

Utah State University

DigitalCommons@USU

All Graduate Theses and Dissertations

Graduate Studies

5-2019

The Development, Implementation, and Assessment of a Home Component to the FIT Game Healthy Eating Program

Hali King O Bray
Utah State University

Follow this and additional works at: <https://digitalcommons.usu.edu/etd>



Part of the [Food Science Commons](#)

Recommended Citation

O Bray, Hali King, "The Development, Implementation, and Assessment of a Home Component to the FIT Game Healthy Eating Program" (2019). *All Graduate Theses and Dissertations*. 7494.

<https://digitalcommons.usu.edu/etd/7494>

This Thesis is brought to you for free and open access by the Graduate Studies at DigitalCommons@USU. It has been accepted for inclusion in All Graduate Theses and Dissertations by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.



THE DEVELOPMENT, IMPLEMENTATION, AND ASSESSMENT OF A HOME
COMPONENT TO THE FIT GAME HEALTHY EATING PROGRAM

by

Hali King O Bray

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Nutrition and Food Sciences

Approved:

Heidi J. Wengreen, R.D., Ph.D.
Major Professor

Gregory J. Madden, Ph.D.
Committee Member

Sheryl S. Aguilar, M.S., R.D.
Committee Member

Richard S. Inouye, Ph.D.
Vice Provost for Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2019

Copyright © Hali King O Bray 2019

All Rights Reserved

ABSTRACT

The Development, Implementation, and Assessment of a Home Component to the FIT

Game Healthy Eating Program

by

Hali King O Bray, Master's Student

Utah State University, 2019

Major professor: Dr. Heidi J. Wengreen

Department: Nutrition, Dietetics, and Food Sciences

Most children do not consume the recommended amount of vegetables. The FIT Game healthy eating program is a school-based intervention that has been successful in increasing children's vegetable consumption at school. The aim of this series of studies was to develop a home component to the FIT Game program (Chapters II) and make necessary revisions with parent input (Chapter III), then implement the revised home component in tandem with the FIT Game and assess its ability to increase vegetable availability at home.

In Chapter II we created and implemented a pilot version of a home component consisting of two newsletters that highlighted one of the FIT heroes' favorite vegetables and included nutrition information, fun facts, and a recipe for the vegetable. Newsletters also included evidence-based suggestions for increasing vegetable consumption at home, season-appropriate family physical activities, and one healthy eating challenge per newsletter. In a parent survey, respondents reported that they enjoyed reading the newsletters and that the newsletters taught them new information.

In Chapter III, two focus groups were conducted with parents from the intervention school that received the pilot newsletters. Participants were asked a variety of questions about what information should be included in newsletters and how they would like to receive information. Participants generally responded with interest in receiving informational newsletters from the FIT Game. The most common suggestions for included information were bullet-point style nutritional information and recipes to make at home.

In Chapter IV, the revised parent newsletters were implemented into the FIT Game program. A total of four newsletters were sent home with children in the intervention school over the course of the FIT Game program. Newsletters included facts and a recipe for a highlighted vegetable, suggestions for increasing consumption of vegetables at home, and a family healthy eating challenge. Baseline and post-intervention surveys were distributed to parents at the control and intervention schools. No significant effects of school over time were present for questions regarding a home vegetable inventory, confidence levels in different scenarios, and frequency of serving vegetables at dinner and with snacks. Fifty-nine percent of parents in the intervention school reported that they enjoyed reading the newsletters and 60% reported that the newsletters taught them something new.

Chapter V discusses the overall results from these studies and suggestions for future FIT Game studies that include a home component.

(183 pages)

PUBLIC ABSTRACT

The Development, Implementation, and Assessment of a Home Component to the FIT

Game Healthy Eating Program

Hali King Obray

Researchers at Utah State University created a school intervention called the FIT Game that has successfully increased children's vegetable intake during lunchtime. The aim of this project was to create a home aspect to the FIT Game for parents that would increase the availability of vegetables within the home. Studies within this thesis discuss the development and revision of parent newsletters for the FIT Game program, as well as the implementation and assessment of the revised newsletters. Results from the assessments indicate that providing parent newsletters is not enough to change the vegetable availability at home.

This home component was unsuccessful in provoking the desired change, and future FIT Game studies that choose to include a home component should consider multiple components for higher changes of likelihood of participation and increasing vegetable availability at home.

ACKNOWLEDGMENTS

I would like to thank Dr. Heidi Wengreen for being a marvelous major professor and providing me with the opportunity to be her graduate student. I appreciate her work in reviewing many thesis drafts, teaching me how to use and understand SPSS, and for her endless patience and constructive criticism. I am grateful for my graduate school experience and the knowledge I gained from working with her. I would like to thank my committee members, Sheryl Aguilar and Dr. Greg Madden, for their suggestions and contributions throughout this project.

I would like to thank Amy Heaps for her help analyzing the focus group transcripts, reviewing drafts of my thesis, and her empathy. Thank you to Sarah Eaton for creating FIT Game newsletters with me and transcribing focus group recordings. I would especially like to thank my wonderful husband for his ceaseless encouragement, support through late nights, and his willingness to volunteer with the FIT Game when he was needed. I would like to thank my family for their love and support throughout this journey.

Hali King O Bray

CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEDGMENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
CHAPTER	
I. INTRODUCTION TO THE PROBLEM, BACKGROUND, AND REVIEW OF LITERATURE	1
Problem Statement.....	1
Background.....	2
Review of Literature	6
Objectives	13
References	18
II. RESEARCH BRIEF: THE INCLUSION OF A HOME COMPONENT TO THE FIT GAME, A PILOT STUDY	24
Methods	27
Results	28
Discussion.....	32
Implications for Research and Practice	36
References	37
III. CONDUCTING A FOCUS GROUP IN EVALUATION OF THE FIT GAME HOME COMPONENT	39
Methods	42
Results	44
Discussion.....	49
Implications for Research and Practice	51
References	53
IV. IMPLEMENTATION AND ASSESSMENT OF EFFICACY OF THE REVISED HOME COMPONENT.....	55
Methods	58
Results	61
Discussion.....	69
Implications for Research and Practice	73

References	74
SUMMARY AND CONCLUSION	76
Summary.....	76
Conclusion.....	79
References	81
APPENDICES	85
Appendix A: Pilot Study Newsletters.....	86
Appendix B: Parent Survey for 2016 Intervention.....	90
Appendix C: Focus Group Questions and Transcripts	93
Appendix D: Revised Newsletters.....	149
Appendix E: Pre- and Post-Intervention Parent Surveys for 2017 Intervention.....	159

LIST OF TABLES

Table		Page
1-1	The FIT Game and Sources of Influence.....	5
2-1	The FIT Game Newsletters Taught Me Something New	28
2-2	I Enjoy Reading the FIT Game Newsletters.....	29
2-3	The FIT Game Newsletters Motivated Me to Make a Change in How I Eat	30
2-4	My Child Enjoys Reading the FIT Game Newsletters	30
2-5	My Family Enjoyed Participating in the Monthly FIT Game Newsletter Challenge	31
2-5	Parent Survey Participant Demographics	62
2-5	Newsletter Review Opinion Questions.....	68

LIST OF FIGURES

Figure		Page
1-1	Estimated marginal means of number of vegetables in home inventory.....	63
1-2	Estimated marginal means of number of target vegetables in home inventory.....	64
1-3	Estimated marginal means of confidence to serve vegetables when preparing meals at home	65
1-4	Estimated marginal means of confidence to serve vegetables when low on time	65
1-5	Estimated marginal means of confidence to serve vegetables when low on money to purchase food.....	66
1-6	Estimated marginal means of how often vegetables served with dinner.....	67
1-7	Estimated marginal means of how often vegetables served as snacks	67

CHAPTER I

INTRODUCTION TO THE PROBLEM, BACKGROUND, AND REVIEW OF LITERATURE

ABSTRACT

The lack of vegetables within children's diets is a concern, and an issue that can lead to health disparities later in life. The FIT Game healthy eating program is a game-like intervention that has been shown to increase students' vegetable consumption by using characters as role models who encourage the children to work together to eat enough vegetables for the game characters to save their school from destruction. Studies that include home components, while not always more effective in increasing vegetable consumption at school, are more encompassing of the participating children's lives and overall diets. Parents play a key role in their children's diets by controlling the availability of foods and acting as a role model for eating behaviors. The purpose of this thesis is to develop, implement, and assess a home component of the FIT Game that will increase availability in participating students' homes.

PROBLEM STATEMENT

Children do not eat enough vegetables. This is a health issue in the United States of America, as well as around the world. The World Health Organization (WHO) estimates that about 1.7 million, or 2.8%, of deaths worldwide can be attributed to low fruit and vegetable (FV) consumption.¹ The Centers for Disease Control and Prevention (CDC) found that from 2007 to 2010, 90% of children in the USA were not eating the

recommended 1-3 cups of vegetables per day, and 60% were not meeting the recommendation of 1-2 cups of fruit per day.² Low FV intake is in the top ten risk factors for global mortality,¹ and can lead to health complications in adulthood such as heart disease, cancer, and type 2 diabetes.³

The FIT Game healthy eating program is a school-based intervention that targets the increase of vegetable consumption and has consistently and effectively increased FV intake of children in grades 1-5 at school,^{4,5} though FIT Game has not previously targeted the behavior of eating vegetables away from school. While positively affecting children's FV consumption at school is a step in the right direction, the home environment plays a large role in eating practices and thus a school intervention that does not attempt to influence the home environment is not as effective overall. Parents influence their children's diets in a variety of ways, providing resources and information to parents about nutrition may positively affect their children's vegetable consumption at home.

BACKGROUND

The FIT Game

The school intervention implemented as part of this study is known as the FIT Game healthy eating program. The FIT Game is played at the school level and children in a school work together to meet daily vegetable consumption goals, though the FIT Game was designed to be able to incorporate other healthy behaviors into the narrative, such as physical activity and other food groups. School-wide participation in the game is contingent upon the children collectively meeting their daily vegetable consumption goals. The FIT Game is presented as a science-fiction space odyssey narrative. In the

Game, there are four main characters who make up the Field Intensive Trainee team, or the FITs. They are preteens of varying ethnicities who each have a special talent (speed, strength, etc.) that correlates with their preferred vegetable to eat. Their overall goal is to stop the Vegetation Annihilation Team (the VAT) and capture its leaders, therein saving the universe. In order to achieve their goal, they need the help from the students at the intervention school. There is a vegetable consumption goal each day for the students to reach, and if they do, the Game progresses (a new episode is presented the following day, or the solution to either a quest or challenge given to the children by the FITs) and the FITs receive “FIT Energy” from the students. If the vegetable consumption goal is not achieved, the students are encouraged to try again the following day and there is no Game progression. FIT Game is not a video game, though it does utilize principles from video game designs to encourage engagement of the participants and facilitate the adoption of the proposed behavior changes. These principles include: player autonomy, quests, a compelling narrative, performance adapted goals, in-game currency, and a clearly stated game objective.

The FIT Game uses the virtual reward of advancement within the Game to incentivize real-world healthy behavior: eating vegetables during lunch. This approach is called “gamification,” and is a term that has been used as a method of motivation for people to make and retain certain desired behaviors in nongame contexts, utilizing game design elements.⁶ The Game information is visually displayed in the cafeteria in comic book format on a projector. FV waste is collected each day to assess whether the students met their consumption goal and are able to advance in the Game. Until this proposed study, no data on intake has been collected from the home environment, and it is unknown what effect, if any, occurs from participating in the FIT Game intervention.

The Social Cognitive Theory & The FIT Game

The social cognitive theory was originally proposed and developed by Albert Bandura in 1977 and has become one of the most widely used theories in the development of both nutrition education and health promotion programs. The theory proposes that there are three types of factors that influence a person's health behavior: 1) Personal factors –consisting of one's own thoughts and feelings; 2) Behavioral factors – these include nutrition-, food-, and health-related skills and knowledge, and one's skills in taking control and being able to regulate their own behaviors; 3) Environmental factors –these include factors that are external to individuals, such as social or physical environments.⁷

Bandura proposes that no other mechanism of personal agency is more central than people's beliefs about their ability to exercise control over events that affect their lives and their own level of functioning.⁸ Self-efficacy, which is defined as “beliefs about personal ability to perform the given behavior that brings the desired outcomes,” is a key aspect of the social cognitive theory.⁷ The theory proposes self-efficacy to be a major motivator of behavior change and action, and suggests that self-efficacy is necessary for individuals to overcome the barriers or impediments present to adopting and then maintaining healthy behaviors.⁹ Research has discovered that self-efficacy greatly impacts the initiation, modification, and maintenance of complex behaviors like healthful eating and physical activity. Additionally, research has indicated that a higher level of perceived self-efficacy will result in an increased amount of effort expended and longer persistence of a new learned behavior.⁷ The FIT Game study utilizes many aspects of the social cognitive theory, especially self-efficacy. Four sources of influence to strengthen

self-efficacy include: 1) personal mastery experiences; 2) social modeling; 3) social persuasion; 4) modification of emotional or physical responses to the behavior.⁷ Personal mastery experience is achieved by the progression of the storyline by children meeting their daily goals in vegetable consumption; social modeling is achieved by the FIT characters enjoying and promoting vegetables throughout the Game's storyline; social persuasion is exemplified by the Game's storyline advancing only when students eat enough vegetables to meet a daily goal; and modification of responses to behavior is achieved with the repeated exposure to vegetables during lunch, reducing aversion and increasing consumption due to enjoyment of the food (Table 1-1).

Table 1-1: The FIT Game and Sources of Influence

Self-Efficacy Sources of Influence	FIT Game Element
Personal mastery experiences	Storyline progression when children meet their daily vegetable consumption goals
Social modeling	FIT characters enjoy and promote vegetables throughout the narrative
Social persuasion	Narrative advancing only when children eat enough vegetables to meet their daily goal
Modification of emotional or physical responses to the behavior	Repeated exposure to vegetables during lunch, reducing aversion and increasing consumption due to food enjoyment

REVIEW OF LITERATURE

Previous school-based interventions that target fruit and vegetable consumption

There are a variety of school-based interventions that have been performed with the goal to increase students' consumption of FV, with some of these studies dating back to the mid 1990s.^{10,11,12} A systematic review by Evans et al. was published in 2012 that analyzed school-based interventions that focused on increasing the FV consumption of children ages 5-12. The authors analyzed studies from the date range 1985-2009 that met their criteria and discussed 27 in their review.¹³ Evans et al. concluded that the studies included were able to moderately improve fruit intake, but had a minimal effect on increasing participants' vegetable intake. The authors reported that school-based interventions of all types were estimated to increase intake of FV by approximately 20-30 g/day.¹³

A more recent review by Aloia et al. in 2016 analyzed 14 school-based intervention studies. Studies were retrieved from PubMed and had to be published between 2004-2014, written in English, conducted in the United States, and examine FV consumption. Studies were excluded if they contained no control group, were non- or quasi-experimental, did not include qualitative data, were not a school-based intervention, and did not include a school nutrition education component.¹⁴ After analysis, the intervention component that was most commonly used in this review was parent or family involvement. Of the seven studies including parent or family involvement, three reported a significant FV consumption increase, while the other four did not. In the six studies that used teacher involvement, only one reported a significant increase in FV consumption. Authors concluded that because the majority of their included studies did not produce significant results in FV consumption, these components

should be avoided in further research: parent or family involvement, teacher involvement, utilizing a behavior change theory, and trying to increase FV intake by increasing antecedents of FV consumption.¹⁴ This conclusion differs from the results of the review by Evans et al, where six of their ten studies that included a “home-based project” were able to significantly increase FV consumption.¹³

In previous studies, the FIT Game healthy eating program has proven to be effective in increasing children’s FV consumption. In a study published in 2014 where the FIT Game narrative was read in classrooms, students increased their fruit consumption by 38.7% (average of 86 g) and vegetable increase by 33.3% (average of 56 g), both of which were statistically significant.⁴ In their 2017 published study where the FIT Game narrative was presented in the cafeteria during lunchtime in the aforementioned comic book format and conducted in an ABAB intervention style, vegetable consumption increased by nearly 100%.⁵

Previous school-based interventions with a home component

Ten of the twenty-seven studies included in the Evans et al. review were categorized as having “home-based projects;” however, a study by Gortmaker et al.¹¹ did not include a home component. Perhaps since a primary outcome was to decrease television viewing, the systematic review authors considered this to be a home-based project. Their school intervention was successful in statistically increasing FV consumption; however, this was only seen in girls with an increase of 0.32 servings per day.¹¹ Another study by Gortmaker et al, nicknamed “Eat Well and Keep Moving,” used a home-based project consisting of classroom campaigns with home activities to include the students’ families.¹⁰ “Eat Well and Keep Moving,” along with a study by Baranowski

et al,¹⁵ used the social cognitive theory developed by Albert Bandura as the basis for their intervention materials to promote behavior change in regards to eating FV. Both studies recorded a significant increase in FV consumption. Baranowski noted that their study increased fruit, juice, and vegetables (FJV) combined, as well as vegetable intake, but no statistically significant increase was seen in fruit alone.¹⁵ The authors' use of this theory supports the application of the social cognitive theory to the development of our proposed home components. Three studies, by Baranowski et al,¹⁵ Bere et al,¹⁶ and Reinaerts et al,¹⁷ incorporated newsletters delivered to parents that included recipes to increase FV intake, promoting increased availability and accessibility of FV in the home, and creating a home environment to facilitate FV consumption. Baranowski et al. included daily parent newsletters with information about increasing FJV consumption and recipes to try at home.¹⁵ Bere et al. sent home 6 newsletters with the goal to increase family communication about FV and increase the availability and accessibility of FV at home. The study did not result in significant increases in FV consumption, and the authors believe the study failed because they were unable to change the students' preferences for FV or the accessibility of FV, which they state are the two strongest correlates of child FV intake at home.¹⁶ Reinaerts et al. used a combination of newsletters and homework activities to promote a home environment that would facilitate FJV consumption, and saw an increase in consumption of fruit from this multi-component approach.¹⁷

Reynolds et al. developed and used a "Freggie Book" that included brochures and recipes, among other intervention materials,¹⁸ while a study by Perry et al. sent home five information/activity packets for families to do together.¹⁰ Both of these studies included drawings for prizes when students returned a signed card or voucher, signifying that they completed an activity at home. Perry et al.'s study was able to significantly increase FV

combined, but when looking at vegetables alone, only girls' intake had increased significantly.¹⁰ Reynolds et al. reported a significant increase of FV consumption in both children and parents who participated in the study.¹⁸ Two studies, performed by Hopper et al.¹⁹ and Spiegel and Foulk,²⁰ included healthy meal preparation and family physical activities in their home components. Both studies reported significant increases for FV consumption in the participating children. The final study, performed by Taylor et al.,²¹ had a questionably defined home-based project that consisted of students completing certain activities with their friends or family for the reward of more cards in the study-developed card game. Additionally, Taylor et al. were unable to increase vegetable intake, though they increased fruit consumption.²¹

Three of the studies discussed by Aloia et al. included a parent or family component with a significant increase in FV consumption. The study by Hoffman et al.²² targeted FV consumption in kindergarten and first grade students with a study that included school- and home-based components. Similar to the FIT Game, they used role models (cartoon characters, peers, school principal, etc.) to convey information. Their family component was a series of children's books that were assigned as homework. There was no significant change in vegetable preference after Year 1 or Year 2. In Year 1, vegetable consumption in the experimental group was significantly increased by 6 g compared to the control group, but consumption differences were not significant in Year 2.²²

Living Free of Tobacco, Plus is a program developed by Wilson et al. to prevent tobacco use and increase FV intake in rural youth.²³ The intervention consisted of eight one-hour workshops for seventh grade students given by high school students. The following year, the same students participated in workshops during health class for eight

weeks. Most workshops included a parent-student activity to complete at home. After the intervention, there was a statistically significant increase in vegetable consumption at the intervention school with a mean of 2.33 servings/day compared to 2.05 servings/day. After one-year follow-up, only white students still had a statistically significant higher consumption rate in the intervention school.²³

The third study, by Springer et al.,²⁴ encouraged participating fourth and fifth grade students to walk/run 26.6 miles over a six-month period, while tracking whether they consumed five fruits or vegetables for twenty-six days for one month. School districts and PE teachers received presentations about healthy eating and physical activity. Parent and teacher information packets were also distributed. The program had a kick-off event and a “Final-Mile Run” completion event with final mile medals and finisher t-shirts. This program was primarily implemented by teachers, parents, and volunteers in the community. There was no statistically significant change in reported FV consumption, though there was a statistically significant increase in reported frequency of vegetable consumption during school lunch.²⁴

These described studies support our home component and give evidence that with the right combination of intervention components, achieving an increase in consumption in vegetables is possible.

Factors in the home environment that influence the diet-related behaviors of children

There are a variety of factors within the home environment that influence children’s eating behaviors. Ong et al.²⁵ reviewed thirty-three studies published between 2007 and 2015 to determine what factors have been measured and which of those factors

were most influential on the consumption of FV in children ages six to twelve years. The authors determined that the most consistent evidence for the consumption of FV in children was found for accessibility and availability of FV, maternal intake of FV, and parent role modeling.²⁵ Our study will target increasing the availability of FV in the home and include aspects of parent role modeling. These two factors are further discussed and reviewed below.

Availability of FV

In a review published in 2014 by Cook et al,²⁶ researchers compared and discussed fifteen studies performed regarding home availability and vegetable consumption in youth. They concluded that most findings were inconsistent, with seven out of fifteen studies (47%) that found a positive association between the perceived home availability and vegetable consumption. The only pattern they discovered was that child perception of home availability was positively associated with vegetable intake. The authors recommend, based on their findings, that targeting home vegetable availability may be helpful for interventions, especially those involving children. The authors also noted that none of these studies included a home food inventory assessing home availability.²⁶

An additional systematic review by Pearson, Biddle, and Gorely²⁷ focused on what factors correlate with FV consumption in children and adolescents. They compared twenty-five studies involving children 6 to 11 years old and thirty-eight studies involving adolescents ages 12 to 18 years. Focusing on the comparison of studies including children, the authors concluded that home availability, parental modeling, parent intake, encouragement, and family rules regarding FV were all positively associated with

children's consumption of FV. They additionally concluded that parent intake and home availability are strongly related to children's eating behaviors.²⁷ The takeaway from this review is that there is sufficient evidence supporting the association between vegetables being available in the home and children's consumption of vegetables. Availability will be targeted in our study and is supported by these previously performed studies.

Research has shown that food preferences of children are built upon foods that are familiar to them, which ties into availability of foods in the home. Availability and accessibility of FV have been correlated with FV preferences, and homes that have greater FV availability have also been found to have a stronger set of motivational factors, such as self-efficacy and the behavioral capability or knowledge of parents, for FV consumption when compared to homes with lower levels of FV availability.²⁸

Role modeling by parents

Children learn by example. Their observations of food choices made by peers and adults, along with their own experiences with food, are large influences in a child's diet. As parents or caregivers are typically in charge of foods available to their children, they serve as important models for eating and feeding practices, as well as culturally appropriate eating patterns and behaviors.²⁸

Maria Golan et al.^{29,30} previously conducted a trial in which participating families were placed in either child-only information sessions or parent-only information sessions that were led by dietitians and covered similar topics about nutrition education (Table 1-2). Topics of the parent-only sessions included: parental modeling, nutrition education, decreasing stimulus exposure, limits of responsibilities, modification of eating and behavior, cognitive restructuring, problem solving, and coping with resistance. Parents

were advised to not restrict the amount of food their children consumed in order to promote self-regulation practice. Topics of the child-only sessions included: physical activity, controlling stimulus, nutrition education, modification of behavior, cognitive restructuring, and problem solving. At the end of the intervention and during the follow ups (one, two, and seven years post-intervention), children's weight differences between the parent-only and child-only groups were statistically and clinically significant with the parent-only group having greater amounts of weight loss and higher percentage of children who reached nonobese status. The parents in this study played a key role in providing nutritious foods in their homes and acting as a positive role model for their children.²⁹

OBJECTIVES

The purpose of this study was to develop, implement, and assess the addition of a home component for the FIT Game intervention. The goal of incorporating a home component to the already successful FIT Game program is to support children's consumption of FV away from school.

Objective 1. Development of a home component to the FIT Game program. The FIT Game home component will be in newsletter format and target increasing availability of vegetables within the home. A pilot home component will be introduced during the FIT Game and revised based on parent surveys and interviews.

Objective 2. Implementation and assessment of the home component. The modified material will be implemented at one of two intervention schools within the four-school FIT Game study and assessed with a survey.

Methods for objective completion

Objective 1

A pilot version of the home component will be developed based off of previous research in school interventions with home components that target vegetable intake. It will consist of two parent newsletters that will be sent home with students who are participating in the FIT Game program. The newsletter will include updates on the FIT Game at school, an introduction to one of the FIT characters with his or her favorite vegetable, tips and suggestions to increase vegetable intake and physical activity at home, and a recipe highlighting the discussed vegetable. The tips and suggestions will come from a Produce for Better Health 2015 publication³¹ that lists suggested ways to increase FV within the home. These newsletters will be sent out as a pilot during the fall 2016 FIT Game intervention.

Volunteering parents from the participating pilot school will participate in a focus group to evaluate and revise the home component based off of their suggestions. Since the 1980s, focus groups have become an increasingly popular method of acquiring qualitative data. Focus groups are often performed in the social sciences and marketing groups with topics ranging from political science to public health.³² As with other research methods, there are benefits and pitfalls to using focus groups. Individual interviews have the potential to be more effective for the purpose of idea generation, while surveys can better determine the prevalence of experiences or attitudes of the participants.³² Focus groups, however, have the ability to create a group discussion that is more closely related to a conversation between participants rather than a Q&A interview. Some researchers believe that because focus group participants are able to interact with

and explain themselves to each other, openness and disclosure is enhanced rather than inhibited.³³

There are multiple factors to consider when designing a focus group. The level of rigidity in the structure of the focus group is a major factor, as that can affect the information gained from the participants' discussion. The moderator of a focus group can serve a variety of purposes, depending on the research design. In focus groups that are more structured, the moderator typically controls which topics are discussed and steers attention away from topics that are considered to be less important to the research. The moderator also manages participation more in a structured design, often making sure each participant is interacting equally and has time to share their thoughts and opinions. Focus groups that are loosely structured allow the group to direct the discussion topics, which can be beneficial depending on the study objectives.³² The next factor is the number of questions the moderator asks during the focus group. The number of questions asked impacts the structure level (ex. how involved the moderator is with the group) and depth of responses, depending on the planned length of time for the group to meet. Finally, the last factor is group size. Group size is important to consider with research objectives because smaller groups are able to delve deeper into topics, while larger groups typically provide a greater variety of responses to questions.³² Fern³⁴ discusses group size in his 1982 study, explaining that groups of eight participants generated a significant higher amount of ideas than groups of four people.

Focus group transcripts will be analyzed and coded per the methods described by Kubik et al.³² Two researchers will independently create transcripts from audiotape recordings of the focus group sessions. One of the two researchers will then combine the transcripts into one per session for analysis and coding. Two researchers will individually

review both transcripts and highlight meaningful data and emerging themes within participants' responses. The final step will be to compare and contrast each analysis and develop a textual summary of findings. This information will be used to inform the development of a component of the FIT Game aimed at helping parents to facilitate and encourage their children to eat FV at home.

Objective 2

The revised newsletter component will be implemented in the 2017 FIT Game intervention. Four newsletters will be distributed to the participating students at the intervention school throughout the FIT Game intervention. These newsletters will contain similar content as the pilot study newsletters: brief update about FIT Game at school, quick tips from the Produce for Better Health publication,³⁰ facts about the highlighted vegetable and an associated recipe, a challenge for the family at home.

Baseline and post-intervention surveys will be sent to parents from the control and intervention schools, which will be analyzed using SPSS. All surveys will include the following: demographic information (parent's gender, ethnicity, and level of education), self-efficacy questions (confidence for preparing vegetables in different circumstances, how often vegetables are served as snacks and with dinner),³⁵ home inventory of vegetables,³⁶ and how many cups of vegetables their child has each day at home. Post-intervention surveys for parents at the intervention school also included whether their child was participating in the FIT Game; questions regarding their opinion of the newsletters (ex. "The FIT Game newsletters motivated me to eat more vegetables"); and which recipes, family challenges, and quick tips they tried. Questions regarding self-efficacy (confidence to provide vegetables and frequency of serving vegetables) were

selected from a validated fruit and vegetable survey developed by Hildebrand and Betts in 2008.³⁵ The home inventory of vegetables is adapted from a validated home food inventory developed by Fulkerson et al.³⁶

The main outcome in this objective is an increase in availability of vegetables in the homes of students at the intervention school when compared to their baseline amount and responses from control school surveys. Secondary outcomes are increases in confidence of parents to provide vegetables in different circumstances and how frequently parents serve vegetables during dinner and as snacks.

REFERENCES

1. Promoting fruit and vegetable consumption around the world. World Health Organization. <http://www.who.int/dietphysicalactivity/fruit/en/index2.html>. Accessed February 20, 2017.
2. Progress on Children Eating More Fruit, Not Vegetables. Center for Disease Control and Prevention. <https://www.cdc.gov/vitalsigns/fruit-vegetables/>. Published August 5, 2014. Accessed July 6, 2018.
3. Childhood Obesity Causes & Consequences. Center for Disease Control and Prevention. <https://www.cdc.gov/obesity/childhood/causes.html>. Accessed July 6, 2018.
4. Jones BA, Madden GJ, Wengreen HJ. The FIT Game: preliminary evaluation of a gamification approach to increasing fruit and vegetable consumption in school. *Prev Med*. 2014;68:76-79. doi: 10.1016/j.ypmed.2014.04.015.
5. Joyner D, Wengreen HJ, Aguilar SS, Spruance LA, Morrill BA, Madden GJ. The FIT Game III: reducing the operating expenses of a game-based approach to increasing healthy eating in elementary schools. *Games Health J*. 2017;6(2):111-118. doi: 10.1089/g4h.2016.0096.
6. Deterding S, Dixon D, Khaled R, Nacke L. From game design elements to gamefulness: Defining gamification. In: MindTrek '11 Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments. 2011:9-15. doi: 10.1145/2181037.2181040.
7. Contento Isobel. *Nutrition Education: Linking Research, Theory and Practice*. 2nd ed. Burlington, MA: Jones & Bartlett Learning ; 2010.

8. Banruda A. Social cognitive theory of self-regulation. *Organ Behav Hum Decis Process*. 1991;50:248-287.
9. Bandura A. Social cognitive theory: an agentic perspective. *Annu Rev Psychol*. 2001;52:1-26.
10. Gortmaker SL, Cheung LWY, Peterson KE, et al. Impact of a School-Based Interdisciplinary Intervention on Diet and Physical Activity Among Urban Primary School Children: Eat Well and Keep Moving. *Arch Pediatr Adolesc Med*. 1999;153(9):975. doi:10.1001/archpedi.153.9.975.
11. Gortmaker SL, Peterson K, Wiecha J, et al. Reducing Obesity via a School-Based Interdisciplinary Intervention Among Youth: Planet Health. *Arch Pediatr Adolesc Med*. 1999;153(4):409. doi:10.1001/archpedi.153.4.409.
12. Perry CL, Bishop DB, Taylor G, et al. Changing fruit and vegetable consumption among children: the 5-a-Day Power Plus program in St. Paul, Minnesota. *Am J Public Health*. 1998;88(4):603-609. doi:10.2105/ajph.88.4.603.
13. Evans CE, Christian MS, Cleghorn CL, Greenwood DC, Cade JE. Systematic review and meta-analysis of school-based interventions to improve daily fruit and vegetable intake in children aged 5 to 12 y. *Am J Clin Nutr*. 2012;96(4):889-901. doi:10.3945/ajcn.111.030270.
14. Aloia CR, Shockey TA, Nahar VK, Knight KB. Pertinence of the recent school-based nutrition interventions targeting fruit and vegetable consumption in the United States:a systematic review. *Health Promot Perspect*. 2016;6(1):1-9. doi:10.15171/hpp.2016.01.

15. Baranowski T, Davis M, Resnicow K, et al. Gimme 5 Fruit, Juice, and Vegetables for Fun and Health: Outcome Evaluation. *Health Educ Behav.* 2000;27(1):96-111. doi:10.1177/109019810002700109.
16. Bere E, Veierød MB, Bjelland M, Klepp K-I. Outcome and process evaluation of a Norwegian school-randomized fruit and vegetable intervention: Fruits and Vegetables Make the Marks (FVMM). *Health Educ Res.* 2006;21(2):258-267. doi: 10.1093/her/cyh062.
17. Reinaerts E, Crutzen R, Candel M, De Vries NK, De Nooijer J. Increasing fruit and vegetable intake among children: comparing long-term effects of a free distribution and a multicomponent program. *Health Educ Res.* 2008;23(6):987-996. doi: 10.1093/her/cyn027.
18. Reynolds KD, Franklin FA, Binkley D, et al. Increasing the fruit and vegetable consumption of fourth-graders: results from the High 5 Project. *Prev Med.* 2000;30(4):309-319. doi:10.1006/pmed.1999.0630.
19. Hopper CA, Munoz KD, Gruber MB, Macconnie S, Schonfeldt B, Shunk T. A school-based cardiovascular exercise and nutrition program with parent participation: an evaluation study. *Children's Health Care.* 1996;25(3):221-235. doi:10.1207/s15326888chc2503_5.
20. Spiegel SA, Foulk D. Reducing Overweight through a Multidisciplinary School-based Intervention. *Obesity.* 2006;14(1):88-96. doi:10.1038/oby.2006.11.
21. Taylor RW, McAuley KA, Barbezat W, Strong A, Williams SM, Mann JI. APPLE Project: 2-y findings of a community-based obesity prevention program in primary school-age children. *Am J Clin Nutr.* 2007;86(3):735-742.

22. Hoffman JA, Franko DL, Thompson DR, Power TJ, Stallings VA. Longitudinal behavioral effects of a school-based fruit and vegetable promotion program. *J Pediatr Psychol*. 2009;35(1):61-71.
23. Wilson DB, Jones RM, Mcclish D, Westerberg AL, Danish S. Fruit and vegetable intake among rural youth following a school-based randomized controlled trial. *Prev Med*. 2012;54:150-156. doi: 10.1016/j.ypmed.2011.11.005.
24. Springer AE, Kelder SH, Ranjit N, Hochberg-Garrett H, Crow S, Delk J. Promoting physical activity and fruit and vegetable consumption through a community-school partnership: the effects of Marathon Kids® on low-income elementary school children in Texas. *J Phys Act Health*. 2012;9:739-53.
25. Ong JX, Ullah S, Magarey A, Miller J, Leslie E. Relationship between the home environment and fruit and vegetable consumption in children aged 6-12 years: a systematic review. *Public Health Nutr*. 2017 Feb;20(3):464-480. doi: 10.1017/S1368980016002883.
26. Cook LT, O'Reilly GA, Derosa CJ, Rohrbach LA, Spruijt-Metz D. Association between home availability and vegetable consumption in youth: a review. *Public Health Nutrition*. 2014;18(04):640-648. doi:10.1017/s1368980014000664.
27. Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. *Public Health Nutr*. 2008;12(02):267. doi:10.1017/s1368980008002589.
28. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *J Law Med Ethics*. 2007;35(1):22-34. doi:10.1111/j.1748-720X.2007.00111.x.

29. Golan M, Crow S. Targeting parents exclusively in the treatment of childhood obesity: long-term results. *Obes Res.* 2004;12(2):357-361. doi: 10.1038/oby.2004.45.
30. Golan M, Weizman A, Apter A, Fainaru M. Parents as the exclusive agents of change in the treatment of childhood obesity. *Am J Clin Nutr.* 1998;67:1130-1138.
31. Produce for Better Health Foundation. State of the Plate, 2015 Study on America's Consumption of Fruit and Vegetables, Produce for Better Health Foundation, 2015. <http://www.PBHFoundation.org>. Accessed February 20, 2017.
32. Kubik MY, Lytle L, Fulkerson JA. Fruits, vegetables, and football: Findings from focus groups with alternative high school students regarding eating and physical activity. *J Adolesc Heal.* 2005;36(6):494-500. doi:10.1016/J.JADOLHEALTH.2004.05.010.
33. Tiggemann M, Gardiner M, Slater A. "I would rather be size 10 than have straight A's": A focus group study of adolescent girls' wish to be thinner. *J Adolesc.* 2000;23(6):645-659. doi:10.1006/jado.2000.0350.
34. Fern EF. The Use of Focus Groups for Idea Generation: The effects of Group Size, Acquaintanceship, and Moderator on Response Quantity and Quality. *JMR.* 1982;19(1):1-13. doi: 10.2307/3151525.
35. Hildebrand DA, Betts NM. Assessment of Stage of Change, Decisional Balance, Self-efficacy, and Use of Processes of Change of Low-income Parents for Increasing Servings of Fruits and Vegetables to Preschool-aged Children. *J Nutr Educ Behav.* 2009;41(2):110-119. doi:10.1016/j.jneb.2008.09.007.

36. Fulkerson JA, Nelson MC, Lytle L, Moe S, Heitzler C, Pasch KE. The validation of a home food inventory. *Int J Behav Nutr Phys Act.* 2008;5(55). doi: 10.1186/1479-5868-5-55.

CHAPTER II

RESEARCH BRIEF: THE INCLUSION OF A HOME COMPONENT TO THE FIT GAME, A PILOT STUDY

ABSTRACT

Objective: To develop a home component to the FIT Game healthy eating program by creating a parent newsletter with ideas to help parents make vegetables more available to children at home.

Methods: Researchers developed two newsletters to distribute to parents of participating students during the FIT Game intervention. Newsletters included introductions to FIT Game characters and their favorite vegetable, facts about the highlighted vegetable and associated recipe, behavior-based tips for increasing vegetable consumption at home, and a family vegetable eating challenge.

Results: Seventy of 326 parent surveys were returned to the researchers and fifty-seven to fifty-eight respondents answered questions about the parent newsletters. Over half of respondents agreed that they enjoyed reading the newsletters and that the newsletters taught them something new.

Conclusions and Implications: Future research is needed to determine how to best make more vegetables available to children at home. Newsletters that coordinate with a school-based program may be an effective way to deliver information to parents.

INTRODUCTION

There is currently a lack of vegetables in children's diets in the USA; from 2007-2010, nine out of ten children were not consuming the recommended 1-3 cups of vegetables per day.¹ In 2009-2010, approximately one-third of the vegetables children consumed were white potatoes, and over half of those potatoes were eaten in a fried form such as potato chips or French fries.¹ Vegetables are a key food group in a balanced diet. Vegetables contain a variety of nutrients, including dietary fiber, folate (folic acid), potassium, vitamin A, and vitamin C. Adequate amounts of vegetables in an individual's diet may prevent against heart disease, certain types of cancer, obesity, and type 2 diabetes.²

Parents are important tools for changing their children's dietary habits; one of the ways children learn is by the observation of others. The observation of peers and adults, along with their own food experiences, are large dietary influencers to children.³ Parents or caregivers are often in control of which foods are available to their children: they are important role models for eating and feeding practices, as well as eating patterns and behaviors appropriate to their culture.³ A 2008 systematic review by Pearson, Biddle, and Gorely that addressed studies that involved children ages six to eleven years in age concluded that parent intake, parental modeling, and home availability of fruit and vegetables (FV) were positively associated with children's FV consumption. There was also evidence to suggest that parental intake and home availability are strongly related to the eating behaviors of children.⁴

The FIT Game healthy eating program is a school-based intervention for elementary-aged children that focuses on increasing vegetable consumption during lunch. FIT Game uses a game-like approach with compelling narrative and characters who act

as role models for the students. The protagonists are the Field Intensive Trainees, or FITs, who are pre-teens that are working to save Earth from the Vegetable Annihilation Team, or VATs. Each FIT has a favorite vegetable that correlates with their special skill (speed, strength, etc.). The narrative's progression and the FITs ability to save Earth is contingent upon the participating students to meet their daily vegetable consumption goals. The FIT Game has been successful in nearly doubling students' intake from baseline levels in a previous study.⁵

The inclusion of a home component in a school intervention targeting change in FV intake can be successful and effective. Evans et al.⁶ performed a systematic review and meta-analysis to evaluate school-based interventions that focused on improving FV consumption in children five to twelve years old. Twenty-seven total studies were included in this study, ten of which included a home component of various types. Seven of the ten studies were successful in increasing FV consumption, two reported only significant increases in fruit intake, and one study believed that they failed to change consumption because they did not adequately improve children's FV preferences or home accessibility of FV.⁶

As the FIT Game is a school-based intervention, there is no information about changes in vegetable consumption at home. The aim of this study is to develop a pilot version of simple home component to provide parents with more information about the FIT Game and tips for increasing vegetable availability and intake at home.

METHODS

Researchers developed a home component to the existing FIT Game healthy eating program delivered to children at school. The home component consisted of two vegetable focused newsletters (Appendix A). Researchers designed each newsletter in a style to give the feel of being sent directly from the FITs, the fictional heroes of the FIT Game healthy eating program. Each newsletter included the following information: an update on the FIT Game storyline which was occurring at school; an introduction to a FIT character and his or her favorite vegetable, along with nutritional information and fun facts about the target vegetable; tips to increase children's vegetable consumption at home; a FIT Game family challenge, which incorporated a goal for increasing vegetable intake and physical activity (PA) of the family during that month; a low-cost, simple recipe that used the FIT character's favorite vegetable; and suggestions of family PA that were appropriate for the weather and season. The tips to increase vegetable availability came from a Produce for Better Health publication⁷ that consisted of an organized list with descriptions of evidence-based suggestions to increase children's fruit and vegetable consumption at home. Researchers gave the two newsletters to teachers to distribute to participating students in their classes and take home. The newsletters were sent home at the beginning of the week during first of each month as the FIT Game intervention was being played in the school.

At the end of the intervention, researchers sent out a survey to parents of participating students with questions regarding the FIT Game and newsletter (Appendix B). Parents provided suggestions for how the FIT Game newsletters could be improved. Responses to questions regarding the newsletter were organized in a Likert⁸ scale: strongly agree, agree, disagree, strongly disagree, or I didn't see or read the FIT Game

newsletters. The questions targeting the newsletters included: The FIT Game newsletters taught me something new; I enjoy reading the FIT Game newsletters; The FIT Game newsletters motivated me to make a change in how I eat; My child enjoys reading the FIT Game newsletter; and My family enjoyed participating in the monthly FIT Game newsletter challenge.

RESULTS

Researchers analyzed responses to the survey questions using SPSS (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.) to determine the frequency of response per question. Seventy out of 326 parents returned the survey. Parents were not required to answer each questions and responses to the following questions shown in Tables 2-1 through 2-5 below are from only 57 and 58 participants.

Table 2-1. The FIT Game Newsletters Taught Me Something New.

	Frequency of Response	Percent (%)
<i>Strongly Agree – Agree</i>	39	67
<i>Disagree – Strongly Disagree</i>	5	9
<i>I didn't see or read the FIT Game newsletters</i>	14	24
Total	58	100

As shown above in Table 2-1, 67% of respondents (n = 58) strongly agreed or agreed with the statement “*The FIT Game newsletters taught me something new.*” Nine percent disagreed or strongly disagreed with the statement, while 24% of respondents submitted that they did not see or read the FIT Game newsletters.

Table 2-2. I Enjoy Reading the FIT Game Newsletters.

	Frequency of Response	Percent (%)
<i>Strongly Agree – Agree</i>	36	62
<i>Disagree – Strongly Disagree</i>	6	10
<i>I didn’t see or read the FIT Game newsletters</i>	16	28
Total	58	100

Table 2-2 illustrates the level of agreement to the statement “*I enjoy reading the FIT Game newsletters*” by respondents. Out of the fifty-eight respondents (n = 58), 62% reported that they strongly agreed or agreed with the statement and 10% of respondents disagreed or strongly disagreed. Twenty-eight percent of respondents reported that they did not see or read the FIT Game newsletters.

Table 2-3. The FIT Game Newsletters Motivated Me to Make a Change in How I Eat.

	Frequency of Response	Percent (%)
<i>Strongly Agree – Agree</i>	26	46
<i>Disagree – Strongly Disagree</i>	16	28
<i>I didn't see or read the FIT Game newsletters</i>	15	26
Total	57	100

Fifty-seven participants (n = 57) responded to the statement “*The FIT Game newsletters motivated me to make a change in how I eat.*” Of those respondents, 46% strongly agreed or agreed, 28% of respondents disagreed or strongly disagreed, and 26% of respondents reported that they did not see or read the FIT Game newsletters.

Table 2-4. My Child Enjoys Reading the FIT Game Newsletters.

	Frequency of Response	Percent (%)
<i>Strongly Agree – Agree</i>	23	40
<i>Disagree – Strongly Disagree</i>	18	31
<i>I didn't see or read the FIT Game newsletters</i>	17	29
Total	58	100

Table 2-4 illustrates the fifty-eight responses ($n = 58$) in level of agreement to the statement “*My child enjoys reading the FIT Game newsletters.*” Forty percent of respondents strongly agreed or agreed with the statement, while 31% of respondents reported that they disagreed or strongly disagreed and 29% reported that they did not see or read the FIT Game newsletters.

Table 2-5. My Family Enjoyed Participating in the Monthly FIT Game Newsletter Challenge.

	Frequency of Response	Percent (%)
<i>Strongly Agree – Agree</i>	21	37
<i>Disagree – Strongly Disagree</i>	19	33
<i>I didn’t see or read the FIT Game newsletters</i>	17	30
Total	57	100

Table 2-5 depicts the fifty-seven responses ($n = 57$) to the statement “*My family enjoyed participating in the monthly FIT Game newsletter challenge.*” Thirty-seven percent of respondents strongly agreed or agreed with the above statement. Thirty-three percent of respondents disagreed or strongly disagreed and 30% of respondents reported that they did not see or read the FIT Game newsletters.

The last question on the survey was “*What could we do to improve the FIT Game newsletters?*” Eighteen ($n = 18$) parents responded to this question. The most common response was “Not sure” with five submissions. Other common responses included a

request for digital or email version (two responses) and responses regarding recipes (two responses).

DISCUSSION

Over half of the fifty-eight respondents strongly agreed or agreed with the statement “*The FIT Game newsletters taught me something new.*” This percentage of positive responses is important to note due to one of the objectives of this newsletter was to provide parents with new information about specific vegetables and tips for increasing vegetable consumption within the family’s home. Responses to the statement “*I enjoy reading the FIT Game newsletters*” was still positive, with over half of respondents strongly agreeing or agreeing. The newsletters were designed to be a simple, quick read that parents could peruse when they had time. The goal of the FIT Game newsletters was to link the school intervention to the home environment and increase the likelihood of affecting children’s vegetable consumption outside of school.

In the following three statements, “*The FIT Game newsletters motivated me to make a change in how I eat,*” “*My child enjoys reading the FIT Game newsletters,*” and “*My family enjoyed participating in the monthly newsletter challenge,*” less than half of respondents (46%, 40%, and 37%, respectively) reported that they strongly agreed or agreed. While the FIT Game newsletters were not explicitly targeted towards changing the parents’ diets, the response is valuable to note because of the parents’ important position as a role model for dietary habits of their children and there may need to be changes in the revised newsletter content to provoke a different response trend.

Additionally, the target audience of the newsletters were parents and it is understandable

that less children found the newsletters enjoyable to read. However, these responses could indicate that the newsletters were not tied in appropriately with the FIT Game motif and are a note for potential revision in the design area. The newsletter challenges were designed to be simplistic in nature. Each newsletter included a healthy eating challenge. The challenge of the first newsletter was “Include a fruit or vegetable with one more meal or snack than usual every day. See who in your family can do this on the most days in October.” The challenge for the second newsletter was “Next time you’re out grocery shopping, let your children pick out a fruit or vegetable to try –at least one each trip! To encourage participation in the healthy eating challenge, the second newsletter included a signature portion that students could return after their family completed the FV and PA challenge for the chance to win a prize, and only one slip was returned. This suggests that parents were not receiving or reading the newsletter, which corresponds with the percentage of survey respondents who reported not seeing or reading newsletters. No return could also indicate that families were not participating in the challenge or were not motivated to return the slip indicated that they had completed the challenge.

Three studies within the review performed by Evans et al.⁶ included newsletters within their home component.^{9,10,11} Baranowski et al.⁹ developed a program called Gimme 5 Fruit, Juice, and Vegetables for Fun and Health that implemented twelve sessions of nutrition-based curriculum during school to target change in fourth- and fifth-grade students’ FV and juice consumption and associated psychosocial variables. Weekly newsletters that contained recipes, suggestions to increase FV and juice intake, and involve the family in weekly home assignments were sent home with students. Researchers reported the intervention as successful in significantly increasing the intake of FV and juice combined and vegetables alone, but not fruit. Researchers recommended

mailing newsletters home in order to increase parent exposure to the material.⁹ This suggestion is similar to two suggestions from parents in this study to email or “send [the newsletter] to home address.”

Reinaerts et al.¹⁰ performed a study with Dutch children to increase FV and construct a home and school environment to support FV consumption with either free distribution of FV for the entire school or intervention with classroom curriculum and parent participation. The home environment was influenced with parent newsletters and homework activities. Researchers did not describe newsletters in detail nor did they discuss the frequency of distribution beyond “recurrent.” In the classroom curriculum and home component group, vegetable consumption at dinner was only significantly increased in fourth, fifth, and sixth graders and non-native students. Vegetable snack intake in the curriculum and home component group was significantly increased in first, second, and third graders, as well as in girl participants. Twenty-four hour FV and juice intake was equally effective for all age groups and native (both parents born in the Netherlands) or non-native (parents born outside of the Netherlands) students in both interventions. When comparing the two interventions, Reinaerts et al. determined that distribution of FV was more effective overall in increasing FV intake, though more expensive.¹⁰ While it is difficult to compare content of newsletters within the Reinaerts et al. study and the current study, it is noteworthy that they determined FV distribution to be more effective than sending parents information directly to influence the home environment.

Fruits and Vegetables Make the Marks, developed by Bere et al.,¹¹ is a Norwegian study that included classroom curriculum, six parent newsletters, and a fruit and vegetable program (school lunch is not typically offered in Norway, children bring their

own lunch). Similar to the design used in the current study, Bere et al. designed parent newsletters to focus on a specific fruit or vegetable each week and health-related information, recipes regarding the target FV, family activities, and a competition among students. No significant changes in consumption at school or all day were found, though researchers found that students with high usage of the provided newsletters showed a significant effect in all day FV intake in both follow up periods when compared to students with low levels of newsletter usage. Researchers stated that the study was not successful because the intervention was not able to positively impact the FV preferences of students or the accessibility of FV at home, which are two of the strongest correlations of FV consumption in children.¹¹ In contrast, the FIT Game has been successful in their attempts to increase vegetable consumption during school⁵ and may impact preferences of students due to encouraging students to eat more vegetables each day. While Bere et al.¹¹ were unable to influence the FV intake of their participants, their study provided a useful comparison of newsletters because Bere et al.'s newsletter content is similar to content within the newsletters of this study. No results on the effect of parent newsletters or the student competition were disclosed by Bere et al.¹¹

One possible limitation of this study may be the low response rate (70/326, 21%) of surveys returned back to the researchers. Due to these low rates, the survey responses researchers collected may not be an accurate representation of the opinions of all parents who received the newsletters. In response to the survey, parents reported that the content in the two newsletters of the current study was enjoyable to read and provided parents and families with new information. However, the newsletters were not reportedly successful in altering the diets of respondents. A significant number (e.g. 14-17) of respondents reported that they did not see or read the newsletters; there may be an issue

of delivery of the newsletters. Teachers may not have passed the newsletters out to students, students could have forgotten to put the newsletters in their backpacks, or the newsletters may have accidentally gotten thrown away. In the current study, researchers gave teachers the newsletters to distribute to their class and children brought home the piece of paper. This distributing issue could be addressed in future studies by researchers distributing digital newsletters or mailing the newsletter directly to family's homes.

An additional limitation is that respondents also indicated mixed levels of family enjoyment of the healthy eating challenges in the newsletters. Newsletter family challenges were only enjoyed by approximately one third of respondents and should thus be revised with parent input for feasible and enjoyable options.

IMPLICATIONS FOR RESEARCH AND PRACTICE

In summary, this study focused on the development of a home component for the FIT Game healthy eating program by creating parent newsletters. Researchers aimed to provide information and behavior-based strategies for increasing vegetable consumption and thus increase the availability of vegetables in the home through the parent newsletters. Our hope was that this increase may, in turn, positively influence vegetable intake in children. Some respondents reported that they enjoyed reading the newsletters and that they provided parents with new information. However, the newsletters were ultimately ineffective in changing the diets of parents and thus, their children. Future research is needed to determine what content parents find useful and informative, and in which challenges they would be willing to participate.

REFERENCES

1. Progress on Children Eating More Fruit, Not Vegetables. Center for Disease Control and Prevention. <https://www.cdc.gov/vitalsigns/fruit-vegetables/>. Published August 5, 2014. Accessed July 6, 2018.
2. Nutrients and Health Benefits: Why is it important to eat vegetables? ChooseMyPlate.gov. <https://www.choosemyplate.gov/vegetables-nutrients-health>. Accessed October 30, 2018.
3. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *J Law Med Ethics*. 2007;35(1):22-34. doi:10.1111/j.1748-720X.2007.00111.x.
4. Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. *Public Health Nutr*. 2008;12(02):267. doi:10.1017/s1368980008002589.
5. Joyner D, Wengreen HJ, Aguilar SS, Spriance LA, Morrill BA, Madden GJ. The FIT Game III: Reducing the operating expenses of a game-based approach to increasing healthy eating in elementary schools. *Games Health J*. 2017;6(2). doi:10.1089/g4h.2016.0096.
6. Evans CE, Christian MS, Cleghorn CL, Greenwood DC, Cade JE. Systematic review and meta-analysis of school-based interventions to improve daily fruit and vegetable intake in children aged 5 to 12 y. *Am J Clin Nutr*. 2012;96(4):889-901. doi:10.3945/ajcn.111.030270.
7. Produce for Better Health Foundation. State of the Plate, 2015 Study on America's Consumption of Fruit and Vegetables, Produce for Better Health Foundation, 2015. <http://www.PBHFoundation.org>. Accessed February 20, 2017.

8. Likert R. A Technique for the Measurement of Attitudes. *Archives of Psychology*. 1932;140:1–55.
9. Baranowski T, Davis M, Resnicow K, et al. Gimme 5 Fruit, Juice, and Vegetables for Fun and Health: Outcome Evaluation. *Health Education & Behavior*. 2000;27(1):96-111. doi:10.1177/109019810002700109.
10. Reinaerts E, Crutzen R, Candel M, De Vries NK, De Nooijer J. Increasing fruit and vegetable intake among children: comparing long-term effects of a free distribution and a multicomponent program. *Health Educ Res*. 2008;23(6):987-996. doi: 10.1093/her/cyn027.
11. Bere E, Veierød MB, Bjelland M, Klepp K-I. Outcome and process evaluation of a Norwegian school-randomized fruit and vegetable intervention: Fruits and Vegetables Make the Marks (FVMM). *Health Educ Res*. 2006;21(2):258-267. doi: 10.1093/her/cyh062.

CHAPTER III

CONDUCTING A FOCUS GROUP IN EVALUATION OF THE FIT GAME HOME COMPONENT

ABSTRACT

Previous work has demonstrated that the FIT Game healthy eating program is an effective intervention to increase primary school-aged children's vegetable intake at school. Providing parents with information about the game and other resources designed to encourage FV consumption by their children during the time that the children are playing the game at school may help children to eat more FV at school as well as at home. Researchers conducted two focus groups with parents whose children had previously experienced the FIT Game intervention at school to gather information about factors related to the content and delivery of parent-focused FIT Game information. Participants' responses reflected interest in easy-to-implement suggestions targeting key vegetables and ideas for getting the whole family involved in physical activity. Providing parents with information about how to prepare vegetables and be more physically active during the period of time their children are playing the FIT Game at school may help the children to eat more vegetables and be more physically active at and away from school.

INTRODUCTION

From 2007-2010, 90% of children in the USA were not eating the recommended 1-3 cups per day of vegetables, and 60% were not eating the recommended 1-2 cups per day of fruit.¹ The percentage of children not meeting the recommended intake for

vegetables is staggering, and can lead to chronic health issues later in life, such as heart disease, type 2 diabetes, and cancer,² and is one of the top 10 risk factors that contribute to global mortality.³ The CDC reports that the prevalence of childhood obesity is continuing to be a serious problem, and that children and adolescents are at risk of poor health in the present and future.⁴ Approximately 13.7 million children and adolescents in the USA are affected by obesity, and children and adolescents in low-income families are affected to a greater extent. In 2014, 14.5% of WIC participants ages 2-4 years old were obese, with prevalence varying from 8.2% in Utah to 20% in Virginia.⁴

The FIT Game healthy eating program is a school-based intervention with a game-like design that focuses on increasing students' consumption of vegetables during lunch. The FIT Game follows a compelling narrative that uses four preteen-aged characters (the Field Intensive Trainees, or FITs) as positive role models. The FITs cite vegetables as the source for their enhanced skills, and their job is to save Earth from the Vegetable Annihilation Team (VAT). The Game's storyline progression is contingent upon the students achieving their vegetable consumption goal each day. In a previous study, the FIT Game showed success in doubling vegetable consumption from baseline during the 8-week intervention.⁵ As this is a school-based intervention, parents receive little information, educational or otherwise, regarding the purpose or outcome of the game other than what is provided to them in the letter of consent to participate in research. Vegetable consumption at home is an important area to address because the home environment is where children typically consume the majority of their meals, and where eating habits are formed from observing their parents. No previous study has examined changes in children's consumption of vegetables away from school before and

after playing the FIT Game at school. Many studies that are school-based interventions do not include a home-focused aspect.

Since the 1980s, focus groups have become an increasingly popular method of acquiring qualitative data. Focus groups are often performed in the social sciences and marketing groups with topics ranging from political science to public health.⁶ Focus groups have the ability to create a group discussion that is more closely related to a conversation between participants rather than a Q&A interview. Some researchers believe that because focus group participants are able to interact with and explain themselves to each other, openness and disclosure is enhanced rather than inhibited.⁷

There are multiple factors to consider when designing a focus group. In focus groups that are more structured, the moderator typically controls which topics are discussed and steers attention away from topics that are considered to be less important to the research. The moderator also manages participation more in a structured design, often making sure each participant is interacting equally and has time to share their thoughts and opinions.⁶ The next factor is the number of questions the moderator asks during the focus group. The number of questions asked impacts the structure level (ex. how involved the moderator is with the group) and depth of responses, depending on the planned length of time for the group to meet. Finally, the last factor is group size. Group size is important to consider with research objectives because smaller groups are able to delve deeper into topics, while larger groups typically provide a greater variety of responses to questions.⁶ Fern⁸ discusses group size in his 1982 study, explaining that groups of eight participants generated a significant higher amount of ideas than groups of four people. Thus, we planned to include a more structured, moderator guided group that was between 4-8 participants.

Prior to this study, a basic home component was created and sent home from school with the participating students. This component consisted of two FIT Game-themed newsletters that included a brief FIT Game update, information and recipe about a highlighted vegetable discussed in the Game, and tips for vegetable consumption and physical activity (PA) outside of school. The objective of this study was to evaluate the newsletters by conducting focus groups with parents of children who attended school where the FIT Game healthy eating program was administered. We conducted focus groups with these parents to acquire data on what information parents would find valuable to receive and which modes of communication would be most effective in a home component version of the FIT Game to help increase both the consumption of vegetables and PA in school-aged children.

METHODS

Researchers conducted focus groups with parent participants from the intervention school in northern Utah. Researchers examined the parents' opinions of the newsletters they received, if their child was participating, and possible methods to create the home component of the FIT Game program. The school's parent newsletter made an announcement with information about the focus groups and compensation for attending, with directions to email or text if they were interested. All parents of students at the intervention school were invited, and 12 responded that they would be willing to participate. Researchers informed parents that they would be fed during the focus group and receive a \$25 VISA gift card by mail as compensation for participating.

Researchers held two focus groups, one group at 4 pm (group 1, n=7) and the other group at 7 pm (group 2, n=5) on a designated day in June of 2017, to increase availability times to help accommodate for parents' schedules. Researchers held both focus groups at the intervention school as a convenience to parents. Each focus group participant filled out a demographic survey upon arrival and received a list of the questions to review before discussing each question as a group. Once all of the participants had arrived, introductions were made and a researcher gave an overview of the FIT Game study and the purpose of the focus groups. The moderator followed a structured format to allow each participant to answer all of the questions, while bringing conversation back into focus when the discussion move away from the current topic. Both groups were audiotaped for subsequent transcription, and notes were taken by the same researcher during each group. Researchers provided vegetable-themed snacks during the focus groups, as well as copies of the snack item recipes for parents to take home with them.

The moderator asked each participant each of 9 open-ended question, allowing each participant to share their opinion on the given topic. When needed, the moderator asked for the participant to elaborate their response to any given question. Questions were written to understand the parents' opinions on various topics related to the family's eating environment and behaviors, their level of interest in receiving nutrition information, and their preference for delivery of such information.

Researchers used the methods described by Kubik et al⁶ to code and analyze the information collected. Two researchers made independent transcriptions of the audiotape recordings shortly after the focus groups were completed. One of the two researchers performing analysis compared and edited the two transcripts and combined the final

transcript into one document, per group session, for analysis. Two researchers individually performed the analysis to review the transcripts for meaningful data and highlighted emerging themes within each question's responses (Appendix C). The final step was to compare and contrast the themes between group sessions, rank them in order of most common theme in each question, and develop a textual summary of findings.

RESULTS

Sample Characteristics

All twelve parents who participated in the focus groups were either the parent or guardian who is responsible for preparing food for the children in their household. Of group 1, four (57%) participants reported being in the 36-40-year age range, one participant was in 26-30-year age range, one participant was in the 31-35-year age range, and one participant was in the 45 or older age range. In group 2, two participants (40%) reported being within the 31-35-year age range, one participant was in the 26-30-year age range, one participant reported being in the 36-40-year age range, and the final participant reported being in the 40-45-year age range. The groups were both predominantly white (83%) and female (83%), with one Asian or Pacific Islander participant in group 1 and one participant reported Other ethnicity in group 2. Of the twelve participants, five (42%) participants received bachelor's degrees, two (17%) participants received master's degrees, one (8%) participant received an associate degree, and one participant reported some college without a degree (8%). Participants predominantly reported being married or in a domestic partnership (8 of 12, 67%) and

one participant reported being divorced (8%), with three participants who did not respond.

Four (33%) of the participants had children who were eligible for free or reduced-price school lunch, five (42%) were ineligible, and three participants did not respond. Ten (83%) of the participants reported that their child participated in the FIT Game healthy eating program during fall 2017.

Question 1. Where do you commonly obtain vegetables?

Participants in both groups overwhelmingly reported purchasing their vegetables at the grocery stores (Walmart, Macy's Smith's, Sam's Club, and Lee's Marketplace). Participants reported that their reasons included produce sales and convenience (locations, hours of operation, etc.) of grocery stores. When asked whether they had shopped at the local farmers market or participated in a Community Supported Agriculture program, there were mixed results. The majority of participating parents had never heard of a Community Supported Agriculture program. Most of the participants visit the farmers' market infrequently, and do not typically purchase vegetables when they do attend. Participants reported that their common reasons for not attending the farmers market included: the market's location being farther away than in past years, perceived payment method restrictions, and that "Saturdays are busy."

Question 2. How successful are you at getting your children to eat vegetables at home?

The participants' responses to this question ranged from "a lot" to "not at all." Seven of the twelve parents stated that they had success in getting their children to eat vegetables. These participants described a variety of methods, such as: repeated offering,

providing a variety of vegetables, adding vegetables to smoothies, serving vegetables as a snack before dinner, and tasting the vegetables before leaving the table.

Question 3. Would you prefer a paper newsletter that is sent home with your child or one that is emailed to you?

The majority of parents preferred a paper newsletter to email. The participants who preferred receiving an emailed version stated that they would be less likely to lose track of the newsletter and could read it anywhere in digital format. Conversely, the participants who preferred paper said that they would see and skim the newsletter before checking their email. Participants mentioned that they would skim the content, so bullet points or “quick tips” for quick reading during busy days would be better. Several participants expressed interest in having recipes included in the newsletter, regardless of format.

Question 4. Interest level of example newsletter titles (vegetable and physical activity)

This question included a list of vegetable-themed newsletter titles and a list of PA-themed newsletter titles. Participants were asked to raise their hand if they would read a newsletter based off of the title. The most popular vegetable newsletter titles included: Easy child-friendly vegetable recipes; How to make vegetables the go-to snacks for your family; Getting your vegetables on a budget; Nutritional differences between fresh, frozen, and canned vegetables; and Games to make vegetable eating fun. Popular PA titles included: Free and creative ways to be physically active by season, Ways to be physically active that the whole family can enjoy, and New kid-friendly ways to be physically active.

Question 5. Would you participate in a recipe contest and why?

Participant responses to submitting a recipe to a recipe contest were split between yes and no. All participants in group 2 responded that they would be interested in seeing what other people had submitted, in part because “that would mean someone else has tried them.” One participant said that she would only participate if “the way to submit was really, really easy.” A different participant reported that they would not participate in the recipe contest because “I don’t have any kids who would eat it.”

Question 6. Would you encourage your child’s participation in a vegetable-eating challenge, and would a prize be effective?

Four of five participants in group 2 were supportive of a vegetable-eating challenge. Two participants in the same group thought their children would lose interest. Three of four responding participants in group 2 reported that a vegetable-eating challenge would be successful with their children. Most participants thought a prize would motivate their children. Prize ideas included coupons or certificates, U-pick at the farmers market, or a vegetable club in school.

Question 7. Would you encourage your child’s participation in a physical activity (PA) challenge?

Group 1 reported that they would be likely to encourage their child’s participation in a PA challenge. Participants in the same group further suggested combining PA with the vegetable-eating challenge and to include the entire family in the challenge. Participants suggested this so the entire family would be incentivized to engage in PA,

instead of just one child. In contrast, group 2 had a general consensus that their children were already active and enjoy being outside, so there was not a need for a PA challenge.

Question 8. Would you be willing to take an online survey that would take 10 minutes to complete, and would an incentive be a motivator to complete this survey?

In group 2, all participants agreed that no incentive would be necessary, they would “probably just do [the survey].” The other group had mixed responses. Three participants stated they would need an incentive to complete the survey, two said that it depends on the day and their mood, and one participant reported that they would complete the survey without an incentive. Group 1 participants requested a short survey that did not have open-ended questions, and that was sent via email. Participants suggested incentives such as coupons and being entered into a drawing.

Question 9. Would you visit a FIT Game website, and what content would you like to see there?

Most parents stated that they would visit a FIT Game website, depending on content and delivery format. Parents in both groups suggested that the website link should be delivered via email or a QR code in a printed newsletter for easy access. Participants’ reasons for visiting a FIT Game website included: recipes, “extra tips” and nutrition information, and updates on the FIT Game (i.e. storyline progression, consumption increases, and what their children are learning).

DISCUSSION

Overall, participants' responses reflected that they were interested in easy-to-implement suggestions to increase both vegetable consumption and PA in their home. Participants reported that they would like to receive a newsletter that includes bullet-points of nutritional information, recipes to make at home, and PA information. Participants generally supported their children participating in a vegetable-eating challenge and agreed that the inclusion of an incentive in the challenge would be effective for their children. All participants in group 2 did not think a PA challenge would be necessary because their children are already active. Participants in group 1 generally reported including an incentive for a parent survey, while participants in group 2 reported that no incentive was necessary. Based on participants' responses, a website for the FIT Game could be used for extra nutrition information, recipes, and updates on how the intervention is progressing at their child's school.

Parent input on a nutrition and PA home intervention is important, especially when the intervention is targeting parents. In a review by Brain Wansink¹⁰ in 2006, he discusses research that supports the importance of nutritional gatekeepers in the home. These gatekeepers purchase foods that are eaten at home, but also influence food choices made by their children outside the home by preparing lunches, providing lunch and snack money, and suggesting or modeling food preferences when eating at a restaurant. A panel of 641 Nutrition Educators estimated that the nutritional gatekeeper of a household controlled an average of 72% of food that was eaten by their children inside and outside of their home⁹. Parents are powerful examples of feeding practices to young children with their selection of available foods for the family and modeling of appropriate feeding practices and cultural eating patterns. Children learn about food through their experiences

at feedings times, as well as through their observations of others during these times.¹¹ A study conducted by Leann Birch found that pre-school aged children's selection and consumption of vegetables were based on observations of choices made by their peers and adults.^{11,12}

Pearson et al. conducted a systematic review, published in 2008, focusing on which factors correlate with FV consumption in children and adolescents. In the 25 studies that involved children ages 6-11 years, the researchers concluded that home availability, parent role modeling, parent FV intake, encouragement, and family rules regarding FV all had a positive association with children's FV consumption. Additionally, researchers concluded that parent FV intake and home availability are strongly related to children's eating behaviors.¹³

Parent-focused studies can be useful for invoking change in children. Moria Golan et al.^{14,15} performed a trial in which participants were either placed in child-only information sessions or parent-only information sessions led by dietitians that covered similar topics about nutrition education. Parent-only group topics included: nutrition education, limits of responsibilities, decreasing stimulus exposure, modification of eating and behavior, parental modeling, cognitive restructuring, problem solving, and coping with resistance. Child-only group topics included: modification of eating behavior, PA, self-monitoring, controlling stimulus, nutrition education, cognitive restructuring, and problem solving. At the end of the intervention and during follow-ups at one, two, and seven years post-intervention, weight differences between the groups were statistically and clinically significant, with the parent-only group having greater amounts of weight loss and percentage of children who reached nonobese status. Parents played a key role in providing nutritious foods in the home, as well as acting as a role model for their

children. Parents were advised not to restrict the amount of food their children consumed, so as to promote self-regulation practice.¹⁴

This study was not without limitations. Since participants were not randomly selected to participate in the focus groups, there is the potential of participation bias. The parents who chose to join the focus groups may have a higher focus on the importance of vegetable consumption and PA in their homes than other families who did not participate. Additionally, the intervention school has a high proportion of Latino students, and there was no representation of that population in attendance at the focus groups. The final concern regarding these focus groups is that some parents dominated the discussion, while other parents may not have responded as fully because of this situation.

Strengths of the study included high participation within both groups and a high percentage of participants were parents of students who participated in the FIT Game the previous fall. The parents who participated in the focus groups provided excellent feedback and information for the researchers and were willing to elaborate on their responses when prompted. Though some participants vocalized their opinions more than others, every participant was given the opportunity to share his or her opinion for each question asked. Of the parents who participated, 83% had children who participated in the FIT Game intervention during fall 2016 and were able to reflect on that experience for the focus groups and provide feedback that related to the newsletters they received.

IMPLICATIONS FOR RESEARCH AND PRACTICE

The FIT Game, while successful at increasing children's vegetable consumption at school, does not include any component to affect children's consumption in the home.

Thus, there is a need for a home component. We conducted the two focus groups to learn what information regarding nutrition and PA parents would find valuable to receive and which modes of communication would be best to deliver this information to the parents. The data that researchers collected will aid in the improvement of the FIT Game program home component to help increase children's vegetable consumption and PA levels.

Due to the FIT Game's success in increasing vegetable consumption, it is important to consider the potential implications at the child's home. With childhood obesity on the rise,³ the FIT Game could be a useful tool in promoting healthy eating and PA at home. Responses from the focus groups suggest that parents would participate in a program that helped facilitate these goals. Given these results, the revised home component could include a newsletter that contains recipes to make at home and bulleted lists of nutritional information, as well as suggestions for family-focused physical activities. Researchers could evaluate the efficacy of the home component of the FIT Game program in promoting vegetable consumption and PA by conducting baseline and post-intervention surveys and analyzing for changes.

REFERENCES

1. Progress on Children Eating More Fruit, Not Vegetables. Center for Disease Control and Prevention. <https://www.cdc.gov/vitalsigns/fruit-vegetables/>. Published August 5, 2014. Accessed July 6, 2018.
2. Childhood Obesity Causes & Consequences. Center for Disease Control and Prevention. <https://www.cdc.gov/obesity/childhood/causes.html>. Accessed July 6, 2018.
3. Promoting fruit and vegetable consumption around the world. Centers for Disease Control and Prevention. <http://www.who.int/dietphysicalactivity/fruit/en/index2.html>. Accessed September 30, 2018.
4. Childhood Obesity Facts. Center for Disease Control and Prevention. <https://www.cdc.gov/obesity/data/childhood.html>. Accessed July 6, 2018.
5. Joyner D, Wengreen HJ, Aguilar SS, Spriance LA, Morrill BA, Madden GJ. The FIT Game III: Reducing the operating expenses of a game-based approach to increasing healthy eating in elementary schools. *Games Health J.* 2017;6(2). doi: 10.1089/g4h.2016.0096.
6. Kubik MY, Lytle L, Fulkerson JA. Fruits, vegetables, and football: Findings from focus groups with alternative high school students regarding eating and physical activity. *J Adolesc Heal.* 2005;36(6):494-500. doi: 10.1016/J.JADOLHEALTH.2004.05.010.
7. Tiggemann M, Gardiner M, Slater A. "I would rather be size 10 than have straight A's": A focus group study of adolescent girls' wish to be thinner. *J Adolesc.* 2000;23(6):645-659. doi: 10.1006/jado.2000.0350.

8. Fern EF. The Use of Focus Groups for Idea Generation: The effects of Group Size, Acquaintanceship, and Moderator on Response Quantity and Quality. *JMR*. 1982;19(1):1-13. doi: 10.2307/3151525.
9. Strategies, Tools, and Resources for Parents & Guardians. PBH.
http://www.fruitsandveggiesmorematters.org/wp-content/uploads/UserFiles/File/pdf/resources/kids/StrategiesToolsResources_Parents.pdf. Published 2012. Accessed July 17, 2016.
10. Wansink, B. Nutritional gatekeepers and the 72% solution. *J Diet Assoc*. 2006;106(9):1324-1327. doi: 10.1016/j.jada.2006.07.023.
11. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *J Law Med Ethics*. 2007;35(1):22-34. doi:10.1111/j.1748-720X.2007.00111.x.
12. Birch LL. Effects of Peer Models' Food Choices and Eating Behaviors on Preschoolers' Food Preference. *Child Development*. 1980;51:489–496.
13. Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. *Public Health Nutr*. 2008;12(02):267. doi:10.1017/s1368980008002589.
14. Golan M, Crow S. Targeting parents exclusively in the treatment of childhood obesity: long-term results. *Obes Res*. 2004;12(2):357-361. doi: 10.1038/oby.2004.45.
15. Golan M, Weizman A, Apter A, Fainaru M. Parents as the exclusive agents of change in the treatment of childhood obesity. *Am J Clin Nutr*. 1998;67:1130-1138.

CHAPTER IV

IMPLEMENTATION AND ASSESSMENT OF EFFICACY OF THE REVISED HOME COMPONENT

ABSTRACT

Objective: To implement and assess the efficacy of a revised home component to the FIT Game healthy eating program.

Design: Two school randomized controlled trial; one school randomized to the intervention and the second school to control.

Setting: Northern Utah, homes of elementary school students.

Participants: Participants were parents of students participating in the FIT Game healthy eating program at one control school and one intervention school.

Intervention: Researchers sent home four parent newsletters with students at the intervention school that contained updates about the FIT Game program played at school, information and a recipe about a highlighted vegetable, tips for increasing children's vegetable consumption, and a family challenge. Changes in availability and assessment of the newsletters were performed with a baseline and post-intervention survey at both the control and intervention schools.

Main Outcome Measure: Change in total vegetable and target vegetable count between baseline and post-intervention. Additional outcome measures were examined by tracking changes in participant responses to how frequently parents served vegetables with dinner or snacks and participant report to changes in confidence when serving vegetables under different circumstances.

Analysis: General linear model repeated measures and one-way ANOVA were used to determine whether there was an effect by school over time and any statistically significant differences between responses.

Results: No significant differences between control and intervention school responses for vegetable home availability, confidence to serve vegetables, or frequency in serving vegetables were observed.

Conclusions and Implications: Future home components to school interventions targeting FV consumption should be more interactive and in-depth, as four parent newsletters were ineffective.

INTRODUCTION

Vegetables provide ample amounts of micronutrients and can reduce the risk of certain chronic diseases, such as heart disease and some types of cancers, and can lower blood pressure and help decrease bone loss.¹ Vegetables are key sources of dietary fiber, potassium, folate (folic acid), and vitamins A and C, among other nutrients.¹ MyPlate, the newest version of a recommended food intake visual, recommends that half of your plate contain fruit and vegetables, with vegetables taking up slightly larger than half of that space.¹ Unfortunately, 90% of children within the USA are not consuming the recommended 1-3 cups of vegetables per day, according to data from the Centers for Disease Control and Prevention (CDC) from 2007 to 2010.² The World Health Organization has estimated that almost 3% of global mortality can be attributed to low fruit and vegetable (FV) consumption, which is approximately 1.7 million deaths.³

The FIT Game healthy eating program is a school-based intervention for elementary aged children that targets increasing vegetable consumption during lunchtime. The FIT Game uses a game-like design with a compelling narrative of four pre-teen aged characters (the Field Intensive Trainees, or FITs) who journey to save Earth from the Vegetable Annihilation Team. The FITs are portrayed as positive role models who each have a favorite vegetable that correlates with their special talent, and those vegetables are highlighted throughout the narrative. The story's progression is contingent upon the students meeting their daily vegetable intake goal. Prior studies with the FIT Game have shown consumption rates almost double from the baseline amount.⁴ While the intervention at school has been successful at increasing children's vegetable intake during lunch, there is currently no data on the effect of the FIT Game intervention at home. Parents typically receive little information during the intervention other than what is provided to them within the letter of consent for their child to participate in the research study.

Previous research supports the inclusion of a home component to a school intervention when targeting changes in FV consumption. A 2012 review by Evans et al.⁵ compared twenty-seven school-based studies on their ability to change FV intake in students' ages five to twelve years. Ten of the twenty-seven studies included a home component of some form. Seven of the studies were able to significantly increase FV consumption in children, two were able to increase only fruit consumption, and one was unable to produce significant changes.⁵ Researchers of the study with nonsignificant results, Bere et al, stated that their intervention was unsuccessful because they were unable to promote a change in FV preference in participating students or in the accessibility of FV at home.⁶

The home environment is an important element in a child's diet, as parents act as role models in dietary habits and control the availability of foods within the home. Increased availability and accessibility to FV in the home have been correlated with FV preference. Additionally, stronger motivational factors such as self-efficacy and the behavioral capacity or knowledge of parents have also been shown to positively impact FV preference in children.⁷ The objective of this study is to examine the implementation and assessment of a home component of the four-school FIT Game program study and its ability to affect the availability of vegetables within the participating students' homes in one of two intervention schools.

METHODS

Study Participants

Participants of this study were the parents of students at the FIT Game intervention school in fall of 2017. Unlike the pilot study mentioned above that only distributed newsletters to parents of children participating in the FIT Game program, this study included parents of all children in order to maximize sample size.

This study was approved by the Institutional Review Board that oversees the FIT Game authors' research at Utah State University.

Intervention Description

The home component was previously developed and revised by researchers (see Chapters I and III for detailed descriptions). The component was created by researchers in the form of a parent newsletter to be sent home with each of the students participating

in the FIT Game intervention. These newsletters included updates and students' progress of the FIT Game at school, an introduction to a FIT Game character and facts about their favorite vegetable, recipe about the highlighted vegetable, and suggestions and tips to increase vegetable consumption at home. These tips were taken from a Produce for Better Health 2015 publication⁹ with a variety of suggested ways to increase FV within the home.

Researchers revised the newsletter component with input from two focus groups of parent volunteers from the intervention school. Researchers asked participating parents questions about potential aspects of a newsletter and other home component aspects. Researchers transcribed participants' responses, coded for emerging themes, and the results were reported in Chapter III.

Researchers sent four revised newsletters (Appendix D) home from school with students throughout the duration of the FIT Game intervention. Each newsletter began with a brief summary about the FIT Game progression during school. The newsletters also provided two to three tips for increasing vegetable consumption at home, along with a vegetable challenge for the family (e.g. Buy and try a new vegetable –or cook a familiar vegetable a new way – with one family dinner this week!). A different vegetable was highlighted in each newsletter (i.e. red bell pepper, zucchini, spinach, and asparagus) and included two to three nutritional facts and a simple recipe in each newsletter. No FIT Game characters were introduced in the newsletters. To better serve the school's population, newsletters were double-sided with one side in English and the reverse in Spanish; this forced newsletters to be as clear and concise as possible, with all information formatted in bullet points.

Assessment Tool

Researchers designed a baseline and post-intervention parent survey sent to both the control and intervention schools (Appendix E) to assess the home component. All surveys included the following question topics: demographic information (parent's gender, highest level of education, and ethnicity), self-efficacy (level of confidence to prepare vegetables in different circumstances, how often vegetables are served as snacks and with dinner),⁹ how many cups of vegetables their child consumes each day, and a home inventory of vegetables.¹⁰ Baseline and post-intervention surveys for the intervention school asked whether the child was participating in the FIT Game at school. The post-intervention surveys sent to parents at the intervention school included additional questions pertaining to their opinion of the FIT Game newsletters and which tips, recipes, and family challenges they tried at home. Researchers selected self-efficacy questions from a validated FV survey that was developed by Hildebrand and Betts in 2008.⁷ Researchers adapted a validated home food inventory developed by Fulkerson et al. in 2008¹⁰ as their home inventory of vegetables survey question.

Statistical Analysis

Statistical analysis was performed with SPSS (IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.). Results were compared using one-way ANOVA and possible effects of school over time were analyzed with General Linear Model Repeated Measures.

RESULTS

Sample Characteristics

Eighty-two of 568 parents (14%) from the control school and eighty-seven of 512 parents (17%) from the intervention school completed the baseline parent survey (Table 3-1). One hundred and twenty-two parents (21%) from the control school and 111 (22%) from the intervention school completed post-intervention surveys. Seventy-seven percent of respondents from the control school were female and 73.1% of respondents from the intervention were female. The majority of respondents from both schools reported their ages being within the age ranges of 26-35 years and 36-45 years. The majority of respondents from both schools considered themselves not Hispanic or Latino. Parents' reported highest level of education completed were similar between the control and intervention school. Large percentages of respondents reported their education being high school or less and some college to bachelor's degree. No p-values for the demographic information were statistically significant.

Researchers asked parents at the intervention school whether their child was participating in the FIT Game because researchers distributed newsletters and surveys to all parents at the intervention school. In the post-intervention survey, 48% of parents responded that their child was participating in the FIT Game, 28% reported that their child was not participating, and 23% of parents were unsure of their child's participation.

Table 3-1: Parent Survey Participant Demographics

	Control	Intervention	P-value
Number of Survey Responses			-
Baseline	82 (14%)	87 (17%)	
Post-Intervention	122 (21%)	111 (22%)	
Gender*			0.511
Male	26 (23.0%)	29 (26.9%)	
Female	87 (77.0)	79 (73.1%)	
Age (years)†			0.133
18 – 25	2 (3.1%)	2 (3%)	
26 – 35	39 (60.9%)	23 (48.5%)	
36 – 45	21 (32.8%)	27 (40.9%)	
46 – 55	2 (3.1%)	5 (7.6%)	
Ethnicity*			0.841
Not Hispanic or Latino	77 (67.0%)	73 (68.2%)	
Hispanic or Latino	38 (33.0%)	34 (31.8%)	
Highest Level of Education (baseline)			0.611
High school or less	27 (34.2%)	20 (23.5%)	
Some college – Bachelor’s	46 (58.2%)	62 (72.9%)	
Master’s or higher	6 (7.6%)	3 (3.5%)	
Highest Level of Education (post-intervention)			0.995
High school or less	53 (46.5%)	45 (43.3%)	
Some college – Bachelor’s	53 (46.5%)	55 (52.9%)	
Master’s or higher	8 (7.0%)	4 (3.8%)	

* = Data only collected with post-intervention survey.

† = Data only collected with baseline survey.

Assessment Survey Responses: Main Outcomes

Researchers conducted general linear model repeated measures to determine whether there was a school effect on the mean number of vegetables marked in the home inventory list between baseline and post-intervention (Figures 1-1 and 1-2). Researchers

found no significant effect ($P = 0.555$) in the home inventory. The availability of vegetables highlighted in the newsletters was also measured with repeated measures and researchers found no significant effect ($P = 0.765$).

In the post-intervention survey, researchers asked parents in the control and intervention schools how many cups of vegetables their child consumed per day. Results were compared in a one-way ANOVA and no significant different of response distribution was found ($P = 0.689$). The three most common responses in the control school were 0.5 to 1 cup (37.9%), 0.5 cup or less (35.3%), and 1 to 1.5 cups (14.7%). The three most common responses from the intervention were 0.5 cup or less (42.2%), 0.5 to 1 cup (29.4%), and 1 to 1.5 cups (15.7%).

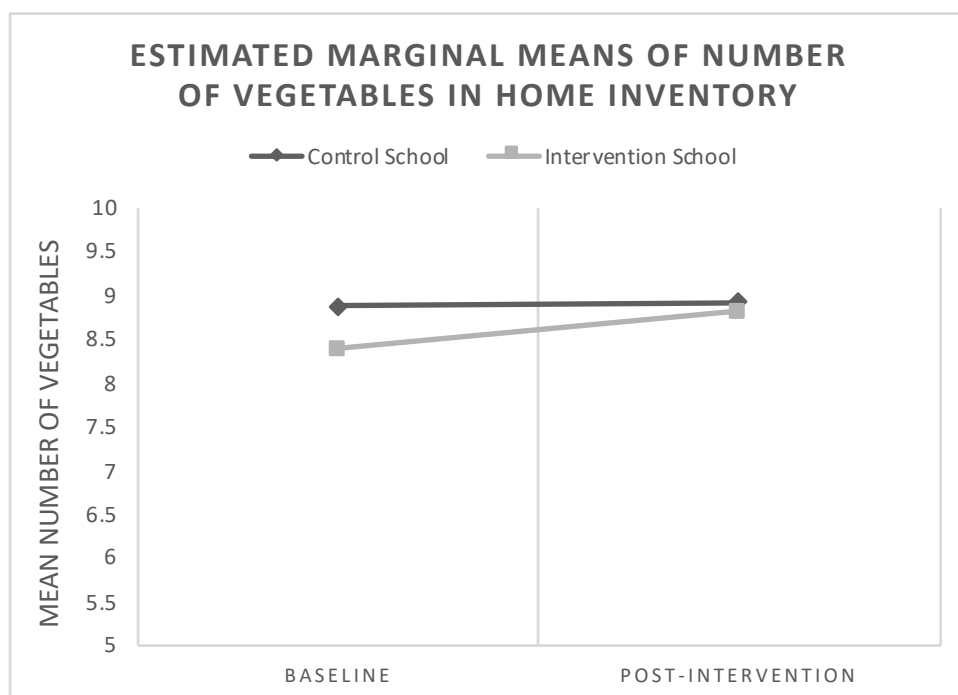


Figure 1-1: Estimated marginal means of number of vegetables in home inventory

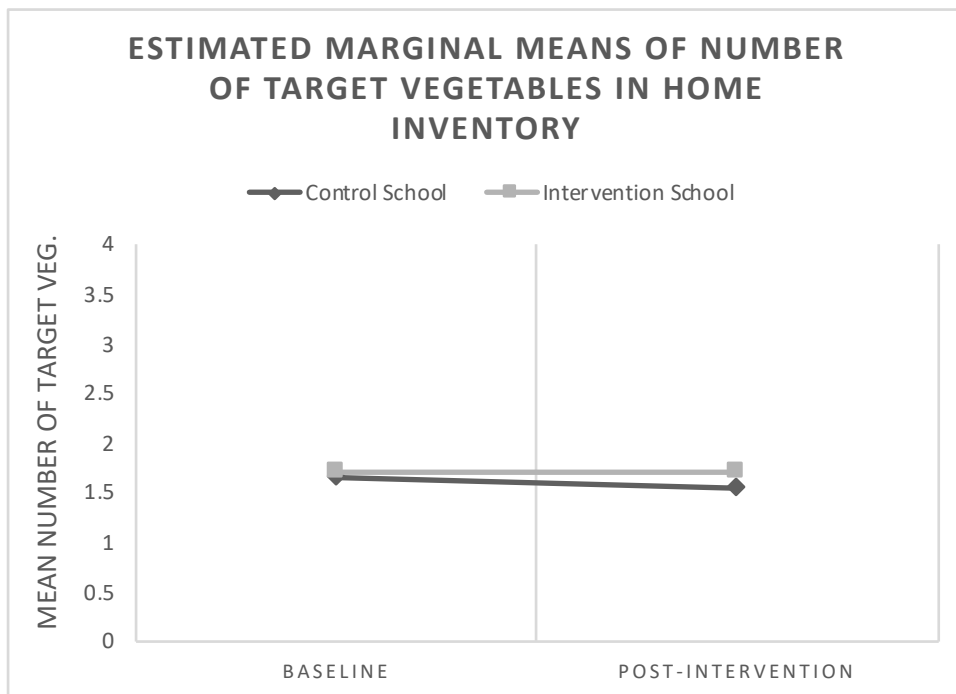


Figure 1-2: Estimated marginal means of number of target vegetables in home inventory

Figures 1-3, 1-4, and 1-5 represent repeated measures analysis estimated marginal means of the three survey questions regarding confidence in various circumstances, when participants prepared dinner at home, low on time, and low on money to purchase food. No significant school over time effects were found for the three questions ($P = 1.000$, $P = 0.354$, and $P = 0.149$, respectively).

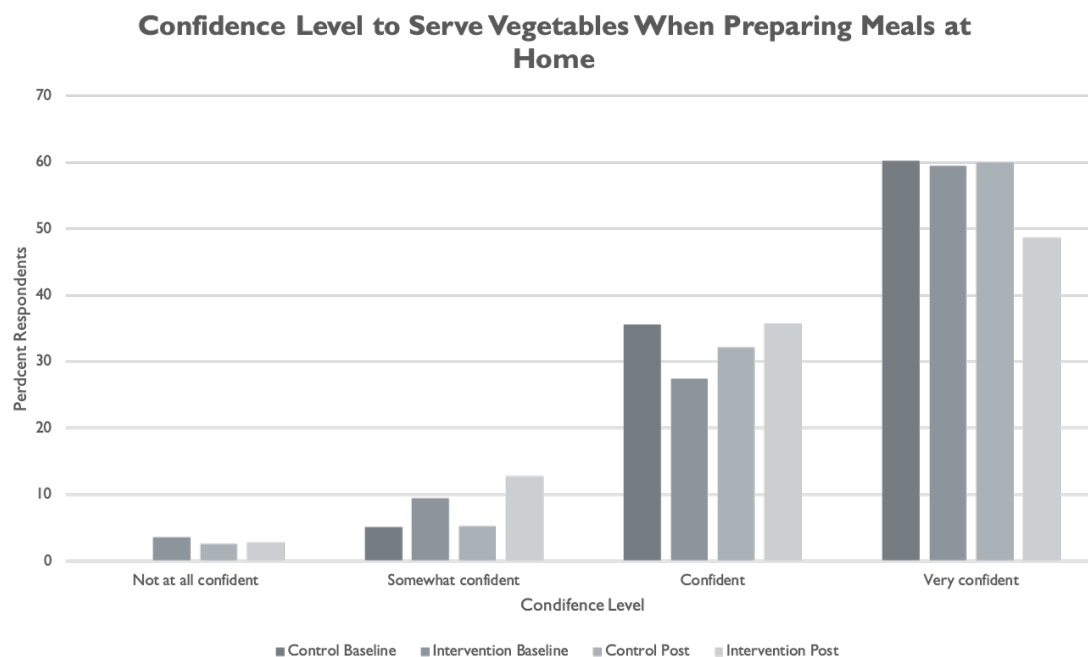


Figure 1-3: Confidence to serve vegetables when preparing meals at home

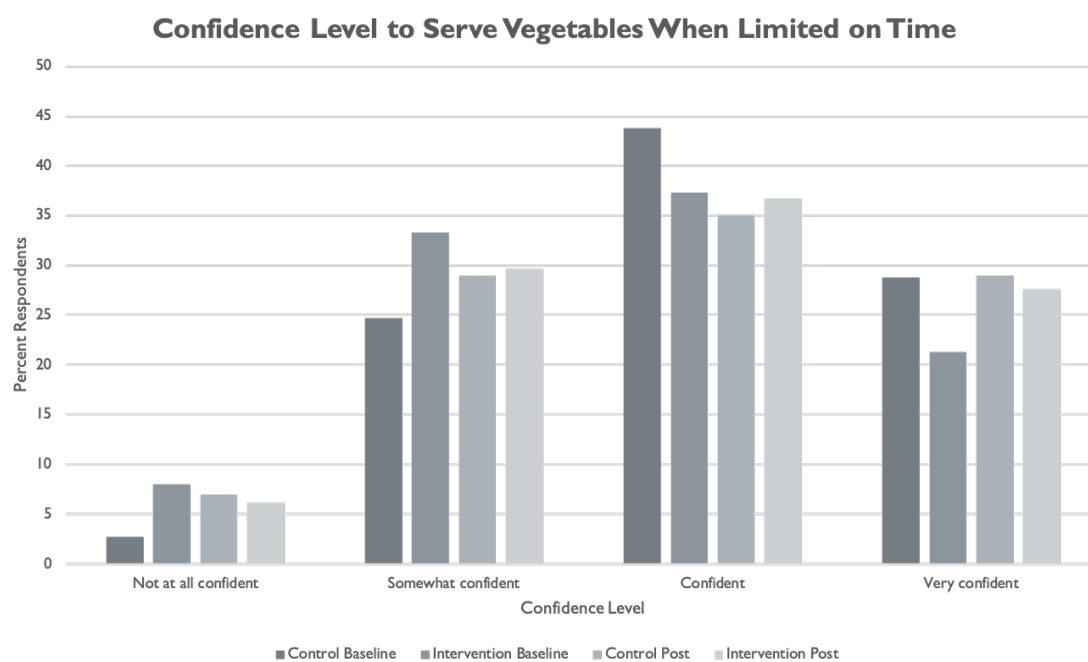


Figure 1-4: Confidence to serve vegetables when limited on time

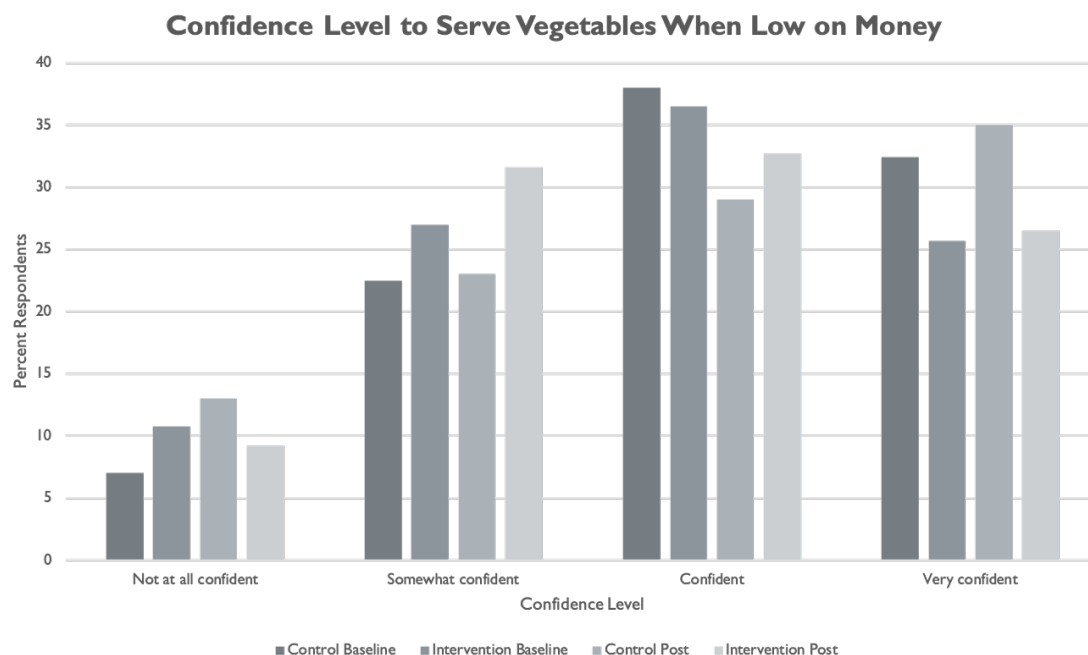


Figure 1-5: Confidence to serve vegetables when low on money to purchase food

Figures 1-6 and 1-7 illustrate repeated measures analysis for questions asking how often parents served vegetables with dinner and how often parents served vegetables as snacks. Neither question had significant p-values for the effect of school over time ($P = 0.710$ and $P = 0.832$, respectively).

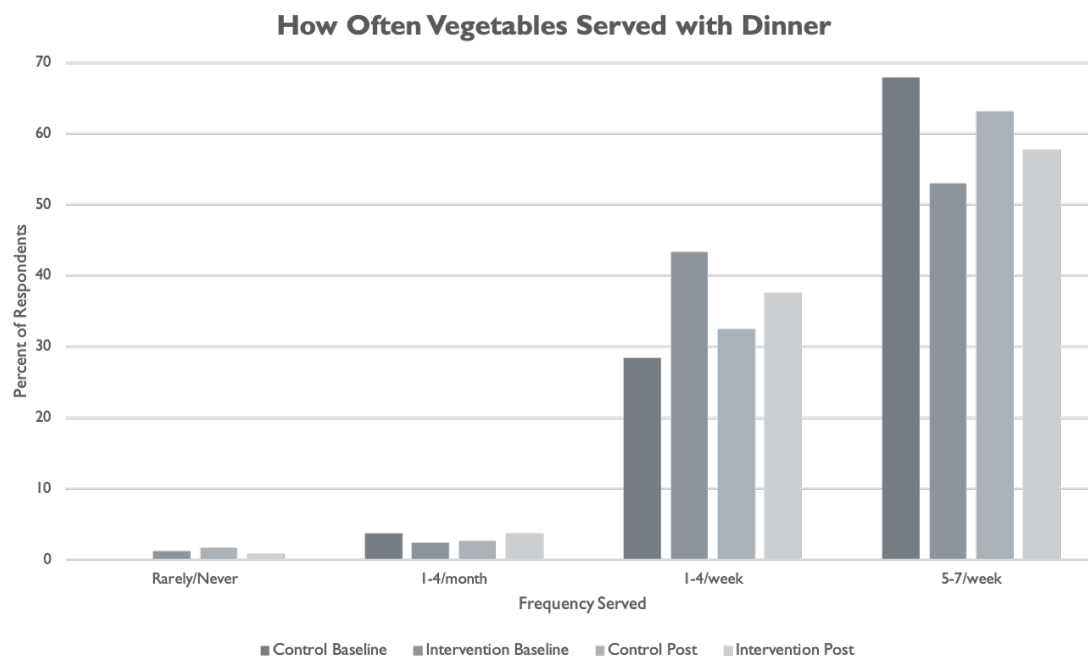


Figure 1-6: How often vegetables served with dinner

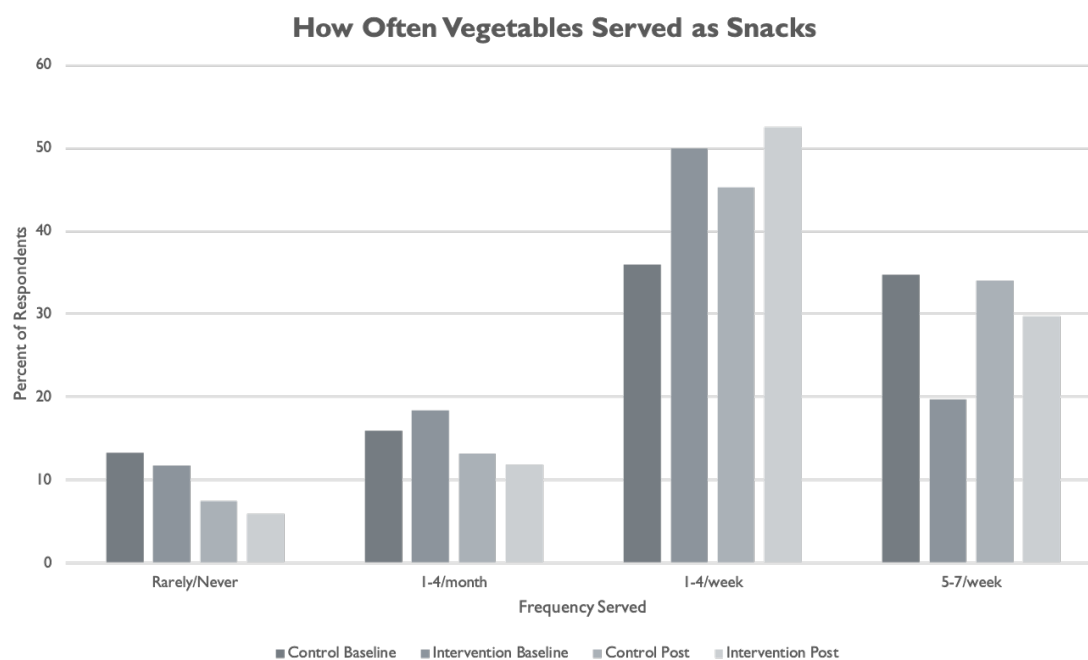


Figure 1-7: How often vegetables served as snacks

Assessment Survey Responses: Newsletter Use

Researchers asked parents in the intervention school to what degree they agreed or disagreed with the following statements: “*The newsletters taught me something new,*” “*I enjoyed reading the newsletters*”, “*The newsletters motivated me to eat more vegetables*”, and “*My child enjoyed participating in newsletter challenges.*” The majority of parents agreed or strongly agreed with the statements (Table 3-2), with 15% or less disagreeing. Approximately 30% of respondents reported that they did not see or read the newsletters.

Table 3-2: Newsletter Review Opinion Questions

	The newsletters taught me something new	I enjoyed reading the newsletters	Newsletters motivated me to eat more vegetables	My child enjoyed participating in newsletter challenges
Strongly Agree or Agree	60 (60.0%)	60 (59.4%)	56 (55.4%)	53 (52.2%)
Disagree or Strongly Disagree	10 (10.0%)	9 (7.9%)	15 (14.9%)	14 (14.6%)
I did not see/read the newsletters	30 (30.0%)	33 (32.7%)	30 (29.7%)	29 (30.2%)

Other questions within the post-intervention survey for the intervention school included how many tips parents tried, which recipes parents tried, and how many of the family challenges they tried. There were 109 responses to each of these questions ($n = 109$). The highest percentage of respondents (48%) reported that they did not try any of

the nine tips for increasing children's consumption of vegetables with the second highest response frequency (32%) for the response of trying 1-2 tips.

Seventy-nine participants reported that they did not try any of the four recipes from newsletters. The most popular recipes tried are as follows: garlic parmesan roasted asparagus (13 responses), stuffed bell peppers (11 responses), three ways to cook with spinach (9 responses), and parmesan zucchini tots (5 responses).

Researchers presented three challenges in the newsletters. Thirty parents reported that they tried the challenge of a family vegetable eating contest, twenty parents reported that they bought and tried a new vegetable with dinner, and three parents reported that they set a family goal to eat vegetables with dinner. Fifty-eight parents reported that they did not try any challenges.

DISCUSSION

Providing parents with newsletters that provided information and a recipe about a specific vegetable, along with tips for increasing vegetable consumption at home and family healthy eating challenge, did not increase the availability of overall vegetables or target vegetables highlighted in newsletters by a statistically significant amount. The home component was additionally unable to produce a change in confidence to serve vegetables under various circumstances and how often parents served vegetables with dinner and as snacks. However, 52% of respondents reported trying at least one tip to increase their children's vegetable intake and 48% of respondents reported trying one of the three challenges. This suggests that some of the participating parents are interested in developing new healthy habits with their families.

One possible reason for these results is that the home component was not impactful enough to change the behaviors of participating parents. Another reason could be the population of parents and students at Title 1 schools used in the FIT Game intervention; parents may not be as involved in their children's school activities when compared to other schools. Other barriers could have prevented parents from making changes to their dietary habits, such as limited time or money.

Similar to previous studies, there were high amounts of respondents reporting that they did not see or read the newsletters. This could be because the mode of delivery was the same: sending newsletters home with students. Researchers determined that sending newsletters out with the school's newsletter would not be as effective as sending paper copies home with students, due to a very low response rate of online baseline survey responses that were sent through the school's newsletter. It is also possible that parents received the newsletters, but chose not to read them.

This study, when compared with the unsuccessful study performed by Bere et al.⁶ is similar in the sense that researchers did not significantly change the main outcome of the current study, which was availability of vegetables at home. Bere et al. hypothesized that they were unable to significantly increase FV consumption because they were unable to increase accessibility of FV at home, which is similar to availability.⁶ Available is defined as "being present for immediate use,"¹¹ while accessible is defined as "capable of being reached."¹² However, this present study was only attempting to influence the home environment, while Bere et al. were attempting to alter consumption at school and at home.

A second study included in the Evans et al. review⁵ was conducted by Baranowski et al.,¹¹ who discussed a home component that included parent newsletters. These weekly

newsletters contained recipes, suggestions on how to increase FV and juice intake, and ways to involve the family in weekly home assignments for the students participating in the study. This intervention was successful in significantly increasing consumption of FV and juice combined and vegetables alone, but unsuccessful at increasing consumption of fruit alone.¹¹ Newsletters in the Bere et al. intervention included similar content: a highlighted fruit or vegetable with health-related information and recipes, family activities, and competition for students.⁶

Parents reportedly found the FIT Game newsletters enjoyable to read, and 59% of respondents agreed that the newsletters taught them new information. While this is beneficial information, the newsletters were ultimately unable to successfully increase the availability of vegetables within home environment. One possible limitation of this study is the small sample size of survey responses. Researchers changed the incentive from completing and returning a survey to be entered into a drawing to win a gift card during baseline to children receiving prizes for completed surveys at the completion of the study. Researchers observed a 7% increase to an overall response rate of 21% at the control school and an increase of 5% for an overall response rate of 22% at the intervention school. Another limitation is that while the demographic information from the control and intervention school did not significantly differ from each other, the sample of survey responses did not fully represent the entire school population. Additionally, given that the newsletters and surveys were distributed to all parents of first through fifth grade students and only 48% of survey respondents reported that their child was participating in the FIT Game program, the results of this study may not accurately portray changes in homes of all families whose children were participating in the FIT Game.

Further parent engagement with the FIT Game may be necessary to observe the desired increase in vegetable availability at home. Maria Golan et al.¹⁴ performed a study targeting parent role modeling and behavior change that compared parent-only information sessions about nutrition- and behavior-related topics to child-only information sessions discussing similar, age-appropriate nutrition- and behavior-related topics. Participating children were ages seven to twelve years old during baseline. At the end of the intervention and over three follow-up time points (one, two, and seven years), children from the parent-only information session group were statistically and clinically different in weight when compared to children from the child-only group. Children in the parent-only group had higher amounts of weight loss and a higher percentage of children in that group reached nonobese status.¹⁴ Providing parents with increased amounts of information in a setting that requires more parent participation may incite the desired change in availability of vegetables at home that this study did not see. Additionally, research supports the concept of repeated tasting exposures to vegetables being effective in increasing vegetable consumption¹⁴ and including strategies for parents to promote repeated tasting of vegetables could be incorporated into the FIT Game program. In order for repeated tasting exposure to be effective, however, vegetables need to be available at home to try. Barriers that should be taken into consideration when promoting repeated tasting exposure include the level of which parents value vegetables, parental knowledge of how to prepare different types of vegetables, and financial resources to purchase vegetables.

IMPLICATIONS FOR RESEARCH AND PRACTICE

The objective of this study was to implement and assess a revised parent newsletter home component to the FIT Game healthy eating program. The analysis of parent survey responses indicates that the study was unsuccessful in its ability to increase availability of vegetables at home, though some parents reported that they both enjoyed reading the newsletters and learned new information from the newsletters. Given these results, researchers recommend further research into successful methods that increase vegetable availability within the home environment. Researchers conclude that the current study of four parent newsletters did not provide enough parent engagement with the FIT Game program. Future studies should consider providing a more in-depth and interactive home component embedded in a school intervention targeting FV consumption.

REFERENCES

1. Nutrients and Health Benefits: Why is it important to eat vegetables?
ChooseMyPlate.gov. <https://www.choosemyplate.gov/vegetables-nutrients-health>.
Accessed October 30, 2018.
2. Progress on Children Eating More Fruit, Not Vegetables. Center for Disease
Control and Prevention. <https://www.cdc.gov/vitalsigns/fruit-vegetables/>.
Published August 5, 2014. Accessed July 6, 2018.
3. Promoting fruit and vegetable consumption around the world. World Health
Organization. <http://www.who.int/dietphysicalactivity/fruit/en/index2.html>.
Accessed February 20, 2017.
4. Joyner D, Wengreen HJ, Aguilar SS, Spriance LA, Morrill BA, Madden GJ. The
FIT Game III: Reducing the operating expenses of a game-based approach to
increasing healthy eating in elementary schools. *Games Health J.* 2017;6(2).
doi:10.1089/g4h.2016.0096.
5. Evans CE, Christian MS, Cleghorn CL, Greenwood DC, Cade JE. Systematic
review and meta-analysis of school-based interventions to improve daily fruit and
vegetable intake in children aged 5 to 12 y. *Am J Clin Nutr.* 2012;96(4):889-901.
doi:10.3945/ajcn.111.030270.
6. Bere E, Veierød MB, Bjelland M, Klepp K-I. Outcome and process evaluation of
a Norwegian school-randomized fruit and vegetable intervention: Fruits and
Vegetables Make the Marks (FVMM). *Health Educ Res.* 2006;21(2): 258-267.
doi: 10.1093/her/cyh062.

7. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *J Law Med Ethics*. 2007;35(1):22-34. doi:10.1111/j.1748-720X.2007.00111.x.
8. Produce for Better Health Foundation. State of the Plate, 2015 Study on America's Consumption of Fruit and Vegetables, Produce for Better Health Foundation, 2015. <http://www.PBHFoundation.org>. Accessed February 20, 2017.
9. Hildebrand DA, Betts NM. Assessment of Stage of Change, Decisional Balance, Self-efficacy, and Use of Processes of Change of Low-income Parents for Increasing Servings of Fruits and Vegetables to Preschool-aged Children. *J Nutr Educ Behav*. 2009;41(2):110-119. doi: 10.1016/j.jneb.2008.09.007.
10. Fulkerson JA, Nelson MC, Lytle L, Moe S, Heitzler C, Pasch KE. The validation of a home food inventory. *Int J Behav Nutr Phys Act*. 2008;5(55). doi: 10.1186/1479-5868-5-55.
11. Available. Merriam-Webster. <https://www.merriam-webster.com/dictionary/available> Accessed November 13, 2018.
12. Accessible. Merriam-Webster. <https://www.merriam-webster.com/dictionary/accessible> Accessed November 13, 2018.
13. Baranowski T, Davis M, Resnicow K, et al. Gimme 5 Fruit, Juice, and Vegetables for Fun and Health: Outcome Evaluation. *Health Educ Behav*. 2000;27(1):96-111. doi:10.1177/109019810002700109.
14. Touyz LM, Wakefield CE, Grech AM, Quinn VF, Costa DSJ, Zhang FF, Cohn RJ, Sajeev M, Cohen J. Parent-targeted home-based interventions for increasing fruit and vegetable intake in children: a systematic review and meta-analysis. *Nutr Rev*. 2018;76(3):154-173. doi: 10.1093/nutrit/nux066.

CHAPTER V

SUMMARY AND CONCLUSION

SUMMARY

The purpose of this thesis project was to create a home component for the FIT Game healthy eating program, followed by the revision, implementation, and assessment of the home component. The FIT Game intervention has been successful at increasing children's intake of vegetables during school lunch.^{1,2} but the intervention has not previously included parents in the implementation of the program beyond providing parents with initial information about the research study in the letter of consent for children to participate.

Researchers completed a literature review to review previous research studies of school-based interventions that targeted increasing in students' fruit and vegetable (FV) consumption. Researchers also searched for previous research studies that included a home component, as well as factors that might affect the home environment. School-based interventions have sought to increase FV consumption in students have been conducted since the mid 1990s.³⁻⁵ Eleven of the thirteen studies discussed in the literature review included a home component and were able to significantly increase FV consumption, vegetable consumption, or both.³⁻¹⁵ Consistent evidence has been found that availability of FV at and away from school¹⁶⁻¹⁹ and role modeling, especially from parents,^{16,19} are important factors in consumption of FV in children.

The development of the FIT Game program is detailed in Chapter II. The component that researchers included in the present study was a parent newsletter that provided updates on the FIT Game program during school; an introduction to the FIT

Game heroes and their favorite vegetables; nutritional information, fun facts, and a recipe of the highlighted vegetable; evidence-based suggestions for increasing children's vegetable intake at home; a family healthy eating challenge; and suggestions for family physical activities that were season-specific. Researchers piloted two newsletters in tandem with the FIT Game program in fall 2016. Over 60% of fifty-eight parents who completed a survey regarding the FIT Game and FIT Game newsletters reported that they enjoyed reading the newsletters and that the newsletters taught them something new.

Researchers conducted two focus groups with parents from the intervention school where the pilot newsletters were distributed (Chapter III). Participants from the focus groups reported that they were interested in easy-to-implement suggestions to increase vegetable consumption within their homes. Participants preferred bullet-point formatting of information and reported that they would like newsletters to include nutritional information and recipes to make at home. In general, participants supported their children participating in a vegetable-eating challenge and agreed that an incentive to participate would be effective for their children.

Researchers implemented revised newsletters into a FIT Game study in fall 2017 (Chapter IV). Four newsletters were distributed to parents throughout the intervention and included the same information as pilot newsletters, with the exception of season-specific suggestions for family physical activities. The main outcome of this study sought to increase availability of vegetables within the home. Researchers distributed baseline and post-intervention surveys to parents in the participating control and intervention schools. Surveys included questions about demographic information, confidence levels of preparing vegetables under various circumstances, how often vegetables were served with dinner and as snacks, and a vegetable home inventory. Researchers adapted

confidence and frequency questions from a validated parent survey²⁰ and adapted the vegetable home inventory from a validated home food inventory.²¹ Post-intervention surveys for control and intervention schools included questions asking how many cups of vegetables their children consume each day. Researchers included additional questions on post-intervention surveys for parents at the intervention school. These included questions about if they enjoyed reading the newsletters, if the newsletters taught them something new, if the newsletters motivated them to eat more vegetables, if their child enjoyed participating in newsletter challenges, how many suggestions for FV consumption they tried, and which recipes and challenges they tried.

Forty-eight percent of respondents did not try any tips, and 32% reported trying 1-2 tips. Thirty of 109 respondents tried at least one of the four newsletter recipes and fifty-one of 109 respondents reported trying at least one of the three healthy eating challenges. Changes in vegetable availability were analyzed with general linear model repeated measures in SPSS for the vegetable home inventory and target vegetables highlighted in the newsletters (i.e. red bell peppers, zucchini, spinach, and asparagus). Changes in confidence levels and frequency serving vegetables were analyzed in the same manner. Researchers found no significant effect of school over time for these questions. In the post-intervention survey, researchers asked participating parents at control and intervention schools how many cups of vegetables their child consumed each day. The control school's most common responses were 0.5 to 1 cup (37.9%), 0.5 cup or less (35.3%), and 1 to 1.5 cups (14.7%). The most frequent responses from the intervention school were 0.5 cup or less (42.2%), 0.5 to 1 cup (29.4%), and 1 to 1.5 cups (15.7%). Researchers analyzed results in a one-way ANOVA and found no significant difference

of response distribution between schools ($P = 0.689$). It is possible that the parameters set were not sensitive enough to detect a difference in children's reported consumption.

This home component was insufficient in its ability to change the availability of vegetables within participating families' homes, though parents reported that they enjoyed reading the newsletter (59%) and that the newsletter taught them something new (60%).

One of the main challenges to this project was a consistently low survey response rate of 14 – 22%. Because of this large difference in parents who received newsletters and parents who completed surveys, it is difficult to apply this project's findings to the entire school population. Changing the incentive to return surveys from targeting the parent to targeting the child did increase the response rate, but only by 5% in the intervention school and 7% in the control school.

CONCLUSION

Children are not consuming the recommended amounts of vegetables.²² Vegetables can reduce the risk for some types of cancer, heart disease, and other chronic diseases, as well as lower blood pressure and decrease bone loss.²³ While children spend much of their time at school, they spend a great portion of their time at home. School based interventions targeting vegetable intake can be effective at increasing consumption of vegetables, but may not make a lasting difference if the same behavior is not maintained at home.

Though the present study did not see a significant increase in vegetable availability at home, researchers have seen success in studies that target repeated tasting

exposure of vegetables to increase vegetable consumption in children. A joint objective to increase the availability of vegetables at home and repeated exposure to vegetables may be an effective combination. Because the FIT Game characters each have a favorite vegetable, it would be feasible for the FIT Game to include promotion of repeated exposure to these vegetables at home.

To increase the connection between parents and the FIT Game school intervention, researchers could hold a FIT Game kick-off parent information session. Researchers would then have the opportunity to explain the program in greater detail, discuss strategies parents can use at home for increasing vegetable intake, and answer parent questions and concerns. This information session could be beneficial alongside a home component. The developed newsletters in this project were designed to be used as a way to briefly update parents on the FIT Game program; however, there was not enough space to include in-depth descriptions in addition to the other information (i.e. recipes, healthy eating challenges, etc.) and maintain a length of one to two pages. Future researchers could mitigate this by sending home digital newsletters where length might not be an issue. Researchers found that newsletters were not effective in this study for inciting the desired change. However, newsletters may work well in conjunction with other home component materials (e.g. homework activities, information, or activity packets) to better tie in the FIT Game at home. Additional research will be necessary to confirm these findings.

REFERENCES

1. Jones BA, Madden GJ, Wengreen HJ. The FIT Game: preliminary evaluation of a gamification approach to increasing fruit and vegetable consumption in school. *Prev Med.* 2014;68:76-79. doi: 10.1016/j.ypmed.2014.04.015.
2. Joyner D, Wengreen HJ, Aguilar SS, Spruance LA, Morrill BA, Madden GJ. The FIT Game III: reducing the operating expenses of a game-based approach to increasing healthy eating in elementary schools. *Games Health J.* 2017;6(2):111-118. doi: 10.1089/g4h.2016.0096.
3. Gortmaker SL, Cheung LWY, Peterson KE, et al. Impact of a School-Based Interdisciplinary Intervention on Diet and Physical Activity Among Urban Primary School Children: Eat Well and Keep Moving. *Arch Pediatr Adolesc Med.* 1999;153(9):975. doi: 10.1001/archpedi.153.9.975.
4. Gortmaker SL, Peterson K, Wiecha J, et al. Reducing Obesity via a School-Based Interdisciplinary Intervention Among Youth: Planet Health. *Arch Pediatr Adolesc Med.* 1999;153(4):409. doi:10.1001/archpedi.153.4.409.
5. Perry CL, Bishop DB, Taylor G, et al. Changing fruit and vegetable consumption among children: the 5-a-Day Power Plus program in St. Paul, Minnesota. *American Journal of Public Health.* 1998;88(4):603-609. doi: 10.2105/ajph.88.4.603.
6. Baranowski T, Davis M, Resnicow K, et al. Gimme 5 Fruit, Juice, and Vegetables for Fun and Health: Outcome Evaluation. *Health Educ Behav.* 2000;27(1):96-111. doi: 10.1177/109019810002700109.
7. Bere E, Veierød MB, Bjelland M, Klepp K-I. Outcome and process evaluation of a Norwegian school-randomized fruit and vegetable intervention: Fruits and

- Vegetables Make the Marks (FVMM). *Health Educ Res.* 2006;21(2): 258-267.
doi: 10.1093/her/cyh062.
8. Reinaerts E, Crutzen R, Candel M, De Vries NK, De Nooijer J. Increasing fruit and vegetable intake among children: comparing long-term effects of a free distribution and a multicomponent program. *Health Educ Res.* 2008;23(6): 987-996. doi: 10.1093/her/cyn027.
 9. Reynolds KD, Franklin FA, Binkley D, et al. Increasing the fruit and vegetable consumption of fourth-graders: results from the High 5 Project. *Prev Med.* 2000;30(4):309-319. doi: 10.1006/pmed.1999.0630.
 10. Hopper CA, Munoz KD, Gruber MB, Macconnie S, Schonfeldt B, Shunk T. A school-based cardiovascular exercise and nutrition program with parent participation: an evaluation study. *Children's Health Care.* 1996;25(3):221-235. doi: 10.1207/s15326888chc2503_5.
 11. Spiegel SA, Foulk D. Reducing Overweight through a Multidisciplinary School-based Intervention. *Obesity.* 2006;14(1):88-96. doi: 10.1038/oby.2006.11.
 12. Taylor RW, McAuley KA, Barbezat W, Strong A, Williams SM, Mann JI. APPLE Project: 2-y findings of a community-based obesity prevention program in primary school-age children. *Am J Clin Nutr.* 2007;86(3):735-742.
 13. Hoffman JA, Franko DL, Thompson DR, Power TJ, Stallings VA. Longitudinal behavioral effects of a school-based fruit and vegetable promotion program. *J Pediatr Psychol.* 2009;35(1):61-71.
 14. Wilson DB, Jones RM, Mcclish D, Westerberg AL, Danish S. Fruit and vegetable intake among rural youth following a school-based randomized controlled trial. *Prev Med.* 2012;54:150-156. doi: 10.1016/j.ypmed.2011.11.005.

15. Springer AE, Kelder SH, Ranjit N, Hochberg-Garrett H, Crow S, Delk J. Promoting physical activity and fruit and vegetable consumption through a community-school partnership: the effects of Marathon Kids® on low-income elementary school children in Texas. *J Phys Act Health*. 2012;9:739-53.
16. Ong JX, Ullah S, Magarey A, Miller J, Leslie E. Relationship between the home environment and fruit and vegetable consumption in children aged 6-12 years: a systematic review. *Public Health Nutr*. 2017 Feb;20(3):464-480. doi: 10.1017/S1368980016002883.
17. Cook LT, O'Reilly GA, Derosa CJ, Rohrbach LA, Spruijt-Metz D. Association between home availability and vegetable consumption in youth: a review. *Public Health Nutr*. 2014;18(04):640-648. doi:10.1017/s1368980014000664.
18. Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. *Public Health Nutr*. 2008;12(02):267. doi:10.1017/s1368980008002589.
19. Savage JS, Fisher JO, Birch LL. Parental Influence on Eating Behavior: Conception to Adolescence. *J Law Med Ethics*. 2007;35(1):22-34. doi:10.1111/j.1748-720X.2007.00111.x.
20. Hildebrand DA, Betts NM. Assessment of Stage of Change, Decisional Balance, Self-efficacy, and Use of Processes of Change of Low-income Parents for Increasing Servings of Fruits and Vegetables to Preschool-aged Children. *J Nutr Educ Behav*. 2009;41(2):110-119. doi:10.1016/j.jneb.2008.09.007.
21. Fulkerson JA, Nelson MC, Lytle L, Moe S, Heitzler C, Pasch KE. The validation of a home food inventory. *Int J Behav Nutr Phys Act*. 2008;5(55). doi: 10.1186/1479-5868-5-55.

22. Progress on Children Eating More Fruit, Not Vegetables. Center for Disease Control and Prevention. <https://www.cdc.gov/vitalsigns/fruit-vegetables/>.

Published August 5, 2014. Accessed July 6, 2018.

23. Nutrients and Health Benefits: Why is it important to eat vegetables?

ChooseMyPlate.gov. <https://www.choosemyplate.gov/vegetables-nutrients-health>.

Accessed October 30, 2018.

APPENDICES

APPENDIX A: Pilot Study Newsletters

Monday, October 3, 2016

FIT Game News

Brought to you from FIT headquarters

<http://fitgame.ou.usu.edu>



Welcome to the FIT Game! The FIT Game is an interactive game played in the school cafeteria and designed to increase children's healthy eating at school and at home. In the game, students help fictional heroes (the FITs) as they find and capture a group of villains. When students work cooperatively to meet a daily healthy-eating goal, the game progresses with new adventures and challenges. Kids enjoy playing the FIT Game and it increases healthy eating.

Who is Penny and Why does she love broccoli?

Penny is one of the FIT heroes. She is very intelligent. The other FITs rely on her brain power to develop plans that will help to find and capture the villains. To keep her brain healthy, Penny eats flavonoids. One vegetable that has lots of flavonoids is broccoli!

Why is Broccoli Good for you?

Penny loves broccoli because it has flavonoids, but broccoli is also high in vitamin C (like bell peppers, citrus fruits, & berries) and folate (like dark leafy greens & asparagus), and is a great source of dietary fiber and potassium!

Cool Facts about Broccoli

When you eat broccoli you are actually eating the flower of the broccoli plant. It is easy to grow broccoli in Utah. Look up more information online or at a plant nursery. The world's heaviest broccoli plant weighed 35 pounds!



Broccoli is our

Vegetable of the
month

**Who is penny and
why does she love
broccoli?**

**Why is Broccoli
good for you?**

**Cool facts about
Broccoli**

How can you help?

Kids need at least 3-5 cups of fruits and vegetables and 30 minutes of physical activity every day.

Check out page 2 for ideas about how you can help!

How Can YOU Help?

Getting kids to eat more fruits and vegetables isn't as hard as you think.

Make it easy for your kids to make the healthy choice by having fruits and vegetables available and visible during times when you know they will be looking for a snack. Place fresh fruit in glass bowls on the kitchen counter, stock your refrigerator with their favorite vegetables, and have dried fruit and nuts on hand in the pantry.

Pre-portion your children's favorite fruits and vegetables into snack-sized zip-lock bags and store them at children's eye level in the refrigerator. Make them the easy-to-grab choice!

Get the entire family involved in physical activity.

Take advantage of the great fall weather we are having and do something active together as a family during the evening instead of watching TV or playing on an electronic device. Take a family friendly hike, or just enjoy the view by walking around your own neighborhood.

Make physical activity into a game by playing tag or racing to a landmark and back for a quick sprint.

Roasted Garlic Lemon Broccoli

Yields 6 servings

Ingredients:

2 heads broccoli, cut in florets	2 teaspoons olive oil
1 teaspoon salt	1 clove garlic, minced
½ teaspoon ground black pepper	Juice of 1 lemon

Directions:

Preheat oven to 400°F. In a large bowl or a Ziplock bag, toss broccoli with olive oil, salt, pepper, and garlic. Spread the broccoli out on a baking sheet lined with foil. Bake 15-20 minutes or until broccoli is tender and can be pierced with a fork. Remove from baking sheet to serving platter. Squeeze lemon juice liberally over broccoli before serving.

Cut me out and save me!



October's FIT

Game Family

Challenge

Eating Healthy

Include a fruit or vegetable with one more meal or snack than usual every day. See who in your family can do this on the most days in October.

Being physically

active

Plan and participate in at least one activity that is outside and provides at least 30 minutes of physical activity for every member of your family.

Remember to ask your kids about what is going on with the FITs in the FIT Game at school! Their adventures are out of this world!

Tuesday, November 1, 2016

FIT Game News

Brought to you from FIT headquarters

<http://fitgame.ou.usu.edu>



Welcome back! The FIT Game is going well; the kids have recently helped the FIT heroes capture Slog, a mean VAT member, by meeting their vegetable intake goals! Meeting goals allows them to keep progressing in the game. To help the FIT heroes stop the last two villains, Carlotta Caloric and the leader of the VAT, encourage your kids to keep eating vegetables at lunch!

Who is Everett and why does he love sweet potatoes?

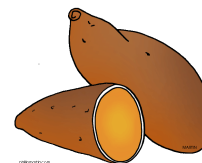
Everett is one of the FIT heroes. He is very strong, and uses his muscles to help catch the vegetable annihilation team villains. In order to keep up his muscle strength, Everett eats foods containing lots of potassium, a mineral that supports muscle contractions and heart function. Sweet potatoes are Everett's favorite food and they are a great source of potassium.

Why are sweet potatoes good for you?

Sweet potatoes are readily available, inexpensive, and delicious. Besides being a great source of muscle-supporting potassium, they are also high in beta-carotene and vitamins E and C. Beta-carotene is found in orange and dark green vegetables and helps maintain healthy eyes. Vitamins E and C are antioxidants that help your body heal and protect your body from damage caused by pollution, sickness, and aging.

Cool facts about sweet potatoes

Unlike regular potatoes, which are underground stems, sweet potatoes are the roots of the plant! When you eat a sweet potato, chances are it came from North Carolina. They produce 40% of the US supply! The world record heaviest sweet potato weighed 82 pounds. Now that's a big potato!



Sweet Potato is
our Vegetable of
the Month

**Who is Everett
and why does
he love sweet
potatoes?**

**Why are sweet
potatoes good
for you?**

**Cool facts about
sweet potatoes**

How can you
help?

Kids need at least
3-5 cups of fruits
and vegetables
and 30 minutes of
physical activity
every day.

Check out page 2
for tips to help
them stay healthy,
and for our
challenge to win a
prize!

How Can YOU Help?

Switch it up!

Fruits and vegetables can be eaten in many different forms – fresh is great, but caned, frozen, and fried fruits and vegetables are just as nutritious. Kids might also be willing to try something they usually turn their nose up at if it is cut into a different shape or prepared in a new way. Frozen grapes make for a tasty frozen treat. Add dried cranberries, bananas, or raisins to cookies, cereal, or granola. Try making “noodles” out of zucchini, carrots, or sweet potatoes by cutting long thin slices using a vegetable peeler or spiral cutter.

Don’t forget that fruits and vegetables are nature’s best snacks. Apples, bananas, oranges, dried fruit, and bite sized pieces of carrots, cucumber, and sweet peppers are perfect for car rides and backpacks –no refrigeration necessary!

Colder weather doesn’t mean you can’t be active with your family!

Fall in Logan is beautiful, but November often brings the chillier weather. Don’t let the cold temperature and shorter days keep your family from being active. Logan has some great indoor activity options! Try the Eccles Ice Center for ice skating, the Fun Park for roller skating, and Smithfield recreation center or USU’s pool in the Hyper building for indoor swimming.

Roasted Sweet Potatoes with Honey & Cinnamon

Yields 4 servings

Ingredients:

4 sweet potatoes, cut into 1-inch cubes (peeled, if desired)

¼ cup extra-virgin olive oil, plus more for drizzling

¼ cup honey 2 teaspoons ground cinnamon

salt and freshly ground pepper to taste

Directions:

Preheat oven to 375°F. Lay sweet potatoes out in a single layer on a roasting tray. Drizzle the oil, honey, cinnamon, salt, and pepper over the potatoes. Roast for 25 to 30 minutes in oven or until tender. Take sweet potatoes out of the oven and transfer them to a serving platter. Drizzle with more olive oil and serve.



November’s FIT

Game Family Challenge

Eating Healthy

Next time you’re out grocery shopping, let your children pick a fruit or vegetable for the family to try –at least one each trip!

Being physically active

Plan and participate in at least one activity that is outside and provides at least 30 minutes of physical activity for every member of your family.

After your family has completed the challenge:

cut this section out, fill in the lines, and bring it back to the school office on _____ to be entered into a drawing for a prize!

Name: _____

Teacher: _____

Grade: _____

Signature: _____

APPENDIX B: Parent Survey for 2016 Intervention

FIT Game Parent Survey

Q1 Are you aware that your child recently participated in the FIT Game Healthy Eating Program at school?

Yes

No

Q2 Please rank to what degree you agree with the following statements about your child's experience playing FIT Game.

	Strongly Agree	Agree	Disagree	Strongly Disagree
My child enjoyed participating in the FIT Game program (please ask your child directly).				
The FIT Game has helped my child to consume more vegetables at school.				
The FIT Game has helped my child to be more willing to try new vegetables.				
I have increased my consumption of vegetables since my child started participating in the FIT Game program.				
I believe other children would benefit from playing the FIT Game at school.				

Q3 Please rank to what degree you agree with the following statements about the FIT Game newsletters.

	Strongly Agree	Agree	Disagree	Strongly Disagree	I did not see or read the FIT Game newsletters
The FIT Game newsletters taught me something new.					
I enjoy reading the FIT Game newsletters.					
The FIT Game newsletters motivated me to make a change in how I eat.					
My child enjoys reading the FIT Game newsletters.					
My family enjoyed participating in the monthly FIT Game newsletter challenge.					

Q4 How many cups of vegetables does your child usually consume at home per day?

< 0.25 cups 0.25 – 0.5 cups 0.5 – 0.75 cups 0.71 – 1 cups
 1 – 1.5 cups 1.5 – 2 cups 2 – 2.5 cups 2.5 – 3 cups > 3 cups

Q5 What could we do to improve the FIT Game program?

Q6 What could we do to improve the FIT Game newsletters?

Q7 Thank you for taking the time to complete our survey! The information you provided to us will help us to improve the FIT Game program. Please enter your email address here if you'd like to be entered into a drawing to win a cool prize.

APPENDIX C: Focus Group Questions and Transcripts

FIT Game Home Component Focus Group Questions

Goal: To identify what information and activities would be most impactful to include in the home component of FIT Game. The goal of the FIT Game program is to encourage kids to eat more vegetables and be more physically active.

We are going to ask for your feedback on a number of questions. Please be as honest as possible, in terms of what you would do or how you would react. Don't be afraid to tell us an idea is a bad one, as we want to be effective and need to know what may work and what won't work.

1. What is your favorite vegetable and how do you like it prepared?
2. Imagine that your child is unloading his/her backpack and hands you some papers from school. In the papers is a newsletter about healthy diet and exercise. How would you react to this? Would you throw it in the trash? Would you quickly skim the story titles to see if anything looks interesting? Would you think "Wow! That's just what I wanted! I'm going to read the whole thing" or would you do otherwise?
3. How would you react to receiving the same newsletter in an email from the school? Would you delete the message without opening the newsletter? Would you open the newsletter file and quickly skim the story titles? Would you read the whole thing, or would you do otherwise?
4. Let's assume that you are looking at the healthy behavior newsletter. I'll read some titles to you, and you tell me on a 1-5 scale how interested you are in reading the story (1 = completely uninterested and 5 = very interested). If you would be offended by any of these titles, give it a score of zero.
 - a. The health benefits of fruits and vegetables
 - b. Children need 60 minutes of play every day
 - c. Vegetable recipes that children will eat
 - d. Think vegetables are too expensive? Think again.
 - e. Games to make vegetable-eating fun
 - f. Kids will eat fruit if it is the most convenient snack
 - g. How to stop the whining at dinner time
 - h. I'm not eating that, it's got green stuff in it!
 - i. Tips for buying vegetables at the local grocery store
 - j. 5 ways to sneak veggies into dinner (or another number)
5. What information could we include in our newsletter that would best help you to encourage your children to be more physically active at home? Would information on these topics be helpful?
 - a. How much physical activity children need per day.
 - b. How to get your child excited about physical activity.
 - c. New kid friendly ways to be physically active.
 - d. Physical activities for kids when it's cold outside
6. If the healthy-behavior newsletter held a kid-friendly recipe contest, would you submit a recipe? Why or why not?

7. If the healthy-behavior newsletter included a vegetable-eating challenge that asked your child to record how many vegetables they eat at home, how likely would you be to encourage their participation?
8. Would you be more willing to encourage your child's participation in the same vegetable-eating challenge if your child was awarded a small prize for participating? If so, what type of small prize would be most effective?
9. Would a similar challenge which required kids to keep a record of their physical activity be effective? Why or why not?
10. Would you be willing to complete an online survey that would take 10 minutes to complete? If not, would a prize or other incentive increase your willingness to complete the survey? If so, what type of incentive? Would having your name entered into a raffle for a prize of your choice worth \$20 be motivating?
11. What would motivate you to visit our program website for further information if directed to do so in the newsletter? What types of information or suggestions would you like on the website?
12. What kinds of vegetables do you have in your home? Probe if needed for specifics or frozen, canned, dried, fresh.
13. Where do you commonly obtain fresh vegetables? Grocery store, family garden, farm stand, farmer's market, CSA program, other? (If no mention of farmers' markets or CSAs) What has kept you from purchasing vegetables through a local farmers' market or CSA program?
14. Overall, how successful are you at getting your children to eat vegetables at home? What types of things might you do to improve your success, if necessary?

FOCUS GROUP 4 pm –Hali & Sarah Fill-in **HALI CODE**

- *Note: bullet points are for each person speaking in the order or response to the question (it varies depending on questions); K = Kynda, the moderator, when she speaks outside of reading/describing the questions; cos = my spelling of the shortened version of because.*
- Intro, names; 5 kids, 3 kids, 1 kid, 6 (+1) kids, 3 kids, 4 kids, 7 kids
- Q1:
 - I like Broccoli, that's my favorite, and I like it just steamed (K: steamed broccoli, that is good. With any butter on it?) No, not really maybe with a little salt. (K: okay great thank you)
 - That's a really hard question, um probably just romaine lettuce and spinach with a light oil and vinegar (K: okay)
 - I love all kinds of vegetables, my sons prefer broccoli and carrots, so I most make the steamed. (K: okay great thank you).
 - So I like grilled zucchini, that's probably my favorite, so with a little olive oil salt and pepper on it (K: alright, thank you)
 - Um, I like fresh peppers and kale chips
 - Um, I like cucumbers and asparagus, but I hardly ever buy it
 - I like, like, all vegetables pretty much, but actually my favorite food since I was a little kid has always been asparagus but I, like her, don't buy it that often, only hardly buy it, only when it's in season and I like it roasted with olive oil and salt and pepper, sometimes some lemon on it
- Q2: **Overwhelming grocery store (W4, S4, M3, SC3)** 1/7 FM
 - I usually just do it at the grocery store (K asks if any particular type of grocery store that you prefer) I just go to Walmart. (K: alright, thank you)
 - Um, I go to the grocery store and it's usually Smith's. I try to shop their sales and just usually eat the produce that is on sale and then in the summer we do the farmer's market (K: you do? How often do you go to the FM?) Um, I haven't been yet but last year we tried to go every week (K: oh, really? So quite often.) Mmhmm yeah. (K: Thank you)

- I go to the grocery store, like Sam's Club, Smith's. (K: okay, okay. Anything else? Don't forget there's also CSAs. Does everyone know that CSA stands for Community Supported Ag program where you get like a basket and stuff every week. So if that's something you do at all let me know.....someone else asks if they do it out here, K confirms, they have done it other places but didn't know they had them here)
- Um, grocery store exclusively (K: okay, any particular one?) It's usually, Macy's or Walmart, one of those (K: okay, Macy's or Walmart, perfect thank you)
- Smith's Marketplace, usually, and we've done the bountiful baskets in the past, um, which was great. We haven't done it for the past couple years but I've been wanting to try that again. (K: okay) And maybe once or twice a year we'll go to the FM. (K: all right, great, thank you)
- Um, usually Walmart, Smith's, or Macy's, or Sam's Club. And I have done bountiful baskets, which the same as ___ we haven't done it for a few years but it's on the list of to do's. (Something is said, but muffled. Maybe K asking about farmers markets) farmers market, I always think it'll be great to buy it there but I never get around to it (K: right, right, right. There's some CSA programs in town so if you're interested, let one of us know) Yeah the last time I did one of those was bountiful baskets. (talking, sounds like to each other quietly about bountiful baskets, muffled) (K: okay, thank you)
- Um, I typically shop at the grocery store also. I shop at Macy's a lot and Sam's Club and sometimes Walmart. And I'm glad to know that [CSA] is available here. I've done it in the past—I've lived in more rural areas. I've also done a lot of vegetable gardening myself in the past, but I don't have a spot large enough to garden anymore, so. (K: oh okay, okay)
- K: for those of you who haven't tried the FM very often, is there something that's been holding you back? You just didn't know about it or it's a bad time? Any thoughts on that? Busy, don't get to it, prices out of budget, payment method (belief) =1 of each
 - Saturdays are busy (laughter, agreement)
 - I always think it'll be fun to go and get stuff, I've heard it's really good but I just never get around to it
 - It doesn't (K: it's a convenience issue more than anything) it doesn't coincide with my budget of when I'm grocery shopping and what I need,

so usually if we end up going to the FM we end up not buying vegetables but, like, goodies (K: oh right, yeah, they do have a lot of that thing, yeah)

- I think, uhm, for me it may be payment method. And I could be completely wrong but I (mumbles something) cash or check and I don't usually carry that stuff around with me (K: yeah, yeah) so it's not a – so when I'm gonna stop and buy produce usually, for me, like, someplace where I want a quick (K: there used to be a Wells Fargo right across the street, but there's not anymore, unfortunately, I feel ya there)
- (You can use your card. Most of them accept credit cards. A lot of them do and you can get tokens that you can use around.) I was gonna say there used to be like a garage on, what was it, 4th North and 100 West (oh yeah, across from the state liquor store, oh yeah) we'd go there frequently since I moved I haven't been (muffled comment) (K: Anybody else gone to that....muffled...during the summer...so that's another shopping option in town)
- Q3 5 success (moderate to “a lot”), 1 not, 1 yes and no (large # kids) keep offering, offer variety (different preferences), make them taste, use veg. as the snack
 - None at all, (K laughs) the problem is husband hates vegetables (K: ohh) and he doesn't think anyone should have to eat things that they don't like so I shouldn't have to make the kids eat vegetables that they don't like. (K: I see) So my kids don't really –there's not that many vegetables that they eat (K: I see, okay) (they say something at the same time, inaudible)
 - (K: ____ [name]) Um, I've had a lot of success, I don't –I don't know, I'm just lucky. But I don't take no for an answer and I just keep offering (K: mmhmm, mmhmm) and they eat and they started really young and they all eat vegetables and I really offer them a large variety.
 - (baby noises kind of muffling response) I think this question is easy for me because my kids love the vegetables um that much better than the meat. (muffled, baby noises) he loves the broccoli and carrots, so and his favorite Chinese plate is fried rice so I mix the veggies and the eggs, pretty easy he could eat you know three meals a day, fried rice. (K: okay, all righty)
 - I'd say we're really successful with our kids, you know, most of them (something..) like vegetables____(K mmhmm as he says word, inaudible) most of them prefer it, almost, you know they get to pick their meals for birthdays and a lot of times they'll pick specific (K: oh really) vegetables to go along with it (K: okay. Have you used. Have you used any

techniques in particular or just left out or-) no, just kind of (K: kind of gone this is what we have to eat, so...) just when they're young we just kind of serve it the same way until they're comfortable and then after they do that we'll start doing a little different with it, but a lot of times we don't—we serve 'em steamed broccoli or we'll do green beans, we don't necessarily stick it in other stuff we serve them by themselves and they're fine. (K: okay, thank you)

- Um we've been pretty successful, um for us we continue to offer the vegetables, it's not like they necessarily took to it at first, and we would never force it down their throats, you know, we just —I'd make them try it and if they didn't like it they didn't have to eat it (K: mmhmm) um but just continuing to offer it has been good for us and worked pretty well. I also started to—I found that the time they're most hungry is right before dinner, and then they would have this big snack (K: mmhmm) and they would never eat dinner. And dinner is when the vegetables are served, you know, so I started trying to make that snack a vegetable snack and sometimes I forget and it doesn't happen all the time but um that was really great and they would- when they're most hungry at that time. (K: okay, that's a great idea, actually. I have one like that, who wants to eat at 3 and not at 6. Laughs)
- Um, uh, we do pretty good but usually my strategy is when I'm serving them dinner, like I put a little bit of the main dish, a little bit of the vegetable, a little bit of this and if they want more—like last night we had a salad and strawberries and I knew they'd want more strawberries so they had to finish their vegetables before they could have more strawberries (K: okay) so I do a small amount, enough that like they can't say they're full or something (K: right, right, right) and but uh sometimes like we call broccoli trees and it's really fun to eat trees (K: mm, right, right) you know or surprisingly the best way my kids eat vegetables is veggie trays and when I throw the raw vegetables on the veggie trays with ranch, it's like carrots, celery, olives, and a few others, I mean they can pound a vegetable tray for some reason (K: yeah, cool) which I think is interesting because it is not cooked, but (K: I was reading an article the other day and they mentioned that calling fruits and vegetables cool names actually greatly increases the amount that the kids eat for some reason, like you said the trees, right. Great, thank you. Yeah [to next person])
- Well I have had both success and failure with getting kids to eat vegetables because I have—I have children age—ranging in age from 22 to

5 so over the years, um I love vegetables, my husband likes pretty much all vegetable also, so um especially when we're having a sit down meal with the whole family I almost always um offer three or four different vegetables. So typically there's at least usually one thing that every kid will eat. I have one kid that is just like corn is his only vegetable and I realize corn is not on the top of the list of healthy vegetables but anyway um so I just think what everyone said about continuing to offer it because you know the majority of my kids will like, like cucumbers and lettuce and carrots and um. I think sometimes also just watching as they age their willingness to try variety becomes you know increased. For some, more than others, because I think we all have different taste preferences of course or else we wouldn't be able to describe what our favorite foods were. But I think generally um most of them are willing to try – interestingly, my girls are better vegetable eaters than my boys, I don't know why that is, but, but I have a couple of boys that will eat a salad if I'm having salad. They will always eat a salad if they see salad so, you know I think it's just mostly about making things available and they'll eat it –eventually. (K: Thank you)

- Q4 [switching direction of answering reverse] 4 would read/skim, 1 email, 4 recipe cos already know basic nutrition, 1 bullet point/short and sweet, 1 review to know if recipe is good
 - I, I try to go through my kids' backpacks as soon as they come home because I know if I don't do it then that I'm not going to get to it. And sometimes, sometimes like the next morning they'll hand me something out of their backpack. So I'm usually pretty interested in things that are like about health or like something that's an activity that's available or whatever, so usually if I go through their backpacks immediately I'll usually read whatever it is right then. And try to decide what I'm going to do with it at that point because I don't like to have lots of piles around (K: right) so I like to deal with it and either discard it or file it (laughs). So yeah, typically I try to see it right away or at least the next morning as they're leaving for school and they say "oh, I forgot this was in my backpack." (K: great, thank you)
 - Um, I feel like over the course of the last five years I've increased my own knowledge and tried to improve my own nutrition and gotten a lot healthier. So I feel like the times I do remember getting letters it's stuff I already know, so it's not really helpful for me cos I already know a lot about health and nutrition, you know, so anyway but I do remember one time I think one of the things had a sweet potato recipe or something and

so I enjoy like new recipes so I would skim it and then be like “oh, I know most of this” but like I remember that sweet potato one I was like “oh, I wanna try this” so I put it on the fridge. So if there’s like a recipe or um maybe some fun strategies, but it was just the basic nutrition and stuff – for me, I already know that stuff, but lot of people don’t so don’t leave it out (K: right; laughs; K: great, thank you)

- It’s funny, I think my answer is kind of the same as ____’s and I actually remember that sweet potato recipe, too. (laughter) (inaudible) I put it up on the fridge. I’m not sure I don’t think I ever made the recipe, but I was planning to. Um, but yeah I am interested in physical fitness and nutrition and so if it’s recipes or something like that would be helpful that I don’t already know. I would definitely of ~muffled~ (K: right. And do you think you would sift through the bring homes to look at it..) I would (K: you would? Okay. Wow, three for three on ____muffled; laughter)
- So my wife would probably sift through it and if she thought it was interesting she would probably share it with me. (K: mmhmm) That’s probably how it would go, but she likes a lot of stuff on fitness and nutrition. She’s kind of in the same boat, she may just skim and find out most of the stuff she already knows, but she’d love a recipe, too, or something like that. (K: mmhmm, all right, interesting. Good, all right go ahead)
- So for me when my son comes back home so the first thing we do, you know, open the backpack. And I will ask him to read all the newsletters and homework to me so for like the information nutritions it’s just up to him if he tell me or is okay but for- I ____ (inaudible). I am probably the same as these two ladies, the basic nutritions I already know, so. I’m a kind of like a feedback person so whatever I purchase I want to see the people’s comments and reviews. (K: oh I see, okay) If it’s okay I will follow it, but. (K: Oh, okay, great, ____ [name])
- So, um (sighs) I uh I don’t have a kid –like he’s going into kindergarten— and from past practice I was terrible about going through everything looking through his backpack, but if I got an email, I would definitely read it. (K: okay) Um, but same as what they said, like I feel like I know quite a bit about nutrition but I would pull a recipe out (K: mmhmm) but yeah it would probably get lost in the backpack (K: yeah, laughter, don’t feel bad, I never look at anything the backpack... chatter, inaudible)
- (K: And yourself?) I would actually probably read a newsletter more than I would email just cos I get so many emails, and so I usually try and read things that my kids come home and if there’s anything I’ll probably just

skim it like if there were bullet points or something that's short and sweet (K: right) tips to do this, or something like that (K: right) I would be much more likely (K: okay) to pay attention (K: so the way that it's presented so it's very straightforward..) Yeah (K: not like four paragraphs... okay. Okay, great, thank you)

- Q5 4/7 prefer hard copy to email, 3 would be more likely to look if it was from the school
 - If there was something that caught my eye with the email I would probably read it but otherwise I would probably delete it.- I go through my emails and delete delete delete delete fast, so but if there was something like the recipe thing— I think. I am always looking for new recipes so that would catch my eye and maybe I would read it, otherwise if it was like some basic thing I think I might just skim it and delete it. (K: and maybe mention in your thinking if you are getting too many emails from school already or you don't so you might be more...[muffled from both talking) Coming from the school um I might be more interested just because I usually worry that I'm going to miss, you know, something, so if it did come from the school that would cause me to pay a little bit more attention than if it was from a random outside source. (K: great)
 - Um, I would probably, my email issues are, I get a lot so I would probably see the title and be like "Oh, I should read this" and then maybe get to it in a week or two whereas I like the hard copy I'd read sooner, but so email I would maybe at some point get to it but my husband makes fun of my email and my inbox of things I'm going to get to...inaudible, laughter. (K: okay! Thank you.)
 - As for me, I'd get to the letter in the backpack quicker than email (K: okay, good to know)
 - I'd probably, I'd open the email and skim it. I'd probably be more likely to look at the email because I can look at it anywhere, the paper's at home, it's a little more accessible. (K: great, thank you. ____[name])
 - I'm different than you guys because I pay much attention to the school's email because it's the only way to get to know the school and get to know my kids, so I will, I will always read through every word and then also forward to my husband (K: okay, great, thank you)
 - I'm similar –if an email comes from the school, I'm going to read it. I might not, if I see that it's like.. same as before, if it's a recipe or something like that or important, I don't know. (K: Okay, perfect.)

- Mumbles...well, having kids in each school, you know, each different grade, then you get more and you get updates about sports and things like that so if it was in there with the general of course I wouldn't read it but to remember things more I would like the hard copy better cos then you can put it up on the fridge if you have something interesting that you'd like to learn (K: okay)
- Q6
 - **raised hand** 0 – (1) changed mind, educate kids about why important to eat them, a specific list of things: carrots are good for this, etc. my kids get excited about that kind of thing
 - all 7
 - 4 yes, one maybe
 - 3 and a half
 - 6
 - 4.5 (games to make veg. eating fun) –simple is better, at dinner table
 - 1 –In my overall parenting I'm trying to figure out bribes vs expecting behaviors, eat your veg because you're supposed to vs I'm going to bribe you, I'm going to give you candy if you do
 - 4
 - 1
 - 2
- Q7
 - 2 –out of curiosity
 - 0 –plenty of excitement, already are, etc.
 - 3
 - 5.5
 - 5
 - all 7 –free, winter ones hard
- Q8 –appeal to a kid 3 wouldn't, 1 if submission was easy, 1 would if Instagram or Snapchat, 2 wanted to include pictures, 1 wanted easy enough for kids to get involved
 - I would if the way to submit it was really really easy, like an email (K: Qualtrics survey or something easy that, drop it in) (muffled) If I had to

copy it and do all this stuff... If I could just copy and paste it in an email, or something convenient. (K: Okay yeah)

- I probably wouldn't (K: no, okay. Other: [jokingly] she's hogging her recipes; laughter) I wouldn't take the time to do it
- Probably wouldn't (K: no?) I don't think my wife would, either (K: okay)
- I would show the pictures, as long as the friends ask me the recipe, I will send to them. I will show the pictures.
- (K: Oh, I see. I got it, I got it. The social media aspects of this, okay, okay. Interesting ideas.) Instagram or snapchat (K: right, right, cool) ...[muffled by K] and my kid enjoying it or something
- A picture with the recipe, it is a contest makes a huge difference. (K: add a picture with the recipe. Okay, got it. Any others comments here?)
- I wouldn't cos I don't have any kids who would eat it [laughter]
- (they talk about interpretation of questions –determine that kid-friendly recipe is more to appeal to kids rather than they can make it themselves; someone says their kids would have eaten the veggie pizza at home)
- I know with my kids is that if they get involved in cooking something or preparing something they are a lot more willing to eat it or to try something new, so um to me kid-friendly could be would appeal to a kid but also would include or encourage that the kid make it (K: okay, I see, perfect)

• Q9 **2 yes, 2 depends on kid –4 responses**

- I think that would actually be really successful in my home. It would be fun and not like we're all super competitive or anything but I think like my kids would kind of especially my oldest would get into that [muffled] (K: I see. Anybody else?)
- I think it depends on the kid, but yeah my oldest would totally be motivated by that (K: Okay) all over it (K: Okay)
- Yeah, my kids (K: that would give you a homework nightmare... muffled) my kids are pretty are super competitive so they would definitely, like, rub it in each other's faces, how many carrot sticks they ate if they ate more than the other one. I can almost see it [laughs] becoming an issue though [laughs] (K: right? Too many vegetables) gorging themselves (K: yeah; laughter)
- [muffled] yeah, he wouldn't. Maybe the older kids would do it but I don't see him doing that. He's competitive but not about stuff like that.

- ****About Q7**** you know I was just thinking, I'm kind of changing my mind about this "why are vegetables so good for me?" We have like, cos my philosophy is kind of like I want to educate them on why vegetables are good for us, but not force them to eat them or anything just educate them and continue to offer it and encourage them to listen to their bodies you know... tell us when they're hungry or full [muffled] try to make good choices for their health so I think it might be a good idea to have kind of a list of specifics, like "carrots are good for this" cos my kids get excited when they know that when I eat carrots it's going to help my eyes it's going to help me see better in the dark! I don't know how true that is...[muffled] but yeah it makes them know that it's specifically good for something so it might be kind of nice to get kind of specific lists to be able to educate them. (K: like chia seeds are supposed to do this). Yeah (K: That kind of stuff?) yeah (K: Yeah that's actually common marketing technique. Okay, good. Um...)
- Q10 4 suggest coupon to somewhere, 2 yes certificate, 1 no certificate
 - If I could get a prize for participating [laughter, agreement] (K: parents prize, okay)
 - I don't think it would make a difference for me (K: okay) because of how good the challenge is for them, I think it wouldn't make a difference (K: it could even be a certificate or something simple)
 - That's what I think (K: says something) like yeah a gift certificate or be in a vegetable club or something
 - [lots of talking at once] We would probably throw a certificate away [more talking]
 - it would be fun for like a week, for a week we'd be like yeah good job for eating your vegetables and then the certificate would go away but I mean he earned the certificate. He'd be proud of himself for a week. (K: so any other small incentives that might be helpful?)
 - my kids like free food at places, like at the yogurt place or the you know whatever sandwich sub place. So that, to me, because it's a food-related thing (K: like a coupon) yeah
 - [muffled, talking at once] maybe a certificate to the farmer's market, too. And make them pick out a vegetable ...talking... maybe a U-pick or something like that. Do they have any of those around here? (Other responds yes, they've gone before. K: there's some seasonality

problems depending on when you run the program, but yeah, I like those ideas, especially the coupon idea....)

- Yeah, anytime my kids get any type of coupon in their hands for something... and when Saturday rolls around they want to go to every place in town they have a coupon to [muffled, laughter] (K: wow, okay okay) I mean, obviously they're motivated by stuff like that, but they're very motivated by that.
- I love that too, how it makes them... if they get a coupon for the FM and vegetable it makes it seem like a prize instead of just sugar, they get a prize (K: suggests coupon would be worth more for vegetable rather than candy, would they make that distinction? –two people agree they would rather not have sugar as an option, they still might choose the sugary thing; coupon specifically for veg. would reinforce what the whole contest was originally about. K: okay, good to know)
- Q11 **2 yes, 2 want family vs child, 2 tie veg. and PA into one challenge, 1 app**
 - Much more effective at my house than the eating (K: okay)
 - Way more, that would be like a full-on everyone would be battling it up (K: yeah, a fit bit challenge, right, keep track of it all[?]) yeah, way more motivational than the food
 - I think it would be fun, too, like if it could be as a family and maybe you have it on percentage scales so someone who has 7 kids isn't competing against someone with like one kid [laugh] (K: right) maybe it's like if the family were to earn a certain amount of physical activity time you're awarded (K: right, per person or something, yeah, that's a great idea, anyone else?)
 - Yeah I think it's great, it's a great idea. I would say maybe tie um if you're going to give a prize for the winner or something like that have it be a couple of passes to the aquatic center or someplace like that (K: mm, mmhmm, physical) where they can be physically active (K: right, [muffled] sports academy) yeah, I do like the idea of involving your entire family um cos, you know, if it's just launched in an elementary school that would be 2 of my 6 kids, but if we involve the whole family that's 6 kids plus 2 adults getting out more (K: right, a lot more games for six people moving and not.. yeah)
 - Well insurance companies and stuff my husband's had employers before that have done kind of similar type programs where you're competing against all the other employees for whether it's for how many— you

know they give out little pedometers and how many whoever gets the most steps you know so you may not do that at a school-aged level, but, you know, something like that where you're competing I think is very motivational for most (K: yeah) any kid that's competitive at all is gonna jump right on board that. And maybe you could tie in the exercise and the eating you know five veg per day. I've participated in things myself like competitions with other people where everybody throws \$10 in the pot and you have to eat a minimum of 5 veg a day and take this many steps and do this much activity or whatever, so you'd probably do it differently if you're gearing it towards children mainly, but I think something like that where you could tie it all in would then.. My kids would not be motivated by the healthy eating, if it was part of the challenge would maybe become more motivated than if either they were just each separate. (K: so combined programs, okay) like a fitness-

- I agree. I think that's a good idea cos my kids have no problem doing the PA stuff and things like that but yeah if you add that in then, you know, they might be more likely to "okay if I really want to win this then I eat ___" (K: right, right, eat their vegetables. That might be their balancer) Would there be an app or how would you...(K: I have no idea; laughter) I think that would make it even better to be like on the iPad (K: [interrupts]) well it would be easier to record it better, obviously, for all of us if we were in that situation, yeah, but um I don't know how that might be implicated, but I can see how an app could be a real possibility, yeah yeah. Each family had their own team roster and you just fill it in, like any person on the team could fill it in or have one person be the official tracker yeah...that's a great idea to have an app. You could kinda compete with each other. Like I have this thing- you could compete with friends, you could see each other's stuff. You know, maybe if you have several families.. You know I could see how that could even for some kids, they would really want to be able to check in with their friend down the street; I could see that also becoming an issue; laughter) but it's a good idea.

- Q12 2 (probably) without incentive, 2 depends on the day, 5 yes incentives 3 coupon, 2 enter into a drawing, multiple yes for email, 1 not email/yes paper
 - I wouldn't mind if it was a short survey I honestly wouldn't mind but it would be more enticing if there was an incentive attached to it. (K: okay, okay. Does it need to be monetary incentive or could it be a coupon or what types of things would be okay?) Like the coupon thing, I think adults

get just as excited about coupons as kids, so yeah just something that was like “hey this was worth my time to do”, you know kind of thing

- But not like a 10% coupon [laughter].....\$5 on iTunes
- Yeah I’m right there, my time is really taken up by a lot so to sit down and take a survey I would need to be motivated, to be brutally honest. Unless it was like I was really motivated by helping my kids in some way, that would motivate me, too. (K: okay, okay) like a coupon is great
- So as long as the survey is from school, I would definitely do that. I always want to help out, so the prize is a bonus. But if no prize, I will do that too. (K: okay) It just takes ten minutes (K: okay, okay. Great thank you)
- I’d probably want a prize, and I’d probably want a survey that didn’t involve a lot of open-ended questions that require typed answers personally, myself [agreement] but if it’s just do it on your phone anywhere, but if you’ve gotta type things in ten minutes can turn into twenty, I don’t know...so that’s my opinion. But I would like an incentive or at least be put in for a drawing or something. (K: oh, okay, okay, yeah that would be another option) obviously if you’re being put in for a drawing I expect it to be bigger than \$5 off [laughter]
- I would like to think that I’d just do it, but it probably depends on the day. Some days are busy, so but yeah an incentive would probably make me more likely to take the time. (K: would having an amount of days and knowing that upfront be helpful? Please take this by...) If it was an email I’d probably look at it and be like “oh, I’ve got a few days” and then forget about it (K: oh, yeah that’s great)
- Um, just depends. I’m always motivated by incentives, but sometimes I like to be more like you and just do it out of the goodness of my heart. But I actually am the opposite of him whereas sometimes I don’t like surveys when you only have like the numbers because I feel like I’m always in the grey area and I want to be able to explain that more, so. Probably a shorter survey but open-ended questions I would.
- Well I do a little bit of this for a business, I take some surveys and actually test products and things, and um and that’s been very motivational for me and they always give me a time limit on how long I have you know you have until this day, and then um usually I am entered into a drawing but um it’s worked out really well for me I’ve received a lot of really cool products and things by doing that so that has become a very motivating thing for me...I like taking surveys. I enjoy doing things like that because um there’s an incentive—I’m being rewarded. So [muffled] I am very

motivated by that I feel like it's useful to me and also useful to the people I'm doing it for. So.

- (K: if it came in an email or on the school's Facebook page or um um I had a teacher who used Remind, if it came up on that would that be more helpful than on an email?) Email best for me [agreement]; even a text saying do you want to take a survey, I'd probably click on that; Facebook would probably be the least [agreement]
 - Deadline/time limit would be helpful
 - Enter into a drawing or something, being rewarded
 - Multiple people: email
 - Facebook would be least
 - One: text message
- Q13 2 track Game progress/results, 1 recipes, 1 further info, 1 challenge etc. info
 - Yeah
 - I think for recipes for sure, if there were more recipes
 - For further information
 - For info on the challenge or whatever, yeah
 - [muffled] Or if we could even see what things our kids are doing in school. If they're participating in it and it said "here's what they've done so far, here's some of what we recorded" cos with the FIT Game, I know my child did it, but I didn't really ever see much about what he was doing or what were the results of the test he was given or whatever, I didn't see much of that, so I would be interested in knowing the basic intent or if he did some other kind of a test what the results were being tested in that. (K: so like activities they're doing, pictures, results, that kind of thing)
 - I was going to say the same, I remember hearing about the FIT Game and seeing some of the newsletters and always thinking "oh, he's been learning about this?" I would have liked to have known what he'd been learning about that week and maybe I could have reinforced it at home (K: okay, okay) you know, like so whether that came through email or, I dunno. If it came through email, a link to the website would be easier than me just having to go to the website. (K: okay)it would have been nice to track and see what kind of things he was learning about (K: good, good, anything else?)
- Comments:

- I'm excited about this program
- I like idea of challenge of some kind of a challenge for the kids, some sort of a fitness challenge that includes nutrition and PA aspect... I think there's a lot of kids who would be really motivated by that, and I think parents would be motivated to get involved and participate
- Especially if you got the whole family involved like you said it's when you have kids at different schools and you only have on kid participating in it but, "if your family does this..." you know, it would be a lot easier cos just trying to get one kid with kids at difference schools is hard

Parent meeting to kick off things cos some parents don't check their email or backpacks, find ways to reach out to those who aren't as involved, different times, would probably reach more

FOCUS GROUP 4 pm –Hali & Sarah Fill-in AMY CODE

- *Note: bullet points are for each person speaking in the order or response to the question (it varies depending on questions); K = Kynda, the moderator, when she speaks outside of reading/describing the questions; cos = my spelling of the shortened version of because.*
- Intro, names; 5 kids, 3 kids, 1 kid, 6 (+1) kids, 3 kids, 4 kids, 7 kids
- Q1:
 - I like Broccoli, that's my favorite, and I like it just steamed (K: steamed broccoli, that is good. With any butter on it?) No, not really maybe with a little salt. (K: okay great thank you)
 - That's a really hard question, um probably just romaine lettuce and spinach with a light oil and vinegar (K: okay)
 - I love all kinds of vegetables, my sons prefer broccoli and carrots, so I most make the steamed. (K: okay great thank you).
 - So I like grilled zucchini, that's probably my favorite, so with a little olive oil salt and pepper on it (K: alright, thank you)
 - Um, I like fresh peppers and kale chips
 - Um, I like cucumbers and asparagus, but I hardly ever buy it
 - I like, like, all vegetables pretty much, but actually my favorite food since I was a little kid has always been asparagus but I, like her, don't buy it that often, only hardly buy it, only when it's in season and I like it roasted with olive oil and salt and pepper, sometimes some lemon on it
- Q2: 7 responses: Shop at grocery store (4: Walmart, 4: Smiths, 3: Sam's Club, 3: Macy's). 1 response: Shop at farmer's market. 3 responses: have used CSA. 1: grown own garden in the past. Responses to why they haven't attended farmer's market include: lack convenience, busy schedule, cost, and payment methods.
 - I usually just do it at the grocery store (K asks if any particular type of grocery store that you prefer) I just go to Walmart. (K: alright, thank you)
 - Um, I go to the grocery store and it's usually Smith's. I try to shop their sales and just usually eat the produce that is on sale and then in the summer we do the farmer's market (K: you do? How often do you go to

the FM?) Um, I haven't been yet but last year we tried to go every week (K: oh, really? So quite often.) Mmhmm yeah. (K: Thank you)

- I go to the grocery store, like Sam's Club, Smith's. (K: okay, okay. Anything else? Don't forget there's also CSAs. Does everyone know that CSA stands for Community Supported Ag program where you get like a basket and stuff every week. So if that's something you do at all let me know.....someone else asks if they do it out here, K confirms, they have done it other places but didn't know they had them here)
- Um, grocery store exclusively (K: okay, any particular one?) It's usually, Macy's or Walmart, one of those (K: okay, Macy's or Walmart, perfect thank you)
- Smith's Marketplace, usually, and we've done the bountiful baskets in the past, um, which was great. We haven't done it for the past couple years but I've been wanting to try that again. (K: okay) And maybe once or twice a year we'll go to the FM. (K: all right, great, thank you)
- Um, usually Walmart, Smith's, or Macy's, or Sam's Club. And I have done bountiful baskets, which the same as we haven't done it for a few years but it's on the list of to do's. (Something is said, but muffled. Maybe K asking about farmers markets) farmers market, I always think it'll be great to buy it there but I never get around to it (K: right, right, right. There's some CSA programs in town so if you're interested, let one of us know) Yeah the last time I did one of those was bountiful baskets. (talking, sounds like to each other quietly about bountiful baskets, muffled) (K: okay, thank you)
- Um, I typically shop at the grocery store also. I shop at Macy's a lot and Sam's Club and sometimes Walmart. And I'm glad to know that [CSA] is available here. I've done it in the past –I've lived in more rural areas. I've also done a lot of vegetable gardening myself in the past, but I don't have a spot large enough to garden anymore, so. (K: oh okay, okay)
- K: for those of you who haven't tried the FM very often, is there something that's been holding you back? You just didn't know about it or it's a bad time? Any thoughts on that?
 - Saturdays are busy (laughter, agreement)
 - I always think it'll be fun to go and get stuff, I've heard it's really good but I just never get around to it
 - It doesn't (K: it's a convenience issue more than anything) it doesn't coincide with my budget of when I'm grocery shopping and what I need,

so usually if we end up going to the FM we end up not buying vegetables but, like, goodies (K: oh right, yeah, they do have a lot of that thing, yeah)

- I think, uhm, for me it may be payment method. And I could be completely wrong but I (mumbles something) cash or check and I don't usually carry that stuff around with me (K: yeah, yeah) so it's not a – so when I'm gonna stop and buy produce usually, for me, like, someplace where I want a quick (K: there used to be a Wells Fargo right across the street, but there's not anymore, unfortunately, I feel ya there)
- (You can use your card. Most of them accept credit cards. A lot of them do and you can get tokens that you can use around.) I was gonna say there used to be like a garage on, what was it, 4th North and 100 West (oh yeah, across from the state liquor store, oh yeah) we'd go there frequently since I moved I haven't been (muffled comment) (K: Anybody else gone to that....muffled...during the summer...so that's another shopping option in town)
- Q3 5 responses: successful with kids eating veggies. 1 response: not successful. 1 response: yes/no. How are they successful? Keep offering/don't take no as an answer. Offer choice. Veggies as snacks. Prepare foods in different ways.
 - None at all, (K laughs) the problem is husband hates vegetables (K: ohh) and he doesn't think anyone should have to eat things that they don't like so I shouldn't have to make the kids eat vegetables that they don't like. (K: I see) So my kids don't really –there's not that many vegetables that they eat (K: I see, okay) (they say something at the same time, inaudible)
 - (K: ___ [name]) Um, I've had a lot of success, I don't –I don't know, I'm just lucky. But I don't take no for an answer and I just keep offering (K: mmhmm, mmhmm) and they eat and they started really young and they all eat vegetables and I really offer them a large variety.
 - (baby noises kind of muffling response) I think this question is easy for me because my kids love the vegetables um that much better than the meat. (muffled, baby noises) he loves the broccoli and carrots, so and his favorite Chinese plate is fried rice so I mix the veggies and the eggs, pretty easy he could eat you know three meals a day, fried rice. (K: okay, all righty)
 - I'd say we're really successful with our kids, you know, most of them (something..) like vegetables ___ (K mmhmm as he says word, inaudible) most of them prefer it, almost, you know they get to pick their meals for birthdays and a lot of times they'll pick specific (K: oh really) vegetables

to go along with it (K: okay. Have you used. Have you used any techniques in particular or just left out or-) no, just kind of (K: kind of gone this is what we have to eat, so...) just when they're young we just kind of serve it the same way until they're comfortable and then after they do that we'll start doing a little different with it, but a lot of times we don't—we serve 'em steamed broccoli or we'll do green beans, we don't necessarily stick it in other stuff we serve them by themselves and they're fine. (K: okay, thank you)

- Um we've been pretty successful, um for us we continue to offer the vegetables, it's not like they necessarily took to it at first, and we would never force it down their throats, you know, we just—I'd make them try it and if they didn't like it they didn't have to eat it (K: mmhmm) um but just continuing to offer it has been good for us and worked pretty well. I also started to—I found that the time they're most hungry is right before dinner, and then they would have this big snack (K: mmhmm) and they would never eat dinner. And dinner is when the vegetables are served, you know, so I started trying to make that snack a vegetable snack and sometimes I forget and it doesn't happen all the time but um that was really great and they would- when they're most hungry at that time. (K: okay, that's a great idea, actually. I have one like that, who wants to eat at 3 and not at 6. Laughs)
- Um, uh, we do pretty good but usually my strategy is when I'm serving them dinner, like I put a little bit of the main dish, a little bit of the vegetable, a little bit of this and if they want more—like last night we had a salad and strawberries and I knew they'd want more strawberries so they had to finish their vegetables before they could have more strawberries (K: okay) so I do a small amount, enough that like they can't say they're full or something (K: right, right, right) and but uh sometimes like we call broccoli trees and it's really fun to eat trees (K: mm, right, right) you know or surprisingly the best way my kids eat vegetables is veggie trays and when I throw the raw vegetables on the veggie trays with ranch, it's like carrots, celery, olives, and a few others, I mean they can pound a vegetable tray for some reason (K: yeah, cool) which I think is interesting because it is not cooked, but (K: I was reading an article the other day and they mentioned that calling fruits and vegetables cool names actually greatly increases the amount that the kids eat for some reason, like you said the trees, right. Great, thank you. Yeah [to next person])

- Well I have had both success and failure with getting kids to eat vegetables because I have –I have children age –ranging in age from 22 to 5 so over the years, um I love vegetables, my husband likes pretty much all vegetable also, so um especially when we’re having a sit down meal with the whole family I almost always um offer three or four different vegetables. So typically there’s at least usually one thing that every kid will eat. I have one kid that is just like corn is his only vegetable and I realize corn is not on the top of the list of healthy vegetables but anyway um so I just think what everyone said about continuing to offer it because you know the majority of my kids will like, like cucumbers and lettuce and carrots and um. I think sometimes also just watching as they age their willingness to try variety becomes you know increased. For some, more than others, because I think we all have different taste preferences of course or else we wouldn’t be able to describe what our favorite foods were. But I think generally um most of them are willing to try – interestingly, my girls are better vegetable eaters than my boys, I don’t know why that is, but, but I have a couple of boys that will eat a salad if I’m having salad. They will always eat a salad if they see salad so, you know I think it’s just mostly about making things available and they’ll eat it –eventually. (K: Thank you)
- Q4 [switching direction of answering reverse]
 - I, I try to go through my kids’ backpacks as soon as they come home because I know if I don’t do it then that I’m not going to get to it. And sometimes, sometimes like the next morning they’ll hand me something out of their backpack. So I’m usually pretty interested in things that are like about health or like something that’s an activity that’s available or whatever, so usually if I go through their backpacks immediately I’ll usually read whatever it is right then. And try to decide what I’m going to do with it at that point because I don’t like to have lots of piles around (K: right) so I like to deal with it and either discard it or file it (laughs). So yeah, typically I try to see it right away or at least the next morning as they’re leaving for school and they say “oh, I forgot this was in my backpack.” (K: great, thank you)
 - Um, I feel like over the course of the last five years I’ve increased my own knowledge and tried to improve my own nutrition and gotten a lot healthier. So I feel like the times I do remember getting letters it’s stuff I already know, so it’s not really helpful for me cos I already know a lot about health and nutrition, you know, so anyway but I do remember one time I think one of the things had a sweet potato recipe or something and

so I enjoy like new recipes so I would skim it and then be like “oh, I know most of this” but like I remember that sweet potato one I was like “oh, I wanna try this” so I put it on the fridge. So if there’s like a recipe or um maybe some fun strategies, but it was just the basic nutrition and stuff – for me, I already know that stuff, but lot of people don’t so don’t leave it out (K: right; laughs; K: great, thank you)

- It’s funny, I think my answer is kind of the same as ____’s and I actually remember that sweet potato recipe, too. (laughter) (inaudible) I put it up on the fridge. I’m not sure I don’t think I ever made the recipe, but I was planning to. Um, but yeah I am interested in physical fitness and nutrition and so if it’s recipes or something like that would be helpful that I don’t already know. I would definitely of ~muffled~ (K: right. And do you think you would sift through the bring homes to look at it..) I would (K: you would? Okay. Wow, three for three on ____muffled; laughter)
- So my wife would probably sift through it and if she thought it was interesting she would probably share it with me. (K: mmhmm) That’s probably how it would go, but she likes a lot of stuff on fitness and nutrition. She’s kind of in the same boat, she may just skim and find out most of the stuff she already knows, but she’d love a recipe, too, or something like that. (K: mmhmm, all right, interesting. Good, all right go ahead)
- So for me when my son comes back home so the first thing we do, you know, open the backpack. And I will ask him to read all the newsletters and homework to me so for like the information nutritions it’s just up to him if he tell me or is okay but for- I ____ (inaudible). I am probably the same as these two ladies, the basic nutritions I already know, so. I’m a kind of like a feedback person so whatever I purchase I want to see the people’s comments and reviews. (K: oh I see, okay) If it’s okay I will follow it, but. (K: Oh, okay, great, ____ [name])
- So, um (sighs) I uh I don’t have a kid –like he’s going into kindergarten— and from past practice I was terrible about going through everything looking through his backpack, but if I got an email, I would definitely read it. (K: okay) Um, but same as what they said, like I feel like I know quite a bit about nutrition but I would pull a recipe out (K: mmhmm) but yeah it would probably get lost in the backpack (K: yeah, laughter, don’t feel bad, I never look at anything the backpack.. chatter, inaudible)
- (K: And yourself?) I would actually probably read a newsletter more than I would email just cos I get so many emails, and so I usually try and read things that my kids come home and if there’s anything I’ll probably just

skim it like if there were bullet points or something that's short and sweet (K: right) tips to do this, or something like that (K: right) I would be much more likely (K: okay) to pay attention (K: so the way that it's presented so it's very straightforward..) Yeah (K: not like four paragraphs.. okay. Okay, great, thank you)

- Q5 3 would prefer hard copy. 4 would read/skim emails. 2 responses: more likely to read because it is from the school.
 - If there was something that caught my eye with the email I would probably read it but otherwise I would probably delete it.- I go through my emails and delete delete delete delete fast, so but if there was something like the recipe thing— I think. I am always looking for new recipes so that would catch my eye and maybe I would read it, otherwise if it was like some basic thing I think I might just skim it and delete it. (K: and maybe mention in your thinking if you are getting too many emails from school already or you don't so you might be more...[muffled from both talking] Coming from the school um I might be more interested just because I usually worry that I'm going to miss, you know, something, so if it did come from the school that would cause me to pay a little bit more attention than if it was from a random outside source. (K: great)
 - Um, I would probably, my email issues are, I get a lot so I would probably see the title and be like "Oh, I should read this" and then maybe get to it in a week or two whereas I like the hard copy I'd read sooner, but so email I would maybe at some point get to it but my husband makes fun of my email and my inbox of things I'm going to get to...inaudible, laughter. (K: okay! Thank you.)
 - As for me, I'd get to the letter in the backpack quicker than email (K: okay, good to know)
 - I'd probably, I'd open the email and skim it. I'd probably be more likely to look at the email because I can look at it anywhere, the paper's at home, it's a little more accessible. (K: great, thank you. ____[name])
 - I'm different than you guys because I pay much attention to the school's email because it's the only way to get to know the school and get to know my kids, so I will, I will always read through every word and then also forward to my husband (K: okay, great, thank you)
 - I'm similar —if an email comes from the school, I'm going to read it. I might not, if I see that it's like.. same as before, if it's a recipe or something like that or important, I don't know. (K: Okay, perfect.)

- Mumbles...well, having kids in each school, you know, each different grade, then you get more and you get updates about sports and things like that so if it was in there with the general of course I wouldn't read it but to remember things more I would like the hard copy better cos then you can put it up on the fridge if you have something interesting that you'd like to learn (K: okay)
- Q6
 - **raised hand** 0 –changed mind, educate kids about why important to eat them, a specific list of things: carrots are good for this, etc. my kids get excited about that kind of thing
 - all 7
 - 4 yes, one maybe
 - 3 and a half
 - 6
 - 4.5 (games to make veg. eating fun) –simple is better, at dinner table
 - 1 –In my overall parenting I'm trying to figure out bribes vs expecting behaviors, eat your veg because you're supposed to vs I'm going to bribe you, I'm going to give you candy if you do
 - 4
 - 1
 - 2
- Q7
 - 2 –out of curiosity
 - 0 –plenty of excitement, already are, etc.
 - 3
 - 5.5
 - 5
 - all 7 –free, winter ones hard
- Q8 –appeal to a kid 3 would not submit. 1 would, if it was easy. 3 would like to see recipes with pictures.
 - I would if the way to submit it was really really easy, like an email (K: Qualtrics survey or something easy that, drop it in) (muffled) If I had to

copy it and do all this stuff.. If I could just copy and paste it in an email, or something convenient. (K: Okay yeah)

- I probably wouldn't (K: no, okay. Other: [jokingly] she's hogging her recipes; laughter) I wouldn't take the time to do it
- Probably wouldn't (K: no?) I don't think my wife would, either (K: okay)
- I would show the pictures, as long as the friends ask me the recipe, I will send to them. I will show the pictures.
- (K: Oh, I see. I got it, I got it. the social media aspects of this, okay, okay. Interesting ideas.) Instagram or snapchat (K: right, right, cool) ...[muffled by K] and my kid enjoying it or something
- A picture with the recipe, it is a contest makes a huge difference. (K: add a picture with the recipe. Okay, got it. Any others comments here?)
- I wouldn't cos I don't have any kids who would eat it [laughter]
- (they talk about interpretation of questions –determine that kid-friendly recipe is more to appeal to kids rather than they can make it themselves; someone says their kids would have eaten the veggie pizza at home)
- I know with my kids is that if they get involved in cooking something or preparing something they are a lot more willing to eat it or to try something new, so um to me kid-friendly could be would appeal to a kid but also would include or encourage that the kid make it (K: okay, I see, perfect)
- Q9 3 responses: would be successful with their kids. 1 response: kid would not be interested.
 - I think that would actually be really successful in my home. It would be fun and not like we're all super competitive or anything but I think like my kids would kind of especially my oldest would get into that [muffled] (K: I see. Anybody else?)
 - I think it depends on the kid, but yeah my oldest would totally be motivated by that (K: Okay) all over it (K: Okay)
 - Yeah my kids (K: that would give you a homework nightmare...muffled) my kids are pretty are super competitive so they would definitely, like, rub it in each other's faces, how many carrot sticks they ate if they ate more than the other one. I can almost see it [laughs] becoming an issue though [laughs] (K: right? Too many vegetables) gorging themselves (K: yeah; laughter)

- [muffled] yeah, he wouldn't. Maybe the older kids would do it but I don't see him doing that. He's competitive but not about stuff like that.
- ****About Q7**** you know I was just thinking, I'm kind of changing my mind about this "why are vegetables so good for me?" We have like, cos my philosophy is kind of like I want to educate them on why vegetables are good for us, but not force them to eat them or anything just educate them and continue to offer it and encourage them to listen to their bodies you know... tell us when they're hungry or full [muffled] try to make good choices for their health so I think it might be a good idea to have kind of a list of specifics, like "carrots are good for this" cos my kids get excited when they know that when I eat carrots it's going to help my eyes it's going to help me see better in the dark! I don't know how true that is...[muffled] but yeah it makes them know that it's specifically good for something so it might be kind of nice to get kind of specific lists to be able to educate them. (K: like chia seeds are supposed to do this). Yeah (K: That kind of stuff?) yeah (K: Yeah that's actually common marketing technique. Okay, good. Um...)
- Q10 7 **responses: yes. 1 response: no difference.** **Ideas for prizes: coupons, vegetable club, gift certificate, u-pick at farmer's market.**
 - If I could get a prize for participating [laughter, agreement] (K: parents prize, okay)
 - I don't think it would make a difference for me (K: okay) because of how good the challenge is for them, I think it wouldn't make a difference (K: it could even be a certificate or something simple)
 - That's what I think (K: says something) like yeah a gift certificate or be in a vegetable club or something
 - [lots of talking at once] We would probably throw a certificate away [more talking]
 - it would be fun for like a week, for a week we'd be like yeah good job for eating your vegetables and then the certificate would go away but I mean he earned the certificate. He'd be proud of himself for a week. (K: so any other small incentives that might be helpful?)
 - my kids like free food at places, like at the yogurt place or the you know whatever sandwich sub place. So that, to me, because it's a food-related thing (K: like a coupon) yeah
 - [muffled, talking at once] maybe a certificate to the farmer's market, too. And make them pick out a vegetable ...talking... maybe a U-pick or

something like that. Do they have any of those around here? (Other responds yes, they've gone before. K: there's some seasonality problems depending on when you run the program, but yeah, I like those ideas, especially the coupon idea....)

- Yeah, anytime my kids get any type of coupon in their hands for something. and when Saturday rolls around they want to go to every place in town they have a coupon to [muffled, laughter] (K: wow, okay okay) I mean, obviously they're motivated by stuff like that, but they're very motivated by that.
- I love that too, how it makes them.. if they get a coupon for the FM and vegetable it makes it seem like a prize instead of just sugar, they get a prize (K: suggests coupon would be worth more for vegetable rather than candy, would they make that distinction? –two people agree they would rather not have sugar as an option, they still might choose the sugary thing; coupon specifically for veg. would reinforce what the whole contest was originally about. K: okay, good to know)

• Q11 5 responses: likely to encourage.

- Much more effective at my house than the eating (K: okay)
- Way more, that would be like a full-on everyone would be battling it up (K: yeah, a fit bit challenge, right, keep track of it all[?]) yeah, way more motivational than the food
- I think it would be fun, too, like if it could be as a family and maybe you have it on percentage scales so someone who has 7 kids isn't competing against someone with like one kid [laugh] (K: right) maybe it's like if the family were to earn a certain amount of physical activity time you're awarded (K: right, per person or something, yeah, that's a great idea, anyone else?)
- Yeah I think it's great, it's a great idea. I would say maybe tie um if you're going to give a prize for the winner or something like that have it be a couple of passes to the aquatic center or someplace like that (K: mm, mmhmm, physical) where they can be physically active (K: right, [muffled] sports academy) yeah, I do like the idea of involving your entire family um cos, you know, if it's just launched in an elementary school that would be 2 of my 6 kids, but if we involve the whole family that's 6 kids plus 2 adults getting out more (K: right, a lot more games for six people moving and not.. yeah)

- Well insurance companies and stuff my husband's had employers before that have done kind of similar type programs where you're competing against all the other employees for whether it's for how many— you know they give out little pedometers and how many whoever gets the most steps you know so you may not do that at a school-aged level, but, you know, something like that where you're competing I think is very motivational for most (K: yeah) any kid that's competitive at all is gonna jump right on board that. And maybe you could tie in the exercise and the eating you know five veg per day. I've participated in things myself like competitions with other people where everybody throws \$10 in the pot and you have to eat a minimum of 5 veg a day and take this many steps and do this much activity or whatever, so you'd probably do it differently if you're gearing it towards children mainly, but I think something like that where you could tie it all in would then.. My kids would not be motivated by the healthy eating, if it was part of the challenge would maybe become more motivated than if either they were just each separate. (K: so combined programs, okay) like a fitness-
- I agree. I think that's a good idea cos my kids have no problem doing the PA stuff and things like that but yeah if you add that in then, you know, they might be more likely to “okay if I really want to win this then I eat—” (K: right, right, eat their vegetables. That might be their balancer) Would there be an app or how would you...(K: I have no idea; laughter) I think that would make it even better to be like on the iPad (K: [interrupts]) well it would be easier to record it better, obviously, for all of us if we were in that situation, yeah, but um I don't know how that might be implicated, but I can see how an app could be a real possibility, yeah yeah. Each family had their own team roster and you just fill it in, like any person on the team could fill it in or have one person be the official tracker yeah...that's a great idea to have an app. You could kinda compete with each other. Like I have this thing- you could compete with friends, you could see each other's stuff. You know, maybe if you have several families.. You know I could see how that could even for some kids, they would really want to be able to check in with their friend down the street; I could see that also becoming an issue; laughter) but it's a good idea.
- Q12 3 responses: would with incentive. 1 response: would without incentive. 2 responses: unsure (depends on day/mood). Easy surveys – no/limited open-ended questions.

- I wouldn't mind if it was a short survey I honestly wouldn't mind but it would be more enticing if there was an incentive attached to it. (K: okay, okay. Does it need to be monetary incentive or could it be a coupon or what types of things would be okay?) Like the coupon thing, I think adults get just as excited about coupons as kids, so yeah just something that was like "hey this was worth my time to do", you know kind of thing
- But not like a 10% coupon [laughter].....\$5 on iTunes
- Yeah I'm right there, my time is really taken up by a lot so to sit down and take a survey I would need to be motivated, to be brutally honest. Unless it was like I was really motivated by helping my kids in some way, that would motivate me, too. (K: okay, okay) like a coupon is great
- So as long as the survey is from school, I would definitely do that. I always want to help out, so the prize is a bonus. But if no prize, I will do that too. (K: okay) It just takes ten minutes (K: okay, okay. Great thank you)
- I'd probably want a prize, and I'd probably want a survey that didn't involve a lot of open-ended questions that require typed answers personally, myself [agreement] but if it's just do it on your phone anywhere, but if you've gotta type things in ten minutes can turn into twenty, I don't know...so that's my opinion. But I would like an incentive or at least be put in for a drawing or something. (K: oh, okay, okay, yeah that would be another option) obviously if you're being put in for a drawing I expect it to be bigger than \$5 off [laughter]
- I would like to think that I'd just do it, but it probably depends on the day. Some days are busy, so but yeah an incentive would probably make me more likely to take the time. (K: would having an amount of days and knowing that upfront be helpful? Please take this by...) If it was an email I'd probably look at it and be like "oh, I've got a few days" and then forget about it (K: oh, yeah that's great)
- Um, just depends. I'm always motivated by incentives, but sometimes I like to be more like you and just do it out of the goodness of my heart. But I actually am the opposite of him whereas sometimes I don't like surveys when you only have like the numbers because I feel like I'm always in the grey area and I want to be able to explain that more, so. Probably a shorter survey but open-ended questions I would.
- Well I do a little bit of this for a business, I take some surveys and actually test products and things, and um and that's been very motivational for me and they always give me a time limit on how long I have you know you have until this day, and then um usually i am entered into a drawing

but um it's worked out really well for me I've received a lot of really cool products and things by doing that so that has become a very motivating thing for me...I like taking surveys. I enjoy doing things like that because um there's an incentive—I'm being rewarded. So [muffled] I am very motivated by that I feel like it's useful to me and also useful to the people I'm doing it for. So.

- (K: if it came in an email or on the school's Facebook page or um um I had a teacher who used Remind, if it came up on that would that be more helpful than on an email?) Email best for me [agreement]; even a text saying do you want to take a survey, I'd probably click on that; Facebook would probably be the least [agreement]
 - Deadline/time limit would be helpful
 - Enter into a drawing or something, being rewarded
 - Multiple people: email
 - Facebook would be least
 - One: text message
- Q13 6 responses: would use website. Would visit for recipes: more info, what kids are doing in school, updates on FIT game.
 - Yeah
 - I think for recipes for sure, if there were more recipes
 - For further information
 - For info on the challenge or whatever, yeah
 - [muffled] Or if we could even see what things our kids are doing in school. If they're participating in it and it said "here's what they've done so far, here's some of what we recorded" cos with the FIT Game, I know my child did it, but I didn't really ever see much about what he was doing or what were the results of the test he was given or whatever, I didn't see much of that, so I would be interested in knowing the basic intent or if he did some other kind of a test what the results were being tested in that. (K: so like activities they're doing, pictures, results, that kind of thing)
 - I was going to say the same, I remember hearing about the FIT Game and seeing some of the newsletters and always thinking "oh, he's been learning about this?" I would have liked to have known what he'd been learning about that week and maybe I could have reinforced it at home (K: okay, okay) you know, like so whether that came through email or, I dunno. If it came through email, a link to the website would be easier

than me just having to go to the website. (K: okay)it would have been nice to track and see what kind of things he was learning about (K: good, good, anything else?)

- Comments:
 - I'm excited about this program
 - I like idea of challenge of some kind of a challenge for the kids, some sort of a fitness challenge that includes nutrition and PA aspect.. I think there's a lot of kids who would be really motivated by that, and I think parents would be motivated to get involved and participate
 - Especially if you got the whole family involved like you said it's when you have kids at different schools and you only have one kid participating in it but, "if your family does this.." you know, it would be a lot easier cos just trying to get one kid with kids at different schools is hard
 - Parent meeting to kick off things cos some parents don't check their email or backpacks, find ways to reach out to those who aren't as involved, different times, would probably reach more people; something like back to school night

FOCUS GROUP 7 pm –Hali & Sarah Fill-in **HALI CODE**

- *Note: bullet points are for each person speaking in the order or response to the question (it varies depending on questions); K = Kynda, the moderator, when she speaks outside of reading/describing the questions; cos = my spelling of the shortened version of because.*
- Q1
 - I actually like vegetables, so um as of right now summertime I'm a kick for the peppers. I cut them up and eat them kind of like an apple. Um, during fall we are really big on corn, we do corn on the cob or put it in a cold salad so I'm kind of good on vegetables (laughs; K: good, great, thank you)
 - Potatoes would probably be mine, and I like them any type of prepared. Carrots is the only vegetable everyone in my family will eat (K: mm), um so either just raw or stick them in with a roast is what we usually do (K: okay, great, thanks)
 - I think I like potatoes, mostly, but corn's good. It kind of depends on what would be good with it. (K: right, how do you like, uh, your potatoes prepared?) um I usually like a potato with some sour cream and some salt (K: okay) so just a baked potato
 - Um I like corn on the cob and I like it just boiled in water (K: okay, okay, you don't put any butter on it or anything?) well I do after (K: well yeah after it's cooked) it's all cooked.
 - I think my favorite vegetable is like a mesclun mixed salad with probably a like a homemade honey vinaigrette. Um that's probably my favorite and in the winter my favorite is probably just something - any vegetable roasted in the oven (K: okay, I kind of like grilled asparagus) uh yeah, that's a good one
- Q2a **5/5 grocery store (1 was second to FM or neighbor's garden), 3M, 1S, 1W, 2L**
 - Um I usually get my produce from Smith's, sometimes when I'm at Walmart getting other stuff, but Smith's usually has a [muffled] selection (K: okay, every buy stuff through a CSA program or through the farmer's market? A CSA box is um basically you sign up for a subscription and you get a box of fresh veggies from a farm like every week for 20 weeks during the summer. We do have like four or five programs in the valley, just FYI) I haven't tried that before (K: Okay, great, thank you)

- Um grocery store, usually Macy's and it's just out of convenience. As far as farmer's market, we go to the farmer's market and grab some food there but we don't necessarily take it home to prepare it (K: I see, so more like the snack stuff) yeah, and I've never done a CSA either (K: okay, okay)
 - Um, we usually get ours from Lee's, most of our vegetables, and don't usually go to the farmer's market that often and never done a CSA (K: mmhmm, okay)
 - (K: and I guess the same for you as well) Pretty much, it just depends on what vegetablesmuffled... Lee's is usually a pretty good price, sometimes we get them from Macy's, rarely at Walmart (K: okay, okay) it just depends on what's a better deal... Lee's is mostly pretty good (K: okay, all right)
 - I loved the vegetable co-op that used to be in town and I miss it terrible because it's not here anymore (K: mmhmm) but we ate a ton of vegetables because we always had them, and but now that that's gone just either somebody's garden or a farmer's market is my next favorite and then a grocery store (K: okay, any particular grocery store?) I think I probably go to Macy's most often.
- Q2b 2 time issue, 1 cost, 1 doesn't think of it/time, 1 afraid cos different from store
 - Uh mostly it's a time issue. If it's not at the right time, I can't go. (K: right) but other than that, nothing (K: Okay, all right)
 - I think for us it's probably cost, it's a little bit more expensive rather than the store (K: okay)
 - [asks what question we're on, "it's a sub-question of 2"] Sometimes it's just a time thing and availability and not being able to go to farmers markets about once a week so we're not always there and they moved it from the park where we used to live close and attended often but now when they moved it we kind of stopped going because it's a little farther on foot traffic and we usually fill our Saturdays up by that time (K: okay, right)
 - Um I don't think about the farmers market, like every time I'm you know [muffled] I'm like "oh, you should try the farmers market!" and then I'm just I'm usually dropping in the grocery store on my way home from work or on my lunch break and grabbing a few things, but and I just haven't

really looked into the CSAs, like I just haven't known what's available (K: okay)

- Um the CSAs just didn't like ____ I just didn't know about them, I'd heard about them in other places but I didn't know about them locally (K: okay) and then local farmers market I think I'm afraid [laughter] just not knowing the selection or almost overwhelmed by the selection and it just being different, you know, it's home grown and it looks different than store-bought and I've never been – I was never raised that way, I was raised store-bought, so I kind of just follow what I was raised on, haven't branched out (K: okay, thank you)
- Q3 2 average, 1 good, 1 bad 2 smoothies, 1 variety of raw to choose, 1 only offer vegetables, 1 can't leave until done with veg, 1 must take a bite, 1 random/new veg at the store, give each their favorite/an option
 - I'd say on average we are average at getting my kids to eat vegetables, um the best success I have is when that's all that's offered are vegetables and um sometimes honestly it's just a laziness issue when I don't offer them it's because I'm in a hurry or something (K: mmhmm) um, the second thing that has been the biggest help with the kids eating vegetables are smoothies and we do those often.
 - Um, our kids aren't really good at all at eating vegetables and one of the things we try to do to encourage them to eat is we have a rule that they can't – once they eat their vegetables they can be done and leave the dinner table, but if they don't they have to wait until everyone's done and I'm usually since I'm getting everyone's plate I'm really late getting done and they hate to wait for me so usually they'll hurry and stuff their vegetables in their mouths just so they can leave (laughs; K: I see, okay, that's a good tactic)
 - The one son sneaks the vegetables onto my plate (laughter; K: do you find a lot under the table?) No, he'll sneak them onto my plate and thinks I don't notice but I do, and then I sneak them back onto his plate when he's not looking. We have tried things before that when we try to make sure they each take a bite of things, and then I think it was more forcing them than ... we did this method for the first little while it was quite tough they were kind of reluctant, so they didn't eat their vegetables and what not, kind of reluctant and then they realized they could and so my oldest son "oh I gotta eat so I can go" and the other kids are like la la la ah and sometimes they get [muffled] to eat it faster, but not as often (K: okay, thank you)

- I... my kids aren't big on cooked vegetables so I usually keep a bunch of cut up, washed vegetables ready and you know pull out the containers at dinner time and it's just kind of a "pick at least one" and they get to choose –I think that works really well, just because they can kind of pick what they're in the mood for and I don't care what vegetable they eat as long as they're eating some. Uh, we did something for a while where we picked something random at the grocery store that we've never tried before (K: right) and then we had to like Google how to prepare it [laughter] and it kind of fun, um, all my kids are like obsessed with parsnips now, which is a vegetable I had never even had until I was an adult and um, but they all, that's one that they all will eat now. My one child the only way he will eat anything green is in a smoothie, but I can put a huge handful of any kind of greens in a smoothie and he'll drink that right up. And he knows it's in there, I don't know what it is, but that's the only way I'll eat greens, too [laughter] so I understand it (K: okay, great, thank you)
- Um I would say we're probably average, um, my son is more of a struggle than not, um but I give him the options. I don't like green peas, my daughter won't eat green peas, but he will eat a whole can of green peas! So we buy the smaller cans and prepare the green peas along with our corn so he has his own option. (K: I see) and then for raw, carrots, celery, whatever, it is smothered in ranch dressing for him [laughs] (K: okay, great well thank you)
- Q4 3 skimmed, 1 lost before reading 3 bullet points/quick tips, 2 recipes
 - Um, quick but I don't ignore it. So it's kind of I glance at it and it might get magneted up to the fridge and look at it while we're cooking or whatever, but um as far as a wordy note like a newsletter um is really skimmed [laughter] (K: okay)
 - Um I my kids did the FIT program last year so we did get the newsletters. I wouldn't throw them away, but sometimes I didn't have the time to look at them right then, sometimes they got set aside with the intention to read them later and it might be a week or so later before I actually looked at them. Um but if I had the time I'd usually skim it and read the things that I thought were good for our family (K: okay)
 - Yes. Usually skim it and then that's about it from what I do is skim and probably put it back in the backpack so that she can see it, too (K: I see, okay, okay, all right) so...

- I would say, usually the kids get their stuff out before I get home and so usually that stuff is lost before I have a chance to look at it (K: okay, all right, so if he's putting it back in the backpack...laughter; husband talks about kids some more)
- I know the newsletters that have come home I've read because I'm curious um I mean I don't study it in depth or anything (K: right, right) but I like to pick up tidbits of information that will be helpful, both for fitness and for food. Um so even though I wouldn't sit down and read a book on it, I like just the little snippets of information, I get more out of it. (K: what kind of things in the newsletter would grab your attention the most?) you know what, I can't say a specific thing but um just the small bits of information, you know maybe (K: muffled) there's a recipe and so I'll skip to the recipe and "oh! I can do that" or "that's a good way to incorporate that vegetable" or fitness "that's a good idea for a game, I should try that" um more like that, or maybe if there was a study or something on fitness or nutrition or something, I'd get more information with a couple of bullet points than I would two pages of writing space (K: anybody else want to add on what types of things you might be looking for that might get your attention?)
- I'm kind of along the same lines if it's a small quick little paragraph it's easy to get through you can get through it without being disturbed kind of thing, um cos I'm a single mom so I've got the two and my time is like this (K: right) so that makes it quicker, I think, instead of a full page if it's just little bullet points (K: are recipes something that are..) yeah (person: pretty sure I've made some recipes from the newsletters; K: do you think having that in there you might retain it and look at it? Okay, anything else?)
- Usually I was looking for things that, I dunno, maybe some kind of thing something that I just found interesting, like she said little studies or facts or something that are quick to read, um but I liked I'd kind of skim it for things to do at home you know like recipes or an activity or something that I thought would be fun to do at home, things to do
- Quick tips or something, those things attract me
- Q5 3 yes/email, 2 no/paper 3 like email for saving/won't get lost, 2 no Facebook, 2 yes if it was a page to follow, 1 yes Facebook for recipes
 - For me it would be more [effective]. I always have my smartphone on me or I'm on my computer at work (K: and you'd open up the email from the

school?) mmhmm (K: you're not overwhelmed by school emails?) uh I'm not, I scan, I make sure..

- I would be more likely to read an email, just when I'm looking at a newsletter it's kind of a chaotic time of day like I just got home from work and I've got to get dinner ready (K: right, right) I'm not reading through things, I'm usually checking my email in the mornings at work or at home after the kids go to bed when I can process something, you know, I'm not quick skimming I can take a few extra minutes and read through something and it won't get lost because it's in my email (laughs) I can leave it there and go back to reading it
- Email I usually don't really check that often (K: okay) and stuff so it might be a little bit harder but it's a quick reference and an always reference, so I like something I can stick it there it for ten years (K: oh okay) so that's beneficial in my mind
- Email is definitely better for me because [muffled] if I don't have time I can save it and know it's right there and come back to it
- Paper, and I don't know why. I think it's because a lot of times I open up a newsletter from somewhere and it's got so much junk in it that's trying to download that I can't just skip to the chase, just tell me what you want to know instead of all the icons and things and banners and stuff and so a lot of times it's annoying (K: right) so I'd rather read a piece of paper (K: what about Facebook or twitter messages and you can link to an online..) I wouldn't.
- Eh, I do, I might see it if it's on Facebook. Not in a message, if it was something like a page I could follow or something, I would like that.
- I think recipes would be good for Facebook (K: okay)
- I could learn to get used to it. I'm not saying- (K: right, right)
- It wouldn't be my preferred method (K: okay, good to know, good to know)

- Q6

- **Raised hand 1**

- 5 (all)

- 3

- 4

- 5

☐ 3

☐ 1

☐ 3

☐ 4

☐ 4

- Q7

☐ 3

☐ 3

☐ 5

☐ hesitant 1

☐ 4

☐ 5

- Q8 3 would participate if they found a good recipe, 2 wouldn't participate/submit a recipe all 5 agreed that they liked the idea of receiving tested recipes from others (community)

- ☐ [muffled comment] Yeah I would love to, I'm just trying to think of a healthy kid-friendly recipe (K: if you saw recipes come to you like from a contest..) yeah, absolutely (K: ...or people from the school, would you look at them?) because that would mean someone else has tried them (K: okay) and kids have tried them, yeah I would definitely be interested in one of those (K: What about you, ____, would you...)
- ☐ I don't know, I think I could probably find something. We're pretty basic, meat and a couple of vegetables or maybe like a... I feel like I don't have any recipes like to share but I would absolutely read them if someone else had the contest and I would get those recipes (K: okay great, thank you, __)
- ☐ Um sorry everyone, um haha my mind went blank again (K: that's all right, recipe contest, would you be willing to submit one and/or uh would getting a group of them that your neighbors here put together would you be willing to look at them?) Yeah, I think so uh I kind of like the idea of a community where everyone [muffled] (K: okay) and it's usually, you know, usually it's what has the best deals on vegetables or whatnot and it's kind of a social thing as well (K: okay) I would not like submitting a recipe, I don't know many or how healthy it would be (K: right) because

what I was thinking had peanut butter in it [laughs] yeah you're thinking that too (K: okay) [muffled]

- Yeah, if I could think of recipes I would definitely submit it and I definitely like the idea of recipes other people have tried that they know are good (K: mmhmm, okay, thank you. ____)
- I would love to try and put in a recipe and I definitely like the community involvement of other people submitting recipes (K: okay, thank you)

- Q9 & Q10 (prize) 4 would encourage challenge, 2 think kids would lose interest, 3 think [at least one] children would participate 2 (maybe 3) think prizes would motivate kids, 1 wouldn't motivate parent to encourage kids

- I would be very likely, like a sticker chart involved [laughter] because I think it's important, especially for my son, I mean it's a bawl-fest and he doesn't even lick the vegetable to see if he likes the flavor of it, so (K: right, right) it's a complete fear-factor with him so yeah I would get involved and I would try and have fun with that one (K: okay, do you think it would give him motivation having it a contest of sorts?) yeah, I think he would be willing to try because he's definitely a people-pleaser and if he knew his friends were doing it too and I think he would jump on that bandwagon(?) (K: okay, ____?)
- Uh I would definitely encourage it um of the two that are in the school right now um it would definitely get my one to eat more, I mean he already does pretty good but he would think that was exciting. And my other one is kind of an overachiever so the idea of a contest would be a challenge would be very ____ [inaudible due to baby scream] and he doesn't eat hardly any vegetables so that would be a very good thing for him (K: okay, great)
- I would encourage it. I think only one of my kids would take and apply that because he likes a challenge (K: okay) um the second one may be like eehhh, [laugh] he doesn't really care, but he's unique
- And I think at first all the kids would be happy and excited and got for it and after a week of doing it they would just stop caring (K: he's putting that in his ear, be careful it's got a sharp point [about baby]; okay, ____?)
- I would definitely be interested, I think um like ____ at first they might be excited and then it would wane after a couple of days, but I like the idea of presenting it as- as a way to track it (K: mmhmm, do you think they'd be more motivated if there was some kind of a small prize?) at the end

(K: okay; inaudible due to baby screeching; um what about you guys, do you think a small prize at the end would be..)

- It would probably help keep them motivated
- I think that would definitely..[baby screeching] I was just kind of reading as you said it and it says, “would you be more willing to encourage your child’s participation if there was a prize?” and that wouldn’t, that wouldn’t motivate me to encourage them, but I think that would definitely I mean kids will do anything for a little prize [laughter] (someone: side note I’m just wondering how we got from eating food and vegetables as a mainstay as opposed to in life to now we are trying to offer our kids toys to eat them; K: responds)
- I think it’s better to encourage children to eat their vegetables and you know because it’s good to be healthy, like I think that’s a more I don’t know healthy attitude to grow up with (K: right, right) but I mean it’s also good to teach your kids, you know to be hard workers for the sake of working hard but we still give them rewards for that because that’s kind of how kids go when they’re little
- Q11 3 think PA challenge is good idea, 1 no because their kids don’t need it
 - I don’t feel I have to worry about my kids’ activity level (K: okay) but that’s just because I turn tablets off and I turn TV off and go away, so um so I don’t- personally for my family we don’t have to encourage being active, as soon as the door’s open, they’re active (K: right, right, okay okay)
 - That’s how our family is, too, that’s not something I’ve ever had to push or even encourage like my kids are just active and would prefer to live outside if they could, so that one wouldn’t be quit as enticing for my kids, but I think there’s a lot of other kids who that would be good for them that maybe their home life is not quite like that so.. still something good to encourage, I think. (K: all right)
 - I think it would be good encouragement because our oldest one doesn’t always get out and do physical activity, but I think he does quite a bit at the school, he kinda you know he does like dance, but the other two kids that we have you open the door and they’re out on the tramp (laughs) you know they’re ready they see that door open they go... (K: right, sounds good)
 - Pretty much the same thing he said, I don’t think our younger ones need it at all, um, the older one we try to get into sports and activities like that

so he does get a little bit of exercise (K: you're basically telling me, I just want to make sure I understand, is that competition as far as physical activity is not a huge motivator so far, is that what I'm hearing?) not really [agreeing with K]

- I think they would- I think my kids would do it, just as you know a challenge, but I'm with you guys. Our kids naturally want to be out[side] (K: okay)

- Q12 All 5 agree no incentives needed for surveys

- Um now that I've met Heidi and Hali I would do it for you [laughter] prize or no prize (K: so you probably wouldn't need the incentive) no, I would do it (K: again, this is coming from the school program)
- I would probably just do it (K: you'd just do it, okay)
- Same here, I'd probably just do it, (K: okay) especially over email [laughter]
- Yeah I would probably do it, I wouldn't need an incentive (K: okay, sounds good)
- Yeah, same (K: okay, alright)

- Q13 1 yes with QR code on paper newsletter, 1 no if link etc. on paper newsletter but yes if email, 2 yes if site had interesting content, 1 if games for son, 2 recipes, 1 if nutrition tips, 1 want info on CSA or FM

- I would, and even if the newsletter came home had that little QRN [they meant QR] code to go to the website on it I think that would be easier (K: right, right, that little thing you can take a picture of?) yeah, that digital code thing because it makes it instant access, it goes back to the email and smart phone technology and website and that stuff and I personally am more drawn that way if I am going to read something (K: okay)
- Uh I would probably if it was a paper coming home I would probably intend to look at it and probably just wouldn't ever find a moment because except when I'm reading the newsletter it's kind of a busy time. If it was coming in an email I would absolutely click on it if there was a link (K: okay) because that would be easy and I'd probably look at it right then.
- For me, it would depend on if it was something I'm interested in at this point, if it was an article I really liked or if it was recipes or something like that I would. If it was something I was interested in.

- Like if there was contests that had all recipes to click on and see I'd be more apt to do so. I'd be moderate, I'm kind of the same as her, moderately if it was something I was interested in. I mean at home they've compiled a recipe book of all the people in our neighborhood and so when we look at recipes "oh yeah, we want Sister Bolton's bread, okay" and you go to certain families' recipes you remember because they've attached their name to them (K: okay; baby screech) attached their names to the recipes (K: what other kinds of things could be on this website that would encourage you to visit it?)
- I think information about the CSAs or um like other programs offered [muffled due to baby screeching] (K: local farmer's markets, local CSAs..)
- My oldest son might be interested in game aspects because he likes video games (K: okay) if they had a little veggie muncher or something like that (K: I see, okay, great, anything else?)
- Any extra tips, I think, or just I think general nutrition information like for kids and stuff, I um like she said earlier like kind of little bits of information are kind of nice to take in when you have a minute. I'm sure I could go hop online and find tons of articles on nutrition, but you just kind of never think "oh I have a minute, I'm going to sit down and look up an article on this" but little bits of information, you know, take in little tips here and there (K: okay) you know that are easy, quick. That would be good. (K: what about like updates on the school program? And maybe results or information.. [multiple people: that would be great] or maybe if they mention that they were doing you could track it...more communication about the program)
- I like it, too, because when I got the newsletter this last year I'd ask my son "have you had vegetables today?" and you know like it kind of prompted me to ask, so I think if it included what they were going through at school whatever it puts it more accessible (K: okay, anything else?)
- Comments:
 - I think it would be interesting to get the kids' point of view, and I don't know if they do that with their school program but I want a non-biased – not me, not the person cramming vegetables down their throat (laughs)—asking them what they like about it- what vegetables do you like, what vegetables do you want to try, and stuff like that, I think that would be kind of a cool thing. I still like the newsletter, either the online

or the paper version, I really like that just because then it opens the dialogue of vegetables with the kids

- I kind of just thought about that was a good thing about getting the paper, I mean if for something for me to read over I would prefer it in my email, but I did like that was a good thing about the paper that it would make me kind of ask about them, even if I wasn't reading it it would kind of remind me that they were doing that and then I would be able to kind of ask them what they did about it or what happened, so that was a plus for something in the backpack but I still think I would like an email better. I think I would have been able to follow the program last year better with an email and I like I knew they were doing but I wasn't really- it was kind of- I wasn't really- it was like "oh this is the thing they're doing at school" kind of in the back of my mind and I wasn't really doing much about it [two others agree with this last statement]

FOCUS GROUP 7 pm –Hali & Sarah Fill-in **AMY CODE**

- *Note: bullet points are for each person speaking in the order or response to the question (it varies depending on questions); K = Kynda, the moderator, when she speaks outside of reading/describing the questions; cos = my spelling of the shortened version of because.*
- Q1
 - I actually like vegetables, so um as of right now summertime I'm a kick for the peppers. I cut them up and eat them kind of like an apple. Um, during fall we are really big on corn, we do corn on the cob or put it in a cold salad so I'm kind of good on vegetables (laughs; K: good, great, thank you)
 - Potatoes would probably be mine, and I like them any type of prepared. Carrots is the only vegetable everyone in my family will eat (K: mm), um so either just raw or stick them in with a roast is what we usually do (K: okay, great, thanks)
 - I think I like potatoes, mostly, but corn's good. It kind of depends on what would be good with it. (K: right, how do you like, uh, your potatoes prepared?) um I usually like a potato with some sour cream and some salt (K: okay) so just a baked potato
 - Um I like corn on the cob and I like it just boiled in water (K: okay, okay, you don't put any butter on it or anything?) well I do after (K: well yeah after it's cooked) it's all cooked.
 - I think my favorite vegetable is like a mesclun mixed salad with probably a like a homemade honey vinaigrette. Um that's probably my favorite and in the winter my favorite is probably just something - any vegetable roasted in the oven (K: okay, I kind of like grilled asparagus) uh yeah, that's a good one
- Q2a 5 get their produce from grocery stores (3 from Macy's, 2 from Lee's, 1 from Smith's). 3 have never used a CSA, 1 used to use CSA. 1 generally gets produce from farmer's market/friend's garden.
 - Um I usually get my produce from Smith's, sometimes when I'm at Walmart getting other stuff, but Smith's usually has a [muffled] selection (K: okay, every buy stuff through a CSA program or through the farmer's market? A CSA box is um basically you sign up for a subscription and you get a box of fresh veggies from a farm like every week for 20 weeks

during the summer. We do have like four or five programs in the valley, just FYI) I haven't tried that before (K: Okay, great, thank you)

- Um grocery store, usually Macy's and it's just out of convenience. As far as farmer's market, we go to the farmer's market and grab some food there but we don't necessarily take it home to prepare it (K: I see, so more like the snack stuff) yeah, and I've never done a CSA either (K: okay, okay)
- Um, we usually get ours from Lee's, most of our vegetables, and don't usually go to the farmer's market that often and never done a CSA (K: mmhmm, okay)
- (K: and I guess the same for you as well) Pretty much, it just depends on what vegetablesmuffled... Lee's is usually a pretty good price, sometimes we get them from Macy's, rarely at Walmart (K: okay, okay) it just depends on what's a better deal... Lee's is mostly pretty good (K: okay, all right)
- I loved the vegetable co-op that used to be in town and I miss it terrible because it's not here anymore (K: mmhmm) but we ate a ton of vegetables because we always had them, and but now that that's gone just either somebody's garden or a farmer's market is my next favorite and then a grocery store (K: okay, any particular grocery store?) I think I probably go to Macy's most often.

- Q2b 2 responses: limited time availability. 1 response: cost. 1 response: convenience of grocery store. 2 response: don't know enough about farmer's market/CSA.

- Uh mostly it's a time issue. If it's not at the right time, I can't go. (K: right) but other than that, nothing (K: Okay, all right)
- I think for us it's probably cost, it's a little bit more expensive rather than the store (K: okay)
- [asks what question we're on, "it's a sub-question of 2"] Sometimes it's just a time thing and availability and not being able to go to farmers markets about once a week so we're not always there and they moved it from the park where we used to live close and attended often but now when they moved it we kind of stopped going because it's a little farther on foot traffic and we usually fill our Saturdays up by that time (K: okay, right)

- Um I don't think about the farmers market, like every time I'm you know [muffled] I'm like "oh, you should try the farmers market!" and then I'm just I'm usually dropping in the grocery store on my way home from work or on my lunch break and grabbing a few things, but and I just haven't really looked into the CSAs, like I just haven't known what's available (K: okay)
- Um the CSAs just didn't like ____ I just didn't know about them, I'd heard about them in other places but I didn't know about them locally (K: okay) and then local farmers market I think I'm afraid [laughter] just not knowing the selection or almost overwhelmed by the selection and it just being different, you know, it's home grown and it looks different than store-bought and I've never been – I was never raised that way, I was raised store-bought, so I kind of just follow what I was raised on, haven't branched out (K: okay, thank you)
- Q3 1: 2 responses: Average successes to eat veggies. 1 response: not good at eating veggies. 2 responses: Provide choice of veggie for successes. 2 responses: smoothies for successes. 2 responses: children not to leave table unless they eat veggies
 - I'd say on average we are average at getting my kids to eat vegetables, um the best success I have is when that's all that's offered are vegetables and um sometimes honestly it's just a laziness issue when I don't offer them it's because I'm in a hurry or something (K: mmhmm) um, the second thing that has been the biggest help with the kids eating vegetables are smoothies and we do those often.
 - Um, our kids aren't really good at all at eating vegetables and one of the things we try to do to encourage them to eat is we have a rule that they can't – once they eat their vegetables they can be done and leave the dinner table, but if they don't they have to wait until everyone's done and I'm usually since I'm getting everyone's plate I'm really late getting done and they hate to wait for me so usually they'll hurry and stuff their vegetables in their mouths just so they can leave (laughs; K: I see, okay, that's a good tactic)
 - The one son sneaks the vegetables onto my plate (laughter; K: do you find a lot under the table?) No, he'll sneak them onto my plate and thinks I don't notice but I do, and then I sneak them back onto his plate when he's not looking. We have tried things before that when we try to make sure they each take a bite of things, and then I think it was more forcing them than ... we did this method for the first little while it was quite tough they were kind of reluctant, so they didn't eat their vegetables and

what not, kind of reluctant and then they realized they could and so my oldest son “oh I gotta eat so I can go” and the other kids are like la la la ah and sometimes they get [muffled] to eat it faster, but not as often (K: okay, thank you)

- I.. my kids aren’t big on cooked vegetables so I usually keep a bunch of cut up, washed vegetables ready and you know pull out the containers at dinner time and it’s just kind of a “pick at least one” and they get to choose –I think that works really well, just because they can kind of pick what they’re in the mood for and I don’t care what vegetable they eat as long as they’re eating some. Uh, we did something for a while where we picked something random at the grocery store that we’ve never tried before (K: right) and then we had to like Google how to prepare it [laughter] and it kind of fun, um, all my kids are like obsessed with parsnips now, which is a vegetable I had never even had until I was an adult and um, but they all, that’s one that they all will eat now. My one child the only way he will eat anything green is in a smoothie, but I can put a huge handful of any kind of greens in a smoothie and he’ll drink that right up. And he knows it’s in there, I don’t know what it is, but that’s the only way I’ll eat greens, too [laughter] so I understand it (K: okay, great, thank you)
- Um I would say we’re probably average, um, my son is more of a struggle than not, um but I give him the options. I don’t like green peas, my daughter won’t eat green peas, but he will eat a whole can of green peas! So we buy the smaller cans and prepare the green peas among with our corn so he has his own option. (K: I see) and then for raw, carrots, celery, whatever, it is smothered in ranch dressing for him [laughs] (K: okay, great well thank you)
- Q4 6 responses: skim/quickly look through a possible newsletter. 2 responses: would/have used newsletter for recipes
 - Um, quick but I don’t ignore it. So it’s kind of I glance at it and it might get magneted up to the fridge and look at it while we’re cooking or whatever, but um as far as a wordy note like a newsletter um is really skimmed [laughter] (K: okay)
 - Um I my kids did the FIT program last year so we did get the newsletters. I wouldn’t throw them away, but sometimes I didn’t have the time to look at them right then, sometimes they got set aside with the intention to read them later and it might be a week or so later before I actually looked at them. Um but if I had the time I’d usually skim it and read the things that I thought were good for our family (K: okay)

- Yes. Usually skim it and then that's about it from what I do is skim and probably put it back in the backpack so that she can see it, too (K: I see, okay, okay, all right) so..
- I would say, usually the kids get their stuff out before I get home and so usually that stuff is lost before I have a chance to look at it (K: okay, all right, so if he's putting it back in the backpack...laughter; husband talks about kids some more)
- I know the newsletters that have come home I've read because I'm curious um I mean I don't study it in depth or anything (K: right, right) but I like to pick up tidbits of information that will be helpful, both for fitness and for food. Um so even though I wouldn't sit down and read a book on it, I like just the little snippets of information, I get more out of it. (K: what kind of things in the newsletter would grab your attention the most?) you know what, I can't say a specific thing but um just the small bits of information, you know maybe (K: muffled) there's a recipe and so I'll skip to the recipe and "oh! I can do that" or "that's a good way to incorporate that vegetable" or fitness "that's a good idea for a game, I should try that" um more like that, or maybe if there was a study or something on fitness or nutrition or something, I'd get more information with a couple of bullet points than I would two pages of writing space (K: anybody else want to add on what types of things you might be looking for that might get your attention?)
- I'm kind of along the same lines if it's a small quick little paragraph it's easy to get through you can get through it without being disturbed kind of thing, um cos I'm a single mom so I've got the two and my time is like this (K: right) so that makes it quicker, I think, instead of a full page if it's just little bullet points (K: are recipes something that are..) yeah (person: pretty sure I've made some recipes from the newsletters; K: do you think having that in there you might retain it and look at it? Okay, anything else?) Usually I was looking for things that, I dunno, maybe some kind of thing something that I just found interesting, like she said little studies or facts or something that are quick to read, um but I liked I'd kind of skim it for things to do at home you know like recipes or an activity or something that I thought would be fun to do at home, things to do
- Quick tips or something, those things attract me
- Q5 3 responses: would prefer email/email more effective. 2 responses: would prefer an actual newsletter.

- For me it would be more [effective]. I always have my smartphone on me or I'm on my computer at work (K: and you'd open up the email from the school?) mmhmm (K: you're not overwhelmed by school emails?) uh I'm not, I scan, I make sure..
- I would be more likely to read an email, just when I'm looking at a newsletter it's kind of a chaotic time of day like I just got home from work and I've got to get dinner ready (K: right, right) I'm not reading through things, I'm usually checking my email in the mornings at work or at home after the kids go to bed when I can process something, you know, I'm not quick skimming I can take a few extra minutes and read through something and it won't get lost because it's in my email (laughs) I can leave it there and go back to reading it
- Email I usually don't really check that often (K: okay) and stuff so it might be a little bit harder but it's a quick reference and an always reference, so I like something I can stick it there it for ten years (K: oh okay) so that's beneficial in my mind
- Email is definitely better for me because [muffled] if I don't have time I can save it and know it's right there and come back to it
- Paper, and I don't know why. I think it's because a lot of times I open up a newsletter from somewhere and it's got so much junk in it that's trying to download that I can't just skip to the chase, just tell me what you want to know instead of all the icons and things and banners and stuff and so a lot of times it's annoying (K: right) so I'd rather read a piece of paper (K: what about Facebook or twitter messages and you can link to an online..) I wouldn't.
- Eh, I do, I might see it if it's on Facebook. Not in a message, if it was something like a page I could follow or something, I would like that.
- I think recipes would be good for Facebook (K: okay)
- I could learn to get used to it. I'm not saying- (K: right, right)
- It wouldn't be my preferred method (K: okay, good to know, good to know)

- Q6

- **Raised hand 1**

- 5 (all)

- 3

- 4

☐ 5

☐ 3

☐ 1

☐ 3

☐ 4

☐ 4

- Q7

☐ 3

☐ 3

☐ 5

☐ hesitant 1

☐ 4

☐ 5

- Q8 3 responses: Would submit a recipe. 1 response: Maybe- but would read other recipes. 1 response: Would not submit a recipe. General feelings from a few of uncertainty of whether a recipe is healthy or not. 2 individuals would like to see recipes that others have tried and liked.

- ☐ [muffled comment] Yeah I would love to, I'm just trying to think of a healthy kid-friendly recipe (K: if you saw recipes come to you like from a contest..) yeah, absolutely (K: ...or people from the school, would you look at them?) because that would mean someone else has tried them (K: okay) and kids have tried them, yeah I would definitely be interested in one of those (K: What about you, ____, would you...)
- ☐ I don't know, I think I could probably find something. We're pretty basic, meat and a couple of vegetables or maybe like a...I feel like I don't have any recipes like to share but I would absolutely read them if someone else had the contest and I would get those recipes (K: okay great, thank you, __)
- ☐ Um sorry everyone, um haha my mind went blank again (K: that's all right, recipe contest, would you be willing to submit one and/or uh would getting a group of them that your neighbors here put together would you be willing to look at them?) Yeah, I think so uh I kind of like the idea of a community where everyone [muffled] (K: okay) and it's usually, you know, usually it's what has the best deals on vegetables or whatnot and

it's kind of a social thing as well (K: okay) I would not like submitting a recipe, I don't know many or how healthy it would be (K: right) because what I was thinking had peanut butter in it [laughs] yeah you're thinking that too (K: okay) [muffled]

- Yeah, if I could think of recipes I would definitely submit it and I definitely like the idea of recipes other people have tried that they know are good (K: mmhmm, okay, thank you. ____)
- I would love to try and put in a recipe and I definitely like the community involvement of other people submitting recipes (K: okay, thank you)
- Q9 & Q10 (prize) 4 responses: Would be likely to encourage. 1 response: would not be likely to encourage. Some parents report that their child would be interested in a contest (3).
 - I would be very likely, like a sticker chart involved [laughter] because I think it's important, especially for my son, I mean it's a bawl-fest and he doesn't even lick the vegetable to see if he likes the flavor of it, so (K: right, right) it's a complete fear-factor with him so yeah I would get involved and I would try and have fun with that one (K: okay, do you think it would give him motivation having it a contest of sorts?) yeah, I think he would be willing to try because he's definitely a people-pleaser and if he knew his friends were doing it too and I think he would jump on that bandwagon(?) (K: okay, ____?)
 - Uh I would definitely encourage it um of the two that are in the school right now um it would definitely get my one to eat more, I mean he already does pretty good but he would think that was exciting. And my other one is kind of an overachiever so the idea of a contest would be a challenge would be very ____ [inaudible due to baby scream] and he doesn't eat hardly any vegetables so that would be a very good thing for him (K: okay, great)
 - I would encourage it. I think only one of my kids would take and apply that because he likes a challenge (K: okay) um the second one may be like eehhh, [laugh] he doesn't really care, but he's unique
 - And I think at first all the kids would be happy and excited and got for it and after a week of doing it they would just stop caring (K: he's putting that in his ear, be careful it's got a sharp point [about baby]; okay, ____?). I would definitely be interested, I think um like ____ at first they might be excited and then it would wane after a couple of days, but I like the idea of presenting it as- as a way to track it (K: mmhmm, do you think they'd be more motivated if there was some kind of a small prize?) at the end

(K: okay; inaudible due to baby screeching; um what about you guys, do you think a small prize at the end would be..) It would probably help keep them motivated. I think that would definitely..[baby screeching] I was just kind of reading as you said it and it says, “would you be more willing to encourage your child’s participation if there was a prize?” and that wouldn’t, that wouldn’t motivate me to encourage them, but I think that would definitely I mean kids will do anything for a little prize [laughter] (someone: side note I’m just wondering how we got from eating food and vegetables as a mainstay as opposed to in life to now we are trying to offer our kids toys to eat them; K: responds). I think it’s better to encourage children to eat their vegetables and you know because it’s good to be healthy, like I think that’s a more I don’t know healthy attitude to grow up with (K: right, right) but I mean it’s also good to teach your kids, you know to be hard workers for the sake of working hard but we still give them rewards for that because that’s kind of how kids go when they’re little

- Q11 : 1 response: Would encourage. 4 responses: Would not encourage. Some parents state that they wouldn’t encourage because their families are already active.
 - I don’t feel I have to worry about my kids’ activity level (K: okay) but that’s just because I turn tablets off and I turn TV off and go away, so um so I don’t- personally for my family we don’t have to encourage being active, as soon as the door’s open, they’re active (K: right, right, okay okay)
 - That’s how our family is, too, that’s not something I’ve ever had to push or even encourage like my kids are just active and would prefer to live outside if they could, so that one wouldn’t be quit as enticing for my kids, but I think there’s a lot of other kids who that would be good for them that maybe their home life is not quite like that so.. still something good to encourage, I think. (K: all right)
 - I think it would be good encouragement because our oldest one doesn’t always get out and do physical activity, but I think he does quite a bit at the school, he kinda you know he does like dance, but the other two kids that we have you open the door and they’re out on the tramp (laughs) you know they’re ready they see that door open they go... (K: right, sounds good)
 - Pretty much the same thing he said, I don’t think our younger ones need it at all, um, the older one we try to get into sports and activities like that so he does get a little bit of exercise (K: you’re basically telling me, I just

want to make sure I understand, is that competition as far as physical activity is not a huge motivator so far, is that what I'm hearing?) not really [agreeing with K]

- I think they would- I think my kids would do it, just as you know a challenge, but I'm with you guys. Our kids naturally want to be out (K: okay)

- Q12 **5 responses: Would do it, no incentive.**

- Um now that I've met Heidi and Hali I would do it for you [laughter] prize or no prize (K: so you probably wouldn't need the incentive) no, I would do it (K: again, this is coming from the school program)
- I would probably just do it (K: you'd just do it, okay)
- Same here, I'd probably just do it, (K: okay) especially over email [laughter]
- Yeah I would probably do it, I wouldn't need an incentive (K: okay, sounds good)
- Yeah, same (K: okay, alright)

- Q13 **3 responses: Would/likely to go to website. 1: depends on interest level.**

Several responses state they would go for other information such as recipes (2), interesting information (3), games (1)

- I would, and even if the newsletter came home had that little QRN [they meant QR] code to go to the website on it I think that would be easier (K: right, right, that little thing you can take a picture of?) yeah, that digital code thing because it makes it instant access, it goes back to the email and smart phone technology and website and that stuff and I personally am more drawn that way if I am going to read something (K: okay)
- Uh I would probably if it was a paper coming home I would probably intend to look at it and probably just wouldn't ever find a moment because except when I'm reading the newsletter it's kind of a busy time. If it was coming in an email I would absolutely click on it if there was a link (K: okay) because that would be easy and I's probably look at it right then.
- For me, it would depend on if it was something I'm interested in at this point, if it was an article I really liked or if it was recipes or something like that I would. If it was something I was interested in.
- Like if there was contests that had all recipes to click on and see I'd be more apt to do so. I'd be moderate, I'm kind of the same as her,

moderately if it was something I was interested in. I mean at home they've compiled a recipe book of all the people in our neighborhood and so when we look at recipes "oh yeah, we want Sister Bolton's bread, okay" and you go to certain families' recipes you remember because they've attached their name to them (K: okay; baby screech) attached their names to the recipes (K: what other kinds of things could be on this website that would encourage you to visit it?)

- I think information about the CSAs or um like other programs offered [muffled due to baby screeching] (K: local farmer's markets, local CSAs..)
- My oldest son might be interested in game aspects because he likes video games (K: okay) if they had a little veggie muncher or something like that (K: I see, okay, great, anything else?)
- Any extra tips, I think, or just I think general nutrition information like for kids and stuff, I um like she said earlier like kind of little bits of information are kind of nice to take in when you have a minute. I'm sure I could go hop online and find tons of articles on nutrition, but you just kind of never think "oh I have a minute, I'm going to sit down and look up an article on this" but little bits of information, you know, take in little tips here and there (K: okay) you know that are easy, quick. That would be good. (K: what about like updates on the school program? And maybe results or information.. [multiple people: that would be great] or maybe if they mention that they were doing you could track it...more communication about the program)
- I like it, too, because when I got the newsletter this last year I'd ask my son "have you had vegetables today?" and you know like it kind of prompted me to ask, so I think if it included what they were going through at school whatever it puts it more accessible (K: okay, anything else?)

- Comments:

- I think it would be interesting to get the kids' point of view, and I don't know if they do that with their school program but I want a non-biased – not me, not the person cramming vegetables down their throat (laughs)—asking them what they like about it- what vegetables do you like, what vegetables do you want to try, and stuff like that, I think that would be kind of a cool thing. I still like the newsletter, either the online or the paper version, I really like that just because then it opens the dialogue of vegetables with the kids

- I kind of just thought about that was a good thing about getting the paper, I mean if for something for me to read over I would prefer it in my email, but I did like that was a good thing about the paper that it would make me kind of ask about them, even if I wasn't reading it it would kind of remind me that they were doing that and then I would be able to kind of ask them what they did about it or what happened, so that was a plus for something in the backpack but I still think I would like an email better. I think I would have been able to follow the program last year better with an email and I like I knew they were doing but I wasn't really- it was kind of- I wasn't really- it was like "oh this is the thing they're doing at school" kind of in the back of my mind and I wasn't really doing much about it [two others agree with this last statement]

APPENDIX D: Revised Newsletters



FIT Game Newsletter

Sept. 11, 2017

Vol. 1



Meet Lynx! She is the mechanical savvy crewmember, and is the ship's handywoman. She even built the FITs' ship! Lynx loves to eat red bell peppers because they are high in vitamin C, which help to heal cuts if she gets hurt on the job!

Welcome to the FIT Game! We are excited to have your child join us this fall on the FIT team's adventure to save the universe from the evil VATs! On the way, the FITs will encourage your child to eat more vegetables during lunch to advance their adventure, and we need your help to encourage them at home! These newsletters will provide tips and recipes to try at home, challenges for the family, and information about the FIT Game's progress at school!

This week's vegetable is the red bell pepper, brought to you by Lynx! She loves them because they are loaded with vitamin C, but here are some other facts about them:

- Red bell peppers are green bell peppers that have been left on the vine to ripen.
- Peppers are actually fruits because they are produced from a flowering plant and contain seeds.
- Red bell peppers are sweeter than green ones because bell peppers sweeten as they ripen.

Here are three tips to increase the prominence of fruits and vegetables in your home:

- 1) Always serve fruits and/or veggies at meal and snack times.
- 2) Cut up veggies in the fridge to make them an easily accessible snack.
- 3) Think of fruits apples, bananas, oranges, dried fruit) for gym bags, backpacks, and car rides.

When you are **not** physically active, you are more likely to:

- Get high blood pressure
- Get heart disease
- Get type 2 diabetes
- Have a stroke

What can you do? Find more ways for the whole family to participate in activities that get you moving for at least 30 minutes. This can be anything from an evening walk to having an epic Nerf gun war!

Stuffed Peppers Recipe

Prep: 15 minutes Total: 55 minutes Servings: 4

Ingredients

4 large red bell peppers	1 pound lean ground beef
2 Tbsp chopped onion	1 cup cooked rice
1 tsp salt	1 can (15 oz) tomato sauce
1 clove garlic, finely chopped OR 1/8 tsp garlic powder	
3/4 cup shredded cheddar cheese	

Steps

- 1) Cut thin slice from stem end of each bell pepper to remove top of pepper. Remove seeds and membranes; rinse peppers. If necessary, cut thin slice from bottom of each pepper so they stand up straight. In 4-quart Dutch oven, add enough water to cover peppers. Heat to boiling; add peppers. Cook about 2 minutes; drain.
- 2) in 10-inch skillet, cook beef and onion over medium heat for 8-10 minutes, stirring occasionally until beef is brown, then drain. Stir in rice, garlic, and 1 cup of the tomato sauce; cook until hot.
- 3) Heat oven to 350 degrees F.
- 4) Stuff peppers with beef mixture. Stand peppers upright in ungreased 8-inch square glass baking dish. Pour remaining tomato sauce over peppers.
- 5) Cover tightly with foil. Bake 10 minutes. Uncover and bake about 15 minutes longer or until peppers are tender. Sprinkle with cheese.



Boletín Informativo del Juego FIT

Sept. 11, 2017

Vol. 1



Conocer a Lynx!

Ella es la mecánica conocedor del grupo, también es la mujer de moda de la astronave. Incluso construyó la astronave del equipo FIT. A Lynx le encanta los pimientos rojos porque tiene mucha vitamina C, eso la ayuda a curar los cortes si se lastima en el trabajo!

Bienvenidos al juego FIT! Estamos emocionado de tener su hijo unirse en las aventuras del equipo FIT, se van a salvar el universo del equipo malvado VAT! En el camino, los FITs animarán a su hijo a consumir mas verduras durante su almuerzo, para el objeto de avanzar su aventura, y necesitamos la ayuda de ustedes para seguir animándoles en la casa! Estés boletines informativas van a proveer consejo junto con recetas para que las pueden probar en casa, desafíos para la familia, también información sobre el progreso del juego FIT en la escuela!

El vegetal de la semana es el pimiento rojo, traído a usted por la Lynx! A ella le gustan porque están llenos de la vitamina C, también aquí están otros datos sobre ellos:

- Pimiento rojo solamente es el pimiento verde cual ha sido dejado en la vid a madurar por mas tiempo.
- Pimientos de hecho son frutas porque vienen de una planta de floración y contienen semillas adentro.
- Pimientos rojos son mas dulce que los verde porque los pimientos se endulcen como la maduración.

Aquí están tres consejos para sumir la prominencia de frutas y vegetales en la casa:

- 4) Siempre tener presente frutas y/o verduras durante las comidas y también para las meriendas.
- 5) Cortar las verduras para hacerlos muy accesible en el refrigerador
- 6) Pensar mas de tener frutas (manzanas, plátanos, naranjas, fruta seca) para la bolsa de gimnasia, mochilas, y viajes.

Cuando **no** están activa físicamente, es mas probable que:

- Sufrir de presión arterial alta
- Obtener enfermedades cardiacas
- Obtener diabetes tipo 2
- Sufrir un derrame cerebral

¿Qué puedes hacer? Encuentre más formas para que toda la familia participe en actividades que le obligan a moverse durante al menos 30 minutos. ¡Esto puede ser cualquier cosa desde un paseo de la tarde a tener una épica guerra de armas Nerf!

Receta de Pimientos Rellenos

Prep: 15 minutos Total: 55 minutos Sirve: 4

Ingredientes

4 grandes pimientos rojos	1 libra carne molida
2 C. cebolla picada	1 t. arroz cocido
1 c. sal	1 lata (15 oz) salsa tomate
1 diente de ajo, finamente picado O 1/8 c. Ajo de polvo	
3/4 t. queso cheddar rallado	

Pasos

1) Cortar una rebanada delgada del extremo del tallo de cada pimiento para remover la parte superior del pimiento. Quitar las semillas e enjuagar los pimientos. Si es necesario para que se paren cortar también una rebanada del fondo. En el horno holandés de 4 cuartos, añade suficiente agua para cubrir los pimientos. Calentar hasta hervir; Agregue los pimientos. Cocine unos 2 minutos; desagüe.

2) en una sartén de 10 pulgadas, cocine la carne y la cebolla a fuego medio durante 8-10 minutos, revolviendo ocasionalmente hasta que la carne sea marrón, luego drene. Agregue el arroz, el ajo y 1 taza de la salsa de tomate; Cocine hasta que esté caliente.

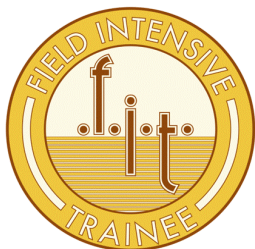
3) calentar el horno a 350 grados F o 177 grados c

4) llenar los pimientos con mezcla de carne. Colocar los pimientos en posición vertical en un plato de hornear de vidrio cuadrado no engrasado de 8 pulgadas. Vierta la salsa de tomate sobrante sobre los pimientos.

5) Cubra firmemente con papel de aluminio. Hornear 10 minutos. Destape y hornee unos 15 minutos más o hasta que los pimientos estén tiernos. Cubren con queso.

FIT Game Newsletter Vol. 2

November 8, 2017



FIT Game is going well at Woodruff Elementary! Because of FIT Game, students are eating more fruits and vegetables at school! Try the recipe below and keep encouraging your children to eat more vegetables at home, too!

TIPS:

- Cut up vegetables into sticks and pack them in a small cup with your child's favorite dip for an easy after school snack.
- Stock up on sale vegetables this week; all forms (fresh, frozen, canned) are nutritious!
- Ask your child about what vegetables they ate at school today!
- **Challenge:** Buy and try a new vegetable –or cook a familiar vegetable in a new way- with one family dinner this week!



Our VEGGIE OF THE WEEK is ZUCCHINI!

Here are some fun facts:

- 1) Zucchini is a great source of vitamins A and C, potassium, and fiber! These are nutrients that most people don't get enough of.
- 2) The world's largest zucchini on record was about 5 feet tall and weighed 65 lbs – the size of an average 5th grader!

PARMESAN ZUCCHINI TOTS

INGREDIENTS:

- 1 1/2 cups shredded and lightly patted dry zucchini (about 1 1/2 medium zucchini)
 1 cup panko bread crumbs 1 large egg
 1/2 Tbsp Italian seasoning 1/2 cup shredded parmesan cheese

DIRECTIONS:

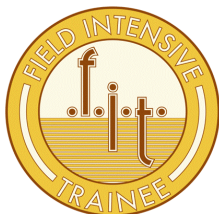
Shred zucchini with a vegetable grater. When done, pat zucchini dry with a few sheets of paper towels. While you don't need to completely dry the zucchini, you do want to absorb some of the moisture.

Preheat oven to 400 F. Measure out 1 1/2 cups of patted dry zucchini and add to a large mixing bowl. Add egg, cheese and breadcrumbs. Stir until everything is thoroughly combined.

Take 1 Tbsp of zucchini batter and squeeze between palm of hand, compressing it. Some water should also release out. Using both hands, shape to resemble a tater tot shape. Place onto a baking sheet lined with parchment paper. Repeat with remaining zucchini.

Bake for about 15-20 minutes until bottoms are golden brown and crispy. Flip over and bake for another 5 minutes. Serve warm with dipping sauce of your choice.





Boletín Informativo Juego FIT Vol. 2

November 8, 2017

¡El juego FIT va bien en la primaria Woodruff! ¡Debido al juego FIT, los estudiantes están comiendo más frutas y verduras en la escuela! ¡Pruebe la receta de abajo y siga animando a sus hijos a comer más verduras en casa, también!

PISTAS:

- Corte los vegetales en palitos y empáquelos en una taza pequeña con el dip favorito de su hijo para una merienda fácil después de la escuela.
- Compra venta de verduras esta semana; todas las formas (frescos, congelados, enlatados) son nutritivo!
- ¡Pregúntele a su hijo qué verduras comieron hoy en la escuela!
- **Desafío:** ¡Compre e intente una nueva verdura – o cocine una verdura familiar de un nuevo modo – con una comida de la familia esta semana.



¡Nuestro VEGETAL DE LA SEMANA es el CALABACÍN! Aquí están algunos hechos divertidos:

- 1) ¡El calabacín es una gran fuente de vitaminas A y C, potasio y fibra! Estos son nutrientes que la mayoría de la gente no recibe suficiente.
- 2) ¡El calabacín más grande del mundo en el expediente era cerca de 5 pies de alto y pesó 65 libras-el tamaño de un 5to grado medio!

Calabacín de Parmesano TOTS

INGREDIENTES:

- 1 1/2 tazas de desmenuzado y ligeramente palmedo (aproximadamente 1 ½ calabacín medio)
- 1 taza de migas de pan
- 1/2 Cdas condimento italiano seco
- 1/2 taza queso parmesano rallado
- 1 huevo grande



DIRECTIONS:

Desmenuzar el calabacín con un rallador vegetal. Cuando se hace, acariciar el calabacín seco con algunas hojas de toallas de papel. Mientras que usted no necesita secar completamente el calabacín, usted quiere absorber algo de la humedad.

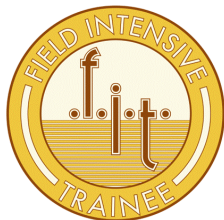
Precaliente el horno a 400 F. Mida hacia fuera 1 ½ tazas de calabacín seco acariciado y agregue a un tazón de fuente de mezcla grande. Añada el huevo, el queso y las migas. Revuelva hasta que todo esté bien combinado.

Tome 1 cucharada de masa de calabacín y apriete entre la palma de la mano, comprimiéndola. Un poco de agua debe liberar también. Usando ambas manos, forme para asemejarse a una forma de tot de papas. Colóquelo sobre una bandeja de hornear forrada con papel de pergamino. Repita con los calabacines restantes.

Hornee durante unos 15-20 minutos hasta que las partes inferiores estén doradas y crujientes. Voltear y hornear por otros 5 minutos. Servir caliente con salsa de tu elección.

FIT Game Newsletter Vol. 3

November 20, 2017



Two weeks ago at lunch, the lunch ladies offered exotic fruits for your children to try, like kumquats and rambutan –ask them how they tasted! The children are still helping the FIT heroes battle against the villains in the FIT Game at school, but they need encouragement to keep eating their vegetables!

TIPS:

- It can take up to 18 tastings for children to decide if they like a vegetable, so don't give up! Praise them whenever they try a new vegetable, even if it's a small bite.
- Let your child pick out a new vegetable to try when grocery shopping this week. Children are more likely to eat vegetables when they have a say in what to eat.
- **Challenge:** Make a family goal to eat at least some vegetables with dinner every night this week.



Our VEGGIE OF THE WEEK is SPINACH! Here are some fun facts:

- 1) Spinach is a great source of vitamin C, A, iron, and calcium! Just 0.5 cup is a serving!
- 2) Spinach is a plant native to Persia (modern-day Iran in the Middle East), and medieval artists used the green pigment from spinach as ink or paint!

THREE WAYS TO COOK WITH SPINACH

<http://www.onegreenplanet.org/vegan-food/sensational-ways-to-cook-with-spinach/>

This has been adapted from the link above for simple and delicious ways to cook with spinach. It is a versatile vegetable that is easily added to a variety of dishes, which is a great way to eat more vegetables! The link also has recipe suggestions.

- 1) **SALADS:** This is probably an obvious choice, but mixing spinach in with other lettuce and greens adds more nutrients and color to whatever salad you're making.
- 2) **SMOOTHIES:** Spinach has a mild flavor and isn't as tough as kale, making it an easy way to make your smoothies healthier. A side effect is that the smoothie can turn slightly green. If your kids are picky, serve the smoothie in an opaque cup with a lid and straw!
- 3) **PASTA:** Cook up some spinach and add it to your sauce and noodles, find ravioli or tortellini (stuffed pasta) that has spinach inside, or layer it inside your lasagna to add color and nutrients to your meal!

These are a few examples, but there are so many options!



Boletín de Información del juego FIT Vol. 3 November 20, 2017

Pistas:

- Puede llevar hasta 18 oportunidades de probar para que los niños decidan se les gusta un vegetal, ¡Así que no te rindas! Felicítelos siempre que prueben un nuevo vegetal, aun que es solo un pequeño bocado.
- Deje que su hijo escoja un nuevo vegetal para probar cuando vaya de compras esta semana. Los niños son más propensos a comer verduras cuando tienen algo que decir sobre qué comer.
- **Desafío:** Haga una meta familiar para comer al menos algunas verduras con la cena todas las noches de esta semana.



¡Dos semanas atrás al almuerzo, las señoras del almuerzo ofrecían frutas exóticas para sus hijos para probar, como kumquats y rambután-pregúnteles cómo le fue!
¡Los niños todavía están ayudando a los héroes aptos batalla contra los villanos en el juego FIT en la escuela, pero necesitan ánimo para seguir comiendo sus verduras!

¡Nuestro VERDURA DE LA SEMANA es ESPINACA! Aquí hay algunos datos divertidos:

- 1) ¡La espinaca es una gran fuente de vitamina C, A, hierro y calcio! ¡Solo 0.5 taza es una porción!
- 2) La espinaca es una planta originaria de Persia (Irán actual en Medio Oriente), y los artistas medievales usaban el pigmento verde de la espinaca como tinta o pintura.

TRES MANERAS DE COCINAR CON ESPINACA

<http://www.onegreenplanet.org/vegan-food/sensational-ways-to-cook-with-spinach/>

Esto ha sido adaptado del enlace anterior para formas simples y deliciosas de cocinar con espinacas. Es un vegetal versátil que se agrega fácilmente a una variedad de platos, ¡Lo cual es una gran manera de comer más vegetales! El enlace también tiene sugerencias de recetas.

- 1) ENSALADAS: Esta es probablemente una elección obvia, pero mezclar espinaca con otras lechugas y verduras agrega más nutrientes y color a cualquier ensalada que estés haciendo.
- 2) SMOOTHIES: La espinaca tiene un sabor suave y no es tan dura como la col rizada, por lo que es una manera fácil de hacer que tus batidos sean mas saludables. Un efecto secundario es que el batido puede ponerse ligeramente verde. Si sus hijos son exigentes, sirva el batido en una taza opaca con tapa y pajita.
- 3) PASTAS: Cocina algunas espinacas y agrégalas a tu salsa y fideos, encuentra raviolis o totellini (pasta rellena) que tiene espinaca adentro, o ponla dentro de tu lasaña para agregar color y nutrientes a tu comida.

Estos son algunos ejemplos, ¡Pero hay tantas opciones!

FIT Game Newsletter Vol. 4

Tuesday December 5, 2017



FIT Game is wrapping up at Woodruff Elementary! Students are eating 80% more vegetables during lunch than they were in September, all in order to help the FIT heroes beat the villains! Try the recipe below and keep encouraging your children to eat more vegetables at home, too!

Our VEGGIE OF THE WEEK is ASPARAGUS! Here are some fun facts:

- 1) Good source of vitamin K, folate, and fiber!
- 2) Fresh asparagus also contains lots of antioxidant vitamins such as vitamin C, vitamin A, and vitamin E.
- 3) It takes asparagus three years from seed to harvest!



TIPS:

- Place sticks of carrots, cucumber, celery, and/or pepper in small cups with a dollop of your favorite dip at the bottom of the cup. Have these available for your kids as an after school snack!
- Establish goals for eating vegetables at home —help your child track his or her progress on a simple online chart and reward them when those goals are met.
- **Challenge:** Have a vegetable eating contest! Whoever eats the most vegetables after 3 days gets to assign the other person to do one household chore.

GARLIC PARMESAN ROASTED ASPARAGUS

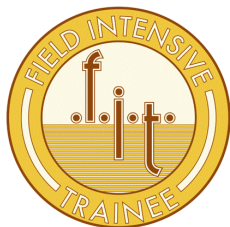
Ingredients

½ pound fresh asparagus 3 cloves minced garlic
 ½ teaspoon salt
 ½ teaspoon fresh ground black pepper
 2-3 Tablespoons parmesan cheese
 olive oil spray or olive oil

Directions

- Preheat oven to 425 degrees. Line a rimmed baking sheet with aluminum foil and set aside.
- Rinse the asparagus and trim off woody end pieces. Spread out in a thin layer on top of the prepared cookie sheet.
- Spray the asparagus lightly with a coat of olive oil spray, or drizzle with olive oil.
- Sprinkle with salt, pepper, garlic, and parmesan cheese. Use your hands to mix the asparagus with all of the ingredients, then lay out into an even layer again.
- Spray/drizzle with one more light coat of olive oil.
- Bake in the preheated oven for 8 minutes. Remove from oven and serve immediately. Enjoy!





Boletín Informativa del Juego FIT Vol. 4 Tuesday December 5, 2017

El juego FIT está terminando en la Primaria Woodruff. Los estudiantes están comiendo un 80% más de vegetales durante el almuerzo que en septiembre, ¡Todo para vencer a los villanos! Pruebe la receta a continuación y siga alentando a sus hijos a comer más verduras en casa también.

Nuestro Vegetal de la Semana

es ¡ESPÁRRAGO! Aquí hay algunos datos divertidos:

- 1) ¡Buena fuente de vitamina K, ácido fólico y fibra!
- 2) Los espárragos frescos también contienen muchas vitaminas antioxidantes como vitamina C, vitamina A y vitamina E.
- 3) ¡Toma tres años de espárragos desde la semilla hasta la cosecha!

PISTAS:

- Coloque los palitos de zanahorias, pepino, apio y/o pimienta en tazas pequeñas con una cucharada de su salsa favorita en el fondo de la taza. ¡Tenga estos disponibles para sus hijos como merienda después de la escuela!
- Establezca metas para comer verduras en casa: ayúdelo a seguir su progreso en un gráfico en línea simple y recompénselo cuando se cumplan esos objetivos.
- **Desafío:** ¡Haz un concurso de comer vegetales! Quien come más verduras después de 3 días consigue asignar a la otra persona para que haga una tarea doméstica.

Espárragos Asados al Ajo Parmesano

Ingredientes

½ libra espárrago fresco ½ cucharadita sal
½ cucharadita pimienta negro fresco
3 dientes de ajo picados
2-3 Cucharadas de queso parmesano
aceite de oliva o aceite de oliva

Instrucciones

Precaliente el horno a 425 grados. Alinee una hoja de hornear con borde con papel de aluminio y póngalo a un lado.

Enjuague los espárragos y recorte las piezas leñosas. Extienda en una capa delgada en la parte superior de la hoja de galleta preparada.

Rocíe ligeramente los espárragos con una capa de aceite de oliva. Espolvorear con sal, pimienta, ajo y queso parmesano. Utilice sus manos para mezclar los espárragos con todos los ingredientes, a continuación, se exponen en una capa uniforme de nuevo.

Rocíe con una capa mas ligera de aceite de oliva.

Hornee en el horno precalentado durante 8 minutos. Quítelo del horno y sirva inmediatamente. Disfrutalo!



APPENDIX E: Pre- and Post-Intervention Surveys for 2017 Intervention

FIT Game Newsletter Survey Baseline Bridger - Short version

Please complete this survey if you are the person who is primarily responsible for purchasing and preparing food for your children in your home. If you aren't this person, please pass this survey along to the person who is primarily responsible for purchasing and preparing food for your children in your home. All of the information you provide will remain confidential. Thank you in advance for completing this survey.

Q1 What is the lunch ID number of your oldest child attending Bridger Elementary?

Q2 What is your age in years? _____

Q3 What is the highest level of school that you have completed?

- 8th grade or lower Some high school, no diploma
 High school graduate or equivalent Some college, no degree
 Trade, technical, or vocational training Associate degree
 Bachelor's degree Master's degree Professional degree
 Doctorate degree

Q4 How often do you serve vegetables for the following eating occasions? (mark within the boxes)

	More than once per day	Every day	5-6 times per week	3-4 times per week	1-2 times per week	Less than once per week	2-4 times per month	Rarely/ Never
Dinner or Supper								
Snacks								

This section asks about how confident you are serving vegetables to your family in different situations. Please select the best answer.

Q5 How confident are you that you can serve vegetables when you are... (Mark within the box)

	Not at all confident	Somewhat confident	Confident	Very confident
Preparing meals at home				
Limited on time				
Low on money to purchase food				

Q6 This question is an inventory of vegetables you have had in your home over the past week. Please mark vegetables that you have had in your home over the past week in any form - fresh, frozen, canned, or dried.

Asparagus	Bell peppers (any color)	Broccoli	Cabbage	Cauliflower
Carrots	Celery	Corn	Cucumbers	Green beans
Lettuce	Onion	Peas	Spinach/Kale/other collard greens	Sweet potatoes/Yams
Tomatoes	Winter squash (acorn, butternut, spaghetti, etc.)	Zucchini	Mixed vegetables	

Q7 Please enter your email address if you would like to be entered to win one of four \$25 Visa gift cards.

FIT Game Newsletter Survey Baseline Woodruff - Short version

Please complete this survey if you are the person who is primarily responsible for purchasing and preparing food for your children in your home. If you aren't this person, please pass this survey along to the person who is primarily responsible for purchasing and preparing food for your children in your home. All of the information you provide will remain confidential. Thank you in advance for completing this survey.

Q1 What is the lunch ID number of your oldest child attending Woodruff Elementary?

Q2 Is your child participating in the FIT Game program at school?

Yes No I am unsure

Q3 What is your age in years? _____

Q4 What is the highest level of school that you have completed?

8th grade or lower Some high school, no diploma
 High school graduate or equivalent Some college, no degree
 Trade, technical, or vocational training Associate degree
 Bachelor's degree Master's degree Professional degree
 Doctorate degree

Q5 How often do you serve vegetables for the following eating occasions? (mark within the boxes)

	More than once per day	Every day	5-6 times per week	3-4 times per week	1-2 times per week	Less than once per week	2-4 times per month	Rarely/ Never
Dinner or Supper								
Snacks								

This section asks about how confident you are serving vegetables to your family in different situations. Please select the best answer.

Q6 How confident are you that you can serve vegetables when you are... (Mark within the box)

	Not at all confident	Somewhat confident	Confident	Very confident
Preparing meals at home				
Limited on time				
Low on money to purchase food				

Q7 This question is an inventory of vegetables you have had in your home over the past week. Please mark vegetables that you have had in your home over the past week in any form - fresh, frozen, canned, or dried.

Asparagus	Bell peppers (any color)	Broccoli	Cabbage	Cauliflower
Carrots	Celery	Corn	Cucumbers	Green beans
Lettuce	Onion	Peas	Spinach/Kale/other collard greens	Sweet potatoes/Yams
Tomatoes	Winter squash (acorn, butternut, spaghetti, etc.)	Zucchini	Mixed vegetables	

Q8 Please enter your email address if you would like to be entered to win one of four \$25 Visa gift cards.

FIT Game Newsletter Survey—Bridger; post-intervention

Please complete this survey if you are the caregiver who is primarily responsible for purchasing and preparing food for your children in your home. **Bring it back by Friday December 15th and your child will receive a prize!**

1. What is the school ID number of your oldest child attending Bridger Elementary?

2. What is your ethnicity? Not Hispanic or Latino Hispanic or Latino

3. What is your gender? Male Female

4. What is the highest level of school you have completed? (circle) (ex. high school graduate; bachelor's degree)

5. How often do you serve vegetables for the following eating occasions? (mark within the boxes)

	More than once per day	Every day	5-6 times per week	3-4 times per week	1-2 times per week	Less than once per week	2-4 times per month	Rarely/ Never
Dinner or Supper								
Snacks								

6. How confident are you that you can serve vegetables when you are... (mark within the boxes)

	Not at all confident	Somewhat confident	Confident	Very confident
Preparing meals at home				
Limited on time				
Low on money to purchase food				

7. Which of these vegetables have you had in your home over the past week in any form (fresh, frozen, canned, or dried)? (circle)

Asparagus	Bell peppers (any color)	Broccoli	Cabbage	Cauliflower
Carrots	Celery	Corn	Cucumbers	Green beans
Lettuce	Onion	Peas	Spinach/Kale/other collard greens	Sweet potatoes/Yams
Tomatoes	Winter squash (acorn, butternut, spaghetti, etc.)	Zucchini	Mixed vegetables	

8. How many cups of vegetables does your child usually consume at home per day? (Circle)

< 0.25 cups	0.25 – 0.5 cups	0.5 – 0.75 cups	0.75 – 1 cups
1 – 1.5 cups			
1 – 1.5 cups	1.5 – 2 cups	2 – 2.5 cups	2.5 – 3 cups
> 3 cups			

Thank you for your participation!

Boletín Informativo del Juego FIT –Bridger; post intervención

Por favor complete esta encuesta se usted es el cuidador que es principalmente responsable de la compra y la preparación de alimentos para sus hijos en su casa.

Devuélvelo antes del viernes 15 de diciembre y su hijo recibirá un premio!

1. ¿Cuál es el número de almuerzo/identificación escolar de su hijo mayor que asiste a la escuela primaria Bridger? _____

2. ¿Cual es tu etnia? (circular) Hispano o Latino no Hispano o Latino

3. ¿Cuál es tu género? (circular) masculino femenino

4. ¿Cuál es el nivel más alto de la escuela que usted ha completado? (e.g. Escuela secundaria, la formación técnica o profesional) _____

5. ¿Con qué frecuencia sirven verduras para las siguientes ocasiones de comer? (marque dentro de la cajas)

	Más de una vez al día	Todos los días	5-6 veces por semana	3-4 veces por semana	1-2 veces por semana	Menos de una vez por semana	2-4 veces por mes	Casi nunca/ Nunca
Cena								
Botana								

6. ¿Qué tan seguro estás de que puedes servir verduras cuando estás...? (marque dentro de la cajas)

	No estoy seguro	Algo seguro	Seguro	Muy seguro
Preparando comidas en casa				
Limitado a tiempo				
Bajo en dinero para comprar alimentos				

7. ¿Cuál de estas verduras ha tenido en su casa durante la semana pasada en alguna forma (fresco, congelado, en una lata, o seco)? (circular)

Espárrago	Pimiento (rojo, naranja, amarillo, verde)	Brócoli	Repollo	Coliflor
-----------	---	---------	---------	----------

Zanahoria	Apio	Maíz	Pepino	Frijoles verdes
Lechuga	Cebolla (rojo, blanco, amarillo)	Arveja	Espinaca/ col rizada/ otros collares verdes	Batatas/Ñames dulces
Tomates	Calabaza de invierno (bellota, nuez, espagueti, etc.)	Calabacín	Verduras mixtas	

8. ¿Cuántas tazas de verduras suele consumir su hijo en casa por día? (circular)

< 0.25 tazas 0.25 – 0.5 tazas 0.5 – 0.75 tazas 0.75 – 1 tazas
 1 – 1.5 tazas

 1 – 1.5 tazas 1.5 – 2 tazas 2 – 2.5 tazas 2.5 – 3 tazas
 > 3 tazas

¡Gracias por tu participación!

FIT Game Newsletter Survey—Woodruff; post-intervention

Please complete this survey if you are the caregiver who is primarily responsible for purchasing and preparing food for your children in your home. **Bring it back by Friday December 15th and your child will receive a prize!**

1. What is the school/lunch ID number of your oldest child attending Woodruff Elem.?

2. Is your child participating in the FIT Game program at school? (circle) Yes No
I am unsure

3. What is your ethnicity? (Circle) Not Hispanic or Latino Hispanic or Latino

4. What is your gender? (Circle) Male Female

5. What is the highest level of school you have completed? (ex. high school graduate; bachelor's degree)

6. How often do you serve vegetables for the following eating occasions? (Mark within the box)

	More than once per day	Every day	5-6 times per week	3-4 times per week	1-2 times per week	Less than once per week	2-4 times per month	Rarely/ Never
Dinner or Supper								
Snacks								

7. How confident are you that you can serve vegetables when you are... (Mark within the box)

	Not at all confident	Somewhat confident	Confident	Very confident
Preparing meals at home				
Limited on time				
Low on money to purchase food				

8. Which of these vegetables have you had in your home over the past week in any form (fresh, frozen, canned, or dried)? (Circle all that apply)

Asparagus	Bell peppers (any color)	Broccoli	Cabbage	Cauliflower
Carrots	Celery	Corn	Cucumbers	Green beans
Lettuce	Onion	Peas	Spinach/Kale/other collard greens	Sweet potatoes/Yams
Tomatoes	Winter squash (acorn, butternut, spaghetti, etc.)	Zucchini	Mixed vegetables	

9. Please rank to what degree you agree with the following statements about the FIT Game newsletters by marking in the appropriate boxes below.

	Strongly agree	Agree	Disagree	Strongly disagree	I did not see or read the newsletters
The FIT Game newsletters taught me something new					
I enjoyed reading the newsletters					
The FIT Game newsletters motivated me to eat more vegetables					
My child enjoyed participating in FIT Game					
My child enjoyed participating in the newsletter challenges					

10. How many cups of vegetables does your child usually consume at home per day? (Circle)

< 0.25 cups 0.25 – 0.5 cups 0.5 – 0.75 cups 0.75 – 1 cups
 1 – 1.5 cups 1 – 1.5 cups 1.5 – 2 cups 2 – 2.5 cups
 2.5 – 3 cups > 3 cups

11. Which recipes from the newsletters did you try? (Circle all that apply)

None Stuffed peppers Parmesan zucchini tots
 Three ways to cook with spinach Garlic parmesan roasted asparagus

12. How many tips about helping your child to eat healthier at home did you try at home? (Circle)

None

1-2

3-4

5-6

All

13. How many of the challenges from the newsletters did you try? (Circle all that apply)

None

Buy and try a new vegetable at dinner

Family goal to eat vegetables with dinner

Family vegetable eating contest

Thank you for your participation!

Boletín Informativo del Juego FIT- Woodruff; post-intervención

Por favor complete esta encuesta si usted es el cuidador que es principalmente responsable de la compra y la preparación de alimentos para sus hijos en su casa.

Devuélvelo antes del viernes 15 de diciembre y su hijo recibirá un premio!

1. ¿Cuál es el número de almuerzo/identificación escolar de su hijo mayor que asiste a la escuela primaria Woodruff? _____

2. ¿Está su hijo/a participando en el programa Juego FIT en la escuela? (circular) Sí
No No estoy seguro

3. ¿Cuál es tu etnia? (circular) Hispano o Latino no Hispano o Latino

4. ¿Cuál es tu género? (circular) masculino femenino

5. ¿Cuál es el nivel más alto de la escuela que usted ha completado? (e.g. Escuela secundaria, la formación técnica o profesional)

6. ¿Con qué frecuencia sirven verduras para las siguientes ocasiones de comer? (marque dentro de la caja)

	Más de una vez al día	Todos los días	5-6 veces por semana	3-4 veces por semana	1-2 veces por semana	Menos de una vez por semana	2-4 veces por mes	Casi nunca/ Nunca
Cena								
Botana								

7. ¿Qué tan seguro estás de que puedes servir verduras cuando estás...? (marque dentro de la caja)

	No estoy seguro	Algo seguro	Seguro	Muy seguro
Preparando comidas en casa				
Limitado a tiempo				
Bajo en dinero para comprar alimentos				

8. ¿Cuál de estas verduras ha tenido en su casa durante la semana pasada en alguna forma (fresco, congelado, en una lata, o seco)? (circular)

Espárrago	Pimiento (rojo, naranja, amarillo, verde)	Brócoli	Repollo	Coliflor
Zanahoria	Apio	Maíz	Pepino	Frijoles verdes
Lechuga	Cebolla (rojo, blanco, amarillo)	Arveja	Espinaca/ col rizada/ otros collares verdes	Batatas/Ñames dulces
Tomates	Calabaza de invierno (bellota, nuez, espagueti, etc.)	Calabacín	Verduras mixtas	

9. Por favor alinee hasta qué grado usted está de acuerdo con las siguientes declaraciones sobre los boletines de juego FIT marcando en las casillas apropiadas abajo

	Estar totalmente de acuerdo	Estar de acuerdo	No estar de acuerdo	No estar totalmente de acuerdo	No vi ni leí los boletines
Los boletines del juego FIT me enseñaron algo nuevo					
Disfruté leyendo los boletines					
Los boletines del juego FIT me motivaron a comer más verduras					
Mi hijo disfrutó participando en juego FIT					
Mi hijo disfrutó participar en los desafíos del newsletter					

10. ¿Cuántas tazas de verduras suele consumir su hijo en casa por día? (circular)

< 0.25 tazas 0.25 – 0.5 tazas 0.5 – 0.75 tazas 0.75 – 1 tazas
 1 – 1.5 tazas 1 – 1.5 tazas 1.5 – 2 tazas 2 – 2.5 tazas
 2.5 – 3 tazas > 3 tazas

11. ¿Qué recetas de los boletines informativos probaste? (Circular todos que te aplique)

Ninguna Pimiento Relleno Calabacín de pimientos totos
 Tres maneras de cocinar con espinacas Espárragos asados al ajo pimiento

12. ¿Cuántos pistas sobre cómo ayudar a su hijo a comer más sano en casa lo ha intentado en casa? (Circular)

Ninguno 1-2 3-4 5-6 todos

13. ¿Cuántos de los desafíos de los boletines informativos has intentado? (Circular todo que te aplique)

Ninguno

Comprar y probar un nuevo vegetal en la cena

Meta familiar para comer verduras con cena

Concurso de comer verduras con la familia

¡Gracias por su participación!