results from taking part in University sponsored research projects. The contact information for a WIC counselor/coordinator will be made available should anyone need it (Jennifer Beck 815-235-1672).

I understand that if I agree to participate in this project, it does not create a waiver of any legal rights I might have as a result of my participation, and I acknowledge that I have received a copy of this consent form. Additionally, I understand that my WIC benefits will not be affected by participation or the lack thereof.

I have been informed that I will receive a gift card for participation in this project (five-dollar gift card for Wal-Mart).

Signature of Subject  Date
Appendix E

WIC Focus Group Question Schedule
WIC Focus Group Question Schedule

These questions will be asked for both handouts if applicable.

1. What do you like/dislike about this handout?

2. Was anything hard to understand?

3. What are your thoughts about the pictures?

4. Read the statements under “Is your child at risk for becoming overweight?” How do you feel about this statement and the statements below it?

5. Do any messages “stick in your mind” about this handout? If so, which ones?

6. Do you feel the messages are positive or negative? Explain.

7. Look at the Food Pyramid. What do you think about the pictures/foods presented on this handout?

8. Should anything else be on this handout? Is there anything that you would change?

9. Is this handout something that you might use?
Appendix F
Handout Modifications
Side One: Fit Families = Healthy Families

Spends four or more hours a day watching television & playing video or computer games
Changed to:
Spends two or more hours a day watching television & playing video or computer games.

Has one or more parents that is overweight or obese
Changed to:
Has one or more parents that is overweight

Added:
You can decrease your child’s risk!
Here’s how:
Limit television & video or computer game time to less than two hours every day.
Be a healthy role model for kids. Be active, and eat healthy WITH them.
Encourage active play on a regular basis
Provide kids with snacks that are fun to make and are healthy too!
Offer kids water frequently! (clipart of water pitcher and glasses)

*Colors were also changed to provide easier reading.

Side Two: Fit Kids = Happy Kids!

The facts:
Changed to:
The facts about childhood overweight:

Overweight children are at a greater risk for becoming overweight adults!
Changed to:
Children are at a greater risk for becoming overweight adults!

Risks for heart disease and diabetes increase dramatically in overweight children.
Changed to:
Risks for heart disease and diabetes increase dramatically.

Overweight children often have poor self-esteem and can become depressed.
Changed to:
Children often have poor self-esteem and can become depressed.

Overweight children are being described as an epidemic!
Changed to:
It is being described as an epidemic!
Side One: Food Guide Pyramid

Fit Your Coupons In The Food Guide Pyramid

Changed to:

Food Coupons Can Fit In The Food Guide Pyramid

Milk and Cheese

changed to:

2-3 servings
1-3 yrs. = 12-16 oz. Milk
4-5 yrs. = 16-24 oz. Milk

Milk and Cheese

2-3 servings
16-24 oz. Milk

*Color of each food group background changed to match the new food guide pyramid

Side Two: Recipes

Easy Quiche Lorraine recipe

Changed to:

Peanut Butter Finger Foods For Kids (new recipes)

Ginger Carrots

Changed to:

Glazed Carrots (same recipe)

Hearty Oatmeal Muffins

Changed to:

Oatmeal Muffins

Hot Tuna and Cheddar Sandwiches

Changed to:

Tuna Melt Sandwiches (same recipe)

Tuscan Bean Soup

Changed to:

Yogurt Parfait (new recipe & clipart of yogurt added)
Appendix G
Revised Handouts
Is your child at risk for becoming overweight?

Your child could be at risk if he or she:
- Spends two or more hours a day watching television & playing video or computer games
- Has one or more parents that is overweight
- Lacks physical activity (children need to move!)
- Consistently eats foods high in fat and sugar
- Drinks two or more sweetened beverages a day

You can decrease your child’s risk!

Here’s how:
- Limit television & video or computer game time to less than two hours every day.
- Be a healthy role model for kids. Be active and eat healthy WITH them.
- Encourage active play on a regular basis.
- Provide kids with snacks that are fun to make and are healthy too!
- Offer kids water frequently!

Encourage healthy eating as a family!

- Keep meal time as pleasant as you can!
- Provide whole or mixed grain breads, cereals, etc.
- Don’t force feed!
- Eat many fruits and vegetables of all different colors!
- Eat as a family at the table or at least sit with your child when he or she eats!

Involve the whole family in physical activities!
- Go for a picnic in the park!
- Try going for bike rides on Sunday afternoons!
- Teach your child a new sport or play a game of catch!
- Take the dog for a walk!
- Walk to school (if possible) together!
- Everyone can help with yard work and cleaning the house!
Feeding your child is a shared responsibility!

- Parents are responsible for WHAT foods are offered, WHEN foods are offered and WHERE foods are offered!
- Children are responsible for WHICH foods they eat and HOW MUCH food they eat.
- Give children seconds if they want them.
- They can also choose not to eat the foods at all.

Children are at greater risk for becoming overweight adults.
- Risks for heart disease and diabetes increase dramatically.
- Children often have poor self-esteem and can become depressed.
- It is being described as an epidemic!
- The rate of children that are overweight has more than tripled in 30 years!

Help your child AVOID this unhealthy trend!

Small Changes Make Big Differences!

Adapted from various references by the Northern Illinois University Community Nutrition Students: J. Albig, S. Kallivas, A. Kiederlen, J. Klepal, V. Lane, S. Miller. May, 2006. For questions or permission to use, email Amy D. Ozier PhD, RD aozier@niu.edu or call 815-753-6343
Juice
"No more than"
2-3 yrs. = 4 oz.
4-5 yrs. = 6 oz.

Peanut Butter, Dry Beans or Peas and Eggs
2-3 yrs. = 2 oz.
4-5 yrs. = 3-4 oz.
1 oz is equal to:
1 oz meat, fish, or chicken
1/4 cup beans
1 egg
1 Tbsp peanut butter
1/2 oz. nuts

Milk and Cheese
2-5 yrs. = 2 cups milk or 2 oz cheese
2 oz cheese = 2 slices

Vegetable group
2-3 yrs. = 1 cup
4-5 yrs. = 1 1/2 cups

Grain Group
2-3 yrs. = 3 oz.
4-5 yrs. = 4-5 oz.
1 oz is equal to:
1 cup ready-to-eat cereal
1 slice bread
1/2 cup cooked rice
1/2 cup cooked pasta
1/2 cup cooked cereal.

Fruit Group
2-3 yrs. = 1 cup
4-5 yrs. = 1-1/2 cups

The above Food Guide Pyramid is recommended for children 2-5 years old

* Through the Farmers' Market Nutrition Program (FMNP), participants are provided with additional coupons that can be used to purchase fresh fruits and vegetables at participating farmers' markets. (FMNP is currently in a limited service area.)

Adapted from various references by the Northern Illinois University Community Nutrition Students: J. Albig, S. Kalivas, A. Kiederlen, J. Klepal, V. Lane, S. Miller. May, 2006. For questions or permission for use, email Amy D. Ozier PhD, RD aozier@niu.edu or call 815-753-6343
Oatmeal Muffins
7 slices white bread, crust removed
4 c cheddar cheese, shredded
6 eggs
1 tsp salt
1 tsp dry mustard
2 cups milk

Lightly butter each slice of bread; cut bread slices in half. Arrange bread slices in a 9 x 13-inch buttered baking dish. Sprinkle cheese over bread slices.

In a mixing bowl, whisk together eggs, salt, dry mustard, and milk until blended. Pour egg mixture over bread and cheese. Cover pan with foil and refrigerate overnight. Remove from refrigerator and let stand for 15 to 20 min.

Preheat oven to 350°. Remove foil from pan. Bake casserole for 45 minutes or until casserole is bubbly and lightly browned on top. A knife inserted into the center should come out clean. Let stand for 15 to 20 minutes after baking.

SERVES 4

Yield: 1 dozen

Tuna Melt Sandwiches
2 cans (6 oz) water packed tuna, drained
1/2 c chopped celery
1 small onion, chopped
1 c (4 oz) shredded cheddar cheese
1/4 c mayo
4 hamburger buns, split
1/8 tsp black pepper

Preheat oven to 350°. In a large bowl, combine tuna, celery, onions, cheese, mayo, and black pepper. Divide tuna mixture evenly among buns. Wrap each bun loosely in aluminum foil. Place on baking sheet. Bake 15-20 minutes or until heated through.

SERVES 4

Egg Casserole

Glazed Carrots
1 lb Carrots, Baby
2 tsp Sugar
1 tsp Cornstarch
1/4 tsp Salt
1/4 tsp Ginger, grated
1/4 c Orange Juice
1 tsp Margarine or Butter

Cook carrots until fork tender, 7-10 minutes in simmering water. While carrots cook, make sauce. Drain cooked carrots thoroughly and keep warm.

For Sauce:
Stir together the sugar, cornstarch, and salt. Gradually stir in the orange juice. Heat the sauce while stirring continuously. Bring to a boil and continue to boil for 1 to 2 minutes.

Remove from heat then stir in the margarine or butter, and ginger. Toss the carrots with sauce until coated.

SERVES 8-10

Peanut Butter Finger Foods For Kids
• Fruit Pizza
4 Tbsp peanut butter
1 apple, 14 slices
2 flour tortillas
4 Tbsp Raisins

Spread 2 Tbsp peanut butter on each tortilla. Top each tortilla with 7 apple slices, and 2 Tbsp raisins.

Dig in!

SERVES 2

• Ants On A Log
Top celery with peanut butter and raisins.

• Mini Peanut Butter Sandwiches
Spread peanut butter on a slice of bread. Top with sliced bananas or shredded apples for something different! Top with additional slice of bread, or leave as is. Cut into four sections, and enjoy!

SERVES 1

Grain Group

Yogurt Parfait
1 c low-fat vanilla yogurt
1/3 c bran cereal
3/4 c sliced peaches

In a large glass, layer half of the yogurt, half or the bran cereal, and half of the fruit. Repeat the layers. Try different cereals and fruits for variety!

SERVES 1

Dairy Group

Orange Blast Smoothie
Mix together 1 cup OJ and 1 cup low fat vanilla yogurt by hand or with a blender. Share with a friend!