The Nutrition and Mental Health Connection – A Pilot Study

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Understanding Emotional Wellness

- How one feels and embracing own emotions
- Attending to both positive and negative emotions
- Teaching emotional wellness in school – helps with resiliency
- Leads to success in school and at home
- Using Emotional Wellness and Mental Health

Connection between Mental Health and Nutrition

- Schools often introduce nutrition in schools through P.E. and nutrition classes
- Researchers have shown nutrient deficiencies are found with disorders such as: bipolar, anxiety, and depression
- We learn about nutrition from medical sources
- **What about school counselors/counselors?**

Other issues

- The CDC (2020) reports that 13.7million children and adolescents are affected by obesity
- Calculated by BMI – cultural issues with this
- Childhood weight can cover more: obesity, anorexia, bulimia, binge eating disorders

Ethnicity and Weight

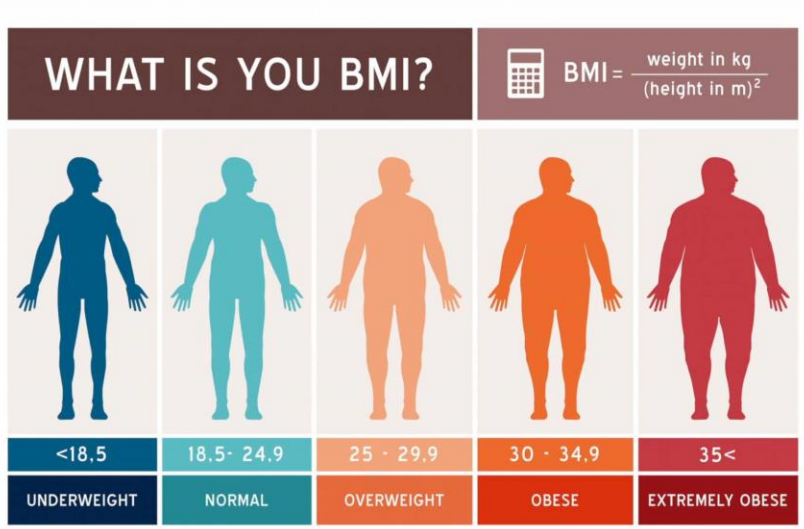
Ethnicity/Culture Influence on Weight

African Americans: BMI; thin ideal

Hispanics: Acculturation

Asian Americans: Acculturation

Importance of Understanding The Role Ethnicity Plays in Weight



Nutrition at home

- Low and High SES – may eat poorly
  - Why?
- Children may not have a lot of control over what is at home or they may have a lot of control!
- A whole family intervention is what may prove to be most successful!

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Nutrition and Schools

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Counselors and Mental Health

- Creating a foundation – basic knowledge of the food plate, how to grow fruits and vegetables (make it fun!)
- Foundation – nutrients, minerals, vitamins and the body
- Teaching students about how certain foods help our brain with our emotional wellness

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Growing Together Project

- Partially funded by Association for Creativity in Counseling through a grant
- Small private school in the Jackson area – about 270 children total
- Participants – K-6th
- 7 lessons in a semester
- Big pretest and posttest (at the end)
- Pretest/posttest before and after each lesson
- Focus group for qualitative research

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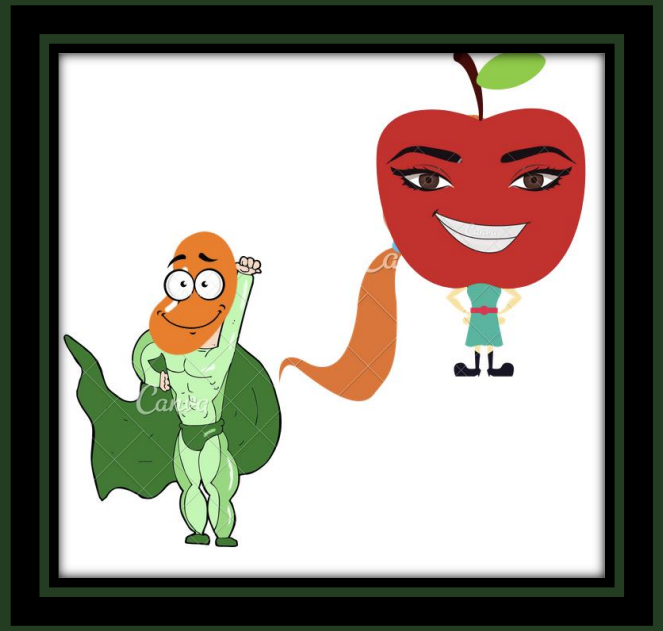
Super Foods

- Creating Super Foods to Connect with Children



Demographics- Kindergarten & 1st grade

- Kindergarten n = 17
- 1st grade n = 13

- 50% male; 50% female
- 93.3% Caucasian; 3.3% Hispanic; 3.3% Asian

Demographics- 2nd through 6th Grade

- 2nd grade n =23
- 3rd grade n = 16
- 4th grade n = 19
- 5th grade n = 10
- 6th grade n = 17

- 91.8% Caucasian; 2.4% Black; 3.5% Hispanic; 2.4% Asian
- 40% male; 60% female

Analyses

- A paired samples t-test was conducted to compare overall scores on the nutritious food survey pre and post educational lessons.

Kindergarten and 1st grade

- There was a significant difference in the scores for pretest (M = 6.47, SD = 2.40) and post-test scores(M = 13.73, SD = 2.59); t(29)= -10.89, *p* = <.001.

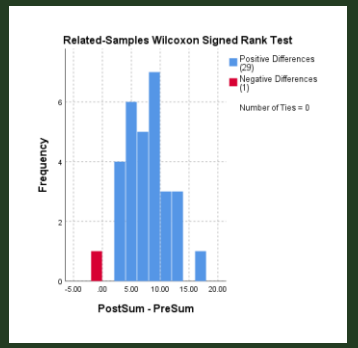
2nd through 6th Grade

- There was also a significant difference in the scores for pretest (M = 9.68, SD = 3.70) and post-test scores (M = 12.64, SD = 3.42); t(84)= -5.85, *p* = <.001.

Analyses

Kindergarten and 1st grade

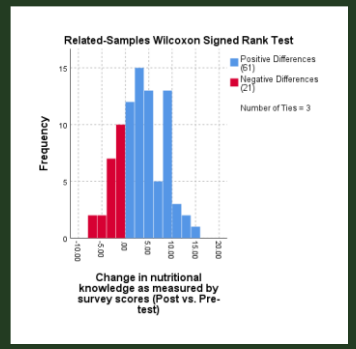
- Wilcoxon signed-rank test was used to determine if there was a statistically significant median difference between pre and posttest scores
- Results indicate that of the 30 children who completed the study, the nutrition education curriculum elicited an improvement in knowledge for all but one.
- Taken together, the implemented curriculum produced a statistically significant median increase in nutritional knowledge and understanding compared to no education intervention, $z = 4.77$, $p < .0005$.



Analyses

2nd through 6th Grade

- Wilcoxon signed-rank test was used to determine if there was a statistically significant median difference between pre and posttest scores
- Results indicate that of the 85 children who completed the study, the nutrition education curriculum elicited an improvement in knowledge for 61 children
- Taken together, the implemented curriculum produced a statistically significant median increase in nutritional knowledge and understanding compared to no education intervention, $z = 5.02$, $p < .0005$.



Differences between sexes?

- There were no statistically significant differences between pre/posttest score changes based on sex for either group as determined by a one-way ANOVA.

Kindergarten/1st grade group ($F(1,29) = .023$, $p = .880$

2nd- 6th grade group ($F(1,84) = .548$, $p = .461$

- Taken together, there was no difference in their nutritional understanding and learning (as measured by score change) between boys and girls

What can we conclude?

- These results suggest that the educational curriculum impacted children's nutritional knowledge across a 7-week intervention program.
- Specifically, our results suggest that when children are provided this type of nutrition education, there is a statistically significant increase in knowledge and understanding of food, health, and the mind-body connection.

Results- Qualitative

- Focus Groups
- 11 Participants (Grades 1-6)
- 11 Questions
- “Has anything about what you eat changed since the beginning of the study?”
- “If you could plan out the lunch menu in the lunchroom what kinds of foods would you want?”
- “Would you eat more foods to help with your emotions?”
- “Do you eat when you are feeling sad? When you are feeling happy?”

Results – Qualitative

- Analytic Method: Thematic analysis
- Often applied across a wide range of theoretical approaches (Braun & Clark, 2006)
- Flexible in that it allows determinants of themes in a variety of ways
-

Results - Qualitative

- Overarching Themes
- Healthier choices
- Mindful eating
- Familial Changes
- Holistic understanding

Challenges

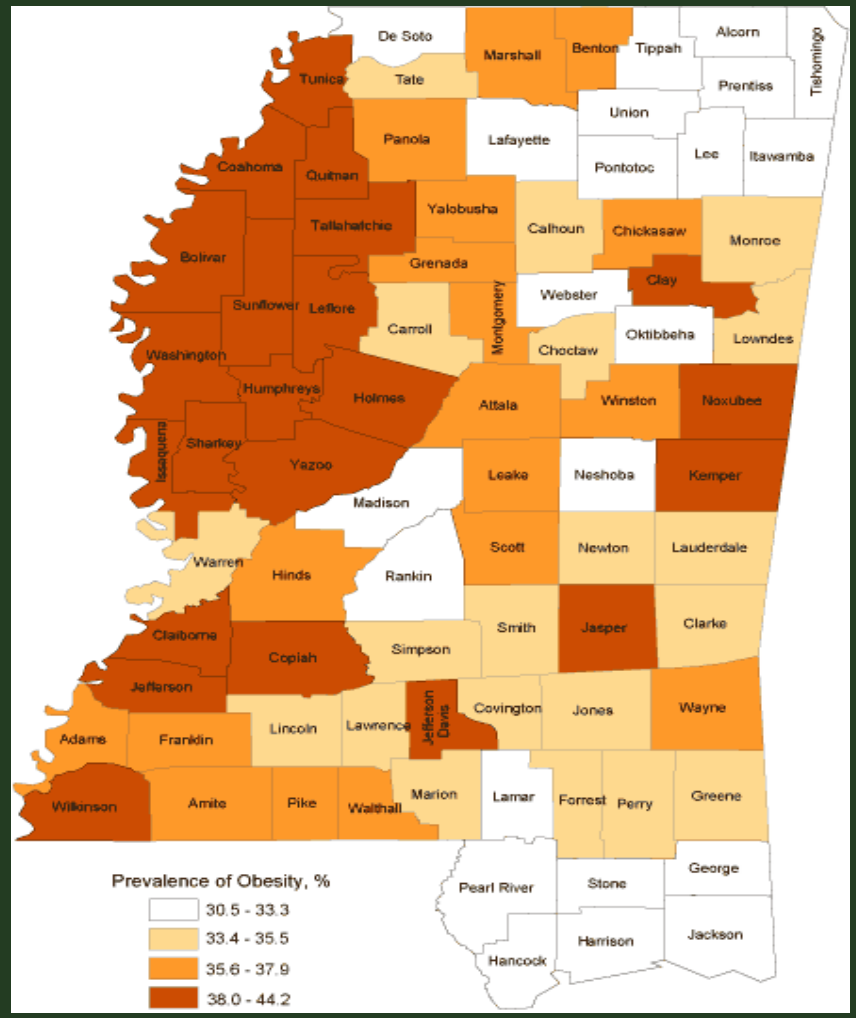
- Getting other schools on board
- Funding for better foods – more nutritious foods cost more
  - Farm to school initiatives
  - Connecting with our local farmers – benefits them
- Foods spoiling – what do we doo with those foods?
- Foods must be cooked fully

Limitations

- One elementary school
- One age group (K-6)
- Inaccurate completion of pre/posttests
- Reach out to more diverse sample population

Future Research

- Study to be replicated Spring 2021
- Use similar school
- Different location of Mississippi
- Revise pre/posttests
- Revamp lesson plans
- Advocating for SC/Counselors to talk about nutrition and mental health



Guess the food!

Directions: We will read the food label and you have to guess what it is or what kind of food it is (breakfast food, etc.)

You can also guess what type of food it is: Processed or Clean


CHANGING LIVES ONE MOM AT A TIME
Amount Per Serving
Calories 200
Calories from Fat 45
% Daily Value*
Total Fat 5g 8%
Saturated Fat 1.5g 8%
Trans Fat 0g
Polyunsaturated Fat 2g
Monounsaturated Fat 1g
Cholesterol 0mg 0%
Sodium 170mg 7%
Total Carbohydrate 38g 13%
Dietary Fiber less than 1g 3%
Sugars 16g
Protein 2g
Vitamin A 10% • Vitamin C 0% • Calcium 0% • Iron 10%
Thiamin 10% • Riboflavin 10% • Niacin 10% • Vitamin B6 10%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:
Calories 2,000 2,500
Total Fat Less than 65g 80g
Saturated Fat Less than 20g 25g
Cholesterol Less than 300mg 300mg
Sodium Less than 2,400mg 2,400mg
Total Carbohydrate 300g 375g
Dietary Fiber 25g 30g
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4
INGREDIENTS: ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, VITAMIN B1 [THIAMIN MONONITRATE], VITAMIN B2 [RIBOFLAVIN], FOLIC ACID), CORN SYRUP, HIGH FRUCTOSE CORN SYRUP, DEXTROSE, SOYBEAN AND PALM OIL (WITH TBHQ FOR FRESHNESS), SUGAR, CRACKER MEAL, CONTAINS TWO PERCENT OR LESS OF WHEAT STARCH, SALT, DRIED STRAWBERRIES, DRIED PEARS, DRIED APPLES, LEAVENING (BAKING SODA, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE), CITRIC ACID, MILLED CORN, GELATIN, SOYBEAN OIL, MODIFIED CORN STARCH, CARAMEL COLOR, SOY LECITHIN, XANTHAN GUM, MODIFIED WHEAT STARCH, VITAMIN A PALMITATE, RED 40, NIACINAMIDE, REDUCED IRON, COLOR ADDED, TURMERIC EXTRACT, VITAMIN B6 (PYRIDOXINE HYDROCHLORIDE), YELLOW 6, VITAMIN B2 (RIBOFLAVIN), VITAMIN B1 (THIAMIN HYDROCHLORIDE), BLUE 1.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Frosted
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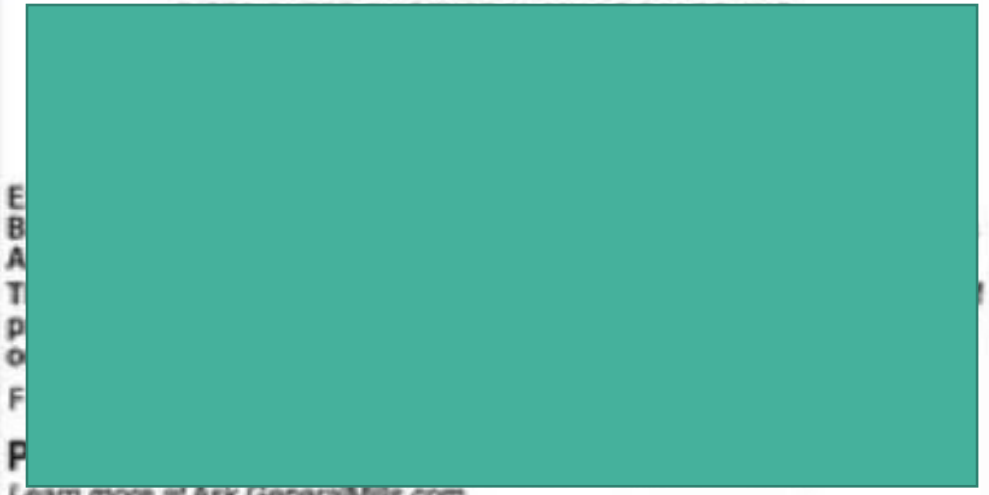
Ingredients: Whole Grain Oats, Sugar, Oat Flour, Corn Syrup, Modified Corn Starch, Corn Starch, Dextrose, Salt, Gelatin, Trisodium Phosphate, Yellows 5 & 6, Red 40, Blue 1 and Other Color Added, Natural and Artificial Flavor. Vitamin E (mixed tocopherols) **Added to Preserve Freshness.**

Vitamins and Minerals: Calcium Carbonate, Zinc and Iron (mineral nutrients), **Vitamin C** (sodium ascorbate), **A B Vitamin** (niacinamide), **Vitamin B_6** (pyridoxine hydrochloride), **Vitamin B_2** (riboflavin), **Vitamin B_1** (thiamin mononitrate), **Vitamin A** (palmitate), **A B Vitamin** (folic acid), **Vitamin B_{12}, Vitamin D_3.**



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16 - 1.6 OZ (45g) BARS
NET WT 1 LB 9.6 OZ (25.6 OZ) (725g)
NET WT 1.6 OZ (45g)
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THE ORIGINAL FRUIT & NUT FOOD BARS
PEANUT BUTTER CHOCOLATE CHIP
16 - 1.6 OZ (45g) BARS
NET WT 1 LB 9.6 OZ (25.6 OZ) (725g)

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INGREDIENTS
100% WHOLE GRAIN ROLLED
QUAKER OATS.
NATURALLY CONTAINS OAT BRAN.

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MBP

Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholest	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carb		300g	375g
Dietary Fiber		25g	30g

INGREDIENTS: ENRICHED PASTA PRODUCT (WHOLE WHEAT FLOUR, DURUM WHEAT FLOUR, NIACIN, THIAMIN MONONITRATE [VITAMIN B1], RIBOFLAVIN [VITAMIN B2], FERROUS SULFATE [IRON]); CHEESE SAUCE MIX (WHEY, MILKFAT, MILK PROTEIN CONCENTRATE, SALT, SODIUM TRIPOLYPHOSPHATE, CONTAINS LESS THAN 2% OF CITRIC ACID, LACTIC ACID, SODIUM PHOSPHATE, CALCIUM PHOSPHATE, YELLOW 5, YELLOW 6, ENZYMES, CHEESE CULTURE)

CONTAINS: WHEAT, MILK.

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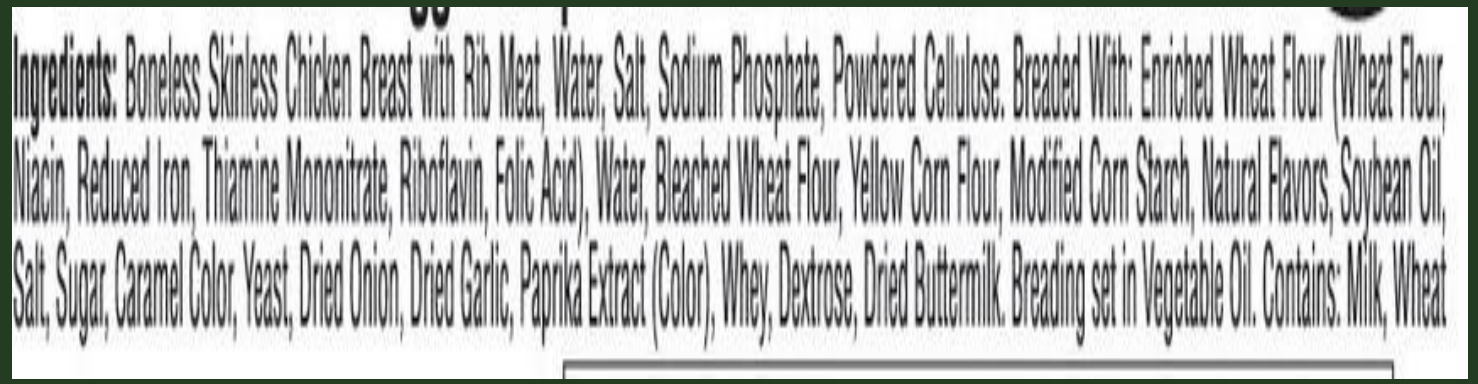
Ingredients: Boneless Skinless Chicken Breast with Rib Meat, Water, Salt, Sodium Phosphate, Powdered Cellulose. Breaded With: Enriched Wheat Flour (Wheat Flour, Niacin, Reduced Iron, Thiamine Mononitrate, Riboflavin, Folic Acid), Water, Bleached Wheat Flour, Yellow Corn Flour, Modified Corn Starch, Natural Flavors, Soybean Oil, Salt, Sugar, Caramel Color, Yeast, Dried Onion, Dried Garlic, Paprika Extract (Color), Whey, Dextrose, Dried Buttermilk. Breading set in Vegetable Oil. Contains: Milk, Wheat

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Chicken Nuggets
Breaded Nugget Shaped Chicken Breast Patties with rib meat
Serving
Suggestion

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