2018

Evaluation Of Parent Involvement In Families In Transformation (Fit) Wellness Program For Children

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EVALUATION OF PARENT INVOLVEMENT IN *FAMILIES IN TRANSFORMATION (FIT)* WELLNESS PROGRAM FOR CHILDREN

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May 2018

ABSTRACT

Objective: To evaluate and determine the effectiveness of parent involvement in the *Families in Transformation (FIT)* child wellness program.

Methods: *Families in Transformation (FIT)* is an 8-week child wellness program utilizing physical activity and nutrition education for families. Eighteen children between the ages of 7-13, of both sexes and their families participated. A single group pre-/post- test design was used, using nutrition and fitness knowledge assessments and health habit surveys. Anthropometric and food frequency data was gathered on the children. A parent satisfaction survey was administered the past night of the program, and both parents and children were given food frequency questionnaires once weekly.

Results: A Chi square analysis revealed modest improvements in several of the parents' health habits, and both parents and children improved on the pre- and post- nutrition and fitness knowledge quiz. Correlation coefficients on the mean food frequency responses versus weeks in the program revealed modest improvements in the children' eating habits, though the parents did not show improvement. Post- program anthropometric data revealed no significant improvement in the children. Results for the parent satisfaction survey was almost universally positive.

Conclusion: Feedback from parents revealed overall satisfaction with the program. Family wellness preventions and interventions offering nutrition education for the whole family and involving the whole family in physical activity together may lead to more positive outcomes than programs focused solely on children.

DEDICATION

I would like to dedicate this thesis to my husband, Will Walker, and my daughter, Carolyn Walker.

ACKNOWLEDGEMENTS

I would like to first and foremost acknowledge the hard work, mentorship, and dedication of my thesis advisor, Dr. Kathy Knight. I would also like to acknowledge the help and guidance of my thesis committee, Dr. Anne Bomba and Dr. Charlotte Oakley, as well as the generous guidance and advice of Dr. Scott Knight. I would also like to acknowledge Ms. Kathy Tucker and the rest of the *Healthworks!* staff for allowing me to observe and evaluate their program. Lastly, I would like to acknowledge my husband, Will Walker, for his patience and help through this process.

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I. INTRODUCTION

Parents have a significant effect on their children's eating behavior, and some pediatric wellness programs include education on healthy eating and physical activity for parents as well as their children. Encouraging a healthy lifestyle and good eating habits at an early age is crucial to combatting the childhood obesity epidemic (Patino-Fernandez, Hernandez, Villa & Delamater, 2013). Much of the current research emphasizes the importance of having the whole family involved in the pursuit of a healthy lifestyle, and support from family can help children maintain lifestyle changes over the long term (Rawlins, Baker, Maynard & Harding, 2012).

Families in Transformation (FIT) is a wellness program for children and their parents and/or caregivers, which provides nutrition and physical activity education and encouragement to practice healthy eating and physical activity habits (http://www.healthworkskidsms.org/whats-happening/fit-families-in-transformation). The program is run by *HealthWorks!,* a health education and activity center for children developed in partnership between Memorial Health System of Indiana, the Health Care Foundation of North Mississippi (HCF) and North Mississippi Health Services (NMHS). The purpose of this research is to: 1) evaluate the portion of the program that was for parents and 2) determine the effectiveness of parental involvement with regards to program outcomes.

Review of Literature

The population of the United States is getting heavier, and this problem is shared by adults and children. Childhood obesity is also a rising concern globally. An increasingly sedentary lifestyle and the ready availability of energy dense foods have created a perfect storm for the rapidly rising levels of childhood obesity (Adamo & Brett, 2014). The rising rate of overweight and obesity in children is not exclusive to one race, ethnicity, or socioeconomic class, according to the National Health and Nutrition Examination Survey (NHANES) (Gray et al., 2007). African-American and Hispanic children are at a higher risk for childhood obesity and the associated co-morbidities such as type II diabetes (Patino-Fernandez et al., 2013). The rising incidences of type II diabetes in children points to the shift in eating habits of children and families alike (Gray et al., 2007). Convenience foods, fast foods, and other foods high in fat, sodium, and sugar have all contributed to the overweight and obesity epidemic among children; diets are now high in calories, but low in beneficial nutrients (Adamo & Brett, 2014; Gray et al., 2007). Children have begun to lead more sedentary lives supported by the increasing prevalence of video games, television viewing, and computer use (Gray et al., 2007). More time devoted to these sedentary activities may have led to less time for physical activity.

Liechty et al. (2015) suggests that parents' health literacy may be a promising place to start a family wellness intervention. To determine the health literacy of parents, and which weight loss strategies parents felt comfortable employing with their overweight children (Liechty et al., 2015), researchers extracted data from the STRONG Kids Study, a larger panel survey study in the Midwest. Through the use of questionnaires and interviews, the researchers reported that parents with a high level of health literacy often consulted the

Internet to get their nutritional information, whereas people with lower levels of health literacy often relied on information communicated to them from their peers (Liechty et al., 2015).

Yabanci, Kisac and Kerakus (2014), contended that mothers have the most influence over their children's nutritional decisions. A total of 302 mothers of students in Ankara, Turkey (mean age of 12 years), took a 30-item inventory aimed at determining the nutritional knowledge of the mothers. The study found that the children of mothers who had a higher nutritional knowledge most often had a normal body mass index (BMI), and consumed more fruits and vegetables and less fast foods and sugary drinks than children of mothers who had less nutritional knowledge (Yabanci et al., 2014). Therefore, the authors concluded that the mothers' nutritional knowledge had a direct impact on what their children chose to eat.

Vereecken and Maes (2010) examined Flemish children's adherence to dietary guidelines and their mothers' nutritional knowledge and attitudes. Through a 25 page computer generated questionnaire, they classified the mothers based on education level (with high being a bachelor's or master's degree, medium being technical education, and low being less than a technical education), and used a food frequency questionnaire to determine their children's eating habits. The researchers reported that there was a positive relationship between the children's eating habits and their mothers' level of education and nutritional knowledge; the higher the education level, the higher the nutritional knowledge and the more the child adhered to recommended dietary guidelines. Building on Vereecken and Maes' (2010) research, a study done by Campbell et al. (2013), reported that a mother's nutrition knowledge had a direct impact on her child's eating habits. This knowledge was assessed using a survey. The mothers' BMI's were calculated, and their highest level of education was

recorded. The researchers reported that the mothers' nutritional knowledge was significantly associated with their children's consumption of fruits and vegetables. Additionally, mothers who had a high level of nutritional knowledge had more fruits and vegetables available to their children in their home than the mothers who did not have a high level of nutritional knowledge (Campbell et al., 2013).

Russell and Worsley (2013) interviewed 60 parents from various socioeconomic classes to determine what the parents thought influenced their children's food choices, and whether they felt they had any influence over those choices. The researchers found that most of the parents believed that their children's likes or dislikes with regards to certain foods were innate; they either liked or disliked these foods and no amount of intervention by the parents would change these feelings. Some parents felt that their children did not like certain types of foods based on the characteristics of a food; for instance, the food had an unpleasant smell, texture, taste, et cetera (Russell & Worsley, 2013). Ultimately, the researchers classified the parents into groups: the healthy group, the unhealthy group, and the neophobic group (consisting of parents who identified their children as "picky," and unwilling to eat new foods). The researchers concluded that the parents thought their children were influenced both by their innate preferences and by their environment which included their parents.

In a 2007 study by Gray et al., surveys were administered to the parents of 2nd grade students to determine their concern about their child's nutrition status and their risk for overweight. Researchers collected heights and weights of the students, and asked the parents whether they considered their children obese, overweight, or of normal weight. They asked the parents the same question regarding themselves. Parents whose children were overweight or at risk of being overweight believed that diet was the main factor, whereas

parents of children who were not at risk for overweight thought that physical activity was the main factor (Gray et al., 2007). Parents who indicated that they were low income believed that their child's overweight status was due to diet related factors. The respondents did not generally indicate that they believed diet and physical activity to be of equal concern with regards to being overweight or at risk for overweight (Gray et al., 2007). In a study of how parents perceive their childrens' weights, Mareno (2013) concluded that because a larger body size is becoming accepted in society, parents are generally not terribly concerned about their children being overweight. Additionally, as the typical U.S. body size becomes larger, parents may be more accepting of their children being overweight because they themselves may be overweight. Mareno stated that the way to combat this view is to promote lifestyle changes and healthy eating habits within the family unit, primarily through the creation of nutrition and lifestyle intervention programs.

Martin-Biggers et al. (2015) surveyed parents of school-age children in New Jersey and Arizona (n=139), and then interviewed them concerning changes they could make within their homes to benefit the health of their children. Parents reported they felt they did not have enough time on a daily basis to prepare healthful meals, and they were unsure about the appropriate serving sizes for their children. Additionally, the study reported that younger parents and those parents with less than a high school education actually involved themselves more in active play with their children than older parents who were educated above the high school level. The parents reported a lack of knowledge affecting their food choices and food preparation, and expressed interest in participating in education workshops to learn more about nutrition (Martin-Biggers et al., 2015).

In a 2014 study, Thomas, Olds, Pettigrew, Randle and Lewis found that both parents and children thought of weight as being the first example of poor health. Though both parents and children perceived being overweight as undesirable, parents believed in the strong negative physical impact of being overweight, while children focused more on the negative social impact of being overweight. Interviews with both parents and children were conducted, and the amount of physical activity, screen time, and other lifestyle behaviors of the children were examined. Anthropometric measurements and demographic information were also recorded. The study found both children and parents believed if someone was thin, then diet and exercise were not nearly as important than if they were overweight (Thomas et al., 2014). The researchers also found that parents routinely used "scare tactics" to influence their children and persuade them to become more physically active; warning their children of the social and health risks of being overweight (Thomas et al., 2014). Surprisingly, the study found some parents believed the teasing of overweight children by their peers was not detrimental, and could be a motivating factor for those children to lose weight.

Erturgut and Erturgut (2010) examined the educational levels and child rearing attitudes of parents as related to their children's nutrition level. Researchers at a Turkish hospital were able to administer a series of written assessments to 116 school-aged children and their parents. Assessments were given to measure the children's health status and to parents to discover their parenting styles. Results of the study included no "meaningful relationship" between parent's education level and their children's nutrition level, and that 36% of the children involved felt as though their parents did not care about their nutrition (Erturgut & Erturgut, 2010). Erturgut and Erturgut did not establish a link between parents who were

more educated and their children's improved nutritional health over more poorly educated parents.

Childhood overweight and obesity accounted for $14.3 billion in healthcare related expenses in America in 2009. The risks for overweight or obese children remaining that way into adulthood is exceedingly high (Ling, King, Speck, Kim & Wu, 2014). In a 2014 study done by Ling et al., children from four separate schools and in kindergarten through 5th grade were assessed using a pedometer and a School Physical Activity and Nutrition questionnaire aimed at measuring the amount of fruits and vegetables consumed by the child each day. Parents were asked to help their children log their steps from the pedometers, and become involved as part of "family fitness fun nights," where all individuals were encouraged to be physically active and exercise as a family unit (Ling et al., 2014). Ling et al found that when parents were involved in their children's pursuit of good health, the school- based nutrition intervention was more successful. Parent involvement was key to ensuring that the children followed the recommendations of their health coaches and kept track of their physical activity.

Patino-Fernandez, Hernandez, Villa, and Delamater (2013) also found that parent involvement is key to the physical health of their children. Three focus groups made up of three parents of 1st graders were conducted. The focus group discussions included the physical activity behaviors and eating habits of their children. The results of the study suggested that parents lacked self-efficacy; therefore, they felt helpless over their influence toward their children's eating habits, citing time constraints and children being finicky as obstacles to healthy eating.

Whereas Ling et al (2014) studied a pre-existing nutrition program, Patino-Fernandez et al. (2013) sought to evaluate parents' attitudes about the possibilities of participating with their children in a school-based program. The researchers in this study found that parents would support a wellness program if they were able to participate with their children, and were provided with reference materials such as recipes that they could use at home (Patino-Fernandez et al., 2013).

Wellness programs designed for families have become popular in recent years. In an evaluation of the *Make It HAPPEN* family education program, Watson-Jarvis, Johnson, and Clarke (2011) examined the aspects of the program that were successful. The researchers determined that the children involved in the 12-week program had an overall weight reduction, a positive view of the program, and felt that they had an overall improvement in their quality of life. Through post-program measures such as questionnaires, children at or above the 98th percentile for BMI cited a positive improvement in their self-esteem as well as a reduction in their BMI score (Watson-Jarvis et al., 2011). Additionally, the researchers received positive feedback from the families about the program's use of "family fun nights," which gave the families the opportunity to support each other and share what they had learned about healthy eating and physical activity (Watson-Jarvis et al., 2011).

Evaluating wellness programs aimed at nutrition and physical activity is vital to finding what works and what needs to be changed. Prelip, Kinsler, Thai, Erausquin, and Slusser (2012), suggested that the most successful intervention programs would be the programs that involve nutrition professionals, and schools and family members. In their study, six elementary schools were selected for distribution of questionnaires measuring fruit and vegetable consumption by students. Teachers in 36 different classrooms administered the

questionnaire at the start of the school year and at the end of the school year. Parents of these students participated in nutrition education workshops throughout the school year. The study found that though the students had a positive view of fruit and vegetable consumption, the students did not increase their consumption of these foods. At the beginning and end of the school year students consumed well below the recommended servings a day (Prelip et al., 2012). It is also interesting to note that the researchers found no positive relationship between parents encouraging their children to eat more healthfully and their children actually doing so (Prelip et al., 2012).

Although Rodriguez, Applebaum, Stephenson-Hunter, Tinio, and Shapiro (2013) focused their *Cooking, Healthy Eating, Fitness and Fun* (CHEFF) nutrition education program at children residing in homeless shelters with their families, the program has valuable insight into the importance of nutrition education for all children. This 15-week program provided nutrition and other health education to two separate homeless shelters located in the Bronx. The researchers collected demographic information and noted any feedback or commentary from the students. Due to the nature of the program, attendance was not consistent. A pre-program and post program questionnaire was used to assess the students' learning, using pictures instead of words (Rodriguez et al., 2013). Some increase in the children's knowledge concerning nutrition and exercise, as well as a significant increase in the caregivers' knowledge was reported; however, the increased knowledge did not lead the children to change their behaviors.

Speroni, Tea, Earley, Niehoff, and Atherton (2008) evaluated a hospital-based wellness program entitled *Kids Living Fit*, targeting children 8-12 years of age and who were overweight, according to their BMI ranking of 95th percentile or greater. The 12-week

program provided both nutrition education and exercise sessions. Anthropometric measurements were taken at the onset and at the conclusion of the program. The participants completed questionnaires about their food choices and favorite types of exercise, and kept daily diaries to record their experiences. The researchers found that in general, waist circumference and BMI were reduced among the participants from the start of the program to the finish. They stated a benefit of having the program be hospital based was the ability to target the overweight population without identification of children as being overweight, which may occur in school programs (Speroni et al., 2008).

Rausch, Berger-Jenkins, Nieto, McCord, and Meyer (2015), evaluated the effect of a Coordinated School Health Program (CSHP), based on parents' knowledge, attitudes, and beliefs about nutrition and physical activity. Over a 2-year period, parents of kindergarteners at seven different schools were surveyed at three different times. Parents reported a reduction in the consumption of unhealthy foods and an increase in their children's physical activity levels. Additionally, since the onset of the program the CSHP has opened a farmer's market and has made gym spaces available to participating families to further healthy lifestyle changes (Rausch et al., 2015). A similar study by Small et al. (2012), evaluated a parent education intervention for 4-6 year old children in a program entitled *Be Beary Healthy*. The researchers used a pre and post- test design to evaluate the parents' acceptability of the program and their resulting nutrition knowledge. The parents were provided with a 10-inch plate displaying age-appropriate serving sizes for the different food groups, and asked to use this plate for meals consumed at home by their children for a 2-4 week period. The goal was to fill each specific area of the plate with the corresponding food group (Small et al., 2012). Additionally, the parents completed a nutrition knowledge

questionnaire and a 2-day photographic food diary. The researchers found that the parents perceived the use of the plate as having a positive impact on mealtimes. At the conclusion of the study, mothers reported serving their children significantly less saturated fat and carbohydrates than before the study (Small et al., 2012).

Sharma et al. (2015) evaluated the effectiveness of communication between parents, children, and childcare providers using the *Lunch is in the Bag* program. Thirty early care education centers participated in the 5-week program, which involved parents packing their children's lunches at home using a variety of fruits, vegetables, and whole grains. Nutrition and healthy eating handouts were given to the parents from the childcare centers, and a socio-demographic survey was administered to parents at the onset and at the conclusion of the program (Sharma et al., 2015). The researchers found that communication improved between parents and childcare providers more about fruit and vegetable intake than about whole grain intake. The most improvement in communication was seen between parents and their children about fruit consumption, with little communication improvement between the two groups about vegetables or whole grains (Sharma et al., 2015).

Many child-based wellness programs are used as intervention tools, whereas prevention focused programs are few and far between. Benzies, Clarke, Barker, and Mychasiuk (2013), evaluated the UpStart Parent Survey, a tool used for specifically evaluating parenting programs that are primarily prevention focused. This survey measured parent satisfaction with the program, parenting knowledge and skills, social support, and other parenting-focused measures (Benzies et al., 2013). Although the researchers found that this survey was fairly straight forward, simplistic and user friendly, it was difficult to measure parental

perceptions of outcomes of the programs, as this was largely based on individual opinions and could not accurately be measured in survey form (Benzies et al., 2013).

Wellness programs aimed at school-age children should incorporate their parents or guardians in order for the program to be successful in the long run. Generally speaking, parents or guardians are responsible for food purchases and cooking within the home. They make food selections and prepare foods for their children, and so empowering these individuals to make healthful choices will not only impact their children's nutritional status, but their own as well. Limiting children's screen time and encouraging them to participate in daily physical activity will help to improve the health status of their children, while exercising as a family unit may benefit the health of the family as a whole.

II. MATERIALS AND METHODS

In early 2016, the evaluation of a weight management program for children entitled *Families in Transformation (FIT)*, was conducted by researchers from the Department of Nutrition and Hospitality Management from the University of Mississippi (UM NHM) at the *Healthworks!* health education and fitness center in Tupelo, Mississippi. The Institutional Review Boards of both the University of Mississippi and North Mississippi Health Services approved the *FIT* program and this evaluation study. There were no incentives for parents/guardians or children to participate in the *FIT* program from the University of Mississippi, though upon completion of the program, each family received a $100 gift card to Kroger from the *Healthworks!* team. Parents/guardians signed consent forms, and the students signed assent forms (found in Appendix A), prior to the onset of the program. The program had a $25 participation fee, which was returned to the parents/guardians upon completion of the program.

Subjects

The *Healthworks!* staff recruited children and their parents from Tupelo area elementary and middle schools. As seen in Table 1, children of both genders, ages 8-13, participated in physical activity and nutrition education lessons and there was some ethnic diversity within the participants with 56% white, 25% black, and 19% multiracial. The parent group was not as diverse as 92 percent of the participants were female and 62 percent were white. Most of the parents (85 percent) had a university degree.

Table 1. Baseline demographic characteristics of *FIT* participants.

Variable	Students (n = 18)	Parents (n=13)
Mean age (years)	10.52 (1.26)	42.5 (3.92)
Gender		
Males	44%	8%
Females	56%	92%
Ethnicity		
White	56%	62%
Black	25%	23%
Hispanic	0%	0%
Asian	0%	8%
Multiracial	19%	0%
Other	0%	8%
Residence		
Apartment	13%	8%
House	75%	77%
Mobile home	13%	15%
Education level (parents only)		
8th grade		0%
High School/GED		0%
College/University		85%
Graduate/Professional		15%

Standard deviations are reported in parentheses.

As seen in Table 2, not all participants were at risk for obesity. The females' baseline weight of 57.89 $\pm$ 18.01 was almost a full standard deviation from the males' baseline weight of 50.96 $\pm$ 15.31. Some participants were referred to the program due to obesity risk, poor nutrition habits, high blood pressure, or poor physical activity status. Some families voluntarily signed up for *FIT* to become more active and healthier without the referral from a physician.

When compared to blood pressure tables from the National Heart Lung and Blood Institute (2004) the mean blood pressures for both females and males was around the 90th percentile. Resting heart rate, however, was in the normal range of 70 – 120 beats per minute (Williams, 2015).

Table 2. Anthropometric and health data for *FIT* student participants.

Measure	Females	Males	Total
Height (cm)			
Pre	142.38 (11.19)	140.61 (16.18)	142.57 (12.42)
Post	143.58 (11.56)	144.62 (13.29)	143.71 (12.32)
Weight (kg)			
Pre	57.89 (18.01)	50.96 (15.31)	52.51 (16.42)
Post	60.17 (18.66)	49.96 (15.54)	53.52 (16.76)
BMI z score			
Pre	2.046 (0.543)	1.352 (1.031)	1.720 (0.860)
Post	2.161 (0.427)	1.340 (0.990)	1.775 (0.836)
Systolic BP (mm Hg)			
Pre	113 (12.24)	110.63 (12.83)	111.31 (12.42)
Post	113 (11.69)	109.00 (12.90)	112.25 (13.55)
Diastolic BP (mm Hg)			
Pre	67.82 (6.00)*	60.00 (10.86)	66.63 (8.81)*
Post	59.90 (9.31)*	66.00 (12.82)	63.75 (11.81)*
Resting heart rate (beats/min)			
Pre	94.27 (11.04)*	76.78 (8.45)	83.69 (8.60)*
Post	98.80 (22.51)*	90.140 (7.68)	93.13 (20.73)*

Standard deviations are reported in parentheses.
* $p < 0.05$.

Procedure

The *FIT* program lasted for 8 weeks. In the first week baseline assessment data was collected, and participants were introduced to the program. Collection of all program post-assessment occurred during Week 8. The physical assessment included: height, weight, resting

heart rate, blood pressure, and physical fitness tests: push-ups, sit-ups, chair-squats, and step-ups. A 10 question nutrition quiz and 11 question lifestyle questionnaire was administered to each student and parent/guardian on the first night and the last night of the program (found in Appendix B). Parents/guardians were asked by the research team not to help their children take the quizzes/questionnaires. A program satisfaction survey was administered to parents/guardians the final night of the program (found in Appendix B). A brief food frequency questionnaire (FFQ) was administered on Monday evenings in weeks 2, 4, 5, 6, and 7. The FFQ can be found in Appendix B. Both parents and children were asked to estimate numbers of servings of various food groups based on their eating habits for the prior 24 hours. The FFQ was not administered during week 3 because the parents met at the grocery store for a tour. Quizzes, surveys, and questionnaires were administered in English, and none of the participants in the program were excluded from the study. A wristband accelerometer called the Sqord Booster (www.sqord.com) was issued to each student upon entrance to the FIT program; students were asked to create an online account using the Sqord software and wear the accelerometer during waking hours to track their physical activity throughout the day. Students accrued points online for physical activity.

Parents/guardians joined the students for 45 minute nutrition education lessons administered on Monday evenings, then the students went to a physical activity while parents stayed for extra nutrition education and/or a question and answer session. Each nutrition education lesson was taught by a registered dietitian from the North Mississippi Medical Center in Tupelo, and this was the only mandatory meeting of the week for parents. On Tuesday and Thursday evenings children participated in physical activity sessions from 5:30-6:30 pm; parent participation was optional.

UM NHM researchers attended each *FIT* meeting, recorded participant numbers, and any particular questions and/or concerns expressed by parents or students. A pilot study was conducted in fall, 2015 to test the survey instrument and to refine logistics such as researcher attendance and frequency of survey and FFQ administration.

Data Analysis

Demographic data, beginning and ending heights and weights, were analyzed using descriptive statistics. Pre- and post-intervention BMI was calculated for each student according to the following formula:

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height (cm)}^2}$$

BMI was then converted to age and gender-specific z scores according to the guidelines provided by the Centers for Disease Control and Prevention (CDC, 2015). The use of BMI z scores rather than direct BMI values helped to prevent factors such as differences in age and rate of growth from confounding the data. Pre and post-intervention mean BMI z scores and pre and post-intervention mean fitness test scores were compared using paired t-test with an alpha of 0.05. Chi square analysis was used to determine any category changes from pre to post *FIT* program for parent and student responses to the health habit survey and the nutrition and fitness quiz. Pearson's correlation coefficients were calculated for the means of weekly parent and student results for the food frequency questionnaire versus time in the *FIT* program.

III. RESULTS

Percent of parent and student responses to the Health Habit Questionnaire can be found in Tables 3a and 3b, and 4a and 4b. Significant differences between pre-program and post-program answers were:

- Question 1, "Do you read food labels?" Parents reported reading food labels more on the post-program survey (77 percent "most of the time" and 15 percent "always") compared to the pre-program survey (44 percent "most of the time" and 6 percent "always") ($p < 0.001$).
- Question 2 – Pre-program, 44 percent of parents responded that they ate "a little too much and 44 percent reported that they ate "the right amount". Post-program, 15 percent of parents answered that they ate "too much" and 77 percent answered that they ate "a little too much" ($p < 0.05$).
- Question 5 – Both children and parents watched less TV shows during the week. Children reported watching
- Question 8 – Parents used less technology on the weekends (28 percent of parents reported using technological items "more than 4 hours" a day pre-survey, whereas post survey 0 percent reported using technological items "more than 4 hours."
- Question 10 – While both parents and students reported more physical activity in a normal day, the parents had the greater increase. Pre-*FIT,* most of the parents reported getting "less that 15 minutes" (33%) or 15 to 30 minutes (28%) of physical activity per day. Post-*FIT,* only 15% reported getting less than 15 minutes per day, while those

reporting 15 to 30 minutes increased to 31%. The group that reported getting 30 to 60 minutes of physical activity per day rose from 17% pre-*FIT* to 38% post-*FIT* ($p < 0.041$). The largest change for students was for the response "15 to 30 minutes" (41% pre-*FIT* to 44% post-*FIT*, $p < 0.05$).

- Question 11 – While no significant differences between pre-*FIT and post-FIT* were determined for children, parents reported physical activity on more days of the week. While 56% reported performing physical activity on 0-2 days of the week before *FIT,* that number fell to 15% post-*FIT*. The number of parents who reported performing physical activity 5 to 7 days per week increased from 11% to 31% ($p < 0.009$).

The lack of other significant differences may be due to the relatively small sample size. Although no other significant differences were found, certain trends appeared in the data that are worth noting. Generally speaking, both groups became more physically active and decreased the number of TV shows they watched. More attention was paid to food labels and how many snacks both parents and children ate in a day.

Table 3a. Parent results from the pre-*FIT* health habit survey.

	Pre-Program Survey				
1. Do you read food labels?	Always	Most of the time	Sometimes	Rarely	Never
	6%	44%	44%	0%	6%
2. At meals I eat	Too much	Little too much	The right amount	Not enough	I don't know
	17%	44%	39%	0%	0%
3. When it comes to snacks I eat	Too much	Little too many	The right amount	Hardly any	I don't eat snacks
	6%	56%	22%	11%	0%
4. During the week, how much time do you watch TV?	No TV	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs
	11%	33%	33%	17%	6%
5. During the week, how many TV shows do you watch?	No TV	2-3 shows	4-6 shows	6 or more	
	11%	72%	11%	6%	0%
6. During one weekday, how many hours do you spend on cellphones, tablets, computers, etc?	No Tech	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs
	0%	17%	33%	6%	44%
7. During the weekend, how much time do you watch TV?	No TV	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs
	17%	11%	39%	28%	6%
8. During the weekend, how many TV shows do you watch?	No Tv	2-3 shows	4-6 shows	7 or more	
	22%	50%	28%	0%	
9. During one weekend day, how many hrs do you spend on cellphones, tablets, computers?	No Tech	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs
	0%	6%	56%	11%	28%
10. How much physical activity do you get in a normal day?	Less than 15 mins	15-30 mins	30-60 mins	more than 60 mins	
	33%	28%	17%	22%	
11. How many days are you physically active during the week?	0-2 days	3-4 days	5-7 days		
	56%	33%	11%		

Table 3b. Parent results from the post-*FIT* health habit survey.

			Post-Program Survey			Probability
1. Do you read food labels?	Always	Most of the time	Sometimes	Rarely	Never	
	15%	77%	8%	0%	0%	< 0.001
2. At meals I eat	Too much	Little too much	The right amount	Not enough	I don't know	
	8%	46%	46%	0%	0%	< 0.001
3. When it comes to snacks I eat	Too much	Little too many	The right amount	Hardly any	I don't eat snacks	
	15%	31%	23%	31%	0%	0.128
4. During the week, how much time do you watch TV?	No TV	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs	
	0%	31%	38%	31%	0%	0.076
5. During the week, how many TV shows do you watch?	No TV	2-3 shows	4-6 shows	6 or more		
	8%	77%	15%	0%		0.020
6. During one weekday, how many hours do you spend on cellphones, tablets, computers, etc?	NoTech	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs	
	0%	8%	38%	15%	38%	< 0.001
7. During the weekend, how much time do you watch TV?	No TV	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs	
	8%	23%	38%	31%	0%	0.157
8. During the weekend, how many TV shows do you watch?	NO TV	2-3 shows	4-6 shows	7 or more		
	15%	69%	15%	0%		0.027
9. During one weekend day, how many hrs do you spend on cellphones, tablets, computers?	No Tech	Less than 1 hr	1-2 hrs	3-4 hrs	more than 4 hrs	
	0%	15%	46%	38%	0%	0.138
10. How much physical activity do you get in a normal day?	Less than 15 mins	15-30 mins	30-60 mins	more than 60 mins		
	15%	31%	38%	15%		0.041
11. How many days are you physically active during the week?	0-2 days	3-4 days	5-7 days			
	31%	38%	31%			0.009

Table 4a. Student results from the pre-*FIT* health habit survey.

Question	Pre-program survey answers				
1. Do you read food labels?	Always	Most of the time	Sometimes	Rarely	Never
	12%	12%	41%	12%	24%
2. At meals I eat	Too much	Little too much	The right amount	Not enough	I don't know
	0%	18%	71%	6%	6%
3. When it comes to snacks I eat	Too much	Little too many	The right amount	Hardly any	I don't eat snacks
	0%	18%	47%	12%	6%
4. During the week, how much time do you watch TV?	I don't watch TV	Less than 1 hour	1-2 hours per day	3-4 hours per day	More than 4 hours
	12%	35%	29%	24%	0%
5. During the week, how many TV shows do you watch?	I don't watch TV	2-3 shows	4-6 shows	6 or more shows	
	12%	65%	24%	0%	
6. During one weekday, how many hours do you spend	I don't use these items	Less than 1 hour	1-2 hours	2-3 hours	3-4 hours
on cellphones, tablets, or the computer?	6%	35%	35%	12%	12%
7. During the weekend, how much time do you watch TV?	I don't watch TV	Less than 1 hour	1-2 hours	3-4 hours	More than 4 hours
	18%	18%	35%	18%	12%
8. During the weekend, how many TV shows do you watch?	I don't watch TV	2-3 shows	4-6 shows	more than 6 shows	
	18%	47%	29%	6%	
9. During one weekend day, how many hours do you spend	I don't use these items	Less than 1 hour	1-2 hours	3-4 hours	More than 4 hours
on cellphones, tablets, or the computer?	0%	24%	41%	12%	24%
10. How much physical activity do you get in a normal day?	less than 15 minutes	15-30 minutes	30-60 minutes	more than 60 minutes	
	6%	41%	18%	35%	
11. How many days are you physically active during the week?	0-2 days	3-4days	5-7 days		
	12%	24%	65%		

Table 4b. Student results from the post-*FIT* health habit survey.

			Post-program survey answers			Probability
1. Do you read food labels?	Always	Most of the time	Sometimes	Rarely	Never	
	13%	13%	44%	13%	19%	0.251
2. At meals I eat	Too much	Little too much	The right amount	Not enough	I don't know	
	0%	19%	69%	6%	6%	0.555
3. When it comes to snacks I eat	Too much	Little too many	The right amount	Hardly any	I don't eat snacks	
	0%	19%	44%	13%	6%	0.398
4. During the week, how much time do you watch TV?	I don't watch TV	Less than 1 hour	1-2 hours per day	3-4 hours per day	More than 4 hours	
	13%	38%	31%	19%	0%	0.399
5. During the week, how many TV shows do you watch?	I don't watch TV	2-3 shows	4-6 shows	6 or more shows		
	13%	69%	19%	0%		< 0.05
6. During one weekday, how many hours do you spend on cellphones, tablets, or the computer?	I don't use these items	Less than 1 hour	1-2 hours per day	2-3 hours	3-4 hours	
	6%	38%	31%	13%	13%	0.331
7. During the weekend, how much time do you watch TV?	I don't watch TV	Less than 1 hour	1-2 hours	3-4 hours	More than 4 hours	
	19%	19%	31%	19%	13%	0.095
8. During the weekend, how many TV shows do you watch?	I don't watch TV	2-3 shows	4-6 shows	more than 6 shows		
	19%	31%	44%	6%		0.221
9. During one weekend day, how many hours do you spend on cellphones, tablets, or the computer?	I don't use these items	Less than 1 hour	1-2 hours	3-4 hours	more than 4 hours	
	0%	25%	38%	13%	25%	0.457
10. How much physical activity do you get in a normal day?	less than 15 minutes	15-30 minutes	30-60 minutes	more than 60 minutes		
	6%	44%	19%	31%		< 0.05
11. How many days are you physically active during the week?	0-2 days	3-4 days	5-7 days			
	13%	25%	63%			0.209

As illustrated in Figure 1 and detailed in Tables 5a and 5b, parents' nutrition knowledge was fairly high prior to the beginning of the program and improved. Before the program fewer parents knew the recommended serving amounts for fruit or if they bought fruit juice, it was rarely 100% juice. Knowledge of basic nutrition was fairly high, however, with most of the parents (89 percent) knowing how many groups are in *MyPlate.* As a whole, parents answered the pre-program fitness questions better than the nutrition questions. Post-program, all of the nutrition questions were answered correctly by all parents and fewer parents answered two of the fitness questions correctly.

Figure 1. Number of correct parent responses to the pre and post-program nutrition and fitness quiz.

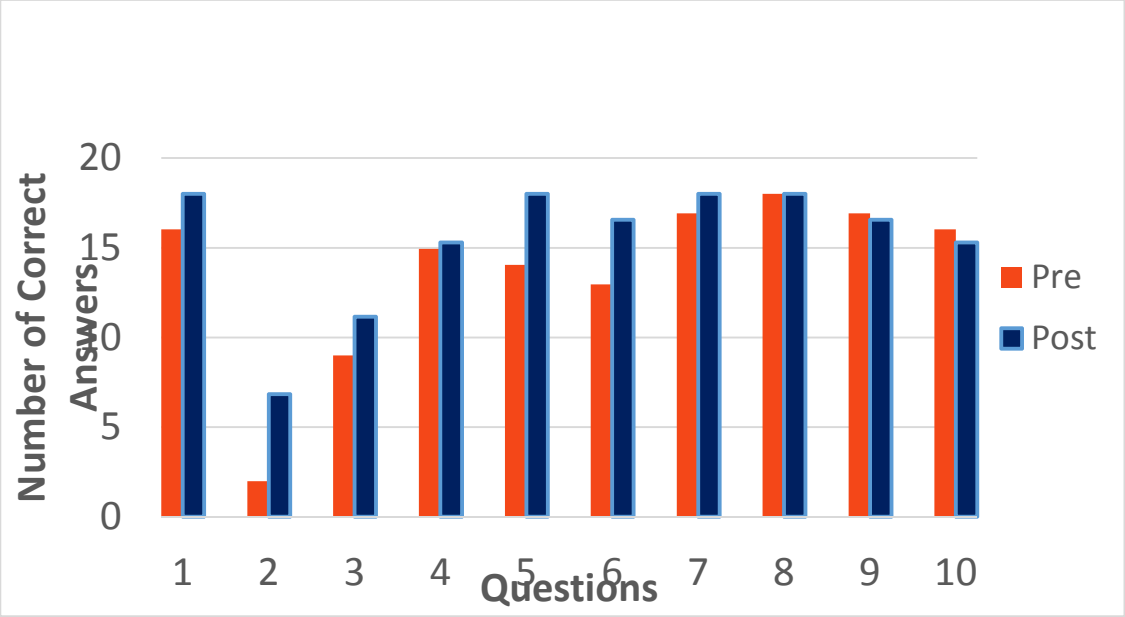

Table 5a. Parent results from the pre-*FIT* nutrition and fitness quiz.

Questions	Pre-program quiz results				
1. How many food groups are shown in MyPlate?	6	10	5	1	I don't know
	0%	0%	89%	0%	11%
2. How many cups of fruit should you eat each day?	none	1 0r 2	3 or more	I don't know	
	0%	11%	44%	11%	
3. When buying fruit juice, how often is it 100% juice?	Almost always	sometimes	almost never	I don't know	I don't drink juice
	50%	22%	11%	0%	11%
4. About how much of your plate should be fruits and vegetables?	one quarter	one half	three quarters	all of it	
	11%	83%	6%	0%	

5. A serving size is	the amount in the package	the amount you eat at one meal	depends on the food and is listed on the label	is different for everyone	
	0%	17%	78%	6%	
6. A food that is labeled "low fat" always has fewer calories than the regular version	TRUE	FALSE			
	28%	72%			
7. Which of the following is the healthiest snack?	Cookies and milk	canned soda and raisins	peanut butter toast and an orange	cheese, crackers & fruit punch	
	0%	0%	94%	6%	
8. You should warm up every time you exercise	TRUE	FALSE			
	100%	0%			
9. You can get more fit by…	shopping	raking leaves	doing laundry	cooking	
	6%	94%	0%	0%	
10. What is a balanced exercise plan?	running, weights, stretch	running, weights, tennis	running, cycling, tennis	weights, hiking, leg lifts	
	89%	0%	6%	6%	

Table 5b. Parent results from the post-*FIT* nutrition and fitness quiz.

Questions	Pre-program quiz results				
1. How many food groups are shown in MyPlate?	6	10	5	1	I don't know
	0%	0%	100%	0%	0%
2. How many cups of fruit should you eat each day?	none	1 0r 2	3 or more	I don't know	
	0%	38%	62%	0%	
3. When buying fruit juice, how often is it 100% juice?	Almost always	sometimes	almost never	I don't know	I don't drink juice
	62%	0%	23%	0%	15%
4. About how much of your plate should be fruits and vegetables?	one quarter	one half	three quarters	all of it	
	8%	85%	8%	0%	

5. A serving size is	the amount in the package	the amount you eat at one meal	depends on the food and is listed on the label	is different for everyone
	0%	0%	100%	0%
6. A food that is labeled "low fat" always has fewer calories than the regular version	TRUE	FALSE		
	8%	92%		
7. Which of the following is the healthiest snack?	Cookies and milk	canned soda and raisins	peanut butter toast and an orange	cheese, crackers & fruit punch
	0%	0%	100%	0%
8.You should warm up every time you exercise	TRUE	FALSE		
	100%	0%		
9. You can get more fit by…	shopping	raking leaves	doing laundry	cooking
	0%	92%	8%	0%
10. What is a balanced exercise plan?	running, weights, stretch	running, weights, tennis	running, cycling, tennis	weights, hiking, leg lifts
	85%	8%	0%	8%

Pearson's correlation coefficients for the mean parent data for the food frequency questionnaire versus program week are seen in Tables 7a and 7b. For parents, relatively strong, albeit negative, correlation coefficients were seen for fruits, vegetables, and protein foods (-0.871889929,-0.975698086, and -0.95826748, respectively) suggesting that parents reported eating less of these foods as the program went on. Relatively strong, positive correlation coefficients were seen for the students in Table 7b. Students reported eating more fruit (correlation coefficient: 0.898322608) and drinking more water (correlation coefficient: 0.937756778).

Table 6a. Parent food frequency data correlated by program week.

Week of Project FIT

Food Group	1	2	3	4	5	6	Correlation Coefficients	P- Value
Fruits	2.1	2.0	NA	1.9	1.2	1.4	-0.871889929	0.054
Vegetables	2.9	2.8	NA	2.6	2.2	1.9	-0.975698086	0.005
Breads	2.4	1.8	NA	1.9	2.3	2.9	0.511763432	0.378
Protein	3.0	3.0	NA	2.8	2.4	2.3	-0.95826748	0.01
Dairy	1.8	1.9	NA	1.7	1.7	1.9	3.39151E-16	1
Soda	1.1	0.8	NA	1.1	0.7	0.7	-0.703468574	0.185
Sports drinks	0.0	0.0	NA	0.0	0.1	0.0	0.353553391	0.559
Water	3.3	4.1	NA	3.4	3.0	2.7	-0.71768305	0.172
Whole wheat bread	0.8	1.8	NA	0.9	1.3	0.9	-0.084239093	0.893
Chips/salt	1.1	0.3	NA	0.9	0.9	1.0	0.175297772	0.778
Sweets	0.9	0.9	NA	1.2	0.8	1.3	0.520133511	0.369

Table 6b. Student food frequency data correlated by program week.

Week of Project FIT

Food Group	1	2	3	4	5	6	Correlation Coefficients	P-Value
Fruits	2.09	2.67	NA	2.46	2.79	3.09	0.898322608	0.038
Vegetables	1.45	2.58	NA	2.00	2.00	2.00	0.201028146	0.746
Breads	2.36	2.42	NA	2.62	2.21	2.00	-0.638404059	0.246
Protein	2.00	2.67	NA	2.00	2.36	2.36	0.233811809	0.705
Dairy	2.18	2.67	NA	2.69	2.64	2.64	0.651715729	0.233
Soda	0.36	0.75	NA	0.62	0.36	0.36	-0.340768416	0.575
Sports drinks	0.09	0.17	NA	0.23	0.36	0.18	0.597420777	0.287
Water	2.45	2.75	NA	2.69	2.86	3.09	0.937756778	0.018
Whole wheat bread	1.55	2.17	NA	1.62	1.86	1.91	0.265953002	0.665
Chips/salt	1.55	0.75	NA	1.23	1.21	1.18	-0.146531076	0.814
Sweets	0.91	0.58	NA	1.00	0.86	1.00	0.420024994	0.481

As seen in Table 7, the parents expressed very strong satisfaction with the program with 100 percent "extremely satisfied" responses to questions about the staff. A total of 86.8 percent of parents reported being extremely satisfied with all aspects of the program. 100 percent of parents reported being extremely satisfied with their "level of satisfaction with the program."

Table 7. Results from the parent satisfaction survey.

Number of Surveys	12						
Overall Scores	86.8%	11.8%	1.4%	0.0%	0.0%		
Questions	**Extremely Satisfied**	**Satisfied**	**Neutral**	**Not Satisfied**	**Not at All Satisfied**		
The Check-In Process	12					100.0%	**Question Specific Scores**
The staff treated me with respect.	12					100.0%	
The staff treated my child with respect	12					100.0%	
The staff made my child feel comfortable	12					100.0%	
The nutrition information was informative and helpful	11	1				97.2%	
The excersize information was informative and helpful	10	2				94.4%	
The excersizes where the right level of difficulty for my child.	8	3	1			83.3%	
The staff explained things to me when needed.	9	3				91.7%	
My level of satisfaction with this program	12					100.0%	
Cost of the program	11	1				97.2%	
Meeting times	9	2	1			86.1%	
My childs progress towards fitness	7	5				86.1%	

IV. DISCUSSION

Nutrition education was delivered every Monday evening during the 8- week *FIT* program, and parents were required to attend the education lessons with their children. A registered dietitian with North Mississippi Medical Center taught the lessons in a classroom setting and encouraged questions from both parents and students. Lessons such as healthy snacking, reading food labels, MyPlate food groups, and serving sizes were reinforced with games for the children. Food models, team competitions, and relays were all used to help the children learn the material while parents watched. At the end of every lesson there was a question and answer session with the dietitian and the parents, while the children left the room to participate in a physical activity session. Parents seemed enthusiastic about what they were learning during the nutrition education lessons and had many questions about food choices for their families, as well as nutritional content of certain types of foods, like honey and milk. Parents were given handouts about healthy snacks to prepare for their children and healthy recipes to make for their families. Other programs that have used this technique reported positive results. Parents who were given healthy eating handouts and recipes in the *Lunch is in the Bag* program (Sharma et al, 2015), showed an overall increase in their children's consumption of fruits, and led to better communication about healthy eating between parents and children.

Both parents and students completed food frequency questionnaires each week based on what they had eaten for the previous 24 hours. The students showed modest improvement overall with their eating habits, most notably with their consumption of water and fruits. Students

increased their fruit consumption by roughly one serving (from 2.09 average servings to 3.09 average servings), and water consumption from 2.49 cups on average to 3.09 cups. Overall, students also had an increase in servings of protein (from 2.00 servings to 2.36 servings), and a modest decrease in consumption of chips and other salty snacks (from 1.91 servings to 1.55). In contrast, parents had a decrease in consumption of fruits, vegetables and water, and an overall increase in consumption of sweets. One explanation for this result may be that through the nutrition education the families received, parents gained knowledge concerning what constitutes a serving size and made adjustments accordingly in their self-reported data. Additionally, parents may need to receive their nutrition education in a different manner than the children in order for them to adopt new eating habits. Whereas children may appreciate the colorful food models and fun games that the nutrition educators use to teach healthy eating, the parents may need an approach more tailored to their individual needs. It may be beneficial for future wellness programs that involve the whole family to consider separating the parents and children for nutrition education. For instance, parents may be receptive to discussions with medical health professionals such as doctors who can inform them of the direct impact of unhealthy eating on their health. Further education on health topics like Type II diabetes mellitus, hypertension, obesity, and other dietary related diseases may make an impression on parents that cause them to make lifestyle adjustments.

Activities outside of the classroom, such as the grocery store scavenger hunt, were well received by the parents and several voiced the sentiment that they learned a lot through the process of actively searching for particular foods and nutritional components. Integrating more nutrition education outside of a classroom setting where parents can actively participate in learning may also prove to be beneficial in adjustments in their eating habits. Additionally,

empowering parents to prepare healthful foods by providing quick and easy nutritious recipes could lead to more positive changes in familial eating habits. Martin-Biggers et al. (2015) noted that time constraints and busy schedules caused parents to voice their frustrations with food preparation.

The nutrition quiz administered on the first day of the program and the last day showed a modest gain in knowledge among both parents and students. When asked whether a "low fat" label always means that the food item has less calories than its regular version, all of the parents correctly answered "false" on the post nutrition quiz, whereas 72 percent answered "false" on the pre- nutrition quiz. Additionally, when asked what a serving size meant on a food label, 78 percent of parents picked the correct answer of "depends on the food and is listed on the label," on the pre- nutrition quiz, whereas 100 percent of parents chose this answer on the post quiz. There was also a moderate improvement seen in snacking habits; in the pre-survey 56 percent of parents reported eating "a little too many" snacks during the day, whereas in the post survey that percentage dropped to 31 percent. Not knowing what to feed their families may influence unhealthy meal decisions; to remedy this situation; the positive response the parents gave to the recipes handed out during one nutrition education lesson could make the case for a more thorough multiple recipe handout or recipe book to be given to families to give them confidence in the ability to prepare healthful meals.

When asked about their lifestyle and behavioral habits in the pre-program and post-program survey, parents showed some improvement in several areas. Firstly, when asked how many hours they spent during a weekend day on cellphones, tablets, and computers, 28 percent of parents reported spending more than four hours on the pre- quiz. On the post quiz, however, that percentage dropped to zero. This may be due in part to an increase in physical activity;

when asked how much physical activity they got on average, 17 percent reported getting 30 to 60 minutes on the pre- survey, whereas 38 percent reported getting 30 to 60 minutes on the post survey. This 21 percent increase in time spent participating in physical activity may leave less time to be spent on television viewing and using technological devices. Additionally, when asked how many days on average during the week they were physically active, only 11 percent responded with 5 to 7 days in the pre- survey, whereas 31 percent reported being physically active on 5 to 7 days a week in the post survey.

Overall parents had a positive response to the program. In the parent satisfaction survey, 86 percent reported being extremely satisfied with all aspects of the program. Though this is encouraging for future participants in the program, further feedback would be beneficial for future programs like *FIT* through satisfaction surveys that include open ended questions and room for additional remarks from the parents. It may be advantageous for child wellness programs such as *FIT* for parents involved with the program to have a way to make suggestions and leave comments for staff.

There are several recommendations that could be made for program improvement. Firstly, it may be beneficial to have the parents participate in physical activity alongside their children. As Patino-Fernandez (2013) found, parents generally had a favorable perception of child wellness programs if they are able to participate alongside their children. Their progress could be tracked much as their children's progress is tracked, through anthropometric measurements at the onset and the conclusion of the program. Parents could have their Body Mass Index taken at the onset and the conclusion of the program, as well as other anthropometric measurements. Fitness testing such as sit ups, chair squats, push-ups, etc could all be used to measure improvements in fitness. In addition, while meeting three nights a week seemed to

prove successful, making the program longer than 8 weeks may show a larger improvement in the participants' anthropometric data. Taking the parents anthropometric data may also prove to be a motivating factor for them to become more physically active and participate alongside their children in the exercise portion of the program. If the program were to be 12 to 14 weeks long, there would be ample opportunity for more nutrition education and physical activity.

Creating family exercise activities outside of the set *FIT* meeting times could also prove to be beneficial. This may prove to create a sense of community among the *FIT* participants and increase parents' accountability for their eating habits when encouraged by their peers who are also participating in *FIT*. In the *Make It HAPPEN* family education program, Watson-Jarvis, Johnson and Clarke (2011) found that the "family fun nights" utilized by the program allowed for the families involved to not only participate in physical activity together, but also to discuss what they had learned in the program and share positive changes they had made as families. These "family fun nights" created a sense of solidarity among the participants and aided in the continuation of their progress after the *Make It HAPPEN* program had concluded (Watson-Jarvis, Johnson and Clarke, 2011).

Another recommendation that could be beneficial to the *FIT* program would be the addition of a suggestion or comment box that parents and children could submit individual questions or concerns anonymously. This would allow the individuals who may be too timid to voice their concerns or ask their questions verbally to do so in a private and anonymous manner.

Overall the *FIT* program can be interpreted as a successful program, most notably among the children. Improvements were seen in several areas of the food frequency questionnaires over the 8-week period. Children's scores also improved from the pre- nutrition quiz to the post nutrition quiz. Anthropometric measurements such as diastolic blood pressure, and fitness data

such as sit ups, push-ups, and chair squats, also improved from the onset of the program to the conclusion. The overwhelmingly positive response on the parent satisfaction survey also needs to be taken into consideration. Parents reported that they were extremely satisfied with the program overall and felt as though they and their children learned a great deal. The researchers directly observed that numerous parents remarked how much they felt they and their children had learned, and how they had noticed their children's unhealthy eating habits changing. Children began drinking more water and becoming more active in food preparation and selection at home.

Evaluations of child wellness programs that actively involve parents are few and far between. Generally speaking, parents and guardians are responsible for food procurement in the home. Incorporation of nutrition education with these programs may influence positive changes in regards to food purchasing and meal preparation within the home. Further research with parent involvement in child wellness and nutrition programs would be beneficial to gain a detailed perspective of the advantages to such programs.

Limitations

Limitations of this study include a small sample size coupled with inconsistent attendance by some parents and students. Additionally, the researchers relied on self-reported data for the food frequency questionnaires and surveys. Efforts to make the parent satisfaction survey simple to administer and to avoid survey fatigue resulted in a limited insight into parents' thoughts and suggestions for program improvement or adjustment.

Conclusion

The *Families in Transformation* program increased overall nutrition knowledge in both parents and students, and improved students' eating habits. Though parents valued the program and participating in nutrition education lessons alongside their children, more research is needed to determine the long-term impact of wellness programs on children and their families.

V. BIBLIOGRAPHY

Adamo, K.B., & Brett, K.E. (2014) Parental perceptions and childhood dietary quality. *Maternal Child Health Journal, 18*, 978-995. DOI: 10.1007/s10995-013-1326-6.

Benzies, K., Clarke, D., Barker, L., & Mychasiuk, R. (2013) UpStart Parent Survey: A new psychometrically valid tool for the evaluation of prevention-focused parenting programs. *Maternal Child Health Journal, 17*, 1452-1458. DOI: 10.1007/s10995-012-1152-2

Campbell, K.J., Abbott, G., Spence, A.C., Crawford, D.A., McNaughton, S.A., & Ball, K. (2013) Home food availability mediates associations between mothers' nutrition knowledge and child diet. *Appetite, 71*, 1-6.

Erturgut, P. & Erturgut, R. (2010) An analysis of nutrition level of adolescent school children with respect to the educational levels and child-raising attitudes of their parents. *Procedia Social and Behavioral Sciences, 2*, 1238-1243. DOI: 10.1016/j.sbspro.2010.03.180

Families in Transformation (FIT). (n.d) Retrieved November 13th, 2015 from http://www.healthworkskidsms.org/whats-happening/fit-families-in-transformation

Gray, V.B., Byrd, S.H., Cossman, J.S., Chromiak, J.A., Cheek, W., & Jackson, G. (2007) Parental attitudes toward child nutrition and weight have a limited relationship with

child's weight status. *Nutrition Research, 27*, 548-558. DOI: 10.1016/j.nutres.2007.07.003.

Liechty, J.M., Saltzman, J.A., & Musaad, S.M. (2015) Health literacy and parent attitudes about weight control for children. *Appetite, 91*, 200-208.

Ling, J., King, K.M., Speck, B.J., Kim, S., & Wu, D. (2014) Preliminary assessment of a school-based healthy lifestyle intervention among rural elementary school children. *Journal of School Health, 84*(4), 247-255.

Mareno, N. (2013) Parental perception of child weight; a concept analysis. *Journal of Advanced Nursing, 70*(1), 34-45. DOI: 10.1111/jan.12143.

Martin-Biggers, J., Spaccarotella, K., Hongu, N., Alleman, G., Worobey, J., & Byrd-Bredbenner, C. (2015) Translating it into real life: A qualitative study of the cognitions, barriers and supports for key obesogenic behaviors of parents of preschoolers. *BMC Public Health, 15,* 189-203. DOI: 10.1186/s12889-015-1554-3.

Patino-Fernandez, A.M., Hernandez, J., Villa, M., & Delamater, A. (2013) School-based health promotion intervention: Parent and school staff perspectives. *Journal of School Health, 83*(11), 763-770.

Prelip, M., Kinsler, J., Thai, C.L., Erausquin, J.T., & Slusser, W. (2012) Evaluation of a school-based multicomponent nutrition education program to improve young children's fruit and vegetable consumption. *Journal of Nutrition Education and Behavior, 44*(4), 310-318. DOI: 10.1016/j.jneb.2011.10.005

Rausch, J.C., Berger-Jenkins, E., Nieto, A.R., McCord, M., & Meyer, D. (2015) Effect of a school-based intervention on parents' nutrition and exercise knowledge, attitudes, and behaviors. *American Journal of Health Education*, *46*(1), 33-39, DOI: 10.1080/19325037.2014.977411

Rawlins, E., Baker, G., Maynard, M., & Harding, S. (2012) Perceptions of healthy eating and physical activity in an ethnically diverse sample of young children and their parents: The DEAL prevention of obesity study. *Journal of Human Nutrition and Dietetics, 26*, 132-144. DOI: 10.1111/j.1365-277x.2012.01280.x

Rodriguez, J., Applebaum, J., Stephenson-Hunter, C., Tinio, A., & Shapiro, A. (2013) Cooking, Healthy Eating, Fitness and Fun (CHEFFs): Qualitative evaluation of a nutrition education program for children living at urban family homeless shelters. *American Journal of Public Health, 103*(S2), S361-S367. DOI: 10.2015/AJPH.2013.301558

Russell, C.G., & Worsley, A. (2013) Why don't they like that? And can I do anything about it? The nature and correlates of parents' attributions and self-efficacy beliefs about preschool children's food preferences. *Appetite, 66*, 34-43.

Sharma, S. V., Rashid, T., Ranjit, N., Byrd-Williams, C., Chuang, R., Roberts-Gray, C., & Hoelscher, D. M. (2015). Effectiveness of the Lunch is in the Bag program on communication between the parent, child and child-care provider around fruits, vegetables and whole grain foods: A group-randomized controlled trial. *Preventive Medicine*, *81*, 1-8. DOI:10.1016/j.ypmed.2015.07.005

Small, L., Bonds-McClain, D., Vaughan, L., Melnyk, B., Gannon, A., & Thompson, S. (2012). A parent-directed portion education intervention for young children: Be Beary Healthy.

Journal for Specialists in Pediatric Nursing, 17(4), 312-320. DOI:10.1111/j.1744-6155.2012.00340.x

Speroni, K.G., Tea, C., Earley, C., Niehoff, V., & Atherton, M. (2008) Evaluation of a pilot hospital-based community program implementing fitness and nutrition education for overweight children. *Journal for Specialists in Pediatric Nursing, 13*(3), 144-153.

Thomas, S.L., Olds, T., Pettigrew, S., Randle, M., & Lewis, S. (2014) "Don't eat that, you'll get fat!" Exploring how parents and children conceptualize and frame messages about the causes and consequences of obesity. *Social Science and Medicine, 119*, 114-122.

Vereecken, C., & Maes, L. (2010) Young children's dietary habits and associations with the mothers' nutritional knowledge and attitudes. *Appetite, 54*, 44-51. DOI:10.1016/j.apet.2009.09.00

Watson-Jarvis, K., Johnston, C., & Clark, C. (2011) Evaluation of a family education program for overweight children and adolescents. *Canadian Journal of Dietetic Practice and Research, 72*(4), 191-196. DOI: 10.3148/72.4.2011.191

Yabanci, N., Kisac, I., & Karakus, S.S. (2014) The effects of mother's nutritional knowledge on attitudes and behaviors of children about nutrition. *Procedia Social and Behavioral Sciences, 116*, 4477-4481. DOI: 10.1016/j.sbspro.2014.01.970

VI. APPENDIX

Appendix A

Parental Consent

and

Student Assent

Appendix A.1. Parental consent form.

Consent for You and Your Child to Participate in Research

Study Title: Development and Evaluation of *Families in Transition (FIT)*, a wellness center based weight management program for children.

Investigator
Sydney Devers & Meagan Maloney
Dept. of Nutrition & Hospitality Mgmt.
Lenoir Hall
University of Mississippi
University, MS 38677
(662) 915-7371

and

Faculty Sponsor
Kathy Knight, Ph.D., R.D.
Dept. of Nutrition & Hospitality Mgmt.
Lenoir Hall
University of Mississippi
University, MS 38677
(662) 915-5172

The purpose of this study
We want to measure what effects the *Families in Transition (FIT)* program will have on your child's eating habits, weight, and fitness level. We also want to know how your support effects the results your child gets from the program.

What you and your child will do for this study
You and your child will allow *HealthWorks* to share your child's **unidentified** height, weight, and fitness scores with us. Our child will also be asked to wear an "activity tracker" that will measure their physical activity for the eight weeks of the program. We will also ask you and your child to take brief surveys at the beginning and at the end of the program. These surveys will be about their eating habits, what they have learned in the program, and how this does or does not affect how the family eats and exercises. Finally, your child will be asked five or six questions each Thursday evening. These will be questions about their diet and eating habits.

Time required for this study
This study will take about 1 hour for the 1st day and 1 hour for the last day of the program and about 15 extra minutes per week.

Possible risks from participation
There are no known risks for you or your child's participation in the study.

Benefits from participation
There are no known incentives and/or benefits for you or your child's participation in the study.

Confidentiality
All health information in the study will be collected from you and your child by *HealthWorks* and given to the researchers anonymously: it will not be possible for anyone, even the researchers, to associate you with your responses or your child's responses.

Right to Withdraw
You do not have to volunteer for this study, your child does not have to participate, and there is no penalty if either of you refuses. If you and your child start the study and either one of you decides that you do not want to finish, just tell the experimenter. Whether or not you and your child participate or withdraw will not affect your current or future relationship with *HealthWorks*, North Mississippi Health Systems, or with the University of Mississippi, and it will not cause you to lose any benefits to which you are entitled.

Protected Health Information
Protected health information is any personal health information which identifies you or your child in some way. The data collected in this study includes: height, weight, and fitness scores. A decision to participate in this research means that you agree to the use of your health information and your child's health information for the study described in this form. This information will not be connected to your child and will not be released beyond the purposes of conducting this study. The information collected for this study will be kept only until July 1, 2016. You may request access to this information at any time.

IRB Approval
This study has been reviewed North Mississippi Health Systems' and The University of Mississippi's Institutional Review Boards (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions or concerns regarding your rights or your child's rights as a research participant, please contact the IRB at (662) 915-7482 or .

Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, then decide if you want your child to be in the study or not.

Statement of Consent
I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study and to allow my child to participate.

Furthermore, I also affirm that the experimenter explained the study to me and told me about the study's risks as well as my right and my child's right to refuse to participate and to withdraw.

Signature of Participant _____ Date _____

Printed name of Participant _____ Printed name of Participant's Child _____

NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED

Appendix A.2. Child assent form.

CHILD ASSENT

Oral Assent Script with Record of Child's (Aged 7-13) Response

I would like to ask you to help me with a project that I am doing at The University of Mississippi. If you agree, you would allow *HealthWorks* to give me your height, weight, and fitness scores without your name on them. You will also be asked to wear an "activity tracker" that will measure your physical activity for the eight weeks of the program. We will also ask you take a 12 question survey at the beginning and at the end of the program. These surveys will be about their eating habits, what you have learned in the program. You will also be asked five or six questions each Thursday evening about your diet and eating habits. The surveys will take about 15 minutes. The questions will take about 10 minutes each Thursday.

What questions do you have about what you will do for me?

Will you do this?

Name: _____ Date: _____

Response: ❑ YES ❑ NO

University of Mississippi Institutional Review Board

Appendix B.

Instruments

Appendix B.1. Parent health habit survey and nutrition and fitness quiz.

Project FIT
Parent/Guardian Questions

A. Survey data. Circle answer.

1. Do you read food labels?
   a. Always
   b. Most of the time
   c. Sometimes
   d. Rarely
   e. Never

2. At meals I eat
   a. Too much
   b. A little too much
   c. Just the right amount
   d. Not enough
   e. I don't know

3. When it comes to snacks, I eat
   a. Too much
   b. A little too many
   c. Just the right amount
   d. Hardly any
   e. I don't eat snacks
   f. I don't know

4. Which of the following is protein?
   a. Eggs
   b. Meat
   c. Beans
   d. All of the above
   e. I don't know

5. During the week (Monday through Friday or your work week if different), how much time do you watch TV?
   a. I don't watch TV
   b. Less than 1 hour
   c. 1 – 2 hours a day
   d. 3 – 4 hours a day
   e. more than 4 hours a day

6. During the week, (Monday through Friday or your work week if different), how many TV shows do you watch?
    a. I don't watch TV
    b. 2 – 3 shows
    c. 4 – 6 shows
    d. 7 or more shows

7. During one weekday (Monday through Friday or one of your work days, if different), how many hours do you spend on cell phones, tablets, or the computer?
    a. I don't use these items.
    b. Less than 1 hour
    c. 1 – 2 hours
    d. 3 – 4 hours
    e. More than 4 hours

8. During the weekend (or one of your off days, if different), how much time do you watch TV?
    a. I don't watch TV
    b. Less than 1 hour
    c. 1 – 2 hours a day
    d. 3 – 4 hours a day
    e. more than 4 hours a day

9. During the weekend (or one of your off days, if different), how many TV shows do you watch?
    a. I don't watch TV
    b. 2 – 3 shows
    c. 4 – 6 shows
    d. 7 or more shows

10. During weekend (or one of your off days, if different), how many hours do you spend on cell phones, tablets, or the computer?
    a. I don't use these items.
    b. Less than 1 hour
    c. 1 – 2 hours
    d. 3 – 4 hours
    e. More than 4 hours

11. How many days are you physically active each week?
    a. 0 – 2 days
    b. 3 – 4 days
    c. 5 – 7 days

12. How much physical activity (exercise or physical work) do you get in an average day?
    a. Less than 15 minutes
    b. 15 – 30 minutes
    c. 30 – 60 minutes
    d. More than 60 minutes

B. Nutrition quiz. Circle the correct answer(s).

1. How many food groups are shown in MyPlate?
    a. 6
    b. 10
    c. 5
    d. 1
    e. I don't know

2. How many cups of fruit should you eat each day?
    a. None
    b. 1 or 2
    c. 3 or more
    d. I don't know

3. When buying fruit juice, how often is it 100 % fruit juice?
    a. Almost always
    b. Sometimes
    c. Almost never
    d. I don't know.
    e. I do not drink juice.

4. About how much of your plate should be fruits and vegetables?
    a. One quarter
    b. One half
    c. Three quarters
    d. All of it

5. A serving size
    a. Is the amount in the package.
    b. Is the amount you eat at one meal.
    c. Depends on the food and is listed on the label.
    d. Is different for everyone.

6. A food that is labeled “low fat” always has fewer calories than the regular version
    a. True
    b. False

7. Which of the following is the healthiest snack?
    a. Cookies and milk
    b. Canned soda and raisins
    c. Peanut butter on toast and an orange
    d. Cheese and crackers and fruit punch

8. You should warm up every time you exercise
    a. True
    b. False

9. You can get more fit by
    a. Shopping
    b. Raking Leaves
    c. Doing Laundry
    d. Cooking

10. What is a balanced exercise plan?
    a. Running, weight lifting, stretching
    b. Running, weight lifting, tennis
    c. Running, cycling, tennis
    d. Weight lifting, hiking, leg lifts

Participant data

1. My gender
    a. Male
    b. Female

2. My education level
    a. 8th grade
    b. HIigh school or GED
    c. College or university
    d. Graduate and/or professional school

3. My ethnicity
    a. Black
    b. White
    c. Asian
    d. Hispanic
    e. Multiracial
    f. Other

4. My family lives in a(n)
    a. Apartment
    b. House
    c. Mobile Home

5. My age
    a. <25
    b. 25-29
    c. 30-34
    d. 35-39
    e. 40-45
    f. >45

Appendix B.2. Parent health habit survey and nutrition and fitness quiz.

Project FIT
Student Questions

A. Survey data. Circle answer.

1. Do you read food labels?
   a. Always
   b. Most of the time
   c. Sometimes
   d. Rarely
   e. Never

2. At meals I eat
   a. Too much
   b. A little too much
   c. Just the right amount
   d. Not enough
   e. I don't know

3. When it comes to snacks, I eat
   a. Too much
   b. A little too many
   c. Just the right amount
   d. Hardly any
   e. I don't eat snacks
   f. I don't know

4. During the week (school days), how much time do you watch TV?
   a. I don't watch TV
   b. Less than 1 hour
   c. 1 – 2 hours a day
   d. 3 – 4 hours a day
   e. more than 4 hours a day

5. During the week, (school day), how many TV shows do you watch?
   a. I don't watch TV
   b. 2 – 3 shows
   c. 4 – 6 shows
   d. 7 or more shows

6. During one weekday (school day), how many hours do you spend on cell phones, tablets, or the computer?
    a. I don't use these items.
    b. Less than 1 hour
    c. 1 – 2 hours
    d. 3 – 4 hours
    e. More than 4 hours

7. During the weekend, how much time do you watch TV?
    a. I don't watch TV
    b. Less than 1 hour
    c. 1 – 2 hours a day
    d. 3 – 4 hours a day
    e. more than 4 hours a day

8. During the weekend, how many TV shows do you watch?
    a. I don't watch TV
    b. 2 – 3 shows
    c. 4 – 6 shows
    d. 7 or more shows

9. During one weekend day, how many hours do you spend on cell phones, tablets, or the computer?
    a. I don't use these items.
    b. Less than 1 hour
    c. 1 – 2 hours
    d. 3 – 4 hours
    e. More than 4 hours

10. How much physical activity (exercise or physical work) do you get in a normal day?
    a. Less than 15 minutes
    b. 15 – 30 minutes
    c. 30 – 60 minutes
    d. More than 60 minutes

11. How many days are you physically active each week?
    a. 0 – 2 days
    b. 3 – 4 days
    c. 5 – 7 days

B. Nutrition quiz. Circle the correct answer(s).

1. How many food groups are shown in MyPlate?
   a. 6
   b. 10
   c. 5
   d. 1
   e. I don't know

2. How many cups of fruit should you eat each day?
   a. None
   b. 1 or 2
   c. 3 or more
   d. I don't know

3. When buying fruit juice, how often is it 100 % fruit juice?
   a. Almost always
   b. Sometimes
   c. Almost never
   d. I don't know.
   e. I do not drink juice.

4. About how much of your plate should be fruits and vegetables?
   a. One quarter
   b. One half
   c. Three quarters
   d. All of it

5. A serving size
   a. Is the amount in the package.
   b. Is the amount you eat at one meal.
   c. Depends on the food and is listed on the label.
   d. Is different for everyone.

6. A food that is labeled "low fat" always has fewer calories than the regular version
   a. True
   b. False

7. Which of the following is the healthiest snack?
   a. Cookies and milk
   b. Canned soda and raisins
   c. Peanut butter on toast and an orange
   d. Cheese and crackers and fruit punch

8. You should warm up every time you exercise
    a. True
    b. False

9. You can get more fit by
    a. Swinging
    b. Riding bikes
    c. Playing video games
    d. Shopping

10. What is a balanced exercise plan?
    a. Running, weight lifting, stretching
    b. Running, weight lifting, tennis
    c. Running, cycling, tennis
    d. Weight lifting, hiking, leg lifts

Student data

1. I am
    a. Male
    b. Female

2. My family lives in a(n)
    a. Apartment
    b. House
    c. Mobile Home

3. I am
    a. Black
    b. White
    c. Asian
    d. Hispanic
    e. Multiracial
    f. Other

Appendix B.3. Food Frequency Questionnaire

In the last 24 hours, how many servings did you eat or drink from each of these?

Fruits	0	1	2	3	4	5	
Vegetables	0	1	2	3	4	5	
Breads, cereals, rice and grain	0	1	2	3	4	5	
Meats and other protein foods	0	1	2	3	4	5	
Milk, cheese, and other dairy	0	1	2	3	4	5	
Sodas	0	1	2	3	4	5	
Sports drinks (like Gatorade)	0	1	2	3	4	5	
Water	0	1	2	3	4	5	
Whole wheat bread, pasta, or cereal	0	1	2	3	4	5	
Chips or other salty snack	0	1	2	3	4	5	
Cookies, cakes, or other sweets	0	1	2	3	4	5	

Appendix B.4. Parent Satisfaction Survey

Project FIT
Parent Satisfaction Survey
Please help us rate the Project FIT program by checking the answer you most agree with.
How satisfied were you with:

	Extremely Satisfied	Satisfied	Neutral	Not Satisfied	Not at all Satisfied
1. The check-in process	☐	☐	☐	☐	☐
2. The staff treated me with respect.	☐	☐	☐	☐	☐
3. The staff treated my child with respect.	☐	☐	☐	☐	☐
4. The staff made my child feel comfortable	☐	☐	☐	☐	☐
5. The nutrition information was informative and helpful.	☐	☐	☐	☐	☐
6. The exercise information was informative and helpful.	☐	☐	☐	☐	☐
7. The exercises were the right level of difficulty for my child.	☐	☐	☐	☐	☐
8. The staff explained things to me when needed	☐	☐	☐	☐	☐
9. My level of satisfaction with this program	☐	☐	☐	☐	☐
10. Cost of the program	☐	☐	☐	☐	☐
11: Meeting times	☐	☐	☐	☐	☐
12. My child's progress towards fitness	☐	☐	☐	☐	☐

Appendix C.

Student Fitness Data

Appendix C.1. Mean pre and post-*FIT* fitness data.

	Push-up		Sit-up		Chair squat		Step test	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Total N = 20	14.31 ± 7.62	19.63 ± 6.62	39.63 ± 5.80	44.38 ± 4.91	30.50 ± 10.21	34.44 ± 7.39	123.06 ± 12.27	119.13 ± 11.19
Females n = 11	14 ± 6.23	20.2 ± 5.63	37.82 ± 6.72	42.9 ± 6.66	29.3 ± 3.23	32.4 ± 4.59	122.6 ± 14.25	122.9 ± 7.05
Males n = 9	12.11 ± 7.37	15.5 ± 9.84	39.78 ± 6.08	43.75 ± 4.98	34.78 ± 13.27	36.38 + 8.81	121.78 + 14.01	202.89 + 266.55

Appendix C.2. Pre and Post-*FIT* fitness test data

Pre-Rest BP	Post-Rest BP	Pre-Push Up	Post-Push Up	Pre-Sit Up	Post-Sit Up	Pre-Chair Squat	Post-Chair Squat	Pre-Step Test 3 min	Post-Step Test 3 min
135/72	124/73	18	21	46	47	34	34	117	126
127/57	106/48	3	16	43	40	25	28	135	127
124/68	117/60	20	21	32	39	24	32	113	117
106/75	135/80	22	32	42	45	29	32	126	115
118/63	108/55	17	21	37	48	31	37	134	131
99/72	108/56	18	17	42	51	27	32	137	133
106/66	110/58	10	8	38	51	30	39	130	129
95/60	91/52	5	12	28	39	31	37	113	115
117/49	108/50	24	34	44	50	17	44	130	129
120/69	115/66	12	17	42	45	21	22	122	105
n/a	n/a	15	25	37	43	57	51	117	105
96/71	104/61	5	18	29	42	23	28	126	132
97/39	107/88	10	14	46	38	35	29	132	119
96/62	93/55	18	20	46	48	29	39	94	95
113/67	102/66	4	17	39	36	25	26	106	113
116/63	134/76	28	21	43	48	50	41	137	115
		14.31	**19.63**	**39.63**	**44.38**	**30.50**	**34.44**	**123.06**	**119.13**

VIII. VITA

Education

BACHELOR OF ARTS | MAY 2006 | HOOD COLLEGE, FREDERICK, MD
· Major: English
· Minor: History

DIDACTIC PROGRAM IN DIETETICS | MAY 2014 | MISSISSIPPI STATE UNIVERSITY, MISSISSIPPI STATE, MS
· Major: Food Science, Nutrition, and Health Promotion
· Concentration: Nutrition

MASTER OF SCIENCE, COORDINATED PROGRAM IN DIETETICS | MAY 2018 | UNIVERSITY OF MISSISSIPPI, UNIVERSITY, MS
· Major: Food and Nutrition Services
· Concentration: Child and Adolescent Nutrition
· Completed and successfully defended Master's Thesis: "Parent Involvement in the *Families in Transformation* (FIT) Wellness Program for Children"

Skills & Abilities

ACADEMICS
· Mississippi State University Didactic Program: 3.4 GPA
· University of Mississippi Coordinated Program in Dietetics: 3.95 GPA
· Presented a poster on Master's Thesis at the Food and Nutrition Conference and Expo 2017 in Chicago, IL

LEADERSHIP
· Foodservice Chairperson of the Mississippi State University Student Dietetic Association (2013-2014)
· Chairperson of Mississippi State University's Department of Food Science, Nutrition, and Health Promotion Welcome Back Fiesta (September 2013)
· Manager of the February 2014 and April 2014 Brown Bag Lunch at Mississippi State University
· ServSafe Instructor, ServSafe certifie

Experience

RECEPTIONIST/ VETERINARY TECHNICIAN | CROSSROADS ANIMAL HOSPITAL, OXFORD, MS | 6/2010- 4/2014

· Discharged surgery patients, administered vaccines, filled prescription, educated clients on proper pet care
· Scheduled appointments, performed monetary transactions, maintained inventory and logged invoices
· Wrote training material for new employees, created Standard Operating Procedures for the hospital

CLIENT CARE COORINATOR | PAMPERED PAWS ANIMAL HOSPITAL, OXFORD, MS | 9/2009- 5/2010

· Filled prescriptions, scheduled appointments, administered vaccines
· Provided client education on proper pet care, trained new employees

INSTRUCTOR/STABLE MANAGER | BREWER EQUESTRIAN CENTER, SHANNON, MS | 10/2008- 8/2009

· Taught students of all ages and ability levels
· Scheduled veterinary and farrier appointments, kept logs of all medical records and procedures
· Spearheaded a summer camp for adolescents
· Trained and competed client and school horses of various ability levels

INSTRUCTOR/STABLE MANAGER | BASCULE FARM, POOLESVILLE, MD | 01/2006- 7/2008

· Managed a staff of up to 7 employees at a facility with over 150 horses
· Taught riders of all ages and ability levels at the largest English riding facility in the Mid-Atlantic region
· Scheduled veterinary and farrier appointments for clients
· Trained and competed client horses of various ability levels