



EFFECT OF BEHAVIORALLY ORIENTED NUTRITION EDUCATION PROGRAM ON CHILDREN'S HEALTHY EATING

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PAN-CRC

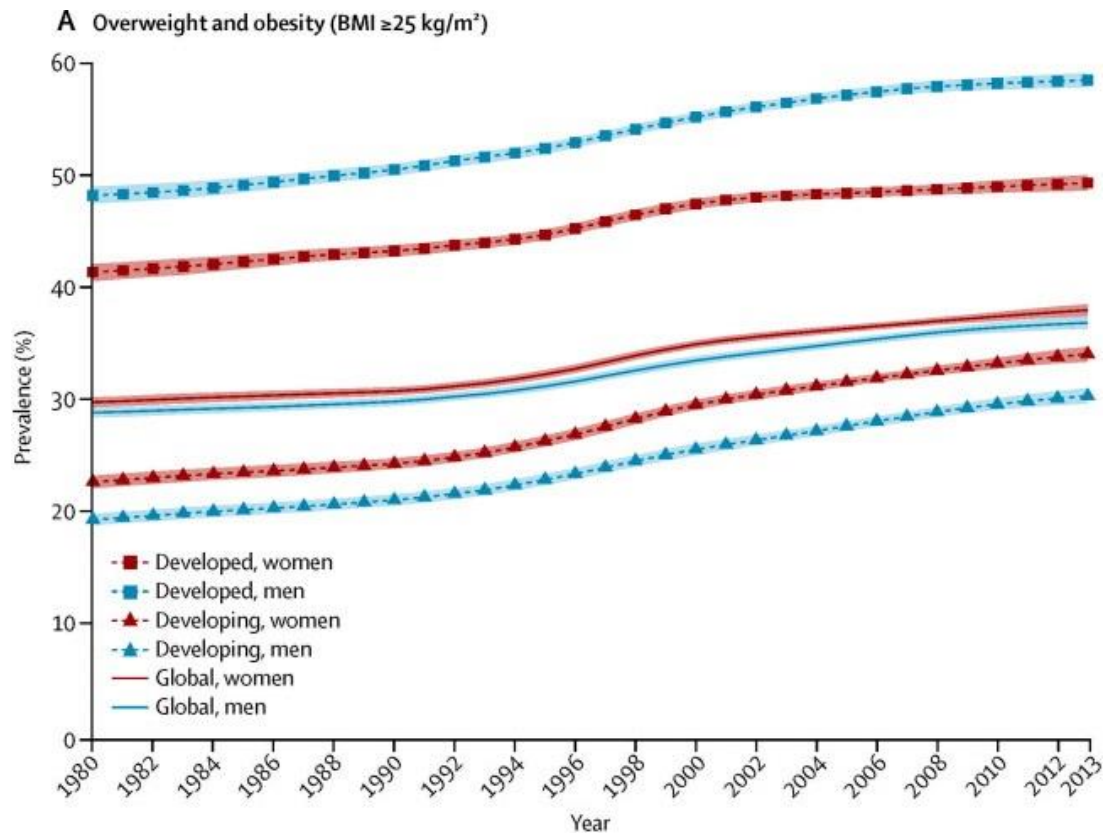
04/20/2015

Outline

- Introduction
 - Methods
 - Results
 - Conclusion
-
- Field Experience Report

Global Concern

- Overweight and obesity remains a matter of urgency (Ng et al., 2013)
- Overweight/obese populations are at risk of developing heart problems, diabetes, metabolic syndrome, stroke, certain types of cancer, and other diseases or complications (Guh et al., 2009)

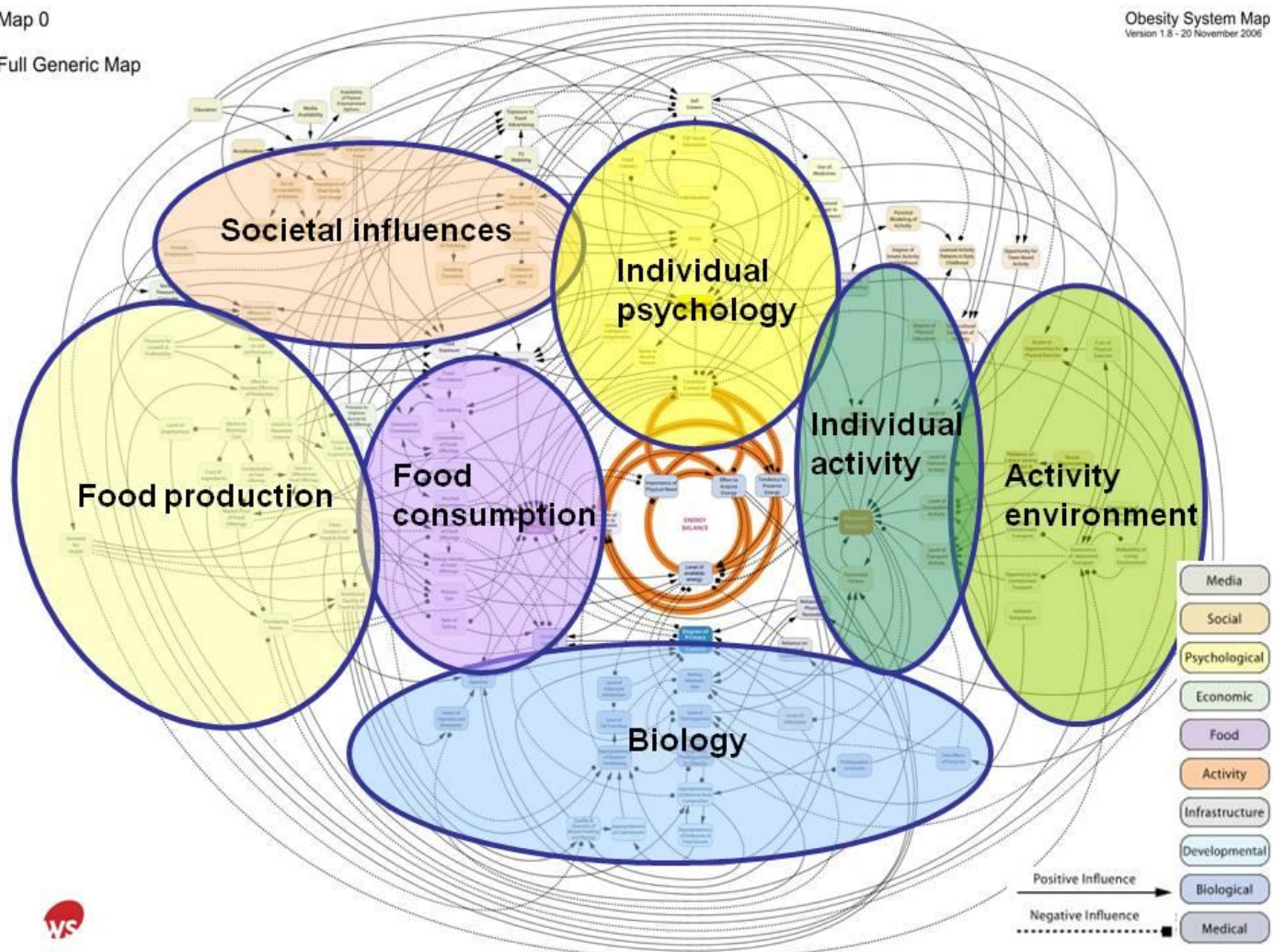


Contributing Factors

Map 0

Full Generic Map

Obesity System Map
Version 1.8 - 20 November 2006



Situation in Russia

The Russian Federation Ministry of Healthcare (2012):

- \approx 50% of adult population is overweight or obese
- Increasing (almost doubled) since mid-1990s
- Prevalence of obesity in children is 5.5% in rural areas, and 8.5% in urban areas (Peterkova, & Remizov, 2004)

The Traditional Russian Diet

High in sugars, meat and dairy products
(Huffman, & Rizov, 2007):

- Meat consumption was favored since times of Soviet Union
- High dairy products intake
- Low in fruits and vegetables intake

People also tend to buy cheaper products (potatoes, processed sugars) rather than fruits, vegetables, fish, poultry (Staudigel, 2011)

Why Target Kids?

- Obesity in childhood, adolescence results in weight-related problems and various health problems in older adults (Daniels, 2006)
- Childhood and adolescence are key times when people establish their habits and tend to maintain those into adulthood (Wang, & Beydoun, 2007)

“Classic” Nutrition Education



http://study.com/articles/5_Majors_for_People_Who_Like_Kids.html

- set of planned educational activities
- targeted at certain population groups
- theory-based

(Gil's publication (as cited in McNulty, 2013))

“Enhanced” Nutrition Education



snack
preparation



set of extra
activities



tasting



Sims, 1987
Lytle, & Achterberg, 1995
Sharma, 2011

Objective

- To evaluate the overall effectiveness of behaviorally-oriented theory-based “enhanced” nutrition education program (intervention condition) in Russian children
- Effectiveness of “enhanced” nutrition education compared to “classic” nutrition education (comparison) in terms of:
 - *nutrition knowledge*
 - *behavior change*
 - *healthy eating attitudes*
 - *self-efficacy*

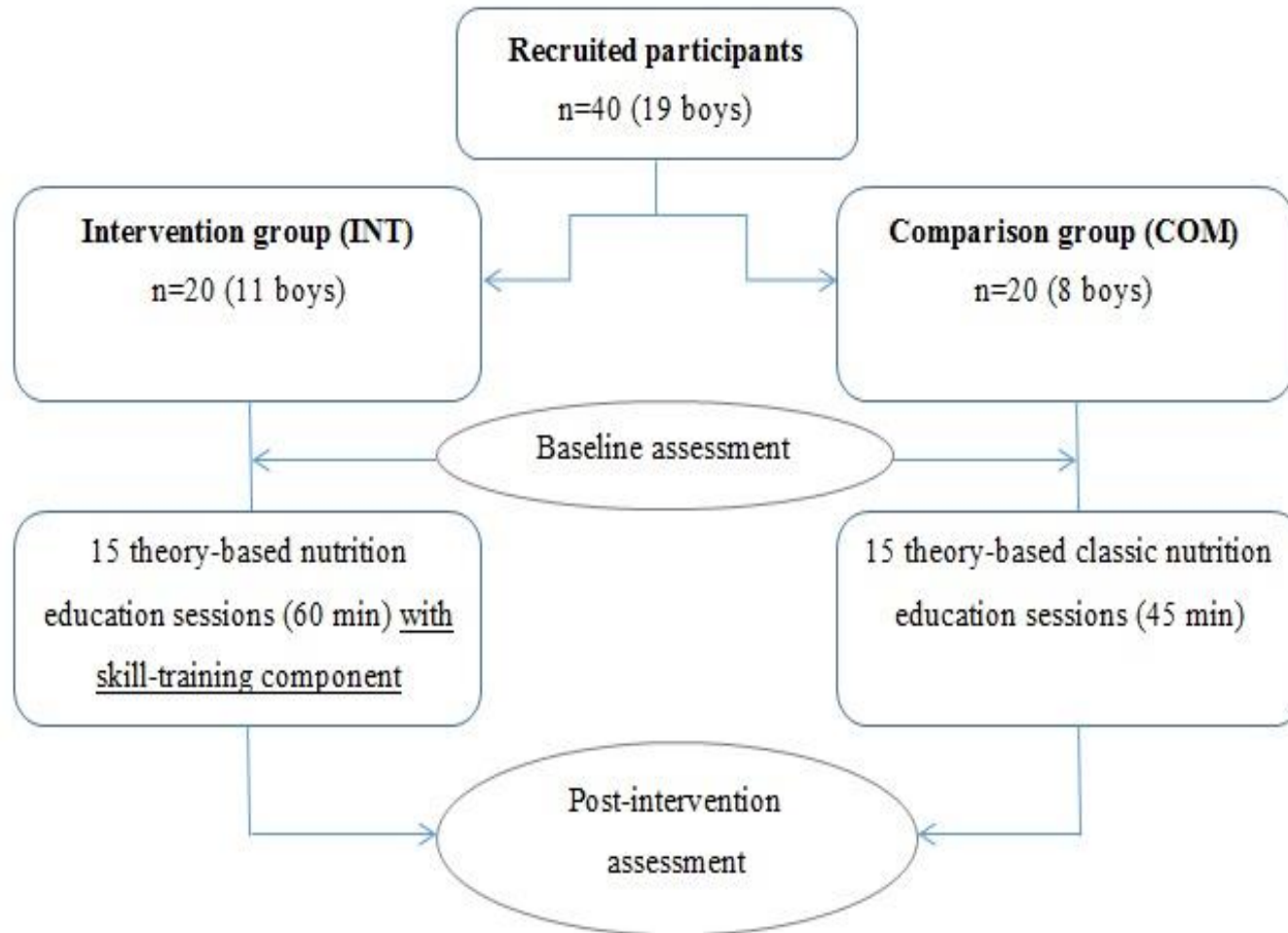
Hypotheses

- Both conditions will show statistically significant improvement from baseline to post-intervention in terms of:
 - *nutrition knowledge*
 - *behavior change*
 - *healthy eating attitudes*
 - *self-efficacy*
- Intervention condition will show statistically significant improvement in outcomes as opposed to comparison group

Camp Setting

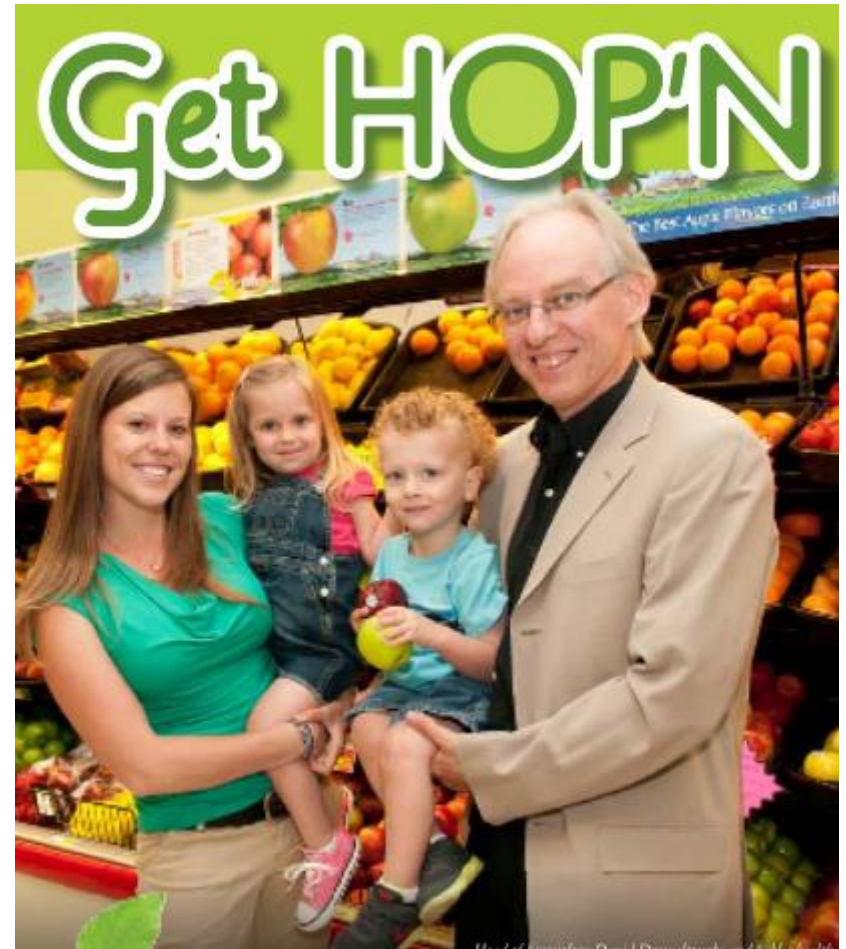


Study Design



HOP'N Program

- Designed as an intervention to target skill development and self-efficacy in kids, and the program used Social Cognitive Theory construct (Dzewaltowski et al., 2010)
- Program modules on healthful eating focus on increasing fruit and vegetable consumption as well as promoting water consumption



Picture from:

http://www.hopnhome.org/uploads/3/6/7/3/3673952/hopn_story.pdf

Anthropometric Measurements

- Height
- Weight
- Waist circumference



Nutrition Knowledge Assessment

Nutrition Knowledge

What do you think health professionals recommend to eat?

	More	Same	Less	Not sure
a. Vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Fruits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Meat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Sugary foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Starchy foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Fatty foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. High-fibre foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Salty foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How many servings of fruit do you think we should eat per day (in cups)? _____

How many servings of vegetables do you think we should eat per day (in cups)? _____

Healthy Eating Behaviors

Menu

Amber Kingdom, 3 shift, 2014 rog.

Please select any 2



Carrot sticks
"DIAMOND
EYE"



Cookies



Crackers



Grapes "MIGHTY BOGATYR"



Walnuts
"SUPER BRAIN"



Cereal

(Hanks, Just, & Wansink, 2013)

Healthy Eating Attitudes

Fruits and vegetables consumption attitudes

	Strongly agree	Agree a little	Not sure	Disagree a little	Strongly disagree
a. Eating vegetables makes me feel healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I like the taste of many vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. In my home, vegetables are served at dinner most nights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I like tasting new vegetables that I haven't tried before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. It is easy to prepare vegetables to eat e.g. make a salad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Eating fruit makes me feel healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. I like the taste of most fruit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Fruit is an easy snack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. I like tasting new fruits that I haven't tried before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. In my home fruit is available to eat at any time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. I like to drink water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. I ask my parents to buy foods or drinks that I see advertised on television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Wilson, Magarey, & Mastersson, 2008)

Self-efficacy Assessment

Self-efficacy.

How sure are you that you can eat...?

	Not at all sure	Somewhat sure	Very sure
One serving (1/2 cup) of fruit each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two servings (1 cup) of fruit each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Three servings (1,5 cup) of fruit each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One serving (1/2 cup) of vegetables each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two servings (1 cup) of vegetables each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Three servings (1,5 cup) of vegetables each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You are done!

Thank you!

Statistics

- SPSS version 22.0;
- Descriptive statistics to assess differences at baseline
- *Independent t-tests* (change scores) to assess the hypothesis whether there were significant differences between intervention and comparison group for changes in outcomes;
- *Paired t-tests* were performed to test whether there were significant differences from baseline to post-intervention within both conditions regarding the outcomes;
- Cronbach's alpha was run to assess internal consistency of each survey part
- Statistical significance was set at $p < 0.05$

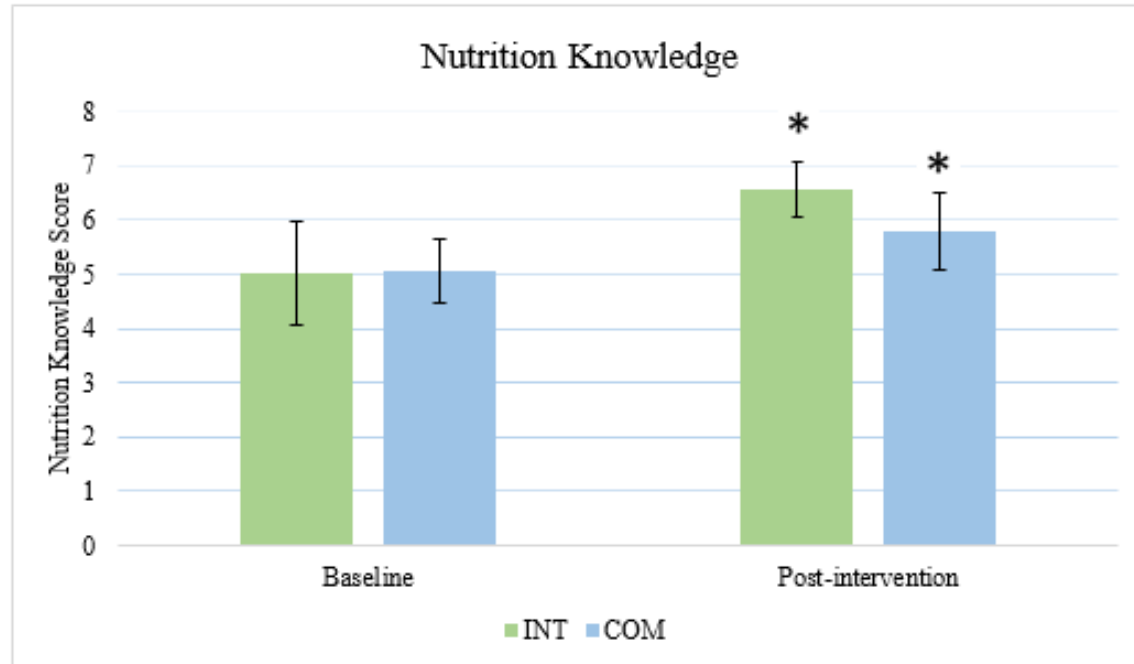
Participant Characteristics

Table 3.1 Baseline participant characteristics (anthropometrics)

	All Kids	INT Group		COM Group	
	Mean \pm SD	Mean \pm SD	range	Mean \pm SD	range
Age (years)	10.35 \pm 1.0	10.2 \pm 1.0	8-12	10.5 \pm 0.9	9-12
Body mass (kg)	39 \pm 9.6	36.6 \pm 6.5	28-53	41.4 \pm 11.5	23-78
Height (cm)	145.3 \pm 7.9	144.8 \pm 8.7	126-164	145.8 \pm 7.3	133-160
BMI percentile	56.7 \pm 27.7	69 \pm 26.7	9-98	44.4 \pm 23.2	1-84
BMI	18.3 \pm 2.9	19.4 \pm 3.3	14-29	17.1 \pm 1.9	13-22

Nutrition Knowledge

Figure 3.1 Mean scores for nutrition knowledge.



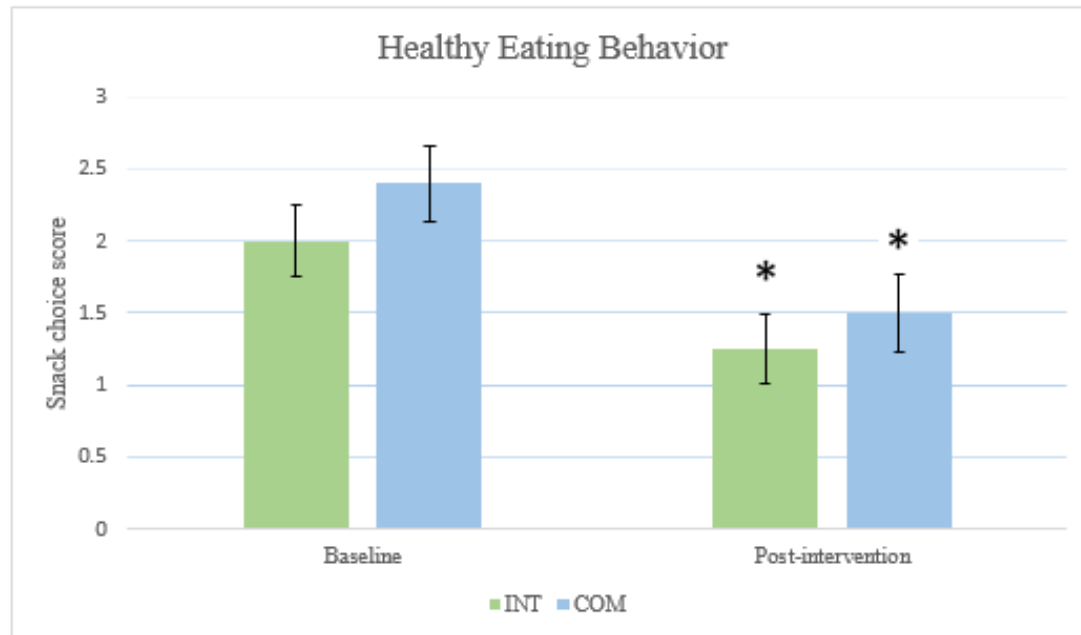
Higher scores indicate better knowledge in study participants

Error bars indicate 95% CI

*Statistically significant difference between baseline and post-intervention scores ($p < 0.05$)

Healthy Eating Behavior

Figure 3.2 Mean scores for healthy eating behavior.



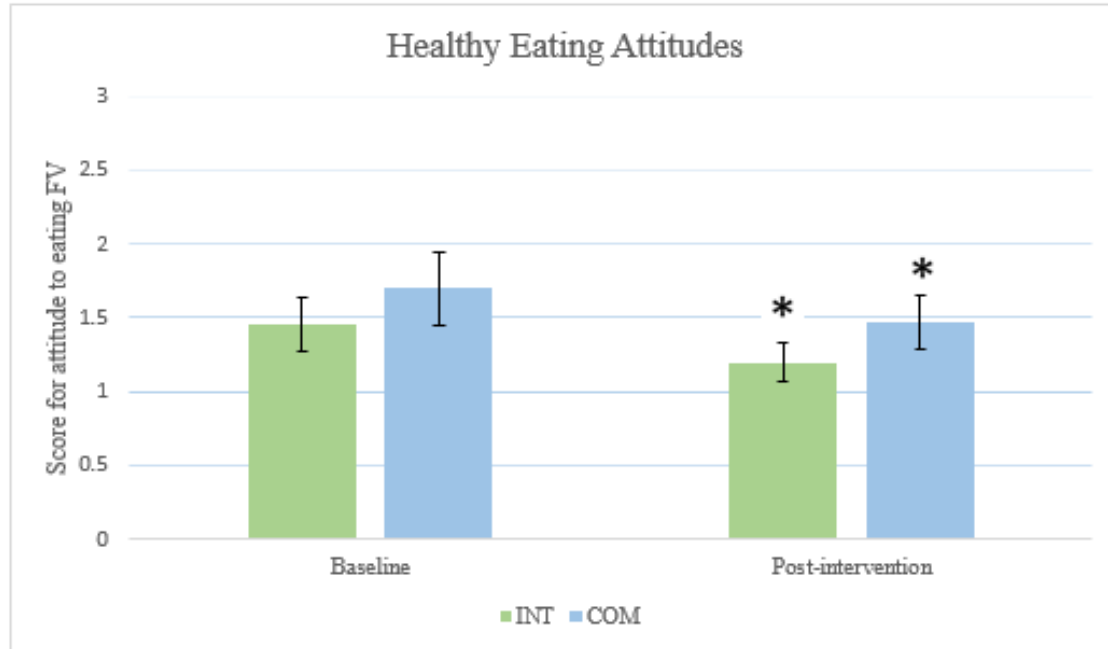
Lower scores indicate healthier snack choices (fruit, vegetable or walnuts over cookies, crackers or cereal) in study participants.

Error bars indicate 95% CI.

*Statistically significant difference between baseline and post-intervention scores ($p < 0.05$)

Healthy Eating Attitudes

Figure 3.3 Mean scores for healthy eating attitudes.



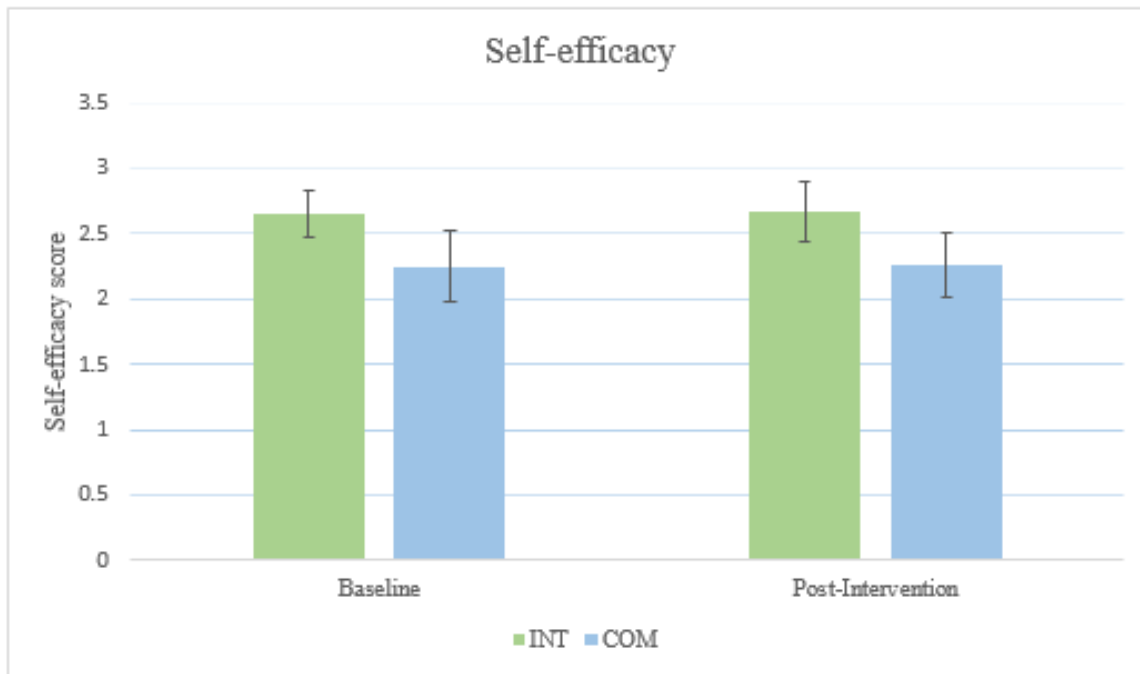
Lower scores indicate positive attitudes to healthy eating (fruit, vegetable consumption) in study participants.

Error bars indicate 95% CI.

*Statistically significant difference between baseline and post-intervention scores ($p < 0.05$)

Self-efficacy

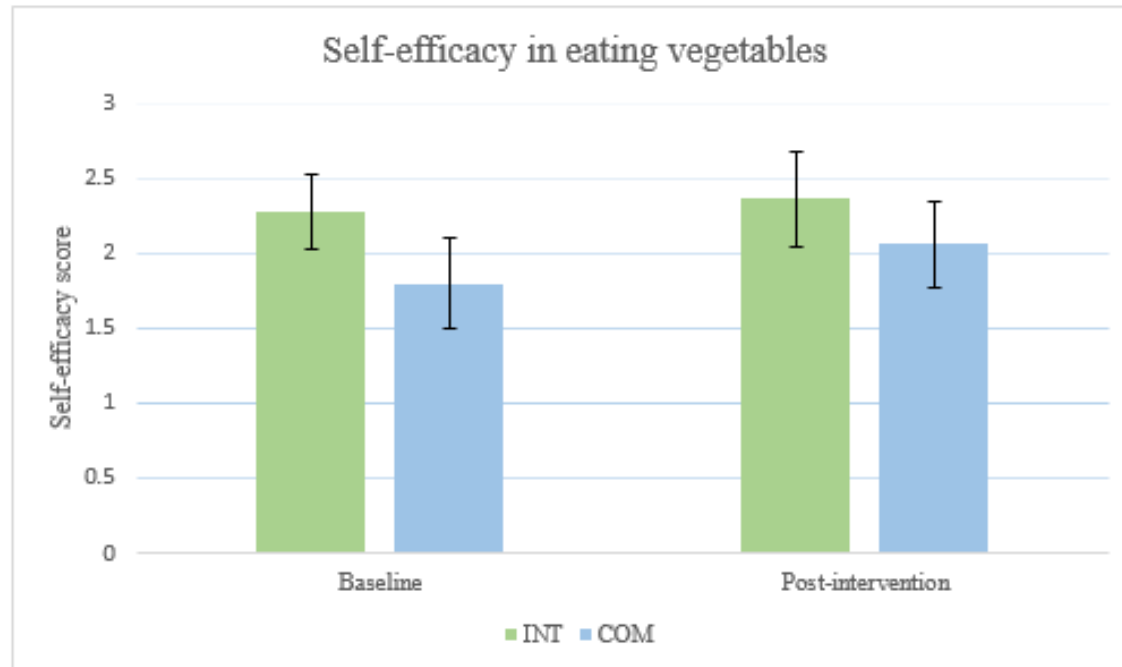
Figure 3.4 Mean scores for self-efficacy in eating fruit.



**Higher scores indicate higher self-efficacy in study participants.
Error bars indicate 95% CI.**

Self-efficacy

Figure 3.5 Mean scores for self-efficacy in eating vegetables.



Higher scores indicate higher self-efficacy in study participants.
Error bars indicate 95% CI.

Major Findings

- H_0 : Both conditions will show statistically significant improvement from baseline to post-intervention in terms of:
 - *nutrition knowledge*
 - *behavior change*
 - *healthy eating attitudes*
 - *self-efficacy*

Our results showed that was supported for all the outcomes listed (except self-efficacy) regardless of intervention condition

Major Findings

- H_0 : The intervention group would show greater changes than the comparison group.

Our results showed that was not supported

Strengths Of The Current Study

- The first intervention in the Russian summer camp context
- 100% participation rate for all 3 weeks
- Short interventions (10-15 hours over 3-15 week period) result in positive effects on nutrition knowledge, skills related to healthy eating practices, healthy eating behavior
- The study utilized an index of behavior change (Snack menus)
- The present study utilized well-structured, previously published educational materials that were shown to be effective

Limitations

- The study was based on a convenience sample
- No true random allocation of study participants into intervention or comparison group occurred
- Quasi-experimental design with no true control group
- Data were collected by self-report, and may be subject to recall bias
- Social desirability bias
- Lower Cronbach's alpha for attitudes towards eating fruit and vegetables (at acceptable, but not adequate level)
- Small sample size
- Potential for contamination effects
- Results might not be generalizable

Future Directions

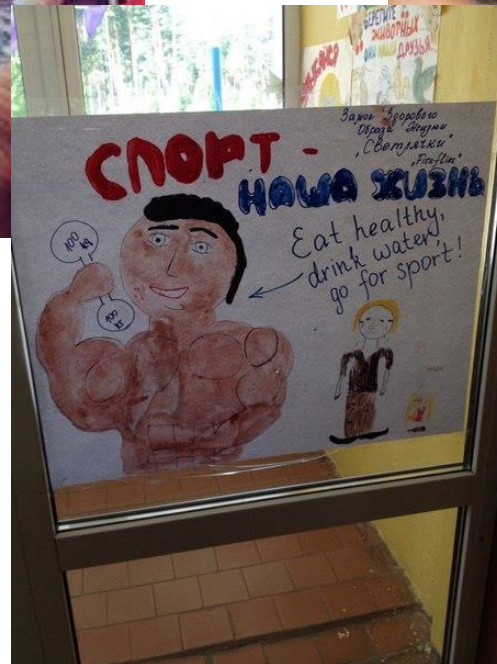
- Fully powered randomized controlled trial design
- Incorporate not only larger sample size potentially including at-risk populations, but longer duration programs
- Future research should also focus on nutrition education interventions accompanied by environmental changes

Conclusion

The present study shows the positive impact of theory-based nutrition education program with or without skill-training component on youth's nutrition knowledge, healthy eating behavior and attitudes

Further research and implementation of nutrition education programs in Russian school-aged children is warranted

Questions?



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Field Experience Report

K-State Research and Extension

January 15, 2015 – March 12, 2015

(180 hours)

Virginia (Ginny) Barnard



K-STATE
Research and Extension

K-State Research and Extension

- **Goal:** to assist the population technically and to provide evidence-based programs to the community
- KSU for Riley County
- Flint Hills Wellness Coalition



Virginia Barnard

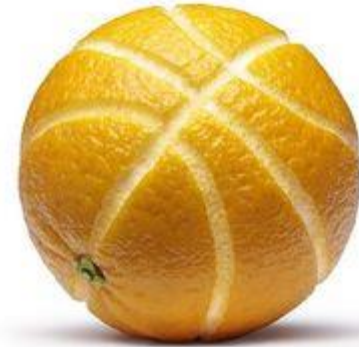
- MPH (Kansas State University)
- Family and Consumer Sciences Agent for Riley County
- Ginny is involved in numerous projects/programs regarding nutrition, food safety, healthy lifestyles, overall well-being



<http://www.riley.ksu.edu/p.aspx?tabindex=395&tabid=243&ItemID=908&mid=292>

Scope of work

- Nutrition Education for Child Basketball Teams
- DIET FREE
- Lunch Series Lectures for City Hall employees
- Flint Hills Wellness Coalition meetings



The 8 Habits That Will Change Your Life

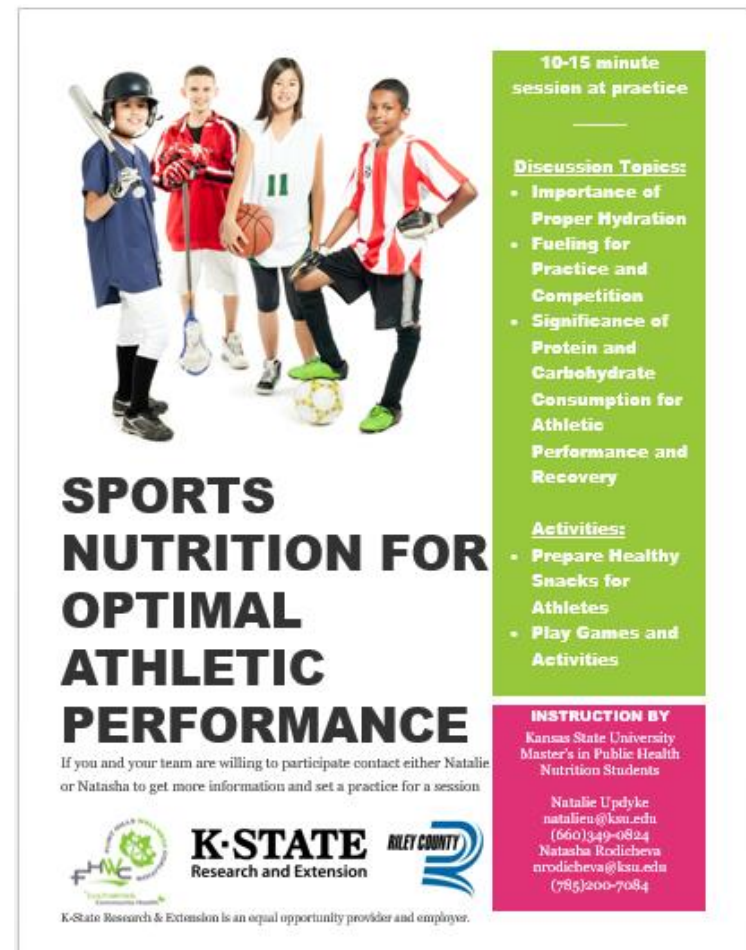
<https://www.pinterest.com/magdalhotsky/cookies/>
<http://www.morrishospital.org/whats-new/diet-free/>

Learning objectives

- To gain a deeper understanding of the motivations/barriers for adults wanting to make healthy behavior changes
- To learn what established social norms, traditions, and environmental factors influence and individual's ability to increase physical activity and improve access to healthy foods
- To be able to describe what internal/external rewards adults may need to successfully change health behaviors
- Was to understand how community partners/organizations work together to impact access to healthy foods and support physical activity
- To consider the scope of work of K-State Research and Extension

Nutrition Education for Child Basketball Teams

- Recruited teams through Parks and Rec office
- Developed a flyer for coaches



10-15 minute session at practice

Discussion Topics:

- Importance of Proper Hydration
- Fueling for Practice and Competition
- Significance of Protein and Carbohydrate Consumption for Athletic Performance and Recovery

Activities:

- Prepare Healthy Snacks for Athletes
- Play Games and Activities

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FHNC
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Research and Extension

RILEY COUNTY

K-State Research & Extension is an equal opportunity provider and employer.

Nutrition Education for Child Basketball Teams

- At baseline we had 6 teams
- We developed 3 sessions:
 - Macronutrients and importance of pre- exercise or pre-game meals and snacks
 - Basic information about glycogen and post-exercise and post-game ideas for healthy meals and snacks
 - Importance of proper hydration
- At follow-up we had 3 teams

Session 1



Fueling for Success

Do

Day Before: Do consume:

- plenty of complex carbs (whole grains, veggies, and fruits)
- moderate source of low-fat protein

3 to 4 hours before: Do consume meal/snack:

- high in complex carbs
- moderate in protein
- low in fat

Immediately before: Do consume low calorie snack with high-carbohydrate and low -protein

Don't

Day Before: Don't consume:

- foods with little nutritional value (fast food, highly processed foods, sodas, etc.)

3 to 4 hours before: Don't consume meal/snack:

- high in fat
- simple carbohydrates
- with new foods

Immediately before: Don't consume:

- high fiber foods
- high fat foods

Carbohydrates

Your body stores carbohydrates as glycogen, which is quickly available to use as fuel. Carbohydrate consumption during high-intensity competition can prevent muscle glycogen depletion and can improve performance.

Protein

Your protein needs can easily be met if you are eating enough food from a balanced diet, and you avoid empty calories (foods that are high in added sugars and/or solid fats with little nutritional value).

Fat

You need fat in your diet, so do not try to eliminate it completely. Instead, incorporate omega-3 fat containing foods like fatty fish (tuna, salmon), walnuts, and flaxseeds into your diet. This type of fat is heart healthy and prevents inflammation. Olive and canola oil, or foods containing them, are also monounsaturated fat that is heart healthy.

Session 2



Do

Within 15 minutes: Do consume:

- liquid carbohydrate
- juice, milk, and sports drink as needed

Within 2 hours: Do consume meal/snack:

- high in carbohydrate, preferably complex carbs
- moderate in protein
- low in fat
- pasta with lean meat, chocolate milk

Why

- carbohydrate will help to restore glycogen in muscles
- reduce fatigue/ low energy level
- protein will help your muscles recover and grow stronger
- combination of protein and carbs helps to optimize glycogen replacement

Glycogen

- an energy storage molecule in your muscles
- composed of glucose molecules
- is an easily available source of energy for your muscles during exercise
- within an hour after exercise your body is most efficient in producing glycogen

Benefits of Post-Exercise Meal

- improved recovery
- reduced soreness
- improved immune function
- improved bone strength and density
- improved body fat utilization



Session 3



Estimate sweat rate:

1. weight before training – weight after training = total weight loss
2. fluid consumed during exercise (15oz=1lb)
3. (total weight loss during training + weight of fluid consumed) / total hours of training = sweat rate

Replace 150% of fluids lost per hour.

Recommended serving sizes:

Low-fat chocolate milk=6oz

100% fruit juice=4oz

Gatorade=8oz

Before Practice/Game:

- 2-3 hours before drink 12-16oz water (about 1-1½ standard bottles)
- 10-15 min before drink 5-8 oz. water (about 1/2 standard bottle)

During Practice:

- Use thirst as an indicator for drinking
- Take drinks during breaks (5 oz.)

After Practice:

- Immediately afterwards, replace fluids lost during exercise
- For every pound lost during exercise consume 24 oz.

Benefits of Hydrating

- Water helps regulate body temperature which could prevent headaches, nausea, and exhaustion
- Water prevents muscle cramps
- Water helps with nutrient transport and waste removal in the body

Effects of Dehydration

- Even small level of dehydration (1-2%) can have negative impacts on heart rate, core temperature, heart and lung function
- In extreme cases dehydration can increase risk of kidney failure

Key Points

- **WATER** is the best fluid, especially if the practice/game lasts less than one hour
- **Pre-hydrating** before completion can decrease risk of dehydration during the game
- Consuming dilute carbohydrate solution before and after exercise can increase fluid absorption (≤19g per 8oz)
- Consuming beverages with sodium and/or salted snacks with water can help retain fluid (50-170mg per 8oz)
- Consuming a whole 20 oz. Gatorade is not necessary
 - An 8oz serving will adequately replace ions lost during a 1 hour game or practice



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City of
Manhattan
Kansas
Parks and Recreation



Snack Tasting



Child Survey

Name _____ Team _____

Age _____ Gender M / F Date _____

1. How often do you usually do the following?

Tick one box in each row

	Never/rarely OR Less than once/week	About 1-3 times/week	About 4-6 times/week	Every day
a. Drink water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Drink fruit juice or fruit juice drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Drink soda (not including diet soda)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Carry a water bottle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Eat chocolate or candy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. French fries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Eat potato chips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Eat fast food	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Help choose or buy groceries for the family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Help prepare your dinner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Eat dinner with most of the family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Eat dinner in front of the television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Eat snacks in front of the television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How many serves of vegetables do you usually eat each day?

(1 serving = 1 cup of salad vegetables, OR ½ a cup of cooked vegetables, OR 1 medium potato)

1. I don't eat vegetables
2. Less than 1 serve a day
3. 1-2 serves a day
4. 3-5 serves a day
5. More than 5 serves a day

3. How many serves of fruit do you usually eat each day?

(1 serving = 1 medium piece, OR 2 small pieces of fruit e.g. clementine ("Cutie") or apricots, OR 1 cup of diced pieces)

1. I don't eat vegetables
2. Less than 1 serve a day
3. 1-2 serves a day
4. 3-5 serves a day
5. More than 5 serves a day

How many servings of fruit do you think we should eat per day? _____

How many servings of vegetables do you think we should eat per day? _____

1. How beneficial is being properly hydrated for you athletic performance? (Select one)

- Not beneficial at all
- Not very beneficial
- Somewhat beneficial
- Beneficial
- Very beneficial
- Completely beneficial

2. How beneficial is maintaining a healthy diet for you athletic performance? (Select one)

- Not beneficial at all
- Not very beneficial
- Somewhat beneficial
- Beneficial
- Very beneficial
- Completely beneficial

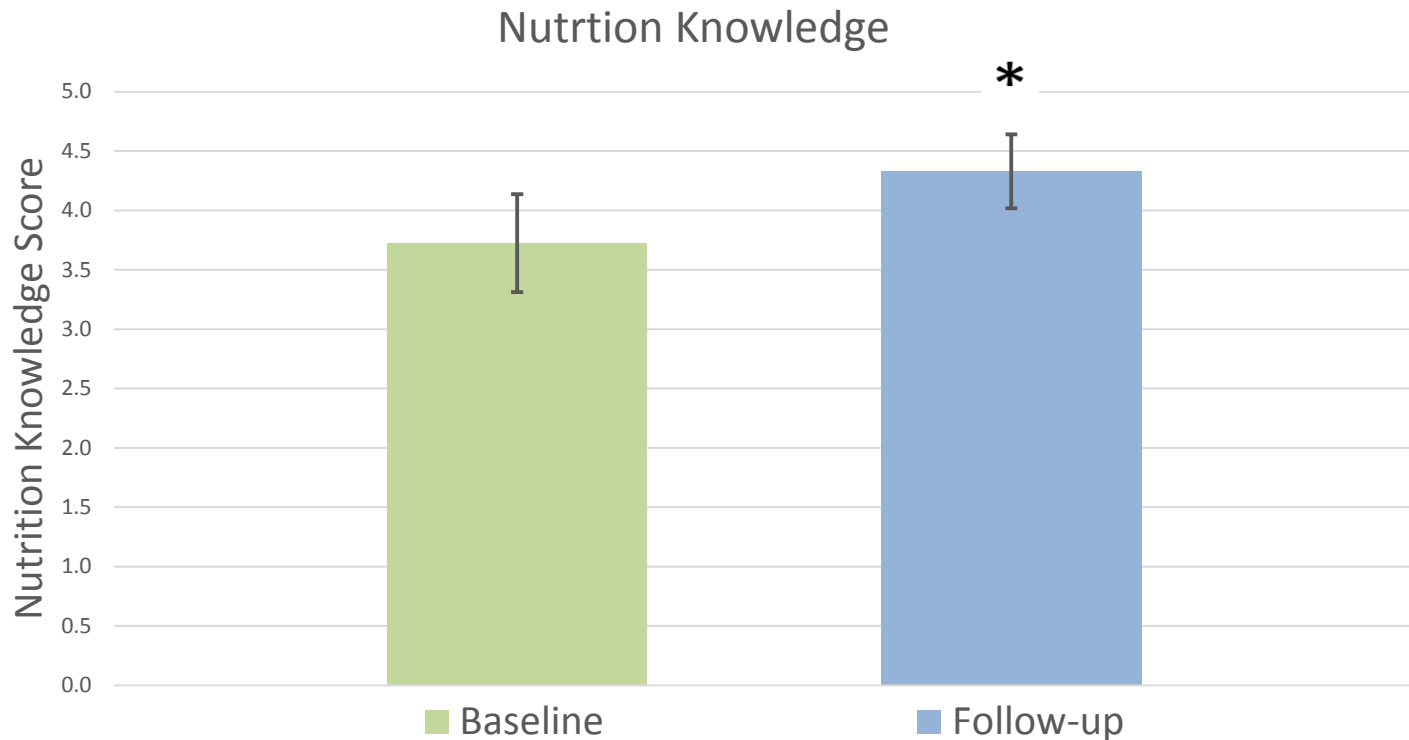
3. How beneficial is eating throughout the day (before practice/game) for you athletic performance? (Select one)

- Not beneficial at all
- Not very beneficial
- Somewhat beneficial
- Beneficial
- Very beneficial
- Completely beneficial

4. How beneficial is eating after practice/game for recovery and future athletic performance? (Select one)

- Not beneficial at all
- Not very beneficial
- Somewhat beneficial
- Beneficial
- Very beneficial
- Completely beneficial

Nutrition Education for Child Basketball Teams



Higher scores indicate better knowledge in participants

Error bars indicate 95% CI

*Statistically significant difference between baseline and follow-up knowledge scores ($p < 0.05$)

DIET FREE

- Zonya Foco, RD
- 10 sessions, 8 habits
- Drink water
- Include breakfast
- Eat often and include a fruit or vegetable each time
- Tame your sweet tooth
- Find the fat
- Replace processed foods with wholesome
- Eat until no longer hungry
- Exercise every day



DIET FREE Activities



DIET FREE Activities



DIET FREE Assessment

Self-Assessment Snapshot

Take a self-assessment snapshot of your health, both physically and emotionally, when you begin the DIET FREE program. Choose the number that most accurately reflects how strongly you disagree or agree with the statement.

After learning one habit a week, for at least eight weeks from the date of beginning the program, repeat the self-assessment snapshot and compare. I also recommend repeating this assessment every six months to evaluate and celebrate your DIET FREE health benefits!

Snapshot at beginning of program Date: _____

	Strongly Disagree	Strongly Agree
I have a positive energy level all day	1 2 3 4 5 6 7 8 9 10	
I sleep soundly and without pain	1 2 3 4 5 6 7 8 9 10	
I feel good in the clothes I wear	1 2 3 4 5 6 7 8 9 10	
I am physically active	1 2 3 4 5 6 7 8 9 10	
I breathe easily	1 2 3 4 5 6 7 8 9 10	
I can walk, bend and move easily	1 2 3 4 5 6 7 8 9 10	
My mood is typically positive	1 2 3 4 5 6 7 8 9 10	
Total of all circled numbers	_____	

Snapshot at end of program (min. 8 weeks) Date: _____

	Strongly Disagree	Strongly Agree
I have a positive energy level all day	1 2 3 4 5 6 7 8 9 10	
I sleep soundly and without pain	1 2 3 4 5 6 7 8 9 10	
I feel good in the clothes I wear	1 2 3 4 5 6 7 8 9 10	
I am physically active	1 2 3 4 5 6 7 8 9 10	
I breathe easily	1 2 3 4 5 6 7 8 9 10	
I can walk, bend and move easily	1 2 3 4 5 6 7 8 9 10	
My mood is typically positive	1 2 3 4 5 6 7 8 9 10	
Total of all circled numbers	_____	
Did your total increase?	_____	
How do you feel about this change?	_____	

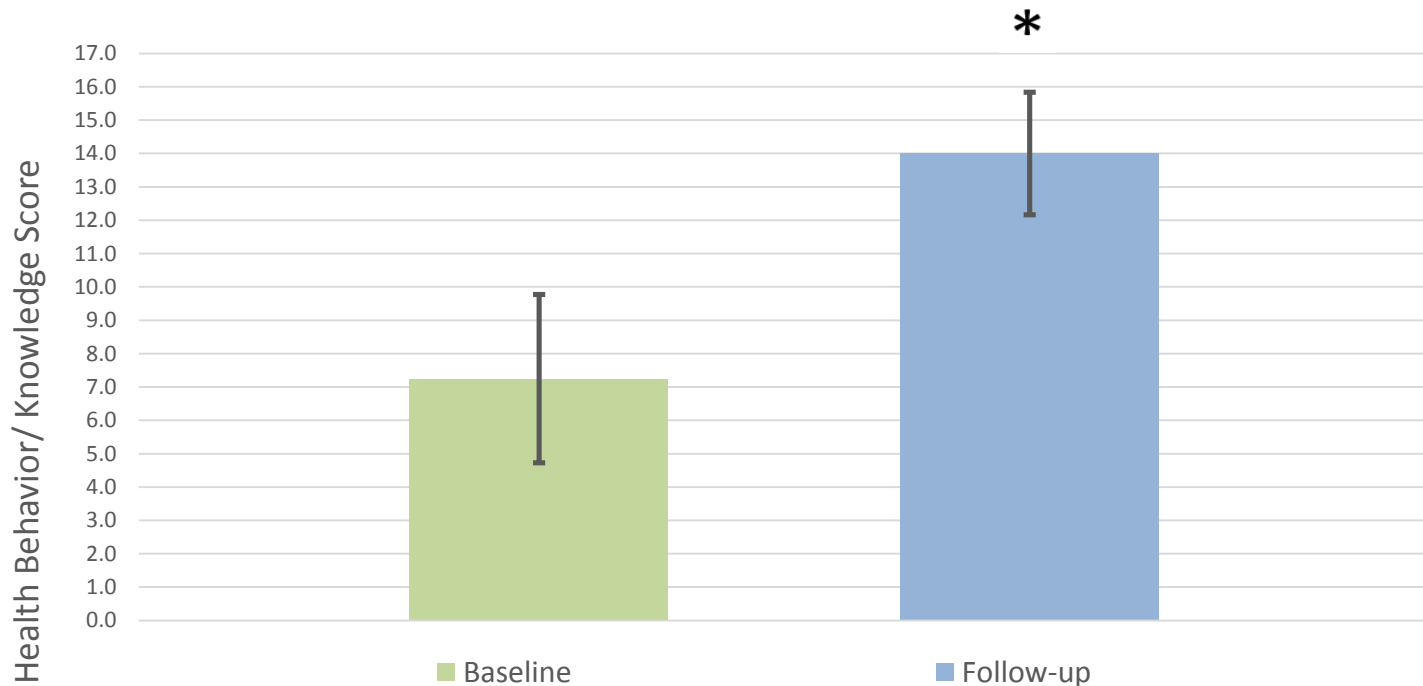
Current Knowledge and Habits Survey

Take a moment to answer the following questions with a yes (Y) or no (N). You should repeat the assessment at the end of the DIET FREE program to help evaluate the knowledge you've gained and changes you've made.

Start Date:	End Date:	Current Knowledge and Everyday Habits
Y N	Y N	I know what trans and saturated fats are, and try to limit the amount I eat.
Y N	Y N	If someone brings in donuts, I do not eat them 90 percent of the time.
Y N	Y N	I eat breakfast every day.
Y N	Y N	I am diligent about not eating two to three hours before bedtime.
Y N	Y N	I often eat at least seven servings of fruit or vegetables each day.
Y N	Y N	I have a fruit bowl prominently displayed and regularly filled at home and/or at work.
Y N	Y N	When choosing bread, cereal, rice and pasta, I choose whole-grain products most of the time.
Y N	Y N	My beverage of choice is water, and I am good about limiting the amount of calorie-filled beverages.
Y N	Y N	Faced with the large portions typically served in restaurants, I often share my meal or save the rest for later.
Y N	Y N	I avoid processed food, and choose wholesome and natural options instead.
Y N	Y N	I participate in 30 minutes or more of physical activity most days of the week.
Y N	Y N	I am physically active while running my daily errands, such as taking the stairs instead of the elevator, parking farther away, and walking or biking instead of driving whenever possible.
Y N	Y N	I understand the value of strength training and do resistance or body conditioning at least twice a week.
Y N	Y N	I stretch at least 10 minutes twice a week, to preserve and improve my flexibility.
Y N	Y N	When I eat, it is because I am physically hungry and not to "feed my emotions."
Y N	Y N	I can thoroughly enjoy a small sweet treat without feeling guilty and without overindulging.
Y N	Y N	I rarely leave home without a bottle of water and some healthy snacks.
Total "YES" Answers:	Total "YES" Answers:	How do I feel about this change?
_____	_____	_____

DIET FREE Results

Diet Free Health Behavior/Knowledge



Higher scores indicate better behavior/knowledge in participants

Error bars indicate 95% CI

*Statistically significant difference between baseline and follow-up health behavior/knowledge scores ($p < 0.05$)

Alignment with Public Health Competencies

- Biostatistics:
 - Utilized surveys
 - Ran statistical analyses on the data set
- Environmental health:
 - Flint Hills Wellness Coalition meetings (tobacco use, and food safety and availability)
- Epidemiology:
 - Background research for interventions for both thesis and field experience
 - Analyzing published literature

Alignment with Public Health Competencies

- Healthcare administration:
 - Role of K-State Research and Extension office for the Riley County healthcare services
 - Importance of community-based programs
- Social and behavioral sciences:
 - Healthy eating and physical activity promotion for the community while working on both thesis and field experience
 - Helped to provide opportunities for behavior change

Conclusion

- I became more observant and passionate about my field of interests
- I learnt a lot from my professors and mentors, but I do understand that there is still a lot to learn about and to explore



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