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Evaluation of a Nutrition Education Program Targeting Home-Based Child Care Centers

Cassandra Nicole Urrutia

University of Texas at El Paso, cnurritia@miners.utep.edu

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EVALUATION OF A NUTRITION EDUCATION PROGRAM TARGETING HOME-
BASED CHILD CARE CENTERS

Cassandra Nicole Urrutia

Master's Program in Public Health

APPROVED:

Leah D. Whigham, Ph.D., Chair

Thenral Mangadu, Ph.D.

Sarah E. Peterson, Ph.D.

Charles H. Ambler, Ph.D.
Dean of the Graduate School

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Dedication

I would like to dedicate my thesis to my family for the patience, love, and support they have provided me throughout this journey. I would also like to give special thanks to my Mom, who is the reason I am pursuing my master's in the first place. Being raised by a single mother of three, she provided me with an excellent example of what a woman can accomplish if she is determined. To my girls, I hope that you know everything Mommy does is for you. You both are my motivation to push myself every day toward greatness. I love you both dearly my sweet girls. Always be true to yourselves and know that I am here to take on the world with you every step of the way. Brandon, thank you for your unwavering love and encouragement; for those long nights of staying up with me just to keep me going. You are my most loyal supporter and I'm proud to call you my partner in life.

EVALUATION OF A NUTRITION EDUCATION PROGRAM TARGETING HOME-BASED
CHILD CARE CENTERS

By

Cassandra Nicole Urrutia, BS

Thesis

Presented to the Faculty of the Graduate School

The University of Texas at El Paso

In Partial Fulfillment

of the Requirements

for the Degree of

Master of Public Health

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Abstract

Background: The development of a highly obesogenic culture promoting sedentary behavior and the consumption of calorie-dense foods has led to increased levels of overweight and obesity globally. While children and adults are both at increased risk of developing obesity, the risk is even higher in minority and low socioeconomic populations. Changes in familial structure and an increase in mothers of younger children (below the age of 6) entering the workforce have created a new demand for child care services. Although some studies have researched the effectiveness of nutrition programs to increase healthy eating within the child care setting, few have examined to what extent a program is able to increase child proxy-efficacy. Proxy-efficacy is defined as a youth's confidence in their ability to get others to act in one's interests; in this case, to create a supportive home environment that produces healthier eating and increased physical activity beyond the child care center.

Purpose: To evaluate the effectiveness of a nutrition education program targeting home-based child care centers to increase child proxy-efficacy related to asking behaviors for healthy foods and physical activity.

Methods: Children of both genders across Doña Ana County participated in a longitudinal nonexperimental research study in which 23 home-based child care centers received the 12-week HOP'N Home program. The intervention included training of the child care providers who then taught lessons five days a week to the children in their care. Weekend home-connection activities were also provided to the families. Baseline and follow-up skin carotenoid measurements (a biomarker of total fruit and vegetable [F/V] intake) were collected using VEGGIE METER™ (VM), along with pretest and posttest parent survey data assessing the impact of HOP'N Home on parental practices and home environment. Statistical analyses were conducted using SPSS 22

predictive analytics software and included univariate descriptive analysis of all variables, paired-sample t-tests, bivariate linear regression, and correlations (both parametric and nonparametric).

Results: The sample population consisted of 54 preschool aged children (mean age= 3.9; SD= 0.82 y; 97% Hispanic or Latino origin; 25.5% Male) and one parent or guardian (mean age=30.7 y.; SD= 8.0 y; 97.7% Hispanic or Latino origin; 84% Female caregiver; 60% Married or living with a partner). Due to attrition, time 2 data were collected on approximately half of the initial participants (n=26-31). Child VEGGIE METER™ (VM) scores were not significantly different (n=31; 0.101 vs. 0.104; p=0.48). Child proxy-efficacy to ask for F/V increased significantly only for vegetables (n=26; 2.32 servings/day vs. 3.50 servings/day; p=0.003). Parent-reported child consumption of 100% fruit juice, vegetables, and fruit did not change. Parental practices of tracking and limiting screen time did not change significantly. Regarding screen time, there was a significant decrease in TV and movie time (n=26; 2.02 h/day vs. 1.23 h/day; p=0.003). The decrease in video game time approached significance (n=26; 0.308 h/day vs. 0.058 h/day; p=0.091), but there was no difference in computer screen time. At time 1, there was a negative correlation between child VM score and parent-reported child intake of fruit (i.e. low child VEGGIE METER™ scores were associated with higher parent-reported child intake of fruit); $r = -0.386$; $p = 0.008$), but no association with 100% fruit juice or vegetables ($r = -0.178$ and $r = -0.122$). At time 2, there was no association between VM score and intake (100% fruit juice, $r = -0.139$; vegetables, $r = -0.202$; or fruit, $r = 0.077$). A correlation between child screen time of TV/movies and parental practices of limiting that type of screen time at time 2 was significant (i.e. higher parental practices of limiting child screen time was associated with children watching less TV and movies at time 2; $r = 0.426$; $p = 0.012$), and the association approached significance for video games ($r = 0.286$; $p = 0.070$).

Conclusions: Given that Doña Ana County has a high population of youth that are overweight or obese, a program such as HOP’N Home that targets child nutrition knowledge and proxy-efficacy has potential for great impact. In this study, high attrition levels compromised statistical power and poor program implementation compromised impact. However, given that some outcomes were improved, this evidence-based tool does have promise for use in this region. A thorough process evaluation could be useful in addressing logistics and implementation barriers leading to improved program effectiveness.

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Chapter 1: Introduction

The development of a highly obesogenic culture promoting sedentary behavior and the consumption of calorie-dense foods has led to increased levels of overweight and obesity globally. Worldwide, the prevalence of overweight and obesity have been steadily on the rise in both industrialized and developing countries (World Health Organization, 2000). In the United States, children and adults have been equally affected creating a notable shift in the overall health and wellbeing of America's populace. Despite the apparent increase in obesity prevalence, it has only recently begun to enter the consciousness of health policy experts and the public as being a severe health and economic concern (Oliver and Taeku, 2005). What was once considered to be a cosmetic issue is now recognized as a chronic progressive disease with grounds in both individual causality and complex environmental influence. It is understood, more so than ever, that this condition demands a much more in-depth look at its pathologic and physiologic intricacies. A simple explanation of overeating and lack of self-control will no longer suffice, and a new challenge has been posed to create and implement holistic interventions that will prevent this and future generations from being forced to live much less healthy lives than their predecessors (Ogden et al., 2012).

Hispanics are the most rapidly growing segment of the population in the United States, and the continuing rise of overweight and obesity among this racial group is a significant concern. Although the obesity rates remain consistently high among all racial groups, research has shown that children of low-income minority homes are at a considerably higher risk of overweight and obesity (Lindsay et al., 2015). This study focused on underserved communities along the border region with high concentrations of Hispanics that are known to be disproportionately affected by high rates of obesity. In addition, the social indicators that are

known to be correlated with the development of obesity are more prevalent in Doña Ana than most other counties in New Mexico. It is for these reasons why assessing the effectiveness of an educational program like HOP'N Home is so important.

Chapter 2: Background and Significance

2.1 Definitions and Terminology

Overweight and obesity are characterized by an excess accumulation and storage of adipose tissue (fat cells) in the body (Disease of Obesity, n.d.). Major health implications are directly associated with excess weight such as an increased incidence of type 2 diabetes mellitus, hypertension, stroke, cardiovascular disease, osteoarthritis, and some cancers (Must et al., 1999). Overweight and obese patients as a group are at a higher risk of developing comorbid complications compared to their healthy-weight counterparts, but the extent to which each overweight or obese person is afflicted by these complications can vary greatly from person to person.

Clinically, overweight and obesity are typically defined by a person's body weight for height, or Body Mass Index (BMI) as a proxy for body fat. Unlike other more extensive and expensive procedures that can quantify body fat directly (e.g. dual-energy x-ray absorptiometry), BMI is regularly used in clinical settings since height and weight can be routinely measured. BMI is estimated by weight in kilograms (kg) divided by height in meters (m) squared (kg/m^2). Despite its popularity, the method has its limitations. The use of BMI assumes that adiposity is distributed evenly throughout the body, and does not take into consideration disproportionate amounts of fat that may be regionally located (Tchernof and Depres, 2013). When assessing a person for possible risk status of comorbidity, waist circumference, fitness, and genetics are other factors that should be considered in a health assessment, in combination with BMI. The National Heart, Lung, and Blood Institute has formulated evidence-based guidelines for defining the individual cut-points for each weight class summarized in Table 1.

Table 1. Classification of overweight and obesity using BMI cut-points, defined by the Heart, Lung, and Blood Institute in an evidence report of clinical guidelines to identify overweight and obesity

Obesity Class		BMI (kg/m²)
Underweight		< 18.5
Healthy Weight		18.5 – 24.9
Overweight		25.0 – 29.9
Obesity	I	30.0 – 34.9
Extreme Obesity	II	35.0 – 39.9
	III	≥ 40.0

Being that distribution of body mass, height, and weight change are much more variable during the years of early growth and development, a BMI curve must be utilized to plot BMI among children to properly define their weight classification (Barlow, 2007). BMI in children is calculated using the same equation (kg/ m²). Among infants and toddlers, sex-specific percentile ranges independent of age are used. A BMI at or above the 95th percentile on the CDC weight-for-recumbent-length growth charts is considered excess weight. Among children 2 to 19 years, excess weight is defined by the child’s current weight in relation to the 2000 CDC sex-specific BMI-for-age growth charts. Two primary cut points are utilized on these growth charts to identify varying levels of health risk for the child. Table 2 explains where each cut point lies and the proper clinical terminology to classify the patient’s BMI in that range.

Table 2. Terminology for Pediatric BMI Categories defined in the Center for Disease Control’s Growth Charts

<i>Percentile</i>	<i>Classification</i>
<5 th percentile	Underweight
5 th -84 th percentile	Healthy weight
85 th - 94 th percentile	Overweight
≥95 th percentile	Obesity

2.2 National Prevalence Rates

Adults

A significant increase in the prevalence of obesity rates among American adults has been observed compared to those of past decades. In the mid-1980's no state reported having an adult obesity rate higher than 15 percent. Today four states have obesity rates exceeding 35, 25 states exceed 30 percent, and the remaining 21 states are all above 20 percent. Data analyzed from the Behavioral Risk Factor Surveillance System in the 2011-2014 report indicated that an estimated 36.5% of the entire adult population was obese (Ogden, Carroll, Fryar, & Flegal, 2015). Taking into consideration that the BRFSS relies heavily on self-reported data from surveyed participants, researchers have noted that these figures likely misjudge the actual extent of the issue, and may be an underestimation of rates, due to self-report response bias.

Children and Youth

As with the adult population, obesity remains a considerable threat to the current and long-term health of young people and adolescents in the United States. Data collected over the last three decades concerning childhood obesity rates have been equally as disheartening, providing evidence of a tripling in the prevalence of obesity among children ages 2 to 19 years of age, from 5% in 1971–1974 to 17% in 2009–2010 (NHANES, 2011-2014 data). Today, approximately 12.7 million children are overweight or obese and face the same serious health consequences as adults if adjustments to their diet and activity levels are not made (Ogden et al., 2015). Among the Latino and Hispanic populations children and youth of all age groups are disproportionately affected compared to their non-Hispanic white counterparts: 38.9% vs 28.5%

in 2-9-year-old, 16.7% vs 3.5% in 2-5 year olds, and 26.1% vs 13.1% in 6 to 11 year olds (Ogden et al., 2015).

2.3 Overweight and Obesity at the State Level

Inequalities in the rates of certain subsets of the population are apparent in obesity and overweight data. Mapping of the overall trends in adult obesity rates provides evidence of how quickly they have risen since the early 1980's, and how geographic locality plays a role in the development of obesity, with many in the southern and southwestern states having the highest rates of overweight and obesity. New Mexico is ranked as the 32nd highest state for rates of adult obesity, with 28.8% of the population being overweight or obese. Some progress has been observed over the last few years regarding declines in childhood obesity. Per a report by the Robert Wood Johnson Foundation and the CDC, New Mexico's childhood overweight and obesity rates have decreased from 15.5% to 11.3% from 2010-2015. Despite the observed decline, the rates remain high across grades and genders. In 2015, more than 1 in 4 kindergarten children was overweight or obese (25.6%), and 1 in 3 third graders (34.4%). Additionally, slightly higher proportions of boys are obese than girls in both grades (13.4% vs. 10.1% in Kindergarten and 20.5% vs. 17% in third grade) (New Mexico Childhood Obesity Update, 2016).

2.4 Doña Ana County Demographics

The county of Doña Ana is in the southern part of the state on the border between New Mexico and Texas. In 2015, it was home to over 214,000 people making it the second-most populated county in the state, and it is also considered one of the most densely populated with

approximately 55 people per square mile in 2010 (United States Census Bureau, n.d.). It has a considerably young population with 26.7% of persons under the age of 18 and 7.2% under the age of 5 years in 2015. Of the youth and adolescents between the ages of 0 and 19 years, approximately 78.8% are of Hispanic origin, and among those between the ages of 0-17 years 38.8% are living in poverty.

According to the New Mexico's Indicator-Based Information System, approximately 15.3% of the adolescent population in Doña Ana is obese (BMI at or above the 95th percentile based on sex and age). Since it is known that the development of overweight and obesity early in life increases the likelihood of those individuals being overweight or obese as adults, these rates are a significant concern.

2.5 Fruit and Vegetable Consumption

A large body of evidence exists today signifying the importance of diets high in vegetable and fruit (F/V) intake. A diet rich in these food groups encourages the healthy growth and development (both physical and cognitive) of young children and adolescents, as well as, lowering their risk of poor health conditions associated with vitamin/mineral deficiencies and eating disorders (US Department of Agriculture, 2008). Research has also indicated that an increase in F/V intake is correlated with the displacement of other energy-dense, nutrient poor foods (Epstein et al., 2001), which in turn helps keep calorie intakes within appropriate levels and aids in the prevention of overweight and obesity. Overall the benefits of adequate consumptions of F/V during childhood extend throughout the entire lifespan of the individual by also decreasing the individual's risk of adult chronic disease (Wyse, Campbell, Nathan, & Wolfenden, 2011).

Serving size recommendations are broken down based on age, gender, and activity levels.

The most recent version of Dietary Guidelines for Americans outlines dietary intake recommendations for each age groups as follows:

Table 3. Recommended daily servings of Fruits and Vegetables based on U.S. Dietary Guidelines

<i>Stage of Life</i>	<i>Age</i>	<i>Servings of Fruit</i>	<i>Servings of Vegetables</i>
Preschool	3-5 years	2-3 (1-1.5 cups)	2-4 (1-2 cups)
Middle school	6-8 years	2-4 (1-2 cups)	3-5 (1.5-2.5 cups)
Late Childhood	9-11 years	3-4 (1.5-2 cups)	4-6 (2-3 cups)
Adolescence	12-17 years	3-5 (1.5-2.5 cups)	4-8 (2-4 cups)

Despite the overwhelming amount of evidence available on the association of fruits and vegetables and positive health benefits, the number of children that consume even the minimum daily servings of F/V recommended for proper growth and development is unfortunately very low. 9 out of 10 children do not consume the recommended daily amount of vegetables, and 6 out of 10 do not consume the recommended daily amounts of fruits (Kim et al., 2014)

2.6 Factors affecting Dietary Intake

Research suggests that the years of early childhood are critical to the development of lifelong food habits, yet experiences with flavor profiles take place even before birth (Wyse et al., 2011). Postnatally, the first five years of life are a period of rapid physical growth and development. During this time, children begin to establish their first eating patterns based on cultural and familial beliefs and practices surrounding food and eating (Savage, Fisher, & Birch, 2007) and use parents as a model for learning how much, what, and when food consumption is appropriate. A recent systemic study reviewing the environmental correlates of obesity-related

dietary behaviors in youth found that environmental factors were most consistently studied at the household level, and parental intake was regularly associated with childhood dietary intake (Van der Horst et al., 2007). Similarly, in a separate review of 98 papers examining the determinants of F/V consumption among children and youth, Rasmussen et al. (2007) found that age, gender, socio-economic position, preference, parental intake, and home availability/accessibility were all consistently positively correlated with child F/V intake.

2.7 Sedentary behavior and Child Screen-time

The development of overweight and obesity involves more than good nutrition. Increasing screen-time viewing has been implicated as one possible contributor to the growing epidemic (Braithwaite, Stewart, Hancox, Beasley, and Murphy, 2013). Ease of access to various technology types has resulted in the children of today spending one-quarter of their waking lives engaged in some sort of screen-time (i.e. television, computers, video games, cell phones, etc.) (Olds, Ridley, & Dollman, 2006). A report on the changing media landscape of today's youth, including two nationally representative samples of children aged 2-7 years (n=1,090) and 8-18 years (n=2,065), revealed that 100% of the sample population of children 2-7 years lived in a home with 1 or more TVs (Roberts, 2000). Regarding the 8-18-year-old group, 99% of that sample population lived in a home with 1 or more TVs. Those high percentages were mirrored when it came to other types of media availability in the home by age group (Figure 1).

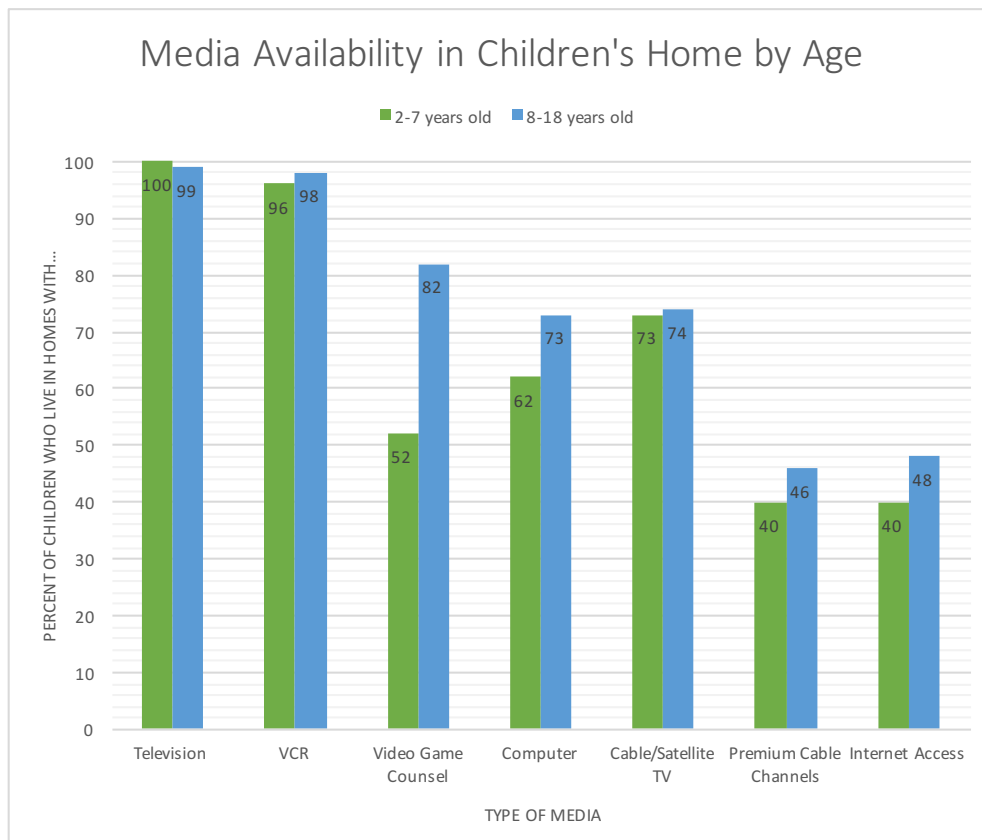


Figure 1. Media use patterns of U.S. children ages 2 -18 years compiled by Kaiser Family Foundation and Stanford University.

It has been suggested that possible mechanisms for how screen-time plays a role in the development of obesity among youth and adolescents include: 1) displacement of physical activity; 2) decreased resting energy expenditure compared to other activities; 3) increased sleep deprivation; and 4). increased dietary intake while engaging in screen-time or because of food advertising (Braithwaite et al., 2013; Rey-López et al., 2008; Wethington et al., 2013). A cross-sectional study on the worldwide association between TV viewing and obesity in children and adolescents provided evidence of how prolonged periods of viewing were correlated with higher BMIs for youth in 54 countries ($p < 0.0001$) (Braithwaite et al., 2013). In the study, participants were categorized by the length of time they engaged in screen-time: short (< 1 h/day), moderate ($1 - < 3$ h/day), long ($3 - < 5$ h/day), and prolonged ($5+$ h/day). Among the children, the mean

percentage self-reporting moderate, long, or prolonged viewing was 79%. For adolescents, that percentage increased to 89%. After controlling for location, age, and measurement type, there was a positive association between longer periods of television viewing and BMI in both the adolescent and child groups worldwide. An associated dose response effect was also present for the two age groups, with a 10 to 27% increased risk of overweight or obesity in adolescents and children watching 1-3 hours of TV per day, and females experiencing a 45% increase when watching 5+ hours of TV per day (Braithwaite et al., 2013). These results parallel those of an older similar study (Dietz and Gortmaker, 1985).

2.8 Changes in Familial Structure and the Need for Child Care

Over the last thirty years, drastic changes to the typical family structure have taken place. Changes in gender roles and higher level educational attainment among women coupled with the recent economic recession have created a need for more mothers of young children to enter the workforce. In 2011, the U.S. Census Bureau reported an estimated 68% of women in the workforce are mothers of children 6 years and younger, and 11 million pre-school aged children received some form of child care while their mothers were working (Lavery, 2012; Lindsay et al., 2015). Furthermore, more than 1.6 million children attend home-based child care centers. Studies of the impact of social environments such as child care centers have revealed that these settings play a critical role in early nutrition knowledge acquisition and the development of eating habits. Caregivers serve as parental-proxies for the children in their care, and ultimately help in molding lifelong habits that contribute to overweight and obesity.

2.9 HOP’N Home Curriculum

The Healthy Opportunities for Physical Activity and Nutrition Program (HOP’N Home) is the product of over ten years of evidence-based research in child obesity prevention and nutrition by Dr. David Dzwealtowski and colleagues of Kansas State University’s kinesiology department. Dzwealtowski’s earlier works in the 90’s with older school-aged children allowed him the opportunity to understand better the obstacles that children face ultimately dictating their ability to make healthful choices. In a monthly newsletter published by the College of Arts and Science at Kansas State, Dzwealtowski explains how adjusting an already established lifestyle can be trying even for adults but it proves to be particularly difficult for children. Youth often lack the ability to make many of the important decisions regarding food access and physical activity opportunities at home. He goes on to explain that being overweight or obese at an early age puts an individual on a developmental pathway into adulthood being overweight or obese. For that reason, HOP’N home targets the years of early childhood development when children are first learning how to apply context to their immediate environment and are establishing their identity as health-conscious individuals.

Gaps continue to exist in research regarding how to successfully influence the physical and social landscaping of home environments that shape healthy behaviors. Many programs in existence focus on behavior change at the personal level, but as mentioned before this often proves to be ineffectual among children due to their lack of decision-making power in their home. HOP’N Home considers all aspects of a child’s environment that are likely to influence ability to obtain adequate daily servings of F/V and sufficient amounts of physical activity. This is done by incorporating the caretakers and parents into the learning process to develop healthful

behaviors as a unit, as well as a media literacy component that teaches families to identify the motives of possibly harmful marketing campaigns targeting children.

Program Structure

HOP’N Home is a 12-week program, heavily based on the constructs of the well-founded and commonly applied Social Cognitive Theory (SCT). The SCT explains how individuals develop and maintain certain behavioral patterns in terms of continuous interactions between their environment, behavior, and other personal factors (i.e. biology and cognitive function). Bandura (1986), discusses how "unless a child believes they can produce the desired result and forestall detrimental ones by their action, they have little incentive to act or persevere in the face of difficulties”.

HOP’N Home is designed to encourage children to draw from both their personal and proxy efficacies to execute a given behavior at the necessary level (Bandura, 1986). By doing so children can obtain the desired outcome of influencing their parents to provide them with a variety of vegetables, fruits, and physical activities opportunities. The program utilizes multiple techniques to build participant’s skills in self and proxy-efficacy to create positive environmental change at home. The four central goals of the program are for children to:

- 1) Be physically active for at least 60 minutes every day.
- 2) Eat vegetables and fruits at every meal or snack
- 3) Drink less soda and juice drinks compared to before the intervention.
- 4) Reduce overall child screen time (i.e. TV and video games)

HOP’N Home instills healthy thinking through a combination of five quality elements: group activities, dramatic play, musical social narratives, meal prompts, and home-based activities. The

entire week is accounted for in this curriculum which includes weekends. The home-activities that are sent with the child every week are to provide extra opportunities for children to practice what they are learning with their families. Each lesson begins on Wednesday of each week and ends the following Tuesday.

Weeks 1-3 are dedicated to familiarizing participants with the fundamental concepts of HOP’N Home. The topics of “GO and SLOW” emerge, as children discuss and practice identifying different types of foods and physical activities that would fit into each of these categories. Regarding foods, “GO” is defined as things that are good to eat most often, which are nutritiously dense and relatively low in sugar, fat, and calories. “GO” activities would be things that elevate the heart rate, and should be done as much as the child wants. These are the types of activities that should also be done most often and daily. “SLOW” foods are described as those that should be consumed less often or not at all, which are high in fat, added sugar, and calories. Similarly, “SLOW” activities, which require little to no body movement, should also be limited as much as possible. The mastery of these ideas is central to HOP’N Home, and are what participants will base their knowledge of nutrition and physical health on as the program progresses.

Weeks 4-10 are devoted to deepening participant understanding of “Go” and “Slow” through continued practice and group projects. Teachers provide “group time” activities three times per week for a minimum of ten minutes each session. Another quality element of HOP’N Home is the scheduled “dramatic play” sessions, where teachers set up dramatic play scenarios where the children can apply what they have learned in mock scenarios. For example, one week a play area that simulates a grocery store would be constructed where children will pretend to grocery shop with their families and identify “GO” and “SLOW” foods in the store. Meal

prompts are another method of reinforcing program ideals, done 3 times/ week during at least one meal or snack. Teachers will prompt children to identify what parts of the meal are “GO” and “SLOW”. Musical social narratives and home connections are the two remaining elements of HOP’N Home that help to bring everything together. During the 12-weeks children are taught three different songs: “The Play Song”, “The Breakfast Song”, and “The Go and Slow Song”

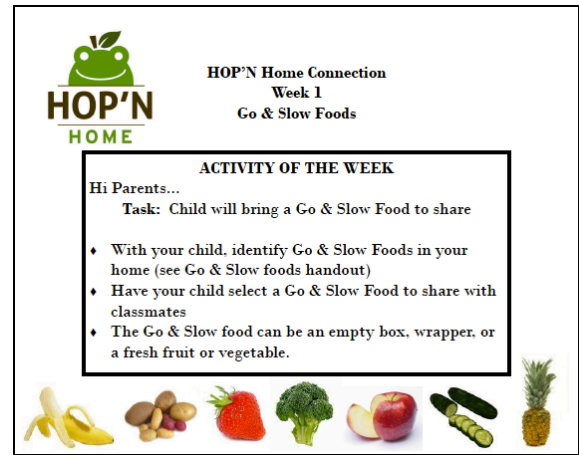


Figure 2. Example of weekly HOP'N Home Connection card sent home to parents.

which are used to help participants remember the concepts. A CD is provided to each child with copies of the songs to take home and use during home connection activities. Each week children are provided with a HOP’N Home note card or newsletter to take home to their parents/caregivers (Figure 2). The newsletters explain the current activities of the program and the note-cards provide parents with an activity that should be completed with their children before their next class. At times children are asked to bring back a certain item from home that would be used as props during group time activities or dramatic play. Weeks 11-12 are used to wrap up the concepts, and participants further strengthen their skills through continued practice with the techniques mentioned above.

Evidence-Based Results

The first study examining the effectiveness of HOP’N Home was a cluster-randomized controlled trial that involved two separate child care classrooms, and the second was a non-randomized trial in which two child care homes and two child care centers received the

intervention. HOP’N Home did not have an impact on participant BMI or BMIz, although there were improvements in health-related outcomes because of the program in both studies. In the first study HOP’N Home children increased ($p<0.05$) frequency of asking to play outside/ week (pretest= 4.5 vs. post= 4.6) in comparison to the control group (pretest=5.5 vs. post=2.5). In the second study an increase in park visits was observed ($p<0.05$), as well as a decrease in child ST (mean change= -21.2 min/day) and fast food restaurant visits/week (-0.2 times/wk) (Hastman et al., 2012).

HOP’N Home’s comprehensive structure and previous successes in child care settings in Kansas are what enticed local organization, Community Action Agency of Southern New Mexico (CAASNM), to adopt and adapt its methodology into their Early Childhood Nutrition and Education Program (ECNEP). In 2015, CAASNM received a grant from the Paso del Norte Health Foundation to employ the HOP’N Home curriculum as their primary educational tool for the ECNEP.

Chapter 3: Study Aims and Hypotheses

3.1 Study Rationale

It has been suggested that individual change is more likely to be facilitated and sustained if the environment within which choices are made supports healthy food options (van der Horst et al., 2007). Taking into consideration that HOP’N Home focuses on improving children’s proxy-efficacy to affect their immediate home environment, the study aims and hypothesis were developed.

3.2 Study Aims

The purpose of this study was to 1) assess the impact of HOP’N Home on child F/V intake, proxy-efficacy, parental practices, and screen-time; 2) describe the influence of proxy-efficacy on child F/V intake; 3) investigate the association between parent-reported F/V intake with child F/V intake; and 4) investigate the association between parental practices related to tracking and limiting screen-time.

3.3 Study Hypotheses

1. Child fruit and vegetable intake as measured by the VEGGIE METER™ will significantly increase from time 1 to time 2. (Aim 1)
2. Child proxy-efficacy as measured by parent-reported child asking behaviors for fruits, vegetables, and 100% fruit juice will significantly increase from time 1 to time 2. (Aim 1)
3. Parent-reported child intake of fruits, vegetables, and 100% fruit juice will increase from time 1 to time 2. (Aim 1)

4. The mean child screen time amounts in a usual week will decrease from time 1 to time 2. (Aim 1)
5. Mean frequency of parental practices regarding screen time tracking/ limiting will increase from time 1 to time 2. (Aim 1)
6. Changes in proxy-efficacy as measured by parent-reported asking behavior will predict changes in F/V intake as measured by the VEGGIE METER™. (Aim 2)
7. Parent-reported F/V intake of the child will be positively correlated with F/V intake as measured by VEGGIE METER™ scores. (Aim 3)
8. Parental Practices (PP) as measured by HOP’N Home parent survey will be associated with parent-reported child screen time (ST). (Aim 4)

3.4 Strategic Framework

Healthy People has established science-based national targets for improving the overall health status of Americans by identifying high-priority health issues. Progress in these areas has been continuously monitored and benchmarks are adjusted accordingly every 10 years during the revision process. The primary goals of the HOP’N Home project (increase F/V intake among children aged 2.5-5 years and increase their physical activity levels) reaffirm the Nutrition and Weight Status themes outlined in *Healthy People 2020* (HP 2020). Under the subheadings of “Food and Nutrient Consumption” and “Nutrition and Weight Status” four main objectives parallel those of HOP’N Home. As mentioned earlier, the contribution of F/V to the normal diets of children aged 2 years and older is greatly lacking. Most children are not receiving adequate amounts of nutrients from these foods and therefore run higher risks for developing various health complications throughout their lifespan. HOP’N Home and HP 2020 aim to improve the

current mean daily intake of both fruits and vegetables, and reduce the consumption of calorie dense foods and added sugars in the diets of children 2 to 5 years. The healthful changes in diet and physical activity levels expected from the program also contribute to accomplishing the goal of reducing the proportion of children aged 2 to 5 years considered obese.

Chapter 4: Methods

4.1 Sample Population

Children & Parents

Participants for the program were identified through an assessment of existing Child and Adult Care Food Program (CACFP) client records. Preliminary evaluation of the CACFP registries indicated that approximately 400 children in Doña Ana County meet the inclusion criteria for ECNEP. Participants were considered for the program if they were eligible for reduced or no cost school lunch, between the ages of 2.5-5 years (preschool aged), and were currently in the care of a home-based child care provider. Including the parents and caregivers allows for the child's whole environment to be represented and helps ensure that the messages of the program are in fact reaching the individuals that will ultimately be making the choices surrounding nutrition and physical activity in the home. One parent/guardian from the family was asked to fill-out and submit all the necessary documentation to participate in the program. Based on inclusion criteria set by CAASNM, 54 parent-child dyads were included in this study (child age=3.9 y; SD= 0.82 y; 97% Hispanic or Latino origin; 25.5% Male and adult age=30.7 y; SD= 8.0 y; 97.7% Hispanic or Latino origin; 84% Female caregiver; 60% Married or living with a partner). Due to attrition, time 2 data were collected on fewer than half of the initial participants (n=26-31).

Child Care Providers

Estimation from existing CACFP client criteria records approximates that 25-50% of home-based providers are parent households caring for their children in addition to others, and 50-75% of the providers are direct relatives of the children for which they serve as daycare providers. These data indicate that a significant portion of children attending home-based child

care centers in Doña Ana are in the care of close family and friends that have a considerable amount of influence on shaping their behaviors, beliefs, and habits surrounding healthy eating and active living. A total of 250 provider homes were initially identified as being eligible to participate in this project, of which a subset of 23 were included in the first year's cohorts.

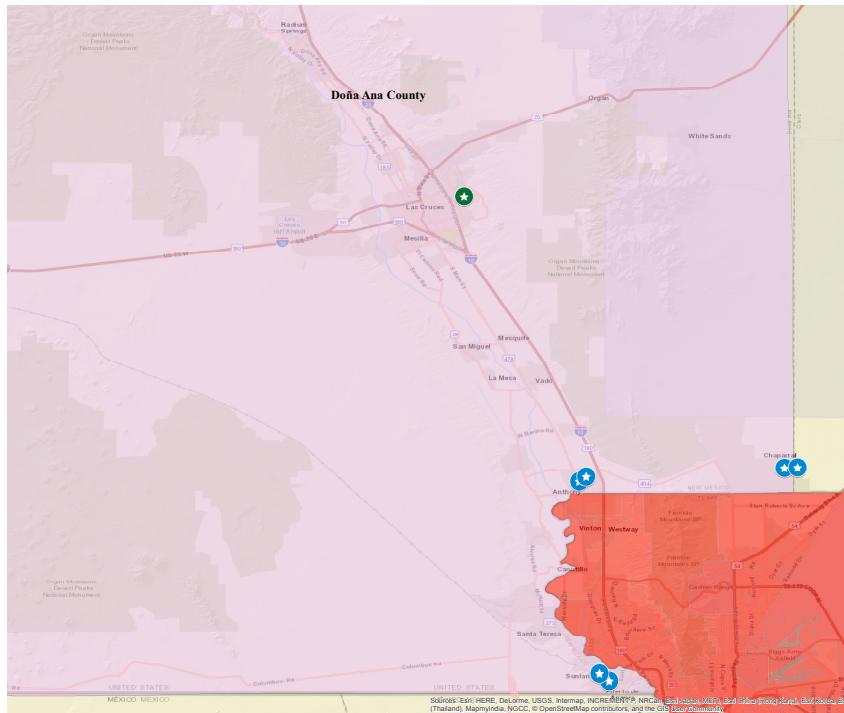


Figure 3. Mapping of home based child care centers participating in HOP'N Home. Pink shaded area represents Doña Ana County. Blue markers indicate location of HOP'N Home child care sites and green marker is the CAASNM office in relation to those centers.

4.2 Procedures

Process and evaluative methods of the HOP'N Home project were assessed by the University of Texas at El Paso's (UTEP) Institutional Review Board (IRBNet ID # 794722-4), and the approval of all accompanying documents was obtained. Written informed parental consents were acquired for each participant before any data were collected from the children. A schedule for anthropometric data collection was created with the help of CAASNM staff and child care providers, to coincide with curriculum training days for caregivers. During each

encounter with the children, trained research assistants from the Institute of Healthy Living (IHL) described the purpose of the study and the procedure for collecting their physical data in easily understood vernacular. IRB approved consent forms clearly explained that participation in the study was entirely voluntary and could be stopped at any time if the child chose. Parents were asked to complete a survey before the initiation of the program and after its conclusion. An incentive was provided to participants for their participation in the data collection efforts, and a \$10 gift card was given to them upon completion of each survey. If parents were enrolling more than one child in HOP’N Home, they were asked to only complete one survey for the household.

4.3 Study Design

This study employed a longitudinal study design to conduct multiple observations of the same subjects over a period of 3 months. Baseline anthropometric measurements were collected at the initial meeting with providers and their classes, including height, weight, body composition, and skin carotenoid levels. A subsequent measurement was collected upon completion of the program. Once participants returned their signed parent consent forms they were assigned a subject ID number to limit the connection of any identifying information to their anthropometric and survey data.

4.4 Measures

Parental Practices and Home Environment Survey

The HOP’N Home parent-survey draws from previously validated measures of assessing home environment (HE) with specific areas of interest in:

- Home availability: fruits, vegetables, physical activity equipment, and media equipment (Baranowski et al., 2009; Gattshall et al., 2008, Sirard et al., 2008)
- Child Asking & Parent Providing Behaviors (Buinzen, 2009)
- Parental Practices (PP): advertising mediation (Buijzen, 2009), active and restrictive practices
- Child Behavior: physical activity, sedentary time, diet (Bennett, 2009; Robinson et al., 1995)

The pre-test survey consisted of 49 questions, which are broken down into 11 sections (See Appendix A). The post-test is longer to include five additional questions specifically about HOP'N Home. For the purposes of answering the specific research questions of this study, only questions included in Table 4 were used during analysis. To differentiate between pre-and post-data, each variable had either a .1 or .2 following its name to signify the time it was taken, except for variables created to calculate change between the two-time points.

Table 4. Summary of variables used during analysis and the hypothesis they address

Question/ Measure	Variable Name (for analysis)	Hypothesis
Section B: Child Sedentary Behavior		
Yesterday (all day long) - How much time did your child spend...?	(Items 3 and 4 were summed to create one variable for Television and Movies)	
3. Watching Television (not including videos on a CVR or DVD player)?	CSB.TVMOV.1	Hypothesis 3 & Hypothesis 5
4. Watching movies or videos on a VCR or DVD player?	CSB.TVMOV.2	
5. Playing video games (like Wii, Leapster, PlayStation, Nintendo DS)	CSB.GM. R.1 CSB.GM. R.2	
6. Playing on a computer or Tablet?	CSB.COM. R.1 CSB.COM. R.2	
Section E: Child Eating and Nutrition		
17. Yesterday, how many servings of the following beverages did your child drink? (One serving equals ½ cup or 125 ml)	CEN.Q17ptA.R.1	Hypothesis 4
17a. 100% Fruit Juice	CEN.Q17ptA.R.2	
18. Yesterday, how many servings of the following foods did your child have to eat?	CEN.Q18ptA.R.1	
18a. Vegetables (cooked & raw, baked beans)	CEN.Q18ptA.R.2	
18c. Fruit (fresh, dried, or canned)	CEN.Q18ptC.R.1 CEN.Q18ptC.R.2	
Section F: Child Asking Behaviors		
19. During a usual week, how often does your child ASK FOR...?	CAB.Q19. ptA.R	Hypothesis 2 & Hypothesis 5
a. 100% Fruit Juice	CHAN.CAB.FJ	
f. Vegetables (cooked & raw, baked beans)	CAB.Q19. ptF.R CHAN.CAB.VEG	
h. Fruit (fresh, dried, and canned)	CAB.Q19. ptH.R CHAN.CAB.FR	
Section H: Parenting and Family Life		
22. How often do you keep track of the... a. Amount of TV or videos your child is watching?	Track.Q22. ptA.1 Track.Q22. ptA.2	Hypothesis 4 & Hypothesis 7
23. How often do you place limits on the... a. Amount of TV or videos your child is watching?	Track.Q23. ptA.1 Track.Q23. ptA.1	
VEGGIE METER™ (Child skin-carotenoid levels)	O.D. Result.1 O.D. Result.2 CHAN.OD	Hypothesis 1 Hypothesis 5 Hypothesis 6

VEGGIE METER™ & Skin-Carotenoid Levels

Up until recent years, much of the data obtained from community-based programs involving F/V consumption was collected through self-reporting measures such as in-person, phone, or online surveys and dietary recalls. This was due to the inaccessibility and high-cost of more objective and accurate indices. However, estimates of nutrient and dietary intake using these self-reporting tools have been found to contain a considerable amount of invariance and random error. This is due to a range of possible biases that exist, not to mention the possibility of systemic and human error that can occur during data input (Baldrick, Woodside, Elborn, Young, & McKinney, 2001). Horner et al. (2002) discuss how measurements of energy intake collected using dietary self-reported methods are a gross underestimation, and the degree of underreporting also varies by participant characteristics such as gender, age, and weight. Other factors hypothesized to influence underreporting include income, education, social desirability, body image, and a history of depression and dieting. For this study, a more objective form of quantifying F/V consumption among the children was used at baseline and follow-up, and was achieved by measuring skin-carotenoid levels. Carotenoids are the fat-soluble pigments that give plants their vibrant color, often red, yellow, and orange. Since human-beings are unable to synthesize carotenoids the primary source comes from the consumption of F/V in the diet. Carotenoids are considered the best biomarker of F/V intake (Jensen et al. 2004).

The VEGGIE METER™ (VM) used in this study uses emerging technology in optically based endoscopic techniques, known as Reflectance Spectroscopy (Wallace, Wax, Roberts, and Graf, 2009). This new alternative to more invasive measures such as plasma and serum High-Performance Liquid Chromatography (HPLC) analysis, allows for a rapid and low-cost method

of assessing skin carotenoids noninvasively (Jahns et al., 2014). In short, the device uses a broad-band white light spanning the spectral range from 350-850 nm to illuminate the tissue site of interest, in this case, the fingertip of the participant (Ermakov & Gellerman, 2011). A slight topical pressure is applied to the area to temporarily “blanch” (i.e. squeeze out) the blood of the measured tissue volume. The resupply of blood is temporarily blocked using the same topical pressure, to allow for an optical clearing time. "Blanching" gives the device a long enough period to reduce the influence of HbO₂ absorptions, as to reduce any influence of oxy-hemoglobin on the reflection spectra (Ermakov & Gellerman, 2011).

The following procedures were followed during each collection to control for variability. Since stains, cuts, or scars on the surface of the skin affect the VM's ability to accurately assess dermal carotenoids, each participant was asked “Have you eaten Takis, Cheetos, or Doritos in the last 2 day?” and the non-dominant hand ring finger was used for assessment. Additionally, exposure to cigarette smoke decreases carotenoid levels in the body, therefore participants were also asked “Have you been around anyone that smokes in the last 30 days?” and “Do you smoke?” The finger was then thoroughly cleaned with an alcohol wipe and allowed to dry before proceeding. Because there is variability across fingers within an individual the same finger was used at each time point (Whigham & Redelfs, 2015).

4.5 Statistical Analysis

Data analysis was performed using SPSS Version 22 predictive analytics software. All variables in this study were treated as continuous, and the descriptive statistics conducted for each included sample size (n), mean (M), standard deviation (SD), frequency and percentage. Preliminary univariate analysis of each variable determined normality of the data (Table 4),

which was based on three assumptions: skewness value (between -1 and 1) and the bell-shape/symmetry of the histogram.

Hypotheses 1-5

Two-tailed paired t-tests were performed to determine if child VEGGIE METER™ score increased from time 1 to time 2. This same type of analysis was used to conclude whether parent-reported child proxy-efficacy and child intake of F/V had improved (Table 4). Univariate analysis of the data for child VM (in O.D. score) at time 1 (N=44, skewness=-0.181) and time 2 (N=34, skewness=0.518) signified that each time-point should be treated as normally distributed.

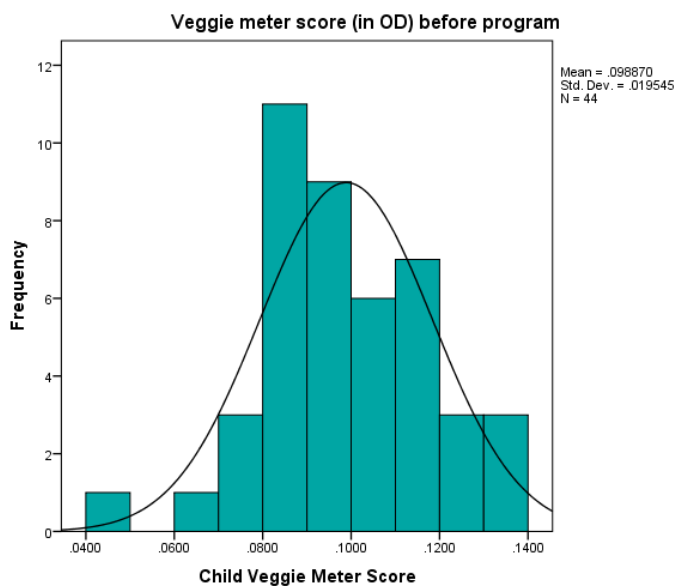


Figure 4. Distribution of child VEGGIE METER™ scores before HOP'N Home.

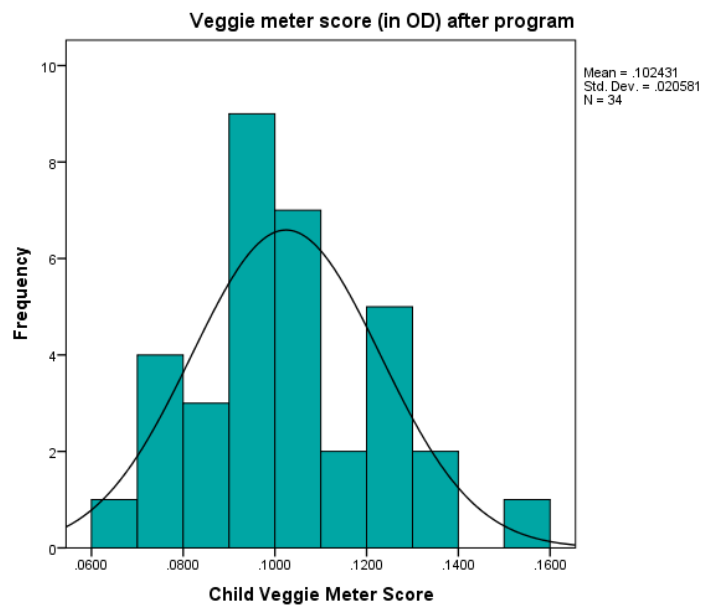


Figure 5. Distribution of child VEGGIE METER™ scores after HOP'N Home.

Additionally, proxy-efficacy measured by parent-reported child asking behavior questions before the program (n=41) provided evidence of normality for all three variables (Table 4): CAB.Q19. ptA skewness=0.319; CAB.Q19. ptF skewness=0.120; and CAB.Q19. ptH

skewness -0.454. After the program, all three variables approximated normality and were treated parametrically: CAB.Q19. ptA skewness= -0.479; CAB.Q19. ptF skewness=-0.671; CAB.Q19. ptH skewness -0.897.

Hypothesis 6

Several variables were recoded for this assessment. Including creating change variables for VEGGIE METER™ (O.D. Result) to calculate differences in VEGGIE METER™ score from time 1 to time 2 (e.g. CHAN.OD = O.D. Result.2-O.D. Result.1). The same change calculation was applied to each child asking behavior question, creating 3 new variables to use in this analysis (Table 4). Changes in parent-reported child asking behaviors for 100% fruit juice from pre-to post (skewness=0.342) were also parametric. The data were not considered symmetric, but that may be due to the loss of participants at time 2. Preliminary analysis of the skewness values for vegetables (skewness=0.658) and fruit (skewness=0.013) indicated it was appropriate to treat both variables as normally distributed. A bivariate linear regression was to be used to predict how well changes in child VM scores could be predicted from changes in child proxy-efficacy to ask for F/V.

Hypothesis 7

The histograms for the Child Eating and Nutrition (CEN) questions at time 1 all approximated normality. Time 2 data differed in the distribution and symmetry of the responses. This could have been due to attrition rates and the minimal number of post-responses that were received. Skewness values for time 2 did indicate all three variables were highly skewed (vegetables=1.32, fruit= 1.51, and 100% fruit juice= 1.21). In the absence of any severe outliers no further data transformations were necessary, and a nonparametric (Spearman) correlation

analysis was used to assess collinearity. Person correlations (one-tailed) were conducted to evaluate the strength of the relationship between parent-reported child intake of 100% fruit juice, vegetables, or fruit and their VEGGIE METER™ score at time 1. Time 2 data were treated with the nonparametric (Spearman-rho) correlation technique due to distribution of the data.

Hypothesis 8

Two separate questions measuring PP concerning tracking and monitoring of child ST before and after the program were used to compare against 3 separate questions measuring the amount of certain types of ST a child received before and after HOP'N Home (Table 4). Univariate analysis of descriptive statistics for parent-reported child ST and PP monitoring/tracking of ST revealed that both pre-and post-test data were highly skewed. Neither the parental practice questions nor the screen time variables met the assumptions of normality and were classified as non-parametric. Spearman (one-tailed) correlations were used to assess the strength of the relationship between PP and parent-reported ST.

Chapter 5: Results

5.1 Hypotheses 1-5

1. “Child fruit and vegetable intake as measured by the VEGGIE METER™ will significantly increase from time 1 to time 2.”
2. “Child proxy-efficacy as measured by parent-reported child asking behaviors for fruits, vegetables, and 100% fruit juice will significantly increase from time 1 to time 2.”
3. “Parent-reported child intake of fruits, vegetables, and 100% fruit juice will increase from time 1 to time 2”
4. “The mean child screen time amounts in a usual week will decrease from time 1 to time 2.”
5. “Mean frequency of parental practices regarding screen time tracking/ limiting will increase from time 1 to time 2.”

Paired sample t-testing indicated a statistically significant difference did not exist in child VM scores from time 1 ($M=0.101$, $SD=0.020$) to time 2 ($M=0.104$, $SD=0.020$) conditions; $t(31) = -0.719$, $p=0.477$ (Table 5). Changes in the mean number of times parents reported their child asked for fruits, vegetables, or 100% fruit juice (in a usual week) at time 1 and time 2 is depicted in Figure 2. The paired sample t-tests indicated only a significant difference in child proxy-efficacy to ask for vegetables ($p=0.003$) but not for 100% fruit juice ($p=0.36$) or fruit ($p=0.22$). Parental practices of tracking and limiting screen time did not change significantly. Regarding screen time, there was a significant decrease in TV and movie time ($n=26$; 2.02 h/day vs 1.23 h/day; $p=0.03$). The decrease in video game time approached significance ($n=26$; 0.31 h/day vs 0.06 h/day; $p=0.09$), but there was no difference in computer screen time (Table 5).

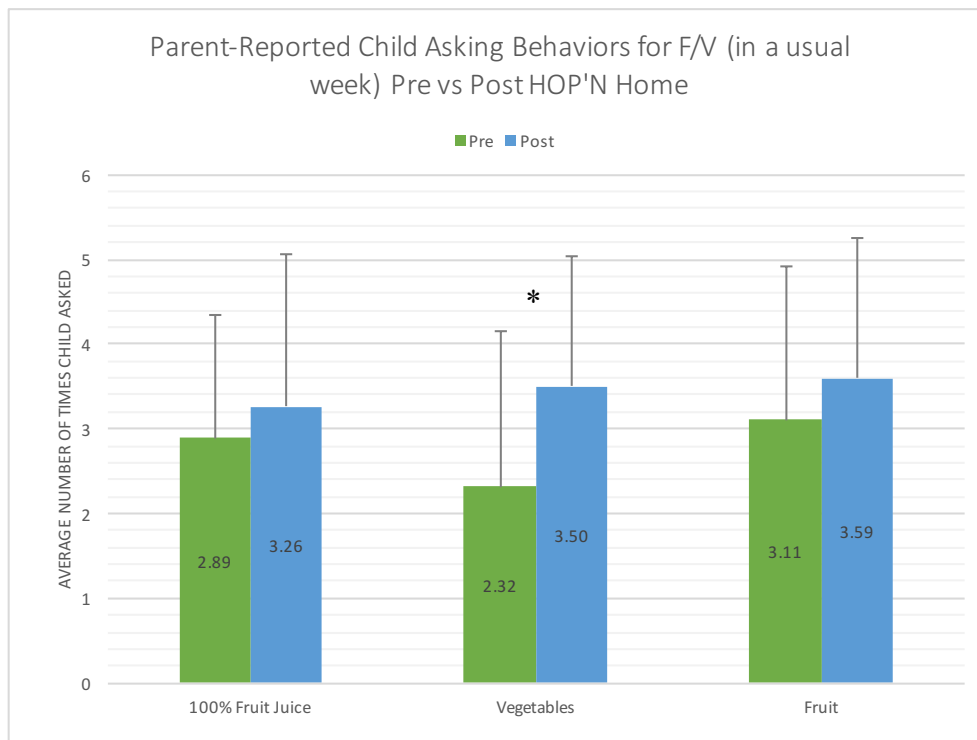


Figure 6. Differences in mean number of times parents reported their child asking for 100% fruit juice, vegetables, or fruit before and after the program. * indicates significant change, $p < 0.05$.

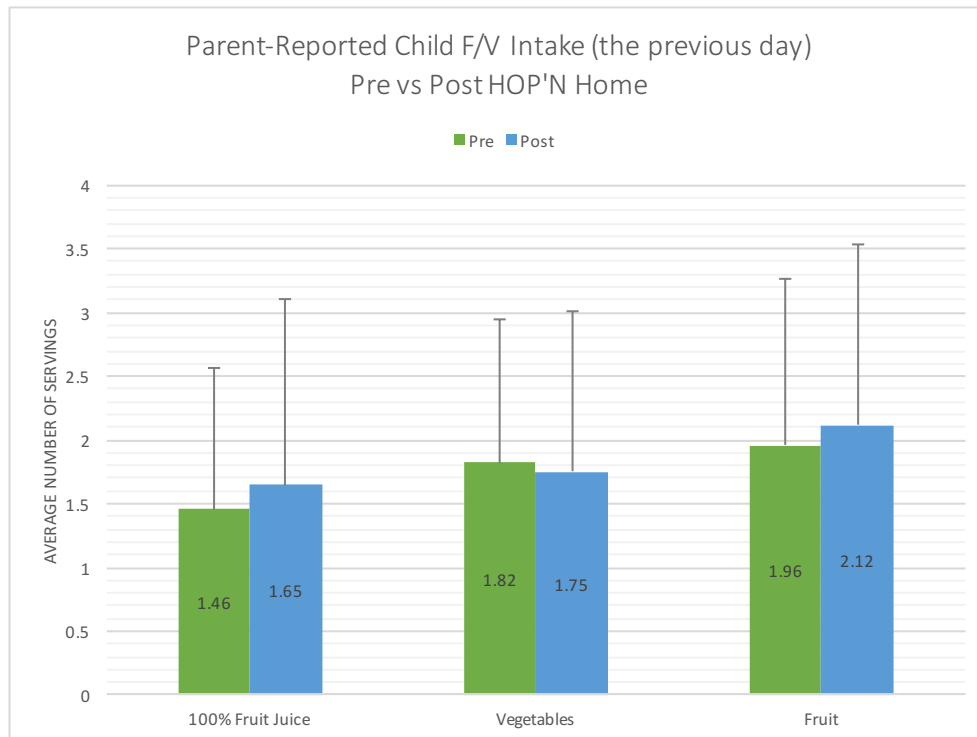
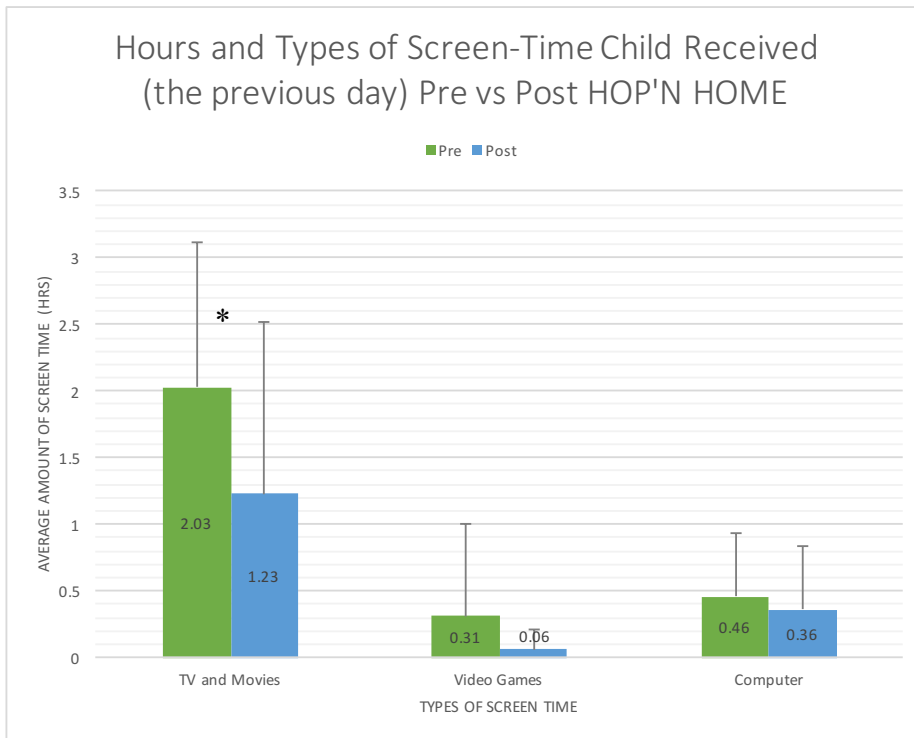


Figure 7. Differences in mean number of servings parents reported their child consumed of 100% fruit juice, vegetables, or fruit before and after the program.



*Figure 8. Differences in mean hours of screen time child received (the previous day) before and after the program. * indicates significant change, $p < 0.05$*

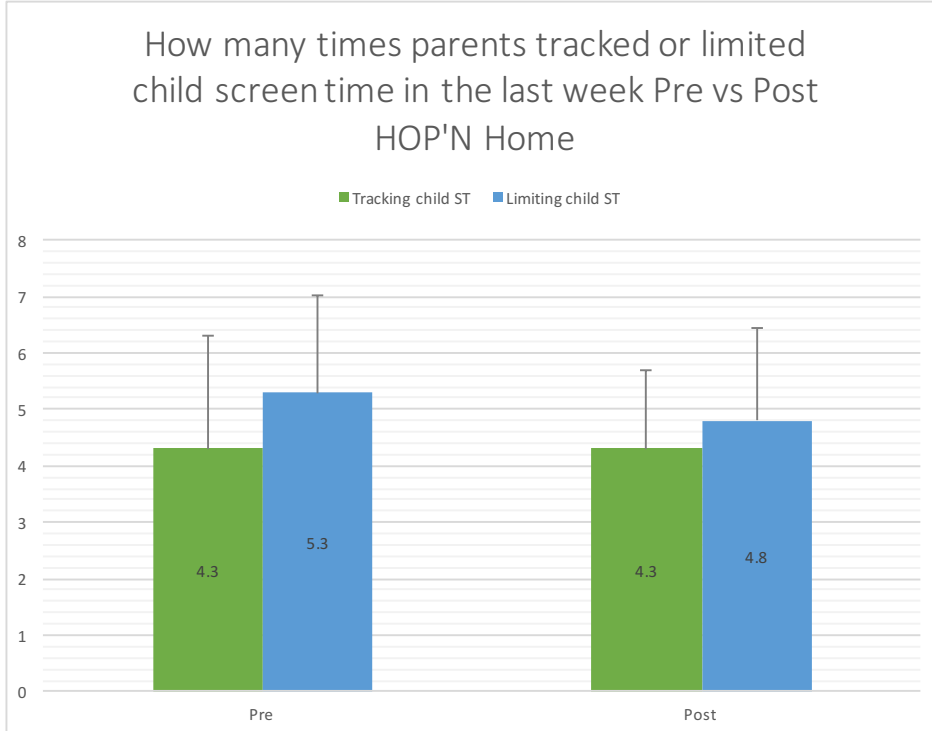


Figure 9. Differences in the number of times parents reported having tracked or limited their child's screen time before and after the program.

Table 5. Summary of mean differences of observed variables from time 1 to time 2 by area of interest.

<i>Variable</i>	<i>N</i>	<i>Time 1</i>	<i>Time 2</i>	<i>t</i>	<i>p-value</i>
		<i>M(±SD)</i>	<i>M(±SD)</i>		
VEGGIE METER™					
Child skin-carotenoid level	31	0.101 ± 0.020	0.104 ± 0.020	-0.72	0.48
Child Asking Behavior					
100% Fruit Juice	27	2.89 ± 1.45	3.26 ± 1.79	-0.93	0.36
Vegetables	26	2.32 ± 1.83	3.50 ± 1.53	-3.27	0.003*
Fruit	27	3.11 ± 1.81	3.59 ± 1.67	-1.27	0.22
Eating and Nutrition					
Servings of 100% Fruit Juice	26	1.46 ± 1.10	1.65 ± 1.47	-0.78	0.47
Servings of Vegetables	28	1.82 ± 1.12	1.75 ± 1.26	0.30	0.77
Servings of Fruit	26	1.96 ± 1.31	2.12 ± 1.42	-0.42	0.68
Parental Practices					
Tracking ST	27	4.30 ± 2.02	4.30 ± 1.73	0.00	1.00
Limiting ST	28	5.29 ± 1.38	4.75 ± 1.65	1.51	0.14
Child Screen Time					
TV & Movies	26	2.03 ± 1.09	1.23 ± 1.29	2.33	0.03*
Video Games	26	0.31 ± 0.70	0.06 ± 0.15	1.76	0.09
Computer	27	0.46 ± 0.48	0.36 ± 0.48	0.84	0.41

* $p < 0.05$

5.2 Hypothesis 6

“Changes in proxy-efficacy as measured by parent-reported asking behavior will predict changes in F/V intake as measured by the *VEGGIE METER™*.”

The pairwise Pearson correlations between change in child VEGGIE METER™score and change in all three parent-reported asking behaviors were not significant (Table 6). An example scatterplot illustrating the lack of correlation is provided below (Figure 10). For this reason, a regression analysis was inappropriate, and proxy-efficacy was determined to not predict VEGGIE METER™score.

Table 6. Correlations between Change in child VEGGIE METER™ score (time 2 – time 1) and Change in Parent-Reported Child Asking Behaviors (100% fruit juice, vegetables, or fruit). None of the correlations were statistically significant.

Change in frequency of Child Asking Behaviors for	Change in child VM score	
	<i>r</i> (<i>n</i>)	<i>p</i>
100% fruit juice	0.058 (23)	0.396
Vegetables	-0.214 (23)	0.164
Fruit	-0.061 (22)	0.394

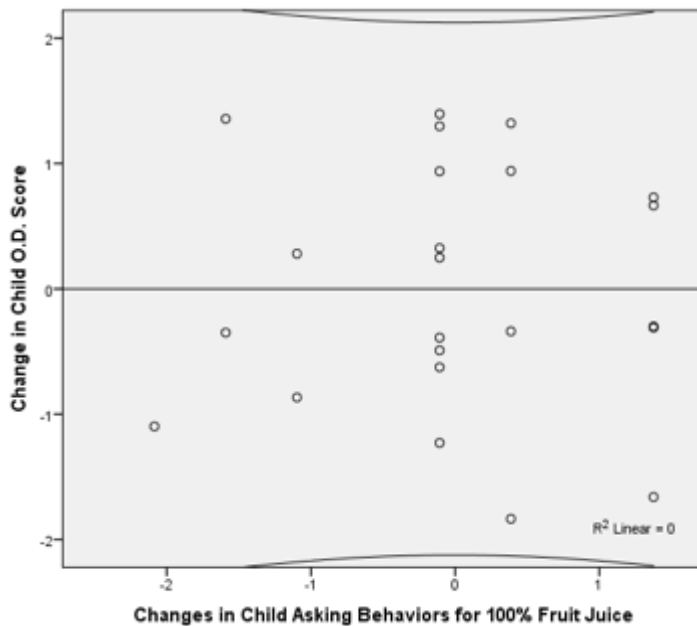


Figure 10. Scatterplot of changes with fitted regression line (and 95% CI)

5.3 Hypothesis 7

“Parent-reported F/V intake of the child will be positively correlated with F/V intake as measured by VEGGIE METER™ scores.”

Mean changes in parent responses to all three child intake questions are depicted in Figure 6. Correlation results for time 1 and time 2 data did not provide evidence of a statistically significant relationship between parent-reported F/V intake and child VM score, as expected. At time 1 association between servings of fruit and child VM score were negatively associated with

one another ($r=-0.386$; $p=0.008$). This could have been due to parents reporting higher levels of fruit intake than what the children were, based on their VM score.

Table 7 Summary of Correlations between child VM score and Parent-Reported Child F/V Intake (during the previous day) from time 1 to time 2.

Parent-Reported F/V Intake (the previous day)	Child VM score			
	Time 1^a		Time 2^b	
	<i>r (n)</i>	<i>p</i>	<i>r (n)</i>	<i>p</i>
Servings of 100% fruit juice	-0.122 (39)	0.233	0.139 (23)	0.264
Servings of vegetables	-0.178 (39)	0.139	-0.202 (24)	0.172
Servings of fruit	-0.386** (38)	.008	0.077 (23)	0.363

- Time 1 correlations were conducted using Pearson correlations.
- Time 2 correlations were analyzed using Spearman correlations.

5.4 Hypothesis 8

“Parental Practices (PP) as measured by HOP’N Home parent survey will be associated with parent-reported child screen time (ST).”

A relationship between child screen time of TV/movies and parental practices of limiting that type of screen time at time 2 was significant ($r=0.426$; $p=0.01$), and the association approached significance for video games ($r=0.286$; $p=0.07$) (Table 8).

Table 8. Summary of Spearman Correlations for parent-reported child ST and PP at time 1 and time 2.

Child ST Activity (the previous day)	PP of Tracking ST		PP of Limiting ST	
	Time 1	Time 2	Time 1	Time 2
	<i>r(n)</i>	<i>r(n)</i>	<i>r(n)</i>	<i>r(n)</i>
How often the child watched TV, movies, or videos	-0.009 (39)	0.167 (27)	0.144 (39)	0.426* (28)
How often the child played video games	-0.117 (37)	0.196 (27)	-0.253 (37)	0.286 (28)
How often the child played on a computer or tablet	0.112 (42)	0.006 (27)	0.059 (42)	0.190 (28)

* $p < 0.05$

Chapter 6: Discussion

6.1 Conclusions

An estimated 60 million children are enrolled in some kind of child care setting, spending over a quarter of their time away from home. Children of working mothers tend to spend 40 hours or more a week in these non-parental care settings (CDC Vital Signs, 2014). The behaviors that children develop regarding eating and physical activity are merely a reflection of what is observed in their immediate environment, and it is for this reason that Early Childhood Education facilities are some of the best places to reach young children with early obesity prevention efforts. These settings have access to children during a period of development when their eating behaviors are just beginning to be shaped, which can help them to develop a foundation of healthy habits for the duration of their lifetime. The evidence-based approach, target audience, study design, and theoretical basis of HOP'N Home allows for all levels of a child's environment to be involved in effectively influencing positive health habits thus reducing the risk of developing obesity later in life.

This study evaluated the effectiveness of a nutrition and physical activity education program targeting home-based child care centers to increase child proxy-efficacy related to asking behaviors for healthy foods and physical activity. The VM was included to quantify child skin-carotenoid measures helping to validate parent reports of child asking behaviors and F/V intake. Of the original 23 providers that began the program 16 finished. Of the 54 children that returned their consent forms, 27 completed time 1 and time 2 data collections. According to the results of this study, F/V intake as measured by the VM did not increase in response to the intervention, as expected (hypothesis 1). Evidence that the program increased child proxy-

efficacy to ask for F/V was limited only to vegetables and parents did not report that their children were consuming more F/V after the program like it was presumed they would (hypothesis 2). The anticipated results that parental practices for tracking and limiting screen time of TV/movies, video games, and computers would increase from beginning to end, did not hold true (hypothesis 4). However, parents did report their children watched significantly less TV and movies at the end of the program, which was an anticipated result of the intervention (hypothesis 3). A linear relationship was expected to exist between child asking behaviors for F/V that would predict positive change in F/V intake (hypothesis 5). The lack of a statistical correlation between child asking behaviors and F/V intake was evidence that further linear regression analysis was not necessary. Lastly, it was foreseen that associations between F/V intake and child VM score and parental practices and child screen would be strongly correlated. The predicted hypotheses were also rejected based on the results of this study (hypotheses 6 & 7).

6.2 Potential Strengths

The fact that the program was implemented along the border region where there are high concentrations of Hispanics/Latinos that are primarily Mexican-American was a unique strength of this study. Seldom are there studies that can examine the effects of an intervention on one subset of Hispanics/Latinos. Additionally, the comprehensive structure of HOP'N Home makes the program one that could have major implications on the dietary intake, physical activity, and overall health for not only the children involved but their families. Although many of the hypothesized outcomes were not realized, HOP'N Home resulted in some anticipated changes in

behavior. However, several limitations (detailed below) likely explain the lack of impact in this initial implementation of HOP’N Home in Doña Ana County.

6.3 Limitations

During this initial pilot year, a small intervention effect was experienced due to CAASNM’s recruitment and retention among child care providers. The focus during this initial year was on home-based establishments, which created a challenge because of the small number of children that regularly attend these types of child care centers. Many of the providers only had 1 to 3 children who met inclusion criteria for the program (i.e. age). Therefore, a higher number of providers had to be recruited to ensure that enough children were available for the study. Even though the program began with a sufficient number of care-givers and participants, retention was very low. Of the 25 providers that initially agreed to participate only 16 completed the twelve-week program. Continuous communication was maintained with the implementation agency (CAASNM) to discuss data collection efforts, and two common themes for program withdrawal emerged: scheduling and transportation barriers to and from trainings/data collections. Initially, data collections and trainings were scheduled to be held at CAASNM’s office in Las Cruces, NM. Many of the caregivers participating in the program resided in the outlying communities of Las Cruces and had difficulty transporting all of their children to the office for these events. To accommodate for these transportation challenges, home visits were arranged, but discomfort with accepting strangers (i.e. IHL research staff) into their homes was also a barrier. Another barrier to continued participation was that providers struggled to implement the curriculum into their daily routine. It was common for the provider to have only one child that met the inclusion criteria for the program at a time or to not have all children present in the home at the same time.

Having such a small audience made some providers feel it was not worth the trouble of teaching a lesson for one child, or if they were going to have to repeat themselves multiple times throughout the day as more children arrived. Overall, the buy-in from child care providers into the importance of the program was not strong.

Trainings and the fidelity of the HOP’N Home curriculum were additional barriers to program implementation. CAASNM employees worked closely with Tanis Walch, one of the developers of the HOP’N Home curriculum and a consultant on this project, on how to train their caregivers to implement the program. However, providers were told that this curriculum is meant to be very flexible and they could choose the components of the curriculum that worked well for them (contrary to the intent of the original program design). Therefore, the program was not implemented consistently across sites. The lack of impact of the program is more likely due to the fidelity of implementation than the program itself.

In addition to barriers related to program implementation, IHL staff faced obstacles related to parental consent for participation in the evaluation of the program. For example, standard consent-form language indicating no harm would come to their child caused suspicion by parents. This barrier seemed especially prevalent in Spanish-speaking participants. Furthermore, child care providers were spoken to in advance by CAASNM and IHL staff about data collection procedures, but were never trained on how to answer the questions from the parents. Although it was clearly stated in the consent forms that if parents had any questions or concerns they could contact the IHL, parents were only comfortable talking with child care providers and did not contact IHL or CAASNM staff. Since the providers were not comfortable answering the questions about the research, several of them were never addressed and parents

eventually just did not see the value in the program. Of the original 81 children invited to participate in the study, only 54 had completed parent consent forms.

Attendance of the children and their willingness to participate also proved to be a major obstacle. At several of the time 2 data collections, many of the children were not present and others did not want to participate in the data collection. Of the 54 children with parent consent, only 27 had complete time 1 and time 2 measurements and pre-post surveys done by their parents.

6.4 Recommendations

To address the concern of recruitment and retention, rather than targeting small home-based child care providers with small numbers of children, a focus on established daycare settings with larger and more consistent attendance would be preferable. Working with larger child care centers may also address the issue of program fidelity. Teachers at larger centers are accustomed to following lesson plans and schedules, and may be more likely to adhere to the curriculum. A larger child care center setting would also facilitate parent information meetings which could be implemented to better explain the value of the program and procedures to be followed for data collection. This direct communication by the research team with parents might better address parental concerns that may arise.

Given that Doña Ana County has a high population of youth that are overweight or obese, a program such as HOP'N Home that targets child nutrition knowledge and proxy-efficacy has potential for great impact. In this study, attrition levels were high resulting in a low implementation of the curriculum and compromised statistical power. However, given that some outcomes were improved, this evidence-based tool does have promise for use in this region. A

thorough process evaluation would be useful in addressing logistical and implementation barriers leading to improved program effectiveness.

Chapter 7: MPH Core Competencies

This research study employed 4 of the 5 major core competency areas that serve as cornerstones for the Master of Public Health Program at the University of Texas at El Paso. By utilizing the methodologies and evidence-based practices from each of these disciplines a comprehensive study was developed to address the specific needs in the target population and the questions of interest in this thesis.

7.1 Biostatistics

Is the branch of statistics that is responsible for proper interpretation of scientific data generated in the biomedical sciences during population-based research used? The methodologies of biostatistics were applied in this study to provide the mathematical framework for analyzing and interpreting the VEGGIE METER[™] scores and responses of the parent-reported surveys that were collected in this study. It helped to identify the proper analytical measures and generate appropriate statistical assumptions about the data.

7.2 Epidemiology

Epidemiology is the study of the patterns, causes, and outcomes of health and disease conditions in a targeted population. This methodology has served as a corner stone of public health, and has helped to shape the development of evidence-based practices and policy decisions by pinpointing social and environmental determinants of disease and the areas of opportunity for preventative healthcare. This study utilized important secondary sources of epidemiological data on obesity in the U.S. to establish the grounds for why it is important to address overweight and obesity along the border in Hispanic populations. Larger epidemiological

studies like the National Health and Nutrition Examination Survey (NHANES) provided information on environmental factors that are likely to be major contributors to the obesity epidemic.

7.3 Social and Behavioral Sciences

The social and behavioral sciences in public health address the behavioral, social, and cultural factors related to individual and population health and health disparities over the course of a person's lifespan. The constructs of social and behavioral sciences were applied throughout the course of the evaluation of the HOP'N Home Program by assisting to understand the psychosocial, behavioral, familial, and environmental influences that impact the health of children involved in home-based child care centers in Doña Ana County.

7.4 Hispanic and Border Health

The concentration on Hispanic and Border Health prepares MPH students to effectively address the health concerns often faced in Hispanic and Border communities to create culturally appropriate preventive practices and eliminate health disparities. This study was based in underserved communities along the border with high concentrations of Hispanics, and evaluated the effectiveness of the HOP'N Home program to improve child nutrition and physical activity as a preventative practice to childhood obesity.

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Appendix 1

HOP’N Home – Parent Survey Structure

Section	Child/Parent/ Home	Measure	Instrument
A	Parent	FV Availability PA Availability Media Availability	Baranowski (2008) – Pantry Gattshell/EPAO/ECERS/AHEMD Sirard (2008) – PAMI Bryant (2008) – Healthy Home Survey
B	Child	Sedentary Behavior	SMART
C	Child	PA	Bennett (2009) – EPAQ (not validated for PA)
D	Child	Eating & Nutrition	Bennett (2009) – EPAQ
E	Child	Eating & Nutrition	Bennett (2009) – EPAQ
F	Child	Asking Behaviors	Adapted from Buijzen (2009)
G	Parent	Advertising Mediation Scale <ul style="list-style-type: none"> • Active Advertising Mediation • Restrictive Advertising Mediation • Concept-Oriented Consumer Communication • Socio-Oriented Consumer Communication 	Buijzen 2009
H	Parent	Active/Passive Mediation	SNAP – Ric questionnaire
I	Parent	PA & SB	BRFSS & PLANTS
J	Parent	FV Consumption	BRFSS
K	Parent	Parent (Caregiver) Demographics <ul style="list-style-type: none"> - Gender - Married status - Ethnicity - Education - Age - Height/Weight - Free/Reduced Lunch - # of adults in home (>18) - # days preschool in home - # of children (age & gender) 	

Table provided by Tanis J. Hastmann-Walch

Appendix 2

Pre/Post HOP'N Home Parent Survey

ID number: _____

A. What's in your home?

1. Did you have each of the following fruits/vegetables in your home in the last week? (Please check the "YES" or "NO" circle)

Fruits & Vegetables	Yes	No	Fruits & Vegetables	Yes	No
a. 100% Orange Juice	<input type="radio"/>	<input type="radio"/>	w. Lettuce	<input type="radio"/>	<input type="radio"/>
b. 100% Apple Juice	<input type="radio"/>	<input type="radio"/>	x. Tomatoes	<input type="radio"/>	<input type="radio"/>
c. 100% Grape Juice	<input type="radio"/>	<input type="radio"/>	y. Corn	<input type="radio"/>	<input type="radio"/>
d. Other 100% Juice	<input type="radio"/>	<input type="radio"/>	z. Cooked beans (pinto, etc.)	<input type="radio"/>	<input type="radio"/>
e. Bananas	<input type="radio"/>	<input type="radio"/>	aa. Carrots	<input type="radio"/>	<input type="radio"/>
f. Oranges	<input type="radio"/>	<input type="radio"/>	bb. Broccoli	<input type="radio"/>	<input type="radio"/>
g. Apples	<input type="radio"/>	<input type="radio"/>	cc. Green beans	<input type="radio"/>	<input type="radio"/>
h. Grapes	<input type="radio"/>	<input type="radio"/>	dd. Mashed potatoes	<input type="radio"/>	<input type="radio"/>
i. Fruit salad or fruit cocktail	<input type="radio"/>	<input type="radio"/>	ee. Green peas	<input type="radio"/>	<input type="radio"/>
j. Pit fruit (Peaches or Nectarines or Plums)	<input type="radio"/>	<input type="radio"/>	ff. Celery	<input type="radio"/>	<input type="radio"/>
k. Cantaloupe or Honey Dew	<input type="radio"/>	<input type="radio"/>	gg. Cabbage	<input type="radio"/>	<input type="radio"/>
l. Pears	<input type="radio"/>	<input type="radio"/>	hh. Spinach	<input type="radio"/>	<input type="radio"/>
m. Applesauce	<input type="radio"/>	<input type="radio"/>	ii. Refried beans	<input type="radio"/>	<input type="radio"/>
n. Watermelon	<input type="radio"/>	<input type="radio"/>	jj. French fries	<input type="radio"/>	<input type="radio"/>
o. Pomegranates	<input type="radio"/>	<input type="radio"/>	kk. Eggplant	<input type="radio"/>	<input type="radio"/>
p. Dried fruit (Raisins, prunes, etc.)	<input type="radio"/>	<input type="radio"/>	ll. Green Chili	<input type="radio"/>	<input type="radio"/>
q. Kiwi	<input type="radio"/>	<input type="radio"/>	mm. Coleslaw	<input type="radio"/>	<input type="radio"/>
r. Guava	<input type="radio"/>	<input type="radio"/>	nn. Artichokes	<input type="radio"/>	<input type="radio"/>
s. Strawberries	<input type="radio"/>	<input type="radio"/>	oo. Asparagus	<input type="radio"/>	<input type="radio"/>
t. Pineapple	<input type="radio"/>	<input type="radio"/>	pp. Avocado	<input type="radio"/>	<input type="radio"/>
u. Grapefruit	<input type="radio"/>	<input type="radio"/>	qq. Banana peppers	<input type="radio"/>	<input type="radio"/>
v. Apricot	<input type="radio"/>	<input type="radio"/>	rr. Beets	<input type="radio"/>	<input type="radio"/>
w. Berries (Blackberry, Blueberry, Raspberry)	<input type="radio"/>	<input type="radio"/>	x. Squash	<input type="radio"/>	<input type="radio"/>
y. Cactus Fruit	<input type="radio"/>	<input type="radio"/>	z. Bell peppers	<input type="radio"/>	<input type="radio"/>
aa. Cherries	<input type="radio"/>	<input type="radio"/>	bb. Brussel sprouts	<input type="radio"/>	<input type="radio"/>
cc. Dates or figs	<input type="radio"/>	<input type="radio"/>	dd. Cauliflower	<input type="radio"/>	<input type="radio"/>
ee. Mangos	<input type="radio"/>	<input type="radio"/>	ff. Cucumber	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	gg. Jalapenos	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	hh. Potatoes	<input type="radio"/>	<input type="radio"/>

Survey continues →

Did you have each of the following physical activity equipment in your **home** in the last week?
(Please check the “YES” or “NO” circle)

Physical Activity	Yes	No	Physical Activity	Yes	No
a. Inside playroom	<input type="radio"/>	<input type="radio"/>	b. Balls	<input type="radio"/>	<input type="radio"/>
c. Exercise room	<input type="radio"/>	<input type="radio"/>	d. Swinging/rocking/twisting toys (rocking horse, etc.)	<input type="radio"/>	<input type="radio"/>
e. Exercise equipment in TV area	<input type="radio"/>	<input type="radio"/>	f. Pull or push toys (wagon, lawn mower, etc.)	<input type="radio"/>	<input type="radio"/>
g. Space to play in TV area	<input type="radio"/>	<input type="radio"/>	h. Bean Bags	<input type="radio"/>	<input type="radio"/>
i. Driveway	<input type="radio"/>	<input type="radio"/>	j. Movement exploration (stairs, climbing apparatus, tunnels, parachute, etc.)	<input type="radio"/>	<input type="radio"/>
k. Basketball hoop	<input type="radio"/>	<input type="radio"/>	l. Balancing surfaces (balance beams, boards)	<input type="radio"/>	<input type="radio"/>
m. Play area/yard	<input type="radio"/>	<input type="radio"/>	n. Twirling play equipment (ribbons, scarves, batons)	<input type="radio"/>	<input type="radio"/>
o. Pool	<input type="radio"/>	<input type="radio"/>	p. Sand/water play toys (buckets, shovels, scoops)	<input type="radio"/>	<input type="radio"/>
q. Musical instruments	<input type="radio"/>	<input type="radio"/>	r. Tumbling Mats	<input type="radio"/>	<input type="radio"/>
s. Sandbox	<input type="radio"/>	<input type="radio"/>	t. Jumping play equipment (jump ropes, hula hoops, etc.)	<input type="radio"/>	<input type="radio"/>
u. Slides	<input type="radio"/>	<input type="radio"/>	v. Baseball equipment	<input type="radio"/>	<input type="radio"/>
w. Swing set	<input type="radio"/>	<input type="radio"/>	x. Riding toys (tricycle, cars)	<input type="radio"/>	<input type="radio"/>
y. Rollerblades/skates	<input type="radio"/>	<input type="radio"/>	z. Running shoes	<input type="radio"/>	<input type="radio"/>
aa. Skateboard/scooter	<input type="radio"/>	<input type="radio"/>			

2. Do you have the following items in your **Home** and in the **Child's bedroom**?

	Home		Child's Bedroom	
a. Television	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
b. Cable	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
c. Digital Video Recorder / TiVO	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
d. DVD Player	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
e. Computer or Tablet	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
f. Internet / Wi-Fi	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
g. Video Game Systems (Nintendo DS, Playstation, X-Box, Wii)	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No

Survey continues →

B. Child Sedentary Behavior (Please check the appropriate circle)

YESTERDAY (All day long) – How much time did your child spend...

	None	15 min or less	30 min	1 hour	2 hours	3 hours	4 hours	5 hours	6 hours or more
3. Watching television (not including videos on a VCR or DVD player)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Watching movies or videos on a VCR or DVD player?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Playing video games (like Wii, Leapster, Playstation, Nintendo DS)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Playing on a computer or Tablet?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

LAST SATURDAY (All day long) – How much time did your child spend...

	None	15 min or less	30 min	1 hour	2 hours	3 hours	4 hours	5 hours	6 hours or more
7. Watching television (not including videos on a VCR or DVD player)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Watching movies or videos on a VCR or DVD player?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Playing video games (like Wii, Leapster, Playstation, Nintendo DS)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Playing on a computer or Tablet?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

C. Child Physical Activity

11. **Last week**, how many times did you or a family member take your child to a playground, park, swimming pool, dance class or other place for physical activity?

_____ times last week

12. During a **usual week**, how many times do you or a family member take your child to a playground, park, swimming pool, dance class or other place for physical activity?

_____ times last week

13. What does your child **usually** do when she / he has a choice about how to **spend free time**?

- ☐ Usually chooses inactive pastimes (i.e., TV, computer, drawing or reading)
- ☐ Just as likely to choose inactive as active pastimes
- ☐ Usually chooses active pastimes (i.e., outdoor play, dancing, sports)

D. Child's Eating and Nutrition

14. How many servings of **vegetables** does your child **usually** eat each day? (1 serving = ½ cup cooked vegetables, or 1 cup salad vegetables)

_____ Servings per day

15. How many servings of **fruit** does your child **usually** eat each day? (1 serving = 1 apple or banana or 1 cup grapes)

_____ Servings per day

16. How **often** does your child eat take-out or fast-food? (e.g., hamburgers, chicken nuggets, French fries, hot dogs, pizza)

- ☐ Less than once per month
- ☐ 1 – 3 times per month
- ☐ Once per week
- ☐ 2 – 4 times per week
- ☐ 5 – 6 times per week
- ☐ Once per day
- ☐ 2 or more times per day

Survey continues →

E. Child Eating and Nutrition (Please check the appropriate circle)

17. **Yesterday**, how many servings of the following beverages did your child drink?
(One serving equals ½ cup or 125 ml).

	None	1	2	3	4	5	6 or more	Don't know
a. 100% Fruit Juice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Soft Drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Plain Milk (include milk on cereal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Flavored Milk (i.e., with strawberry or chocolate flavoring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. **Yesterday**, how many servings of the following foods did your child have to eat?

	None	1	2	3	4	5	6 or more	Don't know
a. Vegetables (cooked & raw, baked beans) -1/2 cup cooked veggies or baked beans or 1 cup salad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Packaged snacks (chips, cheesies, granola bar) -small (20g) package of chips, one bar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Fruit (fresh, dried or canned) -1 apple or banana or 1 cup grapes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Candy and/or Chocolate -1/2 regular chocolate bar or a small handful or candy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Cake, doughnuts, sweet biscuits, and muffins -1 small slice cake, ½ iced doughnut or ¼ regular muffin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

F. Child Asking Behaviors (Please check the appropriate circle)

19. During a usual week, how often does your child **ASK FOR...**

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. 100% Fruit juice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Soft drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Plain milk (include milk on cereal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Flavored milk (i.e., with strawberry or chocolate flavoring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Vegetables (cooked & raw, baked beans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Packaged snacks (chips, cheesies, granola bar)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Fruit (fresh, dried and canned)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Candy and/or chocolate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Cake, doughnuts, sweet biscuits, and muffins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Breakfast cereal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Television and/or movies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Computer and/or computer games and/or tablet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Video games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Playing outside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. After your child asks, how often do you **PROVIDE...** (% of time your child asks)

	Never	Almost Never	Sometimes	/Almost Always	Always
a. 100% Fruit juice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Soft drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Plain milk (include milk on cereal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Flavored milk (i.e., with strawberry or chocolate flavoring)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Vegetables (cooked & raw, baked beans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Packaged snacks (chips, cheesies, granola bar)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Fruit (fresh, dried and canned)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Candy and/or chocolate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Cake, doughnuts, sweet biscuits, and muffins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Breakfast cereal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Television and/or movies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Computer and/or computer games and/or tablet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Video games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Playing outside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

G. Advertising Mediation Scale (Please check the appropriate circle)

21. During a usual week, how often do you **TELL YOUR CHILD...**

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. That advertising shows products as better than they really are?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. That advertising does not always tell the truth?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. That the purpose of advertising is to sell products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. That not all advertised products are of good quality?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. That some advertised products are not good for children?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. To turn off the television when s(he) is watching commercials?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. That s(he) should not watch commercial channels because they broadcast too many commercials?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. To switch to a channel that broadcasts fewer commercials?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. That s(he) should not watch television advertising at all?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. To watch specific channels that broadcast relatively few commercials?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. That every member of your family should have some say in family purchase decisions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. To give his/her opinion when discussing family purchases?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. To give his/her opinion about products and brands?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. That you respect his/her opinion on certain products and brands?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. To consider the advantages and disadvantages of products and brands?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. That s(he) can co-decide when you make purchases for him/her?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. That you know which products are best for him/her?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. Not to argue with you when you say no to their product request?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
s. That you expect him/her to accept your decisions about product purchases?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
t. Which products s(he) should or should not buy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u. That you have strict and clear rules when it comes to product purchases?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
v. That s(he) is not allowed to ask for products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

H. Parenting and Family Life (Please check the appropriate circle)

22. How often do you keep track of the...

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. Amount of TV or videos your child is watching?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Soda or sugar-sweetened beverages that your child drinks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Servings of fruits your child is eating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Servings of vegetables your child is eating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Physical activity, sports or exercise your child is getting?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. How often do you place limits on the...

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. Amount of TV or videos your child is watching?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Soda or sugar-sweetened beverages that your child drinks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Servings of fruits your child is eating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Servings of vegetables your child is eating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Physical activity, sports or exercise your child is getting?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

I. Parent (Caregiver) Physical Activities

INSTRUCTIONS: We are interested in two types of physical activity – vigorous and moderate. **Vigorous** activities cause large increases in breathing or heart rate, while **moderate** activities cause small increases in breathing or heart rate. In the following section, please think about the physical activities **you** do in a typical week.

	0 days	1 day	2 days	3 days	4 days	5 days	6 days	7 days
--	-----------	----------	-----------	-----------	-----------	-----------	-----------	-----------

24. During a typical week, how many days per week do you do **moderate activities** (such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate) for at least 10 minutes?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

	Less than 10 min	10-19 min	20-30 min	31-45 min	46-60 min	61-90 min	91-120 min	More than 120 min
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25. On days when you do **moderate activities** for at least 10 minutes at a time, how much total time **per day** do you spend doing these activities?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

	0 days	1 day	2 days	3 days	4 days	5 days	6 days	7 days
--	-----------	----------	-----------	-----------	-----------	-----------	-----------	-----------

26. During a typical week, how many days per week do you do **vigorous activities** (such as running, aerobics, heavy yard work or anything else that causes large increases in breathing or heart rate) for at least 10 minutes?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

	Less than 10 min	10-19 min	20-30 min	31-45 min	46-60 min	61-90 min	91-120 min	More than 120 min
--	------------------------	--------------	--------------	--------------	--------------	--------------	---------------	-------------------------

27. On days when you do **vigorous activities** for at least 10 minutes at a time, how much total time **per day** do you spend doing these activities?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

28. How many hours each day do you typically spend sitting down doing things like visiting friends, driving, reading, watching television, using the Internet, or working at a desk or computer (including hours at work)?

_____ Hours sitting each day

29. Over the past month, on average, how many hours per day (outside of work) did you just watch TV, watch videos, or watch Internet videos?

_____ Hours watching TV or videos each day

30. Over the past month, on average, how many hours per day (outside of work) did you just play videogames?

_____ Hours playing videogames each day

31. Over the past month, on average, how many hours per day (outside of work) did you just use a computer, tablet or smartphone for something other than watching movies or playing videogames?

_____ Hours using a computer, tablet or smartphone each day

Survey continues →

J. Parent (Caregiver) Fruits & Vegetables

A cup of fruit or vegetables is about the size of a baseball.

A serving of fruit is equal to:

- 1 medium piece of fresh fruit
- ½ cup of fruit salad
- ¼ cup of raisins, apricots, or other dried fruit
- 6 oz of 100% orange, apple or grape juice
(Do not count fruit punch, lemonade, Gatorade, Sunny Delight, aguas frescas or any other fruit drink)

A serving of vegetables is equal to:

- 1 medium carrot or other fresh vegetable
- 1 small bowl of green salad
- ½ cup of fresh or cooked vegetables
- ¾ cup of vegetable soup

(Do not count French fries, onion rings, or potato chips)

On a **typical day**, how many servings of....

	None	1 serving	2 servings	3 servings	4 or more servings
32. <u>Fruit</u> do you eat?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. <u>Vegetables</u> do you eat?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

K. Parent (Caregiver) Demographics

34. I am the child's:

- ☐ Mother (Female caregiver)
- ☐ Father (Male caregiver)

35. I am currently:

- ☐ Married or living with a partner
- ☐ Divorced or separated
- ☐ Widowed
- ☐ Single

36. My date of birth: _____

My age: _____

37. My ethnicity:

- ☐ Hispanic, Latino or Spanish Origin
- ☐ Not Hispanic, Latino, or Spanish Origin

38. My race: (select all that apply)

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian and Other Pacific Islander
- ☐ Other

Survey continues →

39. My **CHILD's** ethnicity:

- ☐ Hispanic, Latino or Spanish Origin
- ☐ Not Hispanic, Latino, or Spanish Origin

40. My **CHILD's** race: (select all that apply)

- ☐ White
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian and Other Pacific Islander
- ☐ Other

41. **Highest level of education** completed for child's parents or adult caregiver's:

	Mother (female caregiver)	Father (male caregiver)
Grades 0 to 8	<input type="radio"/>	<input type="radio"/>
Grades 9-12 (non-graduate)	<input type="radio"/>	<input type="radio"/>
High school graduate/GED	<input type="radio"/>	<input type="radio"/>
Some college or associates degree	<input type="radio"/>	<input type="radio"/>
Graduated college	<input type="radio"/>	<input type="radio"/>
Master's degree or above	<input type="radio"/>	<input type="radio"/>
Does not apply	<input type="radio"/>	<input type="radio"/>

42. I have health insurance:

- ☐ Yes
- ☐ No

43. I am Disabled:

- ☐ Yes
- ☐ No

44. I am a Veteran:

- ☐ Yes
- ☐ No

45. My family type is:

- ☐ Single Parent Female
- ☐ Single Parent Male
- ☐ Two Parent Household
- ☐ Other: _____

46. My family size is:

- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8 or more

Survey continues →

47. My employment status is: (mark all that apply)

- ☐ TANF
- ☐ SSI
- ☐ Social Security
- ☐ Pension
- ☐ General Assistance
- ☐ Unemployment Insurance
- ☐ Employment & Other Source
- ☐ Employment Only
- ☐ Other: _____

48. What is your family annual income: \$ _____

49. Please describe your current housing?

- ☐ Own
- ☐ Rent
- ☐ Homeless
- ☐ Other

Survey continues →

L. HOP'N Home Program

Below is an example of the HOP'N Home Newsletter and the HOP'N Home Connection.



Please answer these questions about the HOP'N Home program

	Never	Almost Never	Sometimes	Almost Always	Always	
1. HOP'N HOME PROGRAM						
a. We are satisfied with the HOP'N Home program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
b. We made changes in our home because of the HOP'N Home program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2. NEWSLETTER (see above for image)						
a. I received the newsletter every other week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
b. I read the newsletter every other week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
c. My child and I did the family activity every other week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3. HOP'N HOME CONNECTION (see above for image)						
a. I received the Home Connection card every week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
b. I read the Home Connection card every week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
c. I asked my child the questions from the Home Connection card every week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
d. My child and I did the Home Connection activity every week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
e. My child brought the item or activity from the Home Connection to Child Care every week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4. HOP'N HOME Program						
	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. My child and I sing the HOP'N Home songs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. My child sings HOP'N Home songs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

1. During a usual week, how often do you go to the following places...

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. McDonald's drive-thru (or similar fast food restaurant)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. McDonald's eat-in restaurant (or similar fast food restaurant)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Grocery store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Store that sells toys? (for example: Target, Walmart)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Physical activity program? (for example: swimming, ice skating, gymnastics, park)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How often does your child **ASK YOU**... (% of time your child asks)

	Never	25% of the time	50% of the time	75% of the time	100% of the time
a. To buy Go foods while at a fast food restaurant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. To buy Slow foods while at a fast food restaurant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. To buy Go foods while at the grocery store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. To buy Slow foods while at the grocery store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. To buy Go toys/activities while at the store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. To buy Slow toys/activities while at the store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. During a usual week, how often does your child **ASK TO**...

	Never	Less than 1 time per week	1-2 times per week	3-4 times per week	5-6 times per week	Daily
a. Go to McDonald's (or similar fast food restaurant)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Go to a physical activity program? (for example, swimming, ice skating, gymnastics)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Eat Go foods for breakfast at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Eat Slow foods for breakfast at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. To do a Go activity after-school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. To do a Slow activity after-school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. "Is it a Go or is it a Slow? Is it healthy, yes or no?"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues →

4. After your child asks, how often do you give or allow... (% of time your child asks)

	Never	25% of the time	50% of the time	75% of the time	100% of the time
a. McDonald's (or similar fast food restaurant)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. A physical activity program? (for example, swimming, ice skating, gymnastics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Go foods for breakfast at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Slow foods for breakfast at home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Go activity after-school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Slow activity after-school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Go foods while at a fast food restaurant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Slow foods while at a fast food restaurant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Go foods while at the grocery store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Slow foods while at the grocery store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Go toys/activities while at the store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Slow toys/activities while at the store?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Finished - Thank you for your participation!
Please return this survey to your child's teacher.

Appendix 3

Memorandum of Research Personnel for HOP'N Home Project Addressed to UTEP IRB

MEMORANDUM

TO: UTEP IRB
FROM: ALISHA REDELFS
SUBJECT: [794722-1] RESEARCH PERSONNEL
DATE: SEPTEMBER 4, 2015

As of this date, the research personnel for this study include:

- Dr. Leah Whigham, PI
- Dr. Alisha Redelfs, co-PI
- Dr. Thenral Mangadu, evaluation specialist
- Juan Aguilera, IHL Fellow
- Cassandra Urrutia, UTEP MPH student
- David Perez Alba, UTEP Kinesiology student, IHL intern

All research personnel, with the exception of Cassandra and David, have completed the CITI training. Those training certificates are linked to the package at IRBnet.org. Cassandra and David are in the process of completing the Human Subjects CITI training, at which time their certificates will be provided.

Appendix 4

Collaborative Institute (CITI): Social and Behavioral Researchers (Faculty & Students)

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM) COURSEWORK REQUIREMENTS REPORT*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Cassandra Alba (ID: 4790904)
- **Email:** cnurrutia@miners.utep.edu
- **Institution Affiliation:** University of Texas at El Paso (ID: 2114)
- **Institution Unit:** Health and Social Services

- **Curriculum Group:** Social and Behavioral Responsible Conduct of Research
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - RCR
- **Description:** This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes.

- **Report ID:** 15818499
- **Completion Date:** 05/02/2015
- **Expiration Date:** 05/01/2018
- **Minimum Passing:** 85
- **Reported Score*:** 93

REQUIRED AND ELECTIVE MODULES ONLY

	DATE COMPLETED	SCORE
Responsible Conduct of Research (RCR) Course Introduction (ID:1522)	04/17/15	No Quiz
Research Misconduct (RCR-Basic) (ID:16604)	04/25/15	4/5 (80%)
Data Management (RCR-Basic) (ID:16600)	05/02/15	5/5 (100%)
Authorship (RCR-Basic) (ID:16597)	05/02/15	5/5 (100%)
Peer Review (RCR-Basic) (ID:16603)	05/02/15	4/5 (80%)
Mentoring (RCR-Basic) (ID:16602)	05/02/15	5/5 (100%)
Using Animal Subjects in Research (RCR-Basic) (ID:13301)	05/02/15	5/5 (100%)
Conflicts of Interest (RCR-Basic) (ID:16599)	05/02/15	4/5 (80%)
Collaborative Research (RCR-Basic) (ID:16598)	05/02/15	5/5 (100%)
Research Involving Human Subjects (RCR-Basic) (ID:13566)	05/02/15	5/5 (100%)
Responsible Conduct of Research (RCR) Course Conclusion (ID:1043)	05/02/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program

Email: citisupport@miami.edu

Phone: 305-243-7970

Web: <https://www.citiprogram.org>

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM) **COURSEWORK TRANSCRIPT REPORT****

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Cassandra Alba (ID: 4790904)
- **Email:** cnurmutia@miners.utep.edu
- **Institution Affiliation:** University of Texas at El Paso (ID: 2114)
- **Institution Unit:** Health and Social Services

- **Curriculum Group:** Social and Behavioral Responsible Conduct of Research
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - RCR
- **Description:** This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes.

- **Report ID:** 15818499
- **Report Date:** 05/02/2015
- **Current Score**:** 93

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Responsible Conduct of Research (RCR) Course Introduction (ID:1522)	04/17/15	No Quiz
Using Animal Subjects in Research (RCR-Basic) (ID:13301)	05/02/15	5/5 (100%)
Research Involving Human Subjects (RCR-Basic) (ID:13566)	05/02/15	5/5 (100%)
Authorship (RCR-Basic) (ID:16597)	05/02/15	5/5 (100%)
Collaborative Research (RCR-Basic) (ID:16598)	05/02/15	5/5 (100%)
Conflicts of Interest (RCR-Basic) (ID:16599)	05/02/15	4/5 (80%)
Data Management (RCR-Basic) (ID:16600)	05/02/15	5/5 (100%)
Mentoring (RCR-Basic) (ID:16602)	05/02/15	5/5 (100%)
Peer Review (RCR-Basic) (ID:16603)	05/02/15	4/5 (80%)
Research Misconduct (RCR-Basic) (ID:16604)	04/25/15	4/5 (80%)
Responsible Conduct of Research (RCR) Course Conclusion (ID:1043)	05/02/15	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

CITI Program
 Email: citisupport@miami.edu
 Phone: 305-243-7970
 Web: <https://www.citiprogram.org>

Vita

Cassandra Urrutia was born in El Paso, TX. The third child of Cecilia Jimenez and Alejandro Urrutia, she graduated from Anthony High School, Anthony, Texas in the spring of 2007 and entered New Mexico State University in the fall. While pursuing a Bachelors Degree in Community Health Education, she held various appointments on campus. First working as, a tutorial assistant under the Primos Grant of Doña Ana Community College for anatomy and physiology courses, and later worked as a student intern for the on-campus Wellness, Alcohol, and Violence Education (WAVE) harm reduction program. After receiving her bachelor's of science in community health education she worked for Doña Ana County's Health and Human Services Department as a Health Promotion Specialist between the years of 2013-2015. In the fall of 2014, she entered the Graduate School at The University of Texas at El Paso to pursue her master's in public health. While completing her studies, she began work with the Institute of Healthy Living as a graduate research assistant, focusing her research on healthy eating and active living.

Contact Information: cnurrutia@miners.utep.edu

This thesis/dissertation was typed by Cassandra Urrutia.