National Kidney Foundation®
of Michigan

National Kidney Foundation of Michigan

Final PEACH Implementation and Impact Evaluation Report

Years 1-5 of Social Innovation Fund 2011 Grant

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Programs for EArly Childhood Health
National Kidney Foundation of Michigan

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Executive Summary

The National Kidney Foundation of Michigan is a grantee of The United Way for Southeastern Michigan for the SIF 2011 Cohort. This final report details both process level outcomes and impact outcomes. It utilizes data from all five years of SIF 2011. Evaluation activities were completed in house as well as externally in partnership with Dr. Ken Resnicow of The University of Michigan School of Public Health and Academic Assistance, Inc. and Dr. Nanhua Zang of Cincinnati Children's Hospital. We partnered with many early childhood education centers and organizations throughout this study. The full list of program sites is provided in Table A of Appendix A.

The National Kidney Foundation of Michigan's (NKFM) Project for EArly Childhood Health (PEACH) programs are a group of initiatives focused on families with young children in low-income, vulnerable communities in Michigan. These initiatives include: Regie's Rainbow Adventure® (RRA), which provides nutrition and physical activity education to children ages 3-5, Healthy Families Start with You (HFSY), in which family members of young children are coached on making healthy lifestyle changes, Nutrition And Physical activity Self-Assessment for Child Care (NAP SACC), which promotes nutrition and physical activity environmental change within child early childhood education centers, and the Media Toolkit (MTK) which supplements RRA curriculum and promotes healthy living on a budget for families. Our key outcome of interest is answering this question: "Do children who participate in RRA show improved fruit and vegetable consumption, increased physical activity, and decreased screen time relative to children in a matched comparison group?" Our programs are described fully in Section I, parts C and D.

The impact evaluation is of RRA, only. To maximize the ability to make causal inferences about RRA and observed outcomes, the evaluation design incorporates pre-post testing, matched comparison groups, and the triangulation of data sources. The impact evaluation draws from a quasi-experimental, force matched pre-test/post-test evaluation design where both quantitative and qualitative data are collected from parents and teachers utilizing the Parent/Guardian Survey, Child Behavior Checklist (CBCL) and corresponding teacher form (C-TRF), Implementation Checklist, Weekly Attendance Sheet, and Classroom Level Problem Behavior Survey. Data pertaining to program satisfaction and the Media Toolkit was also collected. In order to isolate the program effect on the participants, the evaluators assigned centers to the comparison and implementation groups to analyze the counterfactual. To ensure that the comparison group and implementation groups were similar, centers were matched based on sociodemographic proxies known to influence nutrition, physical activity, and kindergarten readiness, including race/ethnicity and median household income. The intervention group (which we call the implementation group) conducts RRA between the pre and post periods while the comparison group receives a delayed intervention after evaluation activities conclude. The evaluation model is a mixed effect, multivariate, multiple regression model with the child nested within classroom and the classroom nested within the center.

Research questions and outcomes that pertain to the MTK, NAP SACC, and RRA program satisfaction and fidelity are not part of the RRA impact evaluation. They are categorized as implementation research questions and have process level outcomes. However, our HFSY research question is categorized as an exploratory impact evaluation question and therefore it is reported on in impact evaluation sections.

Regie's Rainbow Adventure reached a total of 11,227 kids at 62 sites in years 2 through 5. Year 1 data was not utilized for RRA as the evaluation plan and tools were different than in years 2-5. Year 1 is regarded as a feasibility assessment. The number of children allocated into the evaluation component was 8,039. The final sample consisted of 4,845 children and 1,977 children had enough matched pre-post data to be included in the impact analysis. The overall response rate of the impact study was nearly 25% and the study retention rate was nearly 50%. Programming took place in the following 10 areas identified by United Way of Southeast Michigan: Northwest Detroit, River Rouge, Inkster, Southwest Detroit, Hamtramck-Highland Park, Pontiac, Northeast Detroit, South Oakland-Oakland Park, Detroit Northend Central, and South Macomb-Warren/Eastpointe. NAP SACC programming took place at 29 sites in Years 1-5. NAP SACC reached a total of 2,599 kids. HFSY chats were completed at 24 sites in Years 1-5 and reached a total of 188 people.

Though the PEACH programs have shown preliminary evidence with regard to impact on kindergarten readiness, this study aimed to achieve a moderate level of evidence in regard to the confirmatory research questions pertaining to RRA. NAP SACC is an evidence-based program, however the NAP SACC and HFSY programs are seeking preliminary levels of evidence in this evaluation study, given that they have no comparison groups. The Media Toolkit is a newer program first implemented in Year 3 and has received only a year of evaluation to date, so a pre-preliminary level of evidence is sought by the evaluation.

Relevant prior research will be discussed later in the report and shows that nutrition and physical activity play roles in the timely and adequate development of children physically, emotionally, and cognitively. Such development is crucial to children's academic success (Ginsburg et al., 2007; Burdette & Whitaker, 2005; O'Conner et al., 2013).

Key changes to the program throughout years 2-5 include hosting Palooza survey events to boost survey response rates with parents and teachers, and the discontinuation of measuring children's heights and weights after Year 3. Key changes to the evaluation team include internal program coordinator Lauren Nichols being replaced by Nicole Waller at the end of year 3, and Nicole Waller then being replaced by Sarah Wesolek-Greenson near the end of year 4. The evaluation budget has never decreased; it increased starting in Year 2 in relation to the growing number of sites in which we programmed. Significant evaluation budget increases started in Year 3 in order to provide parents with evaluation thank-you incentives.

Treatment effects for the impact study were varied among the outcomes we studied and were only observed in the context of an interaction between center size and treatment condition. The implications of these findings may be spurious and will be researched further.

Section I. Introduction

This final report summarizes impact and implementation evaluation activities and results of the fifth and final year of the Social Innovation Fund 2011, as well as aggregates and summarizes results of years 1-5 for the NA SACC and HFSY programs, years 2-5 for the RRA impact evaluation, and years 3-5 for the MTK evaluation. This report is intended to inform stakeholders and funders of final results. See Table A in Appendix A for the full list of early childhood centers that implemented PEACH programs in years 1-5. The impact evaluation draws from a quasi-experimental, forced matched, pretest/posttest evaluation design and utilizes quantitative and qualitative data collection from parents and teachers. The process evaluation consists of key informant interviews with teachers in addition to survey measures of fidelity, dosage of the program, and Media Tool Kit reach.

Overall, the final evaluation study aim is to investigate the relationships between RRA, health behaviors, and kindergarten readiness. The evaluation contributes to this process through assessing effect sizes and p-values of confirmatory program outcomes of Regie's Rainbow Adventure®, which are fruit and vegetable consumption, physical activity, and screen time reduction.

Each of the three programs involved in PEACH addresses different components of early childhood education and wellbeing while complementing each other's target outcomes. The programs are briefly summarized in sections C and D below. Please refer to Figure A in Appendix A for the logic model.

A. Program Background and Problem Definition

Through the SIF initiative, our PEACH programs strove to ensure that children were more ready to learn, parents and caregivers were more equipped to nurture children's development, and that early childhood education centers had tools to promote preschoolers' well-being. This project touched three domains of school readiness: literacy, health, and social emotional skills. These outcomes were based on three common indicators as proposed by the intermediary, United Way for Southeastern Michigan:

1. Children are ready for kindergarten;
2. Families promote literacy; and
3. Caregivers promote healthy development through one or more of the following policies: healthy meals and snacks, physical activity, and reduced screen time

The PEACH programs (and RRA specifically) aimed to increase healthy behaviors that have been shown to improve academic outcomes in children. These behaviors were be evaluated alongside externalizing and internalizing behaviors in the classroom and at home, which the PEACH evaluation team defines as factors that play an important role in a child's readiness for formal schooling.

It is clear that overweight and obesity are among the most challenging health issues of our time and minorities and low income populations are at greatest risk (CDC, 2013). Overweight and obesity are associated with adverse health consequences, such as type 2 diabetes, hypertension, hyperlipidemia, sleep apnea, and psychosocial issues even in childhood and overweight children are more likely to become obese adults (CDC, 2014). A recent MetroNet Study in Detroit reported that 48% of children were overweight or obese (BMI the 85th percentile) as were 56% of mothers and 77% of fathers (BMI 25

kg/m2) (Young, Schwartz, Monsur, West, & Neale, 2008). Unfortunately, many people are not taking the necessary steps to be healthy. A study used accelerometers to measure the physical activity levels of 247 children and found that 54.7% of children aged 3-5 years old do not engage in the recommended amount of physical activity (Pate et. al., 2004). An alarming 25% of children 2-19 years old do not regularly eat fruit, according to data from a 2009-2010 The National Health and Nutrition Examination Survey (NHANES) report (Nielsen, Rossen, Harris, Ogden, 2014). A "Vital Signs" report trends analysis on 2003-2010 NHANES data discovered that children's vegetable intake has not increased at all over the study time period (CDC 1, 2014). However, the implications of this are more than just physical.

Overweight children are more than five times as likely as their healthy counterparts to have a lower health-related quality of life (Schwimmer, Burwinkle, & Varni, 2003). Several studies found that children as young as 3 years old associate overweight children with the characteristics of being mean, selfish, stupid, ugly, dishonest, unhappy, lazy, and having few friends (Cramer & Steinwert, 1998; Brylinskey & Moore, 1994; Wardle, Volz, & Golding, 1995). As a result, overweight children tend to withdraw from others and exhibit lower self-esteem, increased levels of fear, sadness, nervousness, and loneliness.

A child who is experiencing poor physical or mental health may not be able to concentrate or attend to tasks in preschool. If kept home to recover, he or she may miss out on key educational and social milestones. In the first study to examine health status and its effect on academic achievement among Head Start children, using data from the National Public School-Head Start Transition Demonstration Study, researchers found poor child health status to be an independent risk factor for lower academic achievement among former Head Start children as they began formal school (Spernak et. al., 2006). In other words, sick, overweight, and/or sedentary children are not as ready for kindergarten as they could be.

And if children are not consuming enough fruits and vegetables, they lack the nutrients necessary for timely and adequate cognitive development. Nutrition is the critical point at the intersection of the biological and nurturing factors that mediate brain growth and development (Rosales, Reznick, Zeisel, 2009). And cognitive development in preschoolers is predictive of later school achievement (Rosales, Reznick, Zeisel, 2009). Not surprisingly, two notable research studies observed children's dietary behaviors and discovered that children who ate higher amounts of fruits and vegetables were more likely to score higher on academic performance measures (Florence, Asbrige, Veugelers, 2008; Neumark-Sztainer et al., 1996).

1. Previous Level of Evidence

As mentioned above, there has been no rigorous evaluation of the RRA program until participation in SIF 2011. Though the PEACH programs have shown preliminary evidence with regard to impact on kindergarten readiness, this study aims to achieve a moderate level of evidence in regard to the confirmatory research questions pertaining to RRA. NAP SACC is an evidence-based program; however the NAP SACC and HFSY programs are seeking preliminary levels of evidence in this evaluation study, given that they have no comparison groups. The Media Toolkit is a newer program first implemented in Year 3 and has received only two years of evaluation to date, so a pre-preliminary level of evidence is sought by the evaluation.

2. Theory of Change

The PEACH programs were developed using the Social Ecological Model and the Social Cognitive Theory as a theoretical framework. The Social Ecological Model issued by the Dietary Guidelines for Americans provides a framework for nutrition and physical activity programs. It recognizes that an individual's physical activity and food choices are impacted by individual factors, environmental settings, sectors of influence and social and cultural norms and values (USDA, 2010). The programs use this multi-level approach to communicate nutrition education messages of increased fruit and vegetable consumption and physical activity every day. Our programs reach the individual, their families, and the early childhood education environment, as described in our logic model (Figure A in Appendix A).

Behavior change approaches used within the programs are based on Social Cognitive Theory, developed by Albert Bandura. Research in the fields of social learning/cognitive theory and social influence support the repeated use of consistent messages via multiple avenues as a way to create dialogue in the community (i.e., within the early childhood settings) and to encourage changes in behavior (Bandura, 1998). These theories emphasize the importance of providing multi-level programming and activities such as health knowledge and behaviors to individuals, families, schools, and communities, in addition to developing incentive systems, self-management capabilities, and strong family support.

B. Overview of Prior Research

Considerable research corroborates the importance of proper nutrition, adequate physical activity, and access to basic primary care for healthy physical, cognitive, and emotional development among children (Ginsburg et al., 2007; O'Conner et al., 2013; Chaddock et al., 2011). Further, studies have demonstrated that overweight children have significantly lower math and reading test scores compared with non-overweight children in kindergarten (Chaddock et al., 2011). Therefore, interventions to improve levels of physical activity and proper nutrition among young children ages 0 to 5 have great potential to create positive long-lasting impacts on children's health and academic potential (Ginsburg et al., 2007; Burdette & Whitaker, 2005). In addition, early childhood education centers have been recognized as critical, but under-utilized, settings for implementing obesity prevention programs for pre-school aged children in the U.S. (Ginsburg et al, 2007).

C. Overview of Impact Study Programs

1. Program Descriptions

Regie's Rainbow Adventure® (RRA)

Regie's Rainbow Adventure® is a seven week nutrition and physical activity education program geared toward 3-5 year old children in Head Start Programs or other early childhood education settings. The program follows a superhero broccoli character named Regie as he travels to islands that match the colors of the rainbow, tries fruits and vegetables of those colors and earns 'power stripes' from the healthy foods he eats. The books include opportunities to learn colors and new vocabulary words, practice counting, and engage in physical activity. A riddle and a song at the end of each book provide fun, age-appropriate language development skills. Each lesson is about 20 minutes long and the core program consists of reading a book, tasting a fruit or vegetable sample and sending home a parent education handout. This program is offered once a week for seven weeks. Optional activities encouraging physical activity and nutrition are included in the teacher's implementation manual.

National Kidney Foundation of Michigan (NKFM) staff provide materials and train teachers who implement the program in their classrooms. Program materials include a set of 7 books, a Regie puppet, classroom posters, fruit and vegetable cards in English and Spanish, a teacher manual, and weekly parent handouts. The classroom posters allow students to track Regie's travels from week to week, color in his power stripes that he earns during his adventures, and also place a sticker by their own name for each week to show that they, too, joined in on Regie's Rainbow Adventure®. Nutrition education is provided to the parents as well through take-home handouts. These handouts include a recipe and a list of fruits and vegetables for each week's specific color. They also include a copy of the story that the children read with their teacher in class that day to encourage a shared reading experience between parent and child at home.

Central to the program is a food tasting of each week's themed color. Students are able to sample a fruit or vegetable in the classroom. Twice during the program, whole produce items are provided to take home with a recipe for children to share with their families. Using the recipe included on the take-home handout, families can experience together a fruit or vegetable they may not have tried or may not be likely to buy themselves. The last week of programming focuses on physical activity and screen time reduction; there is no food tasting that week.

Healthy Families Start with You (HFSY)

Healthy Families Start with You provides parents and caregivers with education sessions regarding individualized health coaching, targeted nutrition, and physical. It utilizes a lay health educator program model. After receiving a standardized training from NKFM, staff within the site conduct two health chats with participating parents/guardians. As part of these chats, parents complete a health assessment form (at two time points), set health related goals, and discuss nutrition and health messages. Group educational classes such as nutrition and physical activity demonstrations are also offered at participating sites. Through educating parents about nutrition and physical activity, HFSY aims to improve parents' behaviors so that they can ultimately serve as positive role models for their children.

HFSY and NAP SACC were conducted at both implementation and comparison sites and the data from these programs has now been analyzed at the end of Year 5 because of their considerably smaller sample sizes. It was our original intent to use this data to compare the effects of receiving: 1) RRA, 2) RRA and NAP SACC and 3) RRA, NAP SACC and HFSY. However upon further review from CNCS, it was determined that due to the fact that there is not a comparison group for each of the treatment types, we are unable to adequately compare the effects of receiving: 1) RRA, 2) RRA and NAP SACC, and 3) RRA, NAP SACC and HFSY. Because of the fact that the evaluation tools and plan for these two programs never changed between years 1 and 2 (unlike for RRA), the full sample from years 1, 2, 3, 4 and 5 have been used in their pertinent analyses. Given their small sample sizes, it was imperative to use all possible data. To be clear, HFSY is technically categorized as part of the impact evaluation given that its research questions in considered to be an exploratory research question. However, HFSY programming efforts and evaluation were not part of the rigorous impact evaluation of the RRA program and its confirmatory research questions and outcomes.

2. Overview of Impact Intervention Design and Activities

The impact intervention really focuses on the confirmatory research questions that pertain to Regie's Rainbow Adventure, only. The evaluators drew from a quasi-experimental, forced matched comparison group design to analyze program effects. In order to isolate the program effect on the participants, the evaluators assigned centers to the comparison and implementation groups to analyze the counterfactual. Intervention activities for implementation centers include pre-tests for both parents and teachers, doing the RRA program, and then post-tests for both parents and teachers. Comparison centers do not do the program in between the pre-and post-time points. Instead, they continue with their regular preschool curricula as scheduled. For a visual representation of this, look to Figure 1 in this report. Figure 1 shows how the implementation group conducts Regie's Rainbow Adventure® between the baseline and follow up periods and the comparison group conducts a delayed intervention after all data collection is finished. The evaluation of the PEACH programs includes the collection of qualitative and quantitative data, outcome and implementation data, and data from the parent/guardian and teacher. See Table B in Appendix A for details about each survey instrument and measures by program. Please refer to Appendix B for all survey instruments.

As seen in the logic model (Figure A in Appendix A), inputs include program staff time, funding, service providers, community based partners and stakeholders, as well as the creation of program materials. Program outputs for RRA include holding trainings, tracking program attendance, baseline and follow-up data, health education, and a scaling and replication plan. Short term outcomes for RRA include increased exposure to fruits and vegetables and increased collaboration and partnership with early childhood education centers while long term outcomes include increased healthy food choices, increased time spent being physically active, and decreased problem behaviors in addition to several others.

The RRA program is divided up into 7 weekly units taught one day a week that follow the colors of the rainbow. Program components include reading the weekly book, engaging in RRA-focused activities from the Teacher Manual, singing the Eat a Rainbow Song, and the food tasting. Activities that support the program and facilitate timely survey completion for both parents and teachers include continual communication between center staff/administration and NKFM staff, as well as Palooza events. Baseline and Follow up Palooza events are scheduled at both comparison and intervention sites. These events were specifically developed to aid in the parent and teacher survey completion and collection process. NKFM staff members arrived at the school before children were dropped off at and picked up from school to distribute surveys for parents/guardians to complete right then and there. NKFM staff were able to help with survey comprehension and answer any questions parents/guardians might have had. The Palooza events also allowed staff to distribute surveys to the teachers, which were left with them at the end of the event and picked up at a later, agreed-upon date.

3. Numbers Served in Impact Study

11,227 children received RRA in years 2-5. The number of children throughout years 2-5 who were allocated into the intervention was 8039 (4396 were allocated into the Implementation group and 3643 were allocated into the Comparison group). Then number of children in the final sample was: 4845 (2241 Implementation, 2621 Comparison). The number of children included in evaluation activities is significantly smaller than the number of children who receive the program. This is because a random sample of children is selected for evaluation, where children who have received programming in previous

years are then excluded from these evaluation activities. Twenty-nine centers also implemented HFSY in years 1-5 which reached 188 parents/guardians and their families.

D. Overview of Implementation Study Programs

1. Program Descriptions

Nutrition And Physical activity Self-Assessment for Child Care (NAP SACC)

The evidence-based NAP SACC program assesses and aims to improve the early childhood education center environment to promote healthy eating and physical activity. The program uses a tool to identify the strengths and limitations of the facility in its ability to promote nutrition and physical activity and includes components for goal setting and education. In addition, NKFM provides resources to achieve the goals set by providers. For example, if a provider set a goal to provide water to children while playing outside, NKFM may purchase a large water cooler for that site. The program consists of a pre-assessment meeting at which point a center provider completes the assessment and creates goals, a post-assessment meeting at program conclusion, and targeted assistance in goal achievement in between those assessments. NAP SACC is considered an environmental intervention. Of note, NAP SACC does not require a separate comparison group because we are only evaluating the progress each site made during the course of the intervention. The comparison is between each individual site's own pre- and post-assessments.

Media Toolkit (MTK)

The Media Toolkit continues to supplement the RRA curriculum and promote healthy living and development on a budget for early childhood families. It consists of a website with free downloadable parent and teacher resources such as games, handouts, and additional curriculum components. The Media Toolkit also contains an RRA Facebook page that shares local community events, posts, and photos dedicated to nutrition, physical activity, and literacy for early childhood families. The toolkit encourages families to bring RRA out of the classroom and into the home. Data to evaluate this component include the number visits to the full website and measuring user engagement of the Facebook page throughout the year.

The Implementation Checklist, Weekly Attendance Sheet, and Key Informant Interviews Guides were also part of the implementation level study and pertain to program fidelity, dosage, and program satisfaction of the RRA impact study. These tools and their roles in both the impact study and implementation level findings are explained in depth in Section II, Part C.

2. Overview of Implementation Evaluation Activities

The Media Tool Kit was first implemented in Year 3 and was only ever promoted after centers had completed the evaluation component of Regie's Rainbow Adventure. We continued to implement the MTK in Years 4 and 5. It was evaluated on a yearly basis. NAP SACC can be implemented at any point during the calendar year, not just during the school year, because environmental and policy changes can be made at any time. NAP SACC is implemented at the convenience of the child care center's owner or director. It was implemented in Years 1, 2, 3, 4 and 5. The Implementation Checklists and the Weekly Attendance Sheets were filled out by teachers in classrooms selected for evaluation in implementation centers, only. They were meant to be filled out on a weekly basis throughout the implementation of the program. They were retrieved by NKFM staff during the follow up time period. The Key Informant Interview Guides were used

to facilitate the key informant interviews that took place at the end of years 1, 2, 3, and 4 with teachers from implementation centers, only.

3. Numbers Served in Implementation Study

Twenty-nine centers implemented NAP SACC in years 1-5 and 2,599 children were reached. The MTK consists of the RRA Facebook page as well as the Early Childhood website. The total reach of the Facebook page between years 3-5 was 53,295 people. The total number of page views for the Early Childhood Website between years 3-5 was 4,837. Specific numbers can be seen in Part C of Section III.

E. Justification of Targeted Level of Evidence for Impact Study

As previously stated, RRA has never been rigorously evaluated before and its current level of evidence is preliminary. The next highest level of evidence is moderate, which is what the RRA impact study has targeted. Low range effect sizes were seen when comparing the comparison group to the implementation group, which illustrated that RRA was making a positive effect on the study population. These low-very low range effect sizes were generally consistently seen, which supports the target goal of attaining a moderate level of evidence. However, a moderate level of evidence for RRA can only be attained through rigorous analysis of a mixed effect, multivariate, multi-level model that incorporates all data from Years 2, 3, 4 and 5. The current quasi-experimental forced matched comparison study design demonstrates a strong conceptual basis, ensures the program precedes any observed outcomes, and rules out other confounding explanations for outcomes.

Regie's Rainbow Adventure®, NAP SACC, and Healthy Families Start with You have been studied for their effects on nutrition and physical activity. The primary focus of the overall evaluation study is on RRA's effects on kindergarten readiness, as measured by fruit and vegetable consumption, physical activity, and screen time. The RRA program has shown preliminary levels of evidence with regard to impact on kindergarten readiness; this study aims to achieve a moderate level of evidence for RRA in this arena. Additionally, this study aims to show a moderate level of evidence for RRA with regard to changes in nutrition and physical activity given that both are related to academic success and school readiness.

Given the fact that HFSY and NAP SACC do not have comparison groups and also lack adequate statistical power for analyses, the following questions regarding these programs are now categorized as exploratory and fall under the preliminary evidence level: "Parents who participate in the program will display significantly higher levels of positive healthy behaviors" and "Centers that complete making improvements in nutritional and physical activity offerings will offer healthier food options and more physical activity opportunities." This re-categorization was decided upon near the end of Year 4 and its final submission actually took place in the beginning of Year 5. The MTK was introduced in Year 3 and due to its lack of formal evaluation, a pre-preliminary level of evidence is sought by the evaluation.

The study aimed to advance the evidence base via the careful steps taken in preserving internal validity through demonstrating a strong conceptual basis; preceding observed outcomes; ruling out other explanations for outcomes; capturing statistically significant associations; and utilizing reliable and valid measures.

F. Research Questions

All impact evaluation questions remain to be answered and center on outcomes of fruit and vegetable consumption, physical activity and screen time, and externalizing behaviors at home and in the classroom. They are listed on the following page.

1. Impact Level Questions

a) Confirmatory Research Questions

Table 1. ***Regie's Rainbow Adventure® (RRA) Confirmatory Research Questions***

Research Question	Method of Analysis	Research Question Type
Will children who participate in RRA have significantly higher fruit and vegetable consumption?	• Time component: post test analysis adjusting for baseline values • Comparison Groups: Intervention vs. Comparison • Instrument: RRA Parent Survey • Reporting: Analyzed for Annual and Final Reports	Confirmatory
Will children who participate in RRA engage in significantly more physical activity and less screen time?	• Time component: post test adjusting for baseline values • Comparison Groups: Intervention vs. Comparison • Instrument: RRA Parent Survey • Reporting: Analyzed for Annual and Final Reports	Confirmatory

b) Exploratory Research Questions

Table 2. ***Regie's rainbow Adventure® (RRA) Exploratory Research Questions***

Research Question	Method of Analysis	Research Question Type
Will children who receive RRA programming have significantly lower externalizing behaviors (and sub scale scores within externalizing behaviors)?	• Time component: post test analysis adjusting for baseline values • Comparison Groups: Intervention vs. Comparison • Instrument: Child Behavior Checklist 1.5-5 and the Caregiver-Teacher Report Form 1.5-5 • Reporting: Analyzed for Final Report*	Exploratory
Will children who receive RRA programming have significantly decreased classroom level problem behaviors?	• Time component: post test analysis adjusting for baseline problem behaviors • Comparison Groups: Intervention vs. Comparison • Instrument: Classroom Level Problem Behavior Survey • Reporting: Analyzed for Final Report*	Exploratory

**Analyzed for Final Report only due to exploratory nature*

Table 3. ***Healthy Families Start with You Exploratory Research Questions:***

Research Question	Method of Analysis	Research Question Type
Will parents who participate in the program display significantly higher levels of positive health behaviors?	• Time component: Comparison of Pre and Post • Comparison Groups: None • Instrument: Pre and post chat instrument • Reporting: Analyzed for Final Report*	Exploratory

**Analyzed for Final Report only due to smaller sample size at time of Year 4 Report*

2. Implementation Level Research Questions

Process measures center around program dosage, fidelity and the evaluation of the recently developed intervention, the MTK. Program satisfaction was also measured via key informant interviews, web-based analytics for the MTK, and how many centers that implemented The NAP SACC went on to make healthy changes in their environments.

Table 4. ***Implementation Research Questions***

Research Question	Method of Analysis	Research Question Type
How many people are reached through the Media Toolkit: NKFM.org Early Childhood page?	Numbers of parents and caregivers who access the web-based programming will be measured and reported based on web-based analytics • Time component: Cumulative analysis from the beginning of year to end of each year • Instrument: Google Analytics • Reporting: Annual and Final. Final report shows cumulative data	Implementation
How many people are reached through the Media Toolkit: Regie's Rainbow Adventure® Facebook page?	Numbers of parents and caregivers who access the web-based programming will be measured and reported based on web-based analytics that capture page views, likes, and post engagement. • Time component: Analyzed by month to calculate yearly totals each year • Instrument: Facebook Insights • Reporting: Annual and Final. Final report shows cumulative data	Implementation
What types of MTK content are most "liked", "shared", and "commented" on by Facebook participants?	Parents and caregivers interact via comments, likes and visits with certain themes of web-based programming therefore indicating satisfaction with this type of content. • Time component: Analyzed within each year • Instrument: Facebook Insights • Reporting: Annual and Final. Final report shows cumulative data.	Implementation
What types of RRA content are most liked by participants?	Teachers provide feedback in Key Information Interviews about components of the programs that are most liked and beneficial to children's learning. • Time component: Analyzed within each year • Instrument: Key Informant Interviews • Reporting: Annual and Final. Final report will show cumulative data.	Implementation
Were the interventions implemented with fidelity?	Teachers and center staff implemented RRA with fidelity as reported in Key Information Interviews and the Implementation Checklist. • Time component: Analyzed within each year	Implementation

	• Instrument: Implementation Checklist and Key Informant Interviews • Reporting: Annual and Final. Final report will show cumulative data.	
Will centers that complete making improvements in nutritional and physical activity offer healthier food options and more physical activity opportunities?	Center staff complete pre and post assessments as part of The NAP SACC and make changes to their facilities and practices based on the results of these assessments. • Time component: Comparison of Pre and Post within each year • Comparison Groups: None • Instrument: Pre and Post Center Nutrition and Physical Activity Practices survey • Reporting: Analyzed for Final Report only in order to increase the sample size*	Implementation

**Analyzed for Final Report only due to smaller sample size at time of Year 4 Report*

G. Contribution of the Study

1. Level of Evidence Generated by the Study

The evaluation shows eligibility for a moderate level of evidence for fruit and vegetable consumption, only. There were no intervention effects for physical activity or screen time. Parents/guardians who participated in HFSY did display significantly higher levels of positive healthy behaviors in 7 of 11 categories, suggesting that the HFSY program does now meet the preliminary evidence level. Centers that participated in NAP SACC offered healthier food options and more physical activity opportunities, also suggesting that NAP SACC now meets the preliminary evidence level.

2. Strengths and Limitations of this Study

The quasi-experimental design aims to assess impacts and implementation of Regie's Rainbow Adventure and shows strength in its steps taken to address common threats to internal validity, the accumulation of four years of pre and post cohort data, differentiation between effects of program dosage on study outcomes, and the statistical analysis of program effect sizes on the study population. Maintaining internal validity facilitates the ability to make causal references to program outcomes. Having a large dataset of pre and post time points allows the evaluation to determine baseline characteristics which also affords the ability to assess differences between study groups. Assessing effect sizes strengthens the study's ability to determine not only the statistically significant changes that appear, but also the magnitude of RRA on affecting change.

A limitation to the study is its low generalizability, as our population is specific to socioeconomic status, location, age, and enrollment in Head Start or Great Start Readiness Program (GSRP). It is imperative to illuminate the conditions under which PEACH functioned in evaluation dissemination. Each participating center filled out a race/ethnicity demographic form for their entire enrolled student population. We were able to compare this demographic form to the race/ethnicity demographics reported in the baseline Parent/Guardian Survey by parents/guardians of children who were selected to participate in the evaluation. Center-reported demographics were aggregated and then averaged for all years each center participated in the study. Parent-reported demographics from the Parent/Guardian Survey for each particular center were also aggregated and then averaged for all years each center participated in the study. These comparison tables that show the estimates of center representativeness can be seen as Tables B1-B62 in Appendix A. In general, most subsamples of children in the evaluation are

representative of their corresponding center's demographic report of their total enrollment. The reporting of race/ethnicity is personal and subjective, and therefore, such reports are bound to vary and differ somewhat.

Another possible limitation is the amount of missing data present in each program year's data set. Our evaluators assessed the amount of missing data and the amount of attrition between time points 1 and 2 to determine the best course of action in dealing with the missing data. Because we were mainly interested in the treatment effect on post-intervention outcomes (which were subject to missinginess), imputation would not have improved the efficiency of the estimation and therefore complete-case analyses were used for the final analyses. A larger final sample of complete cases would have been desirable.

3. Connections of this Study to Future Research

Future research should continue to take place in the Head Start and GSRP environments, where low-income children spend a significant amount of their time. It is in the preschool setting that young children develop their personalities, habits, and behaviors. This study is an important first step in making the connection between nutrition, physical activity, and kindergarten readiness. More research needs to be done on these specific connections and how proper nutrition and regular physical activity help prepare children for formal schooling as measured by the domains of preschool and kindergarten curricula in addition to parent and teacher report.

H. All Changes to SEP throughout years 2-5

The Media Toolkit program component experienced a major change from years 1 and 2 to year 3. Years 2 and 3 were spent planning and developing the MTK. In NKFM launched the MTK in year 3 by posting resources for teachers and parents on the NKFM website at www.nkfm.org/regierainbow and developing the Regie Rainbow Facebook (www.facebook.com/regie.rainbow). This component was then added to RRA teacher trainings at implementation sites. THE MTK was continued throughout year 4 and 5.

Several programmatic strategies were employed in year 3 to increase the likelihood of observing behavior change. First, changes were implemented to the actual RRA program, including a redesign of teacher trainings, increased efforts of data dissemination to teachers, and updated RRA story books and parent handouts. Evidence of these changes were submitted in the year 3 Report. These updates and changes were maintained in years 4 and 5.

Changes specific to year 4 include changing the type of incentive provided for parents filling out the follow-up surveys. Previously we only gave gift cards for Pre Paloozas. We would give parents at implementation sites a MyPlate puzzle at Post Paloozas and comparison site parents a flashlight pen at Post Paloozas. In year 4 we began giving parents a gift card at Post Palooza events at both comparison and implementation sites. We were also able to provide all RRA parent surveys and parent handouts in Arabic in year 4. Southeast Michigan has a large population of Middle Eastern and Arab-American families, many of whom speak English as a second language or do not speak, read, or write in English at all. We were able to better serve this special population now that we have Arabic materials.

Lastly, instead of holding just one, large raffle event for all parents after each evaluation time point (one raffle event after baseline surveys are turned in, one raffle event after follow up surveys are turned in),

we divided up the amount of money dedicated to the raffle event and created smaller raffle events for each partner site, allowing for parents to have a greater chance of winning.

For year 3, changes to evaluation efforts were made in order to increase the response rate and validity of the data. These changes continued in years 4 and 5 due to their effectiveness in improving response rates. NKFM staff hosted events at the early childhood education center during child pick up and drop off where they asked parents to complete surveys, offer incentives, distribute health information and provide a food sample. The teachers were still responsible for distributing surveys to parents not reached at these events but it removed a large portion of the work they did in year 2. In year 1 and year 2, teachers were responsible for asking all parents of children in their classroom to complete surveys. In year 3, a smaller random sample of 50 children per center was selected for survey distribution with a target of 30 completed surveys by both parents and teachers. We continued with this smaller random sample of 50 children per center in years 4 and 5 as well. This was a change from year 2 where we did not have a sample of children, except for a subsample of 20 children for the Child Behavior Checklist instrument. The addition of a random sample and elimination of a small subsample for the instrument were implemented to increase response rates.

More substantial teacher and parent incentives in the form of gift cards were distributed in Year 3 and again in Years 4 and 5. There was hope that the ability to tell parents that they will receive an incentive when returning a survey would increase the likelihood that parents return completed surveys. Two of the survey instruments were also slightly modified. The Implementation Checklist was changed in order to collect more accurate data. Language was added to this survey to decrease social desirability effects and to encourage teachers to report the actual percentage of the program they were able to implement.

In addition, in response to parent feedback, positive behaviors were added to the CBCL 1.5/5 to increase the likelihood that parents would complete the survey. The original version of this survey only includes negative behaviors. Teachers reported in key informant interviews in year 2 that these negative items frustrated parents. By adding items such as 'plays well with others' and 'does something you are proud of', parents were given an opportunity to also describe positive characteristics about their child. These changes were maintained in year 4 programming as well as in year 5.

Key informant interview methodology also changed in year 3. In year 2, these interviews were conducted with all implementation centers. However, information collected from groups showed content saturation and so in years 3 and 4, only new implementation centers were included in these efforts. No teachers were interviewed after the final year, year 5.

In an effort to maintain a true quasi-experimental design with implementation and comparison groups, the MTK was only promoted within implementation and comparison centers only after the evaluation was completed.

A final change to the evaluation process in year 3 was the use of passive consent forms instead of active consent forms. This requires parents to sign the passive consent form only if they did not consent to their child's data being used in the SIF study. When the consent form was not signed and given back to NKFM, consent was assumed. If parents did not consent their child for the study, NKFM did not use any of the data from the individual level survey instruments including those completed by teachers about individual

children. This practice was adopted in year 3 to reduce the amount of paperwork required for parents to send in to participate in the study. The practice of passive consent forms was utilized in years 4 and 5.

In contrast to prior years, height and weight data was not utilized in year 3 analyses nor was it collected in year 4 or year 5. BMI is no longer a component of PEACH's SIF evaluation focus and was not reported on in this final report. This change was recorded in our SEP submitted in February 2016 and accepted in Spring of 2017.

SECTION II. Study Approaches and Methods for both the Implementation and Impact Evaluations

A. Description of Implementation Evaluation and Study Design

The implementation evaluation of the SIF PEACH project was conducted to answer questions pertaining to program fidelity of RRA, program satisfaction of RRA, and aspects of the Media Toolkit (MTK) implementation through both qualitative and quantitative approaches. Additionally, our research question for NAP SACC was classified as an implementation research question. The design of the implementation evaluation was simple-it was generally cumulative in nature and was performed at the conclusion of each grant year. Program fidelity, as measured by the Implementation Checklist, was reported at the end of each grant year in that year's annual report as well as at the end of Year 5 in an aggregated, averaged measure using all implementation checklist data from years 3-5. Key informant interviews that took place after years 2, 3, and 4 were qualitatively analyzed at the end of each of those grant years for each grant year's final report. Aspects of the MTK were quantitatively evaluated via Facebook Insights and Analytics at the end of each grant year since the MTK was first implemented in year 3. NAP SACC implementation consisted of a pre and post test within a single specified grant year. Different centers participated in NAP SACC throughout the 5 years of the study and we possess and have analyzed evaluation data for those centers from each grant year. This NAP SACC evaluation all took place at the end of year 5, when all data was finally organized, and cleaned. Samples, measurements and data collection activities pertaining to the implementation evaluation are explained in greater detail in Section II, Part C.

B. Description of Impact Evaluation and Study Design

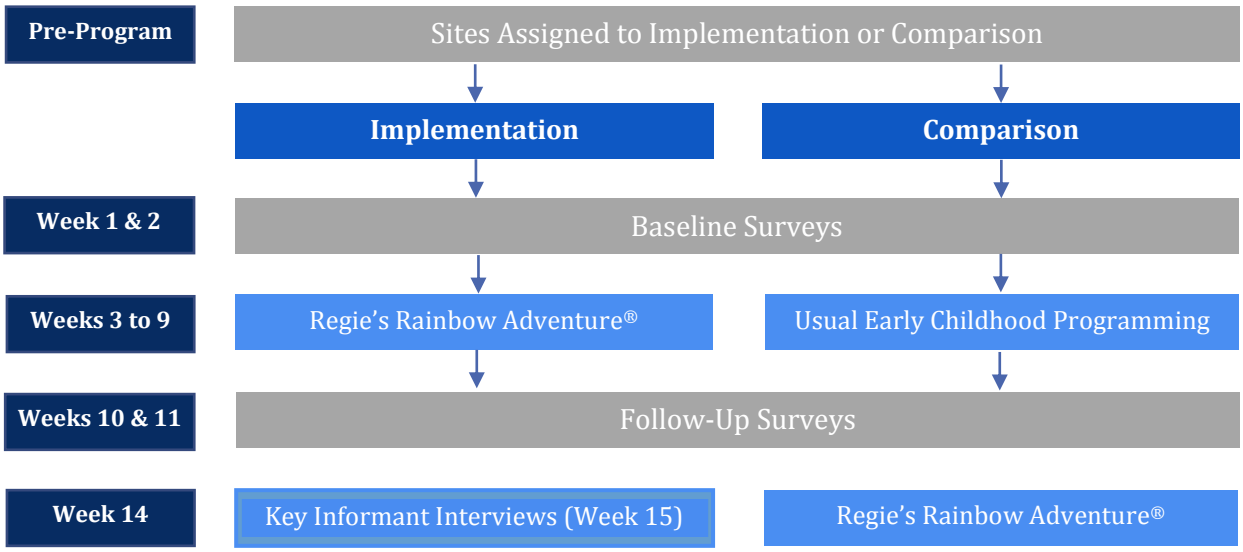
Our research question that pertains to HFSY is categorized as exploratory and therefor technically falls within our impact evaluation. However, the impact evaluation for HFSY is separate from that of the RRA program. The impact evaluation design that is described in the following sections pertains to RRA, only.

We did not track which families participated in HFSY who also had a child participate in the evaluation component of RRA. We did track which centers had families participate in HFSY that also participated in the RRA evaluation component. Evaluation for HFSY consists of a Health Chat 1 with goal setting, and then a Health Chat 2 sometime later to assess what, if any, changes were made or goals attained.

1. Description of RRA Impact Study Design

The impact study for RRA employs a quasi-experimental between-groups design formed by matching. In order to isolate the program effect on the participants, the evaluators assigned centers to the comparison and implementation groups to analyze the counterfactual. As seen in Figure 1 below, the implementation group conducts Regie's Rainbow Adventure® between the pre and post periods and the comparison group conducts a delayed intervention after all data collection is finished.

Figure 1. Impact Evaluation Design and Timeline – Regie's Rainbow Adventure®



In this design, there were only two time points of observation for each child who was evaluated. There was a time when a center is participating in the evaluation component and a time when it was not, but a center's students were never evaluated during both of those times. Centers participate once per year—either as an implementation center or a comparison center. As the figure above shows, children at an implementation center were observed once prior to receiving the intervention (baseline), experienced the intervention for 7 weeks, and were then observed once more thereafter (follow up). There were no future observations when the implementation center was not implementing RRA. In comparison centers, children were observed once (baseline), experienced normal preschool programming for 7 weeks, and were then observed once more thereafter (follow up). Comparison centers received a delayed intervention: After that final, second observation, the comparison center was then free to implement the intervention whenever they chose to do so. The comparison center did not then evaluate its students again when it actually implemented the RRA program.

Both treatment conditions were never housed under the same center during any one year of the study and children were never observed under both treatment conditions. As will be discussed below, some comparison centers became implementation centers in following years, and a few implementation centers became comparison centers between completed years of programming.

a) At the Regional Level

United Way identified 10 specific regions in which all SIF grantees were mandated to deliver our programs. We added regions on a rolling basis each year, starting with two in year 1 (Northwest Detroit and River Rouge) and added two regions each year so that in Year 5 we programmed in all 10 regions. We executed the study with both implementation and comparison centers in all five years of the study. As we began Year 2, we added two more regions, Inkster and Southwest Detroit. We also continued to program in the original two regions in which we first started. Year 3 saw the addition of the Hamtramck and Pontiac regions while we continued to program with centers in the other four regions. Year 4 saw the addition of the Northeast Detroit and South Oakland regions and in Year 5 we added the Detroit Northend

Central and South Macomb/Warren regions to the study as well. Centers were only ever matched with another center within the one region they both resided, never across the regions.

b) At the Center Level

The intention was to continue programming in years 2, 3, 4, and 5 with the same sites that first programmed in year 1, keeping them in the same treatment arm in which they started and adding more centers as we added more regions to the study. However, due to the re-granting of many Head Start centers across Metro Detroit, some centers closed down. Therefore, not all centers that participated in the study in year 1 were able to continue programming in year 2 and beyond. We also discontinued partnering with some centers that were closing due to low enrollment numbers, building safety issues, or moving their center out of the target region. So again, not all centers that participated in year 1 went on to participate in years 2-5. Similarly, some centers participated in subsequent year/years but were unable to participate in the study all the way through Year 5 (for example, a center may have participated in years 3 and 4 but not year 5).

The rolling basis also refers to the centers that became newly enrolled in the evaluation each year as the regions they resided in were added to our study. These centers were either existing sites with whom NKFM already programmed through other funding sources and then the evaluation component of the study was added, or centers that were entirely new to NKFM programs. This process was determined by staff, based on region. In some cases, comparison centers turned into implementation centers in following programming years as we added the regions in which they resided to our study. Per UWSEM's instructions, we needed to have implementation centers in these 10 regions, hence the conversion from comparison to implementation. No centers ever switched back to their original condition thereafter.

Carryover exists at the center level due to the way some centers continued to participate in the study for any number of years throughout the length of the 5 year study. Of course, a center that was new to the study may have carried out the program and/or garnered teacher and parent support for the program differently than a center that has participated in the study and did the program several times before. This carryover was explored and adjusted for accordingly in the final mixed effect, multivariate model by nesting the child within the classroom and the classroom within the center.

(1) Implementation to Comparison Switching

There was the potential for carryover effects because of the fact that some centers switched from implementation to comparison throughout years 2-5. This carryover related to teacher and center practices only and is not related to the selection of children for evaluation. This kind of center switching took place only when absolutely necessary. For example, there were times when only a handful of Head Start centers were located within the certain zip codes that make up a region, and only 1 or 2 of them would have a large enough student population to be able to conduct the evaluation component (minimum of 30 kids). Or, centers declined to program with us at all. Therefore, the only remaining centers to choose in some specific zip codes were centers that were previously in the opposing condition. It was only under those specific circumstances that centers switched from implementation to comparison. No centers ever switched conditions a second time thereafter.

NKFM kept records of the centers that switched from implementation to comparison and between what programming years they did so. NKFM has records of all participants who, subsequent to their center

switching from implementation to comparison, were then selected for evaluation. Four centers switched from implementation to comparison between completed programming years. A total of 184 participant were selected for evaluation from these centers in subsequent programming years after the switch took place. We have taken great care to analyze our sample with these 184 participants included and without them. All models were run twice (the entire sample, and then with this small subset of children removed). This is reflected in our Participant Flow Descriptions Table in Part D of Section II and in the output from the models in Tables H and I in Appendix A.

c) At the Classroom Level

After a center was selected for participation, the evaluation team drew a random sample of classrooms to participate in the evaluation component of the study. To select these classrooms, a list of all the classrooms in the center was first compiled using the rosters given to NKFM by the center. That list was then randomized by using a randomization website and the first 3 classrooms in the random-order list were selected for evaluation. All classrooms in all participating centers received the program, however, we only evaluated children with the classrooms that were selected for evaluation via performing the random sample.

Within that random sample of classrooms, we utilized certain inclusion criteria to make sure that only children who had never received the program before were chosen for evaluation. A new random sample drawing took place each programming year to determine which classrooms would make up the random sample for evaluation efforts. For example: a classroom could have been selected as part of the random sample for the evaluation component in year 2, was selected again in year 3, not in year 4, then again selected in year 5. As such, carryover also exists inside the center level at the classroom level—certain teachers may have repeatedly took part in the evaluation component of the program if their classrooms were drawn into the random sample time and again. Their familiarity with the evaluation surveys and timelines may have differed from those teachers who were not as familiar and whose classrooms had never been selected as part of the random sample before. This carryover was explored and adjusted for accordingly in the final model. Not all the classrooms in a center were always selected for evaluation, and the potential for sharing of information from one classroom to another was real. However, this was a non-issue because comparison classrooms were never housed in the same center as implementation classrooms. A center is only ever entirely implementation or entirely comparison.

d) At the Child Level

We used the classroom rosters provided to us by centers for the exclusion/inclusion process briefly mentioned above. After randomly drawing the sample of which classrooms were to be evaluated, our staff would go through each and every child in those classrooms to determine if he or she had already received the program in years past. The name, birthdate, sex, and other pertinent information of every child who has received the program (not just those who were chosen for evaluation) was entered into program logs in Excel through the 5 years of the study. These logs were kept by programming year. Staff would consult the logs of all previous years of programming as they combed through each classroom roster that was part of the random sample for evaluation. If any child matched a previous participant based on name and birthdate (and sex, if provided), the child was automatically excluded from any evaluation efforts. For example: a child received the program in year 1 and year 2. This child was therefore in both programming years' logs. If the child's classroom was randomly selected for evaluation in year 1, the child was new to

the program and was thus selected within her classroom to be evaluated. Evaluation staff match this child in the year 2 rosters and logs to her own records in the year 1 logs. Thus the child is not selected for evaluation again in year 2 or in any other programming year thereafter. If the child received the program in year 1 but her classroom was not randomly selected for evaluation, she still cannot be selected for evaluation in year 2 or any year thereafter because of the fact that she already received the program. Again, a child can only ever be included in evaluation efforts once, and only if the child has never received the program before. As such, there is no carryover at the child level.

If the number of children within the 3 classrooms who had never received the intervention before was less than 50, an additional classroom was randomly selected until 50 children were eligible for and thus chosen for evaluation (with a maximum of 60 children). Some centers were much smaller than others, however, and so the minimum number of children at a center required for evaluation was 30. These minimum and maximum numbers were generated using a power analysis.

Such exclusionary criteria were necessary because there was not adequate power for children across both the implementation and comparison groups to analyze whether or not there would be an increase in positive outcomes when children received more than one year of the program. Therefore, children were excluded from the evaluation component entirely in program years to come after receiving one year of RRA, regardless of what treatment arm they were in. A child was also not then eligible to be in the comparison group after participating in the treatment group, or vice versa.

2. Matching Approach

Due to logistical constraints described above and the desire to foster relationships with community partners for future work, it was not feasible to randomly assign sites to serve as comparison groups for the program. Therefore, to increase the internal validity of the evaluation (the selection threat) and to ensure that the comparison and implementation groups were as similar as possible, centers were matched based on demographics known to affect the variables of interest. To obtain as much matching equivalency as possible, we used sociodemographic proxies known to influence nutrition, physical activity and kindergarten readiness such as racial/ethnic composition, size of the population, and median household income for matching. Baseline equivalence analyses show which, if any, matching variables are significantly different between the comparison and implementation groups. Such differences were then adjusted for in the final model by making these variables covariates.

Staff members determined the new implementation centers. The selection of these was limited by the number of childcare centers located within the designated regions and zip codes this study operated as well as the size of their student population. We therefore did not use formal propensity score matching or nearest neighbor searches to determine an appropriate comparison center. We did so on a case-by-case basis. A list of possible comparison centers was compiled, utilizing the follow matching process: The matching process is determined by comparing demographic data. Whenever possible, we used demographics provided to us by the centers themselves, as that portrays the most up to date data and was truly representative of each center's enrolled populations (who may or may not physically reside within the center's zip code). When that was not available, we used 9 digit zip code data from the US Census Bureau as a proxy measure. The hierarchy of matching was 1) Race/Ethnicity, 2) Median Family Income and 3) Size (center compared to center, or if that is not available, zip code compared to zip code). The center which was most similar to the selected implementation center in those three categories (with

Race/Ethnicity being most important, Median Family Income being next most important, and Size being least important) was then selected to be the matched comparison center. Sites were specifically selected because they were matched on these characteristics. Peer-reviewed public health literature corroborates the use of this model of matching groups based on demographic characteristics when evaluating the effectiveness of health and nutrition based interventions (Veugelers & Fitzgerald, 2005; Swinburn et al., 2014; Hoelscher et al., 2015; Cloutier et al., 2015). While total randomization could not be achieved, the aforementioned Race/Ethnicity comparison tables for center representativeness (Table B1-B62, Appendix A) help ensure that the samples we obtained were representative of the populations we intended to analyze, those populations being vulnerable, low income families in the metro Detroit area whose children were at risk of being underprepared for formal schooling. As our tables show, such families in Metro Detroit are mainly minorities. Given that most of our partner centers were Head Start centers or had GSRP classrooms in them, we can also say that the samples we obtained were representative of the populations we intended to analyze in terms of house hold income. Therefore, selection bias was generally a nonissue.

3. Unit of Matching

The program was delivered at the center level. An entire center implemented the core program while only certain classrooms participated in evaluation activities through the random selection process. As such, we were unable to match individuals in this evaluation because we treated each school as its own entity and carried out the program at the center level and the analysis at the classroom and child levels (child nested within classroom nested within center). The unit of matching was therefore the center, and when that was not possible, the zipcode in which the center resided. A center is representative of the families whose children attend school there, just as the zipcode is representative of the families who live within it. These are the families who attended our partnering centers, received the program, and participated in the evaluation component of this study.

4. Differences in Baseline Characteristics between Groups

This table shows the differences in baseline characteristics between study groups. Significant differences in age as well as race/ethnicity exist between the comparison and implementation groups. Firstly, the comparison group was slightly larger, by 397 children. The comparison group consisted of more children who were identified as Black by their parents/guardians, and more children who were identified as Other by their parents/guardians. The comparison group was also slightly older than the implementation group. These significant differences are adjusted for in the model by being used as covariates. As previously stated, the reporting of race/ethnicity is a generally nebulous and subjective process. For example, a parent may have reported a race for their child that is different than the race the child's teacher reported for that child. In that case, the parent's report takes precedent. NKFM staff dealt with these issues as they arose on a case by case basis. Such events account for some of the variability in race and ethnicity seen between the Comparison and Implementation groups as well as between those the parents reported and those the center reported.

Table 5. Baseline Equivalence Analysis (Between Study Groups) (N= 4845)

	Comparison (n=2621)	**Implementation** (n=2224)	**Standardized Mean Difference**	**p-value**
Age (mean, sd)	4.10 (.55)	4.05 (.56)	0.098	0.001***
Gender (%)			0.227	0.225
Female	45.5	47.4		
Male	54.5	52.6		
Race/Ethnicity (%)			0.258	0.000***
Black	75.4	68.4		
White	1.8	2.9		
Hispanic/Latino	20.4	21.7		
Arab/Arab American	1.6	1.7		
Other	0.8	5.3		
Parental Education (%)			0.114	0.176
Some grade school	5.0	4.6		
Some high school	14.8	14.3		
High School/GED	29.7	27.5		
Trade or training certificate	8.3	8.5		
Some college	35.2	35.6		
Bachelor degree	5.5	7.4		
Graduate degree	1.6	2.1		
Annual Household Income (%)			0.117	0.170
Less than 10K	39.5	35.7		
10-15K	21.2	21.7		
15-20K	13.5	15.1		
20-25K	10.3	11.8		
25-35K	8.9	9.6		
35-45K	3.9	3.2		
45-60K	2.4	2.2		
60K and above	0.3	0.6	0.118	
Insurance (%)				0.308
Private	12.8	12.7		
Medicaid	81.8	83.0		
CHIP	1.0	0.3		
Military	0.2	0.2		
Indian Health Service	0.0	0.0		
Single Service Plan	0.4	0.4		
Other gov't plan	1.9	1.9		
None	1.9	1.5	0.126	
Public Assistance (%)				0.154
WIC	23.6	25.6		
SNAP	53.6	55.0		
FIP	7.8	6.7		
Other	2.0	1.9		
None	13.0	10.9		

†P<.10 *p<.05 **P<.01 ***P<.001

Additionally, there were centers that received other nutrition and/or physical activity related programming in addition to RRA. These centers and their specific additional practices were recorded. Between years 1-5, 14 centers received additional, relevant programming which resulted in 519 kids in our sample receiving this programming. These children were recorded in our data sets as well. Such additional programming could affect RRA results, and this has been accounted for in our final model and analyses by making this center practice variable a covariate in the model. The following centers received additional programing.

Year 1: None
Year 2: None
Year 3: Holy Redeemer, St. Stephen
Year 4: St. Stephen, Charity, Mt. Calvary, Mt. Zion, Kids in Zion, High Park Cortland, 7 Mile, Samaritan
Year 5: St. Stephen, Mt. Calvary, Mt. Zion, Kids in Zion

5. Differences in Baseline Characteristics between Small and Not-Small Center Sizes

The different enrollment size of centers was viewed as a potential bias by our third party reviewers JBS, as reported to us in a feedback form in November 2016. This issue had never been raised previously in review of any of our submitted documents. Therefore we empirically split centers into either the "Small" or "Not-Small" categories by using the median enrollment size as the cut-off point. The enrollment numbers for each center's first (and for some, only) year that it participated in SIF RRA were used to calculate the overall median enrollment number. This median enrollment number was 71 children. Any center with an enrollment of 70 children or fewer was considered "Small" and any center with an enrollment of 71 children or more was considered "Not-Small".

Table 6. Descriptive Statistics of Center Size

N Valid	62
Mean	97.37
Median	71.00
Std. Deviation	75.697
Range	409
Minimum	17
Maximum	426

Table 7 on the following page shows which centers are categorized as Small Centers and which are categorized as Not Small Centers. Thirty one centers were Small Centers and 31 were categorized as Not Small Centers. The Center Size variable therefore had two values: 0 = Small, 1 = Not Small.

Table 7. Center Enrollment Numbers and Delineation for Center Size Variable

Center Name	Number Enrolled	Center Size	Center Name	Number Enrolled	Center Size
7 Mile	86	1	Kennedy	32	0
All About Kidz	58	0	Kids in Zion	99	1
Bibleway I	58	0	Leland Center	64	0
Bibleway II	53	0	Lighthouse	32	0
Care Village	145	1	Maggie Lee Community Center	59	0
Cathedral of St. Paul	65	0	Manuel Reyes	178	1
Cecil Center	183	1	Mark Twain	34	0
Centerline	50	0	Metropolitan	122	1
Charity	88	1	Mt. Calvary	88	1
Children's Center Head Start	322	1	Mt. Zion	118	1
Christian Fellowship of Love	60	0	Neighborhood School House	20	0
Citadel of Praise	176	1	New Genesis Center	86	1
Clark Academy	94	1	New Westside Central	66	0
Crescentwood	32	0	NSP St. Timothy's	105	1
Durfee	47	0	OLHSA Oak Park Head Start	72	1
Ecorse	64	0	OLHSA Pontiac Head Start	426	1
Emmanuel	29	0	Rainbow Academy	91	1
Eternal Rock	52	0	River Rouge	158	1
Fiore Center	66	0	Samaritan	118	1
Frost PEACE Academy	292	1	Simpson Center	34	0
Greater Mitchell	32	0	Ss. Peter and Paul	80	1
Hamtramck Mitchell	245	1	St. John	70	0
Hanley International	36	0	St. Peter Claver	17	0
Harper Gratiot	118	1	St. Bartholomew	162	1
Hartford	78	1	St. Stephen	111	1
Hernandez	64	0	St. Timothy (Not NSP)	105	1
Highland Park Cortland	87	1	Third New Hope	61	0
Holy Redeemer	141	1	Tower Center	114	1
Infinity I	44	0	WC3D	38	0
Inkster Hiveley	223	1	Winston	68	0
Jones Memorial	64	0	Word of Truth	57	0

Baseline equivalencies in regard to center size were then configured. The table below shows that Race/Ethnicity and Parental Education significantly differed between Small Centers and Not-Small Centers. Specifically, the Small Center group had more children who were reported as Black as well as more children who were reported to be Arab/American. The Not-Small Centers group had more children reported as Hispanic/Latino. The Small Center group had more parents who experienced some college and fewer parents who experienced some high school, in comparison to parents of the Not-Small Center group. These differences between families enrolled in Small Centers versus Not-Small Centers are accounted for in our final model by race and parental education being used as covariates and by making center size an interaction term for other variables. We acknowledge that we did not account for potentially important variables such as religious propensity, household size, and parent vs. grandparent guardianship at baseline. These are unmeasured, potential confounds. However they are unlikely to have

affected the outcomes given the more important covariates are already in the model. It is also unlikely that non-significant findings would have become significant had we put them in the model. It is possible a significant finding could have reversed to non-significant, but this would only be true if the covariate were differentially distributed between the implementation and comparison groups.

Table 8. Baseline Equivalence Analysis (Between Center Sizes) (N= 62)

	Small Center^ (n=31)	**Not Small Center^** (n=31)	**p-value**
Age (mean, sd)	4.15 (.56)	4.05 (.55)	0.170
Gender (%)			
Female	47.9	45.7	0.185
Male	52.1	54.3	
Race/Ethnicity (%)			0.000***
Black	78.6	69.7	
White	2.9	2.1	
Hispanic/Latino	12.7	24.3	
Arab/Arab American	4.2	0.6	
Other	1.6	3.4	
Parental Education (%)			0.000***
Some grade school	4.6	4.9	
Some high school	10.2	16.3	
High School/GED	28.5	28.8	
Trade or training certificate	8.9	8.2	
Some college	40.1	33.4	
Bachelor degree	5.9	6.5	
Graduate degree	1.7	1.9	
Annual Household Income (%)			0.142
Less than 10K	37.5	37.9	
10-15K	21.8	21.3	
15-20K	12.6	14.8	
20-25K	11.0	11.0	
25-35K	10.8	8.6	
35-45K	4.2	3.4	
45-60K	1.9	2.5	
60K and above	0.2	0.6	
†P<.10 *p<.05 **P<.01 ***P<.001			
^ "Small" defined as 70 children attending or fewer, "Not-Small" is defined 71 children attending or more. 71 is the median number of children attending across all centers.			

6. Justification of Target Level of Evidence

To maximize the ability to make causal inferences about RRA and observed outcomes, the evaluation design incorporated pre-post testing, matched comparison groups, and triangulation of data sources. Through these mechanisms, the evaluation worked to satisfy five requirements of internal validity: that RRA demonstrated a strong conceptual basis (see logic model and discussion of Impact Design), RRA preceded observed outcomes, other explanations for observed outcomes have been ruled out, a statistically significant association exists between RRA and observed outcomes, and outcome measures were reliable and valid. In order to obtain a moderate level of evidence, NKFM has taken careful steps in

regards to RRA in order to retain internal validity by addressing these common threats (Grembowski, 2001):

- History: The use of comparison groups represents a key strategy for minimizing threats to history. By observing a comparison group, which was be exposed to the same external events as the treatment group over the course of the program timeline, evaluators can better attribute observed outcomes in the treatment group to PEACH programming. Additionally, children who received the program in the past were screened out of the evaluation.
- Maturation: The use of matched comparison groups controlled for maturation threats by limiting the extent to which RRA effects can be attributed to the natural maturation of children over time. Given that the program is only 7 weeks long in duration, program effects cannot likely be attributed to the maturation of children over such a short time period.
- Testing: Treatment and comparison groups received the same tests and data collection assessments at pretest. Administration of the same tests to both groups increased the likelihood that if testing effects did exist (e.g. participants' outcomes are exaggerated or understated), they applied to both groups, maintaining their comparability.
- Instrumentation: The evaluation further preserved internal validity by employing common tools at pre- and posttest. The use of consistent assessments at pre and post and with comparison groups support evaluators' ability to draw conclusions about the RRA program itself, rather than the instruments used. The set of pre- and post-assessment tools included: 1) parental/caregiver survey to measure children's physical activity and diet, 2) measures of kindergarten readiness (Child behavior checklist and Caregiver-Teacher Report form.
- Statistical regression effects: Regression threats to RRA evaluation findings were reduced because participants were been selected for participation based on specific pretest scores. Further, if regression effects did occur, they were likely to occur in both treatment and comparison groups. The use of reliable and validated instruments, where possible, further controlled for regression threats. This was be especially true when measuring kindergarten readiness utilizing the Child Behavior Checklist and Caregiver-Teacher Report Form.
- Attrition: The evaluation utilized early childhood education centers, which are already intact groups. While attrition cannot be controlled for exactly, comparing "natural" groups minimized the likelihood of unequal attrition between groups and related threats to internal validity. Missing data analysis will be conducted on intervention and comparison groups to assess the likelihood that data is missing at random and that the patterns of missingness are equivalent across groups.
- Differential selection: The evaluation minimized threats to selection, or the possibility that differences in intervention and comparison treatment groups account for observed outcomes, and its potential interaction with maturation, history and instrumentation, by matching treatment and comparison groups on several characteristics and by employing a pre-/posttest design.

Given these strengths, the study still has certain limitations:

- Selection bias: With a nonequivalent comparison group design, there exists the possibility that comparison and treatment groups will still vary on some unmeasured characteristics (Rossi et al., 2004). We matched populations as best as possible by sociodemographic characteristics including race/ethnicity and household income. We then calculated race/ethnicity comparison tables to ensure participants enrolled in the study from randomly selected classrooms were representative of their centers as a whole.

• Selection Additive Effects: With a nonequivalent comparison group design, there exists the possibility that comparison and treatment groups will still vary on some unmeasured characteristics.
• Novelty: This is a concern given that the measures were self-reported and surveys were administered by NKFM staff at Palooza events. It is possible that parents and guardians were aware of the study content and program goals and were therefore biased in their responses.
• Expectancy Effects: This is a potential concern given measures were obtained from parents/guardians/teachers and were administered to parents by staff affiliated with the program. However, staff were instructed to ask parents and teachers to be as honest and truthful as possible in their responses and reassured them that their individual responses would not be analyzed or interpreted on their own (only in large, de-identified data sets.) Staff also received training on answering questions and clarifying terms in the survey tools in ways that were not leading and did not influence responses.

- External validity: Because our target populations for the SIF are made of predominantly low income and high African American and Latino communities, study findings cannot be generalized unless the data are weighted.
- Repeated programming sites: Even though the evaluation study follows a Comparison/Implementation group model, PEACH is unable to control for sites with returning teachers that may carry over nutrition education practices that they learned during previous Regie's Rainbow Adventure® programming, either during SIF or before SIF began. Because PEACH strives to benefit the at-risk population it serves as much as possible, sites are not withheld the program but instead offered a delayed intervention.

7. Changes in SEP in Regard to Impact Evaluation and Design

For year 3, changes to evaluation efforts were made in order to increase the response rate and validity of the data. These changes continued in years 4 and 5 due to their effectiveness in improving response rates. NKFM staff hosted Palooza events at the early childhood education center during child pick up and drop off where they asked parents to complete surveys, offer incentives, distribute health information and provide a food sample. The teachers were still responsible for distributing surveys to parents not reached at these events but it removed a large portion of the work they previously had to do.

In years 1 and 2, teachers were responsible for asking parents/guardians of all the children in their classrooms to complete the Parent/Guardian survey and a subsample of 20 parents/guardians to complete the Parent Child Behavior Checklist instrument. Starting in year 3, a smaller random sample of 50 children per center was selected for survey distribution with a target of 30 completed surveys by both parents/guardians and teachers. The addition of a random sample and elimination of a small subsample for the instrument were implemented to increase response rates.

More substantial teacher and parent incentives in the form of gift cards were distributed in year 3 and again in years 4 and 5. There was hope that the ability to tell parents that they will receive an incentive when returning a survey would increase the likelihood that parents return completed surveys. In response to parent feedback from years 1 and 2, positive behaviors were added to the CBCL 1.5/5 to increase the likelihood that parents would complete the survey in year 3. The original version of this survey only includes negative behaviors. Teachers reported in key informant interviews in year 2 that these negative items frustrated parents. By adding items such as 'plays well with others' and 'does something you are proud of', parents were given an opportunity to also describe positive characteristics about their child. These changes were maintained in year 4 programming as well as in year 5.

Changes to the impact evaluation specific to year 4 include changing the type of incentive provided for parents filling out the follow-up surveys. Previously we gave gift cards at Pre Paloozas, only. We would give parents at implementation sites a MyPlate puzzle at Post Paloozas and comparison site parents a flashlight pen at Post Paloozas. In year 4 we began giving parents a gift card at Post Palooza events at both comparison and implementation sites.

Lastly, instead of holding just one, large raffle event for all parents after each evaluation time point (one raffle event after baseline surveys are turned in, one raffle event after follow up surveys are turned in), we divided up the amount of money dedicated to the raffle event and created smaller raffle events for each partner site, allowing for parents to have a greater chance of winning. This practice continued into year 5 as well.

C. Sampling, Measures, and Data Collection Activities of Implementation Study

1. Program Fidelity as measured by the Implementation Checklist

Implementation Checklists were given to classroom teachers prior to the start of the RRA program and were given only to those teachers whose classrooms were selected for evaluation in implementation centers. The tool was given to teachers at the beginning of the program so that they could track how much of the program they implemented in their classroom each week as well as provide an estimate of how much of the program they felt they implemented overall. The checklists were collected from teachers by NKFM staff at the end of the program. This tool was first implemented in year 2. It was a very lengthy checklist that was often not returned to NKFM staff at all and when it was, it was generally not completed in its entirety. Therefore, changes to the Implementation Checklist were made after year 2 and years 3-5 utilized a more succinct, shorter form that was easier for teachers to fill out and return to NKFM. Due to the fact that there was very little program fidelity data from year 2 and the tool itself was very different, we have not included year 2 data in program fidelity analyses. The response rate for this tool was 22.5% as 61 were returned out of the 271 that were distributed to implementation teachers in Years 3, 4, and 5. For each week of the program teachers could report that they implemented none, some, most, or all of the program by checking the appropriate box. Teachers also reported their overall estimation of the percentage of the program that they completed with their class over the entire 7 weeks. They did so by writing in the percentage themselves. The tool can be viewed in Appendix B: Survey Instruments.

We hypothesized that that a higher dosage of the program (a higher score on the checklist) would result in higher outcome responses from children participating in the evaluation. A dose effect was not calculated, however, given that the response rate of the tool was so low. Only 542 participants' classrooms had Implementation Checklist data—a subsample too small to use for dosage analyses.

Program fidelity was then quantitatively derived from the measures described above. Each week's level of implementation (none, some, most, all) was entered into a database, as well as the teacher's overall estimation of the percentage of the program that they completed with their class. Each classroom was identified by a Classroom ID number that was written on the top of each Implementation Checklist prior to giving them to teachers. This was how we were able to identify each classroom, as some teachers taught two classes a day (AM and PM) and so identifying classrooms by teachers' names was not appropriate. The individual weekly measurements of none, some, most, all were given numerical values in

our Microsoft ACCESS database. None = 0, Some = 1, Most = 2, All = 3. Using these values, the weekly mean and median scores of program fidelity were calculated. These findings are reported in Section III Part A.

To report an aggregate, average measure of program fidelity between years 3-5, each overall estimation of the percentage of the program that was completed was added together and then divided by the number of checklists we received. In addition to the average, the median measure of overall program fidelity was also calculated and both are reported in Section III Part A. And although fidelity data indicate high quality implementation, these data are subject to very high rates of non-response, as mentioned. The above mentioned analyses assessing program fidelity in years 3-5 are based on a 22.5% response rate, only. Therefore it is difficult to truly determine if the intervention was in fact implemented as intended, and whether participants did received adequate dosage of RRA programming. It is possible that teachers who returned the checklists were also more likely to adhere to programming guidelines, which suggests that our Implementation Checklist data could overestimate implementation fidelity.

2. Program Satisfaction and Most Liked RRA Content as Measured by Key Informant Interviews

Program satisfaction was measured in a qualitative fashion through key informant interviews with teachers at implementation centers only, after they implemented the program. Key informant interviews were first implemented in the end of Year 1. The Key Informant Interview Guide used in years 2, 3, and 4 is an updated and amended version of the Key Informant Interview Guide first provided to NKFM by Michigan Public Health Institute in year 1. This tool can be viewed in Appendix B. The reliability and validity of this tool is not available nor necessary, given that it was designed to collect qualitative information, only.

These interviews were led by NKFM staff members. At least 2 staff members were in attendance at each interview to help guide the dialogue and take notes. There are audio recordings of the interviews that took place in year 1, year 2, and year 3. Notes and transcriptions from the interviews were used by staff to then categorize and tally comments by their content. Examples of phrases that staff recorded to determine program satisfaction include teachers mentioning how much their students enjoyed the program, explaining what it is their students liked most about the program and/or disliked most about the program, expressing whether or not they as teachers would do the program again in the future, and mentioning what, if anything, they would change about the RRA program. These interviews were also used by staff to determine what types of RRA content were most liked and beneficial to children's learning, topics not unrelated to program satisfaction. Again, staff utilized notes and transcriptions to tally what specific RRA content and components were mentioned as being most liked and most beneficial in the classroom. Teachers self-selected to take part in these interviews. It is possible that teachers who enjoyed the program more and found the program to be more beneficial were the teachers who volunteered to take part, therefore skewing our qualitative results to be more positive.

Analyses took place at the end of each grant year that the interviews also took place. Such thematic, qualitative analyses of program feedback have helped shape the RRA program into what it is today as it informed the evolution of program materials, the Teacher Manual, program delivery methods and evaluation delivery methods (including the creation of Palooza survey events).

3. Reach through Media Toolkit: NKFM.org Early Childhood Page

The MTK was introduced as a supplement to the SIF project and was not a crucial aspect of the evaluation study, nor did it undergo rigorous evaluation. As such, we can only assume that the increase in traffic and interaction on the RRA Facebook page as well as on the Early Childhood website means that the MTK was well received and on the path towards a pre-preliminary evidence level. In an effort to maintain a true quasi-experimental design with implementation and comparison groups, the MTK was only promoted within implementation sites and during regular RRA programming within comparison sites only after evaluation was completed. Quantitative approaches for the Media Toolkit included tallying the number of visitors to the NKFM.org Early Childhood website throughout years 3-5. This number of visits to the website is not indicative of the actual number of people who accessed the website (true 'reach'), as any one person could have visited the website numerous times.

4. Reach through Media Toolkit: RRA Facebook Page

The number of page views, page likes, post likes, and post shares has been tabulated for the RRA Facebook page for Years 3-5. Simple tallies throughout program years took place and were made possible by utilizing Facebook Analytics. Page view is defined as specifically going to the RRA Facebook page, not just merely viewing a RRA post on one's personal feed. One person can view the RRA Facebook page several times and therefore we cannot report the physical number of people who have viewed the page but only the total number of page views

5. Reach through Media Toolkit: RRA Facebook Page Posts

In order to answer the research question "What types of MTK content are most liked, shared, and commented on by Facebook participants?" NKFM staff used Facebook Analytics, which tallied the number of likes, shares of, and comments on RRA Facebook posts. By identifying the posts that had to most number of likes, most shares, and most comments throughout Years 3-5, we discovered which kinds of content were most popular with users.

6. NAP SACC Program Implementation

The NAP SACC program was offered to all participating centers each year of the study as a separate program from RRA and HFSY. Participating in NAP SACC was completely voluntary, and centers could participate in the RRA program without choosing to also participate in NAP SACC. Centers that were not participating in RRA as part of the SIF 2011 study (due to small center size enrollment) were able to participate in SIF NAP SACC because they were located within the 10 operational regions.
The following Centers participated in NAP SACC throughout the 5 years of the study by completing both pre and post assessments:

Year 1: Bibleway I, Citadel of Praise, Metropolitan, Tower, New Westside Central
Year 2: River Rouge, Inkster-Hiveley
Year 3: Hamtramck Mitchell, Highland Park Cortland
Year 4: Inkster-Hiveley, Hamtramck Mitchell, Highland Park Cortland, OLHSA Pontiac Head Start, OLHSA Oak Park Head Start at Key Elementary, Westwood Head Start, Gracie Fox, Above and Beyond, Second Home Child Development, Something Special Daycare, Willis Wonderland Home Child Care, A Place for Jake, Young Faith Child Care, Seay's Home Child Care, Lona's Learning Zone, Detroit Hispanic Development Corporation, Open Arms Child Care.
Year 5: Mt. Calvary, Mt. Zion, Kids in Zion

Center staff were instructed to complete pre and post center nutrition and physical activity practices assessments as part of the NAP SACC program. These surveys were generally completed online. Some survey were completed by hand, and NKFM staff then complete them online via the center's online NAP SACC account. Data for NAP SACC were collected via the MIHealthTool resource that is managed by the Michigan Department of Health and Human Services (http://mihealthtools.org/childcare/) that captures pre and post assessments and actions towards the selected goals. All entered survey data was retrieved by Michigan Department of Health and Human Services (MDHHS). MDHHS organized the data in an excel spreadsheet and sent it to NKFM. MDHSS assigned numerical values to all possible responses for each question in the surveys. They are as follows: 99= Not Applicable; 0 = Not Achieving Best Practice; 1 = Starting to Achieve Best Practice, Needs Improvement; 2 = Nearly Achieving Best Practices; and 3 = Achieving Best Practices. NKFM evaluation staff then cleaned the data and performed simple analyses in Excel to show the improvements centers made between their pre and post surveys.

To answer the research question "Will centers that complete making improvements in nutritional and physical activity offer healthier food options and more physical activity opportunities?" The following pre and post assessment questions in the nutrition section were analyzed:

Fruits & Vegetables
1. Fruit (Not juice) is offered: (0)-3 times a week or less; (1)-4 times per week; (2)-1 time per day; (3)-2 or more times per day.
2. Fruit is offered canned in its own juice (no syrup), fresh, or frozen: (0)-Rarely or never; (1)-Some of the time; (2)-Most of the time; (3)-All of the time
3. Vegetables (not including French fries, tater tots, hash browns or dried beans) are offered: (0)-2 times a week or less; (1)-3 to 4 times per week; (2)-1 time per day; (3)-2 or more times per day
4. Vegetables, other than potatoes, corn and green beans are offered: (0)-Less than1 time per week; (1)-1 to 2 times per week; (2)-3 to 4 times per week; (3)-1 or more times per day
5. Cooked vegetables are prepared with added meat, fat, margarine, or butter: (0)-All of the time; (1)-Most of the time; (2)-Some of the time; (3)-Rarely or never

Meats, Fats, & Grains
1. Fried or pre-fried potatoes (French fries, tater tots, hash browns) are offered: (0)-3 or more times per week; (1)-2 times her week; (2)-1 time per week; (3)-Less than once a week or never
2. Fried or pre-fried (frozen and breaded) meats (chicken nuggets) or fish (fish sticks) are offered: (0)-3 or more times per week; (1)-2 times per week; (2)- 1 time per week; (3)-Less than once a week or never
3. High-fat meats (sausage, bacon, hot dogs, bologna, ground beef) are offered: (0)-3 or more times per week; (1)-2 times per week; (2)-1 time per week; (3)-Less than once a week or never
4. Beans or lean meats (baked or broiled chicken, turkey or fish) are offered: (0)-Less than 1 time per week; (1)-1 to 2 times per week; (2)-3 to 4 times per week; (3)-1 or more times per day
5. High-fiber, whole grain foods (whole wheat bread, oatmeal, brown rice, Cheerios, etc.) are offered: (0)-1 time per week or less; (1)-2 to 4 times per week; (2)-1 time per day; (3)-2 or more times per day
6. Sweets or salty foods (cookies, cakes, muffins, chips, etc.) are offered: (0)-1 or more times per day; (1)- 3 to 4 times per week; (2)-1 to 2 times per week; (3)-Less than once a week or never

Beverages
1. Drinking water outside is: (0)-Not visible; (1)-Visible but only available during designated water breaks; (2)-Easily visible and available on request; (3)-Easily visible and available for self service
2. Drinking water inside is: (0)-Not visible; (1)-Visible but only available during designated water breaks; (2)-Easily visible and available on request; (3)-Easily visible and available for self service
3. 100% fruit juice is offered: (0)-2 or more times per day; (1)- 1 time per day; (2)-3 to 4 times per week; (3)-2 times per week or less

4. Sugary drinks (Kool-Aid, sports drinks, sweet tea, punches, soda) other than 100% juice are offered:
(0)-1 or more times per week; (1)-Less than 1 time per week; (2)-Less than 1 time per month; (3)-Rarely or never
5. Milk served to children ages 2 years and older is usually: (0)-Whole or regular; (1)-2% reduced fat; (2)-1 to 2% reduced fat; (3)-Always 1% or skim/Nonfat
6. Soda and other vending machines are located: (0)-In the entrance or front of the building; (1)-In public areas, but not at the entrance; (2)-Out of sight of parents and children; (3)-No vending machines on site

Foods Offered Outside of Regular Meals & Snacks
1. Guidelines provided to parents for food brought in for holidays or celebrations are: (0)-Not available; (1)- Loose guidelines with healthier options encouraged; (2)-Written guidelines for healthier options that are not always enforced; (3)-Written guidelines for healthier options that are usually enforced
2. Holidays are celebrated with mostly healthy foods or non-food treats, like stickers: (0)-Rarely or never; (1)-Some of the time; (2)-Most of the time; (3)-All of the time
3. Fundraising consists of selling only non food items (like wrapping paper, coupon books, magazines):
(0)- Rarely or never; (1)- Some of the time; (2)-Most of the time; (3)-All of the time OR we do not conduct fundraising activities

And the following pre and post assessment questions in the physical activity section were analyzed:

Active Play Time & Inactive Time
1. Active play time is provided to preschool children: (0)-45 minutes or less each day; (1) 46 to 90 minutes each day; (2)-91 to 120 minutes each day; (3)-More than 120 minutes each day
2. Structured physical activity is provided to all children: (0)-1 time per week or less; (1)-2 to 4 times per week; (2)-1 tie per day; (3)-2 or more times per day
3. Outdoor active play is provided for all children: (0)-1 time per week or less; (1)-2 to 4 times per week; (2)-1 time per day; (3)-2 or more times per day
4. Active play is withheld for children who misbehave: (0)-Often; (1)-Sometimes; (2)-Never; (3)-Never and we provided more active play for good behavior

Support for Physical Activity
1. During active play time, caregivers: (0)-Supervise play only (mostly sit or stand); (1)-Sometimes encourage children to be active; (2)-Sometimes encourage children to be active and join children in active play; (3)-Often encourage children to be active and join children in active play
2. Support for physical activity is visibly displayed in common areas by: (0)-No posters, pictures, or books about physical activity displayed; (1)-Visual support for physical activity is available for lessons or upon request; (2)-Poster, pictures, or books about physical displayed in some areas; (3)-Posters, pictures, or books about physical activity displayed in all areas where children spend most of their time

The difference between centers' pre and post assessment scores for these specific questions were specifically recorded and improvements were noted, counted, and reported in part D of Section III. The NAP SACC tool can be viewed fully in Appendix B.

Construction of the NAP SACC self-assessment survey took place in 2001 and 2002. Formative research was conducted in order to gain insight into parent and child care provider views of the nutrition and physical activity environments within child care centers, determine in what ways the rating and regulatory systems influence nutrition and physical activity in these centers, and identify opportunities to encourage and enhance positive nutrition and physical activity behaviors in children in child care settings through policy and environmental changes (Ammerman et al, 2007).

Researchers conducted a thorough review of nutrition and physical activity standards and recommendations for children ages 2 to 5 years old and in relation to early child care. The also reviewed the scientific literature regarding nutrition and physical activity behaviors of young children. An advisory

group of child health professionals and child care center staff convened starting in 2001 to guide development of the intervention process and program materials (Ammerman et al, 2007).

Formative work suggested that a self-assessment approach would help pinpoint areas that need attention and provide more sustainable and achievable improvements through voluntary participation and self-initiated change. Such a tool would also allow for an honest evaluation of the child care setting and environments without repercussions from regulatory and/or licensing groups. Pilot testing took place to assess feasibility and acceptability in 19 child care centers. Ten national experts in pertinent fields then reviewed and edited the instrument one last time (Ammerman et al, 2007).

A 2007 study assessed the validity and reliability of the NAP SACC self-assessment survey. Kappa statistics for inter-rater reliability ranged from 0.20 to 1.00 across all questions. The test-retest reliability of the survey tool generated kappa statistics ranging from 0.07 to 1.00. The inter-quartile kappa statistic ranges for both inter-rater and test-retest reliability were 0.45 to 0.63 and 0.27-0.45, respectively. Percent agreement was calculated and questions ranged from52.6% to 100% for inter-rater reliability and 34.3 to 100% for test-retest reliability. Validity kappa statistics ranged from 0.04 to 0.79 and had an inter-quartile range of 0.08 to 0.34. The percent agreement for validity ranged from 12.9% to 93.7%. (Benjamin et al, 2007). These results indicate that the self-assessment survey is a stable and reasonably accurate instrument for use with child care interventions. The NAP SACC Self-Assessment tools are located in Appendix B.

7. Lessons Learned

We first informed families of the MTK by word of mouth. We thought that saying "Remember to look Regie up on Facebook" or "Make sure to google Regie's Rainbow Adventure, we have a website now!" would suffice in increasing traffic on our Facebook page and early childhood website. It did somewhat, but we often had families asking for a MTK handout with a list of what all was available online. We then created a colorful MTK handout with the website URLS and Facebook page visually available so families could have the MTK information readily available.

NAP SACC program completion was also an issue. Center administrators were excited about the program but would often be burdened by paperwork and many other responsibilities during the chaos of the school year such that completing the NAP SACC assessments would fall by the wayside. Continued communication from our program coordinators in the form of emails, phone calls, and visits when in the area served as reminders for centers to complete the assessments and achieve their goals. Such communication also provided the opportunity for center administrators to ask questions, clarify terms in the assessments, seek advice, etc. This was an important step in forging strong relationships with centers participating in NAP SACC such that they would follow through with their goals and decide to participate in the program again.

8. Changes to SEP Regarding Implementation Evaluation or Design

The Implementation Checklist was changed in order to collect more accurate data beginning in year 3. Language was added to this survey to decrease social desirability effects and to encourage teachers to report the actual percentage of the program they were able to implement.

As advised by our official reviewers, our research question regarding NAP SACC was move from the exploratory category for the impact study to the implementation category. This change was advised upon review of our SEP document submitted in February 2016. We made this change in all subsequent documents submitted to CNCS.

D. Sample Flow of Impact Study

1. Participant Flow Description

As described in the impact evaluation design section, RRA program participants at each center were selected through a randomization process at the classroom level, and then a set of exclusion criteria at the individual level. This same process was used for both implementation and comparison groups. Sample sizes for both the implementation and comparison groups are show in the table below. The table begins by describing those included in the study and those not. It then describes those included in the implementation and comparison groups.

Table 9. Participant Flow Descriptions for Impact Study Evaluation

Study Timepoint	**Number Evaluated for Potential Enrollment**	**Number Not Included in Study after Evaluation**	**Notes**
Enrollment	11,227 children received the program at all participating centers.	3,188 children were excluded from being enrolled in the evaluation	The number of people evaluated for potential enrollment into the study includes all children at all centers who receive the program. All 11,227 children were evaluated for potential enrollment into the study. Potentially eligible children in classrooms that were not randomly selected to participate in the evaluation component were excluded a priori. Then, children who already received the program were excluded from enrollment in the evaluation. Any child who had ever received the program before could not ever be enrolled in either arm of the study. 11,227 – 3,188 = 8,039 children enrolled in the study
Study Timepoint	**Number Allocated to Implementation**	**Number Allocated to Comparison**	**Notes**
Intervention Allocation	4,396 participants	3,643 participants	After determining the number of children eligible to participate, they were allocated to either the Implementation or Comparison arm, generally based on where their centers resided within United Way of SEM's 10 specific regions. Reasons for not being placed in the Implementation arm include centers not residing in any one of the 10 regions that Implementation centers had to be located within, or, simply being chosen as a comparison site in a given program year on a case by case basis at the discretion of NKFM staff based on center matching needs. 4,396 + 3,643 = 8,039 participants allocated, total.
Study Timepoint	**Number in Implementation**	**Number in Comparison**	**Notes**
Program Completion- Participants who stayed in evaluation for entire duration as allocated by study group	4,222 participants stayed in the 7 week long evaluation component in the Implementation Group	3,567 participants stayed in the 7 week evaluation component in the Comparison group	We had zero participants formally withdraw for the program throughout the course of the study. However, we have knowledge of 250 participants (174 Implementation, 76 Comparison) who dropped out of their centers during programming (or whose centers closed down during programming), such that they were lost both to the intervention and to assessment. The number of children allocated to each intervention arm minus the number of

			children who reported leaving their centers (or centers closing) = the number of participants who remained in the evaluation component for the entire 7 weeks. 4,396 – 174 = 4,222 participants 3,643 – 76 = 3,567 participants 4,222 + 3,567 = 7,789 participants stayed in the evaluation for the entire duration
Study Timepoint	**Number who Returned Surveys**	**Number who Did Not Return Surveys**	**Notes**
Program Completion- Participants who returned any survey tools, versus those who did not	4,845 participants	2,944	Of the 7,789 participants who stayed in the evaluation for its entire duration, 2,944 of them did not return any survey tools. 7,789 – 2,944 = 4,845 as the final sample size

Study Timepoint	**Number with Baseline Values Only in Implementation**	**Number with Baseline Values Only in Comparison**	**Notes**
Follow Up – Participants with only baseline values for the confirmatory outcomes, by study group	863 participants	970 participants	These numbers include the 250 children who were lost both to the intervention and to follow up. 863 + 970 = 1833 participants with baseline values only
Study Timepoint	**Number with Post Values in Implementation**	**Number with Post Values in Comparison**	**Notes**
Follow Up – Participants who have follow up values for the confirmatory outcomes independent of baseline values, by study group	1,238 participants	1,367 participants	2,605 participants had follow up values for the confirmatory outcomes, independent of baseline values. 1,238 + 1,367 = 2,605 Of the 1,238 participants with follow up values in the implementation arm, 402 of them had follow up values only. Of the 1,367 participants with follow up values in the comparison arm, 427 of them had follow up values only.
Study Timepoint	**Number in Pre/Post Cohort in Implementation**	**Number in Pre/Post Cohort in Comparison**	**Notes**
Follow Up – Participants who have both baseline and follow up values for confirmatory outcomes, by study group	836 participants	1,141 participants	1977 participants had both baseline and follow up values for the confirmatory research outcomes. 836 + 1141 = 1977 The total number of participants in the Implementation group who had baseline values can be calculated as 863 (baseline only) + 836 (baseline and follow up) = 1699. The total number of participants in the Comparison group who had baseline values can be calculated as 970 (baseline only) + 1,141 (baseline and follow up) = 2,111.

Study Timepoint	Number of Implementation in Main Analyses	Number of Comparison in Main Analyses	Notes
Analysis – Participants included in main analysis, by study group	2,224 participants included in main analyses	2,621 participants included in main analyses *(2,437 participants)	*184 participants in the comparison group included in the evaluation attended centers that switched from implementation to comparison between program years. Final analyses excluded these 184 children from the model. The analyses were repeated with the 184 participants in order to assess whether centers switching conditions had any impact on outcomes. 2,224 + 2,621 = 4,845 participants included in main analyses 4,845 – 184 = 4,661 included in alternate analyses 2,621 - 184 = 2,437 participants in Comparison group included in alternate analyses 2,224 participants in Implementation group included in main analyses.

2. Composition of the RRA Impact Evaluation Sample

The following table below shows demographics of the study participants, as reported at baseline by children's parents/guardians. The average age of study participants was 4.08 years old, and more study participants were identified by their parents/guardians as male than female. Study participants were predominately Black. The next most common race/ethnicity reported was Hispanic/Latino. Over 80% of parents/guardians reported they had completed high school/obtained their GED. However, only 6.3% hold a four-year bachelor degree and 35.4% say they attended some college but never graduated. The percentage of households making less than $25,000 a year is high at 84.5%. Following this trend of generally low-educated, low-income families is participants' Medicaid status. Over 82% of participants were on Medicaid and an additional 0.7% received insurance through CHIP, a Medicaid program administered at the state level and funded jointly by states and the federal government.

Lastly, over half of participants' families received SNAP benefits and almost a quarter were in the WIC program. Parents/guardians were able to check all of public assistance programs in which they participated and therefore some participants were enrolled in more than one of these programs. It is possible to be enrolled in WIC, receive SNAP benefits, and also take part in the FIP program simultaneously. It is important to note that it is not known whether the 12.1% of parents/guardians who reported that their families were not on any form of public assistance were eligible to be in any public assistance programs as this was not asked. It is both possible and plausible that some percentage of these families were indeed eligible to be enrolled in public assistance programs during the course of the study but were not at the time. Insurance type and coverage as well as participation in public assistance programs are relevant characteristics of our study population as both play roles in the health of young children and their families.

Table 10. General Description of Study Participants (N = 4845)

Age (mean, sd)	4.08 (0.55)
Gender (%)	
Female	46.4
Male	53.6
Race/Ethnicity (%)	
Black	72.3
White	2.3
Hispanic/Latino	21.0
Arab	1.6
Other	2.9
Parental Education (%)	
Some grade school	4.8
Some high school	14.6
High School/GED	28.7
Trade or training certificate	8.4
Some college	35.4
Bachelor degree	6.3
Graduate degree	1.9
Annual Household Income (%)	
Less than 10K	37.9
10-15K	21.4
15-20K	14.2
20-25K	11.0
25-35K	9.2
35-45K	3.6
45-60K	2.3
60K and above	0.5
Insurance (%)	
Private	12.8
Medicaid	82.3
CHIP	0.7
Military	0.2
Indian Health Service	0.0
Single Service Plan	0.4
Other gov't plan	1.9
None	1.7
Public Assistance (%)	
WIC	24.5
SNAP	54.2
FIP	7.3
Other	1.9
None	12.1

3. Sample Recruitment and Retention

Recruitment started at the center level by finding centers located within the 10 regions that were large enough to take part in the evaluation study. Centers with whom we already partnered for the RRA program were generally easier to recruit, as they just had to add the evaluation component to what they were already doing. Once these center partnerships were formed, we would meet with classroom teachers to introduce them to the program and explain the requirements of the evaluation. Because we utilized a train-the-trainer model, it was important that these teachers fully understood the components of both the program and the evaluation study.

Starting in year 3, we used passive consent forms instead of active consent forms. This requires parents to sign the passive consent form only if they do not consent to their child's data being used in the SIF study. When the consent form is not signed and given back to NKFM, consent is assumed. If parents did not consent their child for the study, NKFM did not use any of the data from the individual level survey instruments including those completed by teachers about individual children. This practice was adopted to reduce the amount of paperwork required for parents to send in to participate in the study. The passive consent form was especially discussed with teachers at length because they were handing them out to parents at classroom drop-offs in the morning and pick-ups in the afternoon. We wanted to make sure that teachers felt comfortable answering general questions parents might have about participating in the evaluation component of RRA.

The way we discussed the evaluation with teachers was important as well. We made sure to emphasize that we were in no way evaluating their effectiveness or skills as teachers, and the surveys that they filled out would not be shared with their colleagues, administrators, or employers. We expressed that we had developed a fun and interactive nutrition and physical education program for preschool age children that was meant to improve kindergarten readiness, and we simply wanted to know whether it was working, and if it was, how well. We were able to find common ground with teachers by showing our commitment to improving the health and school readiness of young children. This engagement at the teacher level then trickled down to parents and families. Teachers introduced the program to their students and introduced the program and our research to families and parents and pick up and drop off times. Teachers were able to pass on to potential participants and their families their enthusiasm for the program and their willingness to take part in a research study that aimed to improve children's lives. Thus, participant recruitment and engagement was not a real hardship for us.

Due to the nature of working with a transient population (Head Start families), sample retention was a challenge in this pre/post cohort study. The PEACH team took proactive measures to attempt to retain as many participants as possible starting in year 3. Year 1 was a feasibility assessment and so year 2 was the start of our evaluation study as it exists today. Survey collection events were designed to help with sample retention in year 3, as they allowed NKFM to have a physical presence in the schools. Survey data were collected through the process of hosting "Regie Paloozas" at each implementation center and "Parent Paloozas" at each comparison center. NKFM staff hosted these Paloozas during child pick up and drop off where they asked parents to complete surveys, offered incentives, and provided a food sample. Parents/guardians were given a gift card and a raffle ticket for a future raffle drawing for completing the surveys then and there. NKFM staff were available to help with survey comprehension, answer any questions, and communicate about the PEACH programs with parents. It was key to have staff available

to answer questions that parents had to ensure they did not drop out of the study due to lack of understanding of questions or literacy difficulties. These events were held at both pre and post time points (weeks 1-2, and 10-11, respectively). NKFM would approach parents/guardians and ask for their child's name. If their child was part of the random sample determined prior to the Palooza events, NKFM staff would then present the parent/guardian with the survey about their child and ask them to complete it then and there. If it was determined that their child was not part of the random sample, parents were thanked and offered free educational materials.

Whereas these events were focused on increasing parent involvement in the evaluation, they also allowed our staff to distribute teacher surveys and any leftover parent surveys to teachers, which were left with the teachers at the end of the event. However, this did become a barrier because it then fell upon the teachers to send these surveys home with their students, in hopes they were then sent back to school completed by their parents/guardians. NKFM staff would then pick up these surveys from teachers at a later date. The many steps necessary for these surveys to completed and returned to NKFM staff in order to be used in the evaluation made it difficult to retain participants, period. It was especially difficult to retain participants who were absent on days of survey events or did not have time to fill them out. To help mitigate this, NKFM program coordinators made many phone calls, emails, and extra trips to the schools with whom they programmed to pick up surveys and distribute gift cards to ensure that these participants did not drop out of the study.

At follow-up Palooza events, all parents of children chosen for evaluation were invited to fill out surveys, not just the parents who filled out baseline surveys. Raffle tickets for a cash prize were available at the follow-up event for parents who filled out follow-up surveys to encourage completion of the evaluation. These raffle drawings took place after evaluation periods were over. NKFM staff would contact centers to inform them of the participants who had won.

Changing the sampling method also helped increase recruitment and retention. In year 1 and year 2, teachers were responsible for asking all parents of all children in their classroom to complete surveys. This felt burdensome and overwhelming for teachers. In year 3, a smaller random sample of 50 children per center was selected for survey distribution with a target of 30 completed surveys by both parents and teachers. We continued with this smaller random sample of 50 children per center in years 4 and 5 as well. The addition of a random sample and elimination of a small subsample were implemented to ease the burden on teachers and increase response rates.

Additionally, more substantial teacher and parent incentives in the form of gift cards were distributed in years 3, 4, and 5. There was hope that the ability to tell parents/guardians that they would receive an incentive when returning a survey would increase the likelihood that they would return completed surveys.

Lastly, in response to parent feedback, positive behaviors were added to the CBCL 1.5/5 to increase the likelihood that parents would complete the survey. The original version of this survey only includes negative behaviors. Teachers reported in key informant interviews in year 2 that these negative items frustrated parents. By adding items such as 'plays well with others' and 'does something you are proud of', parents were given an opportunity to also describe positive characteristics about their child. These changes were maintained in years 4 and 5.

The total average response rate for child level data did indeed increase following the evaluation changes made prior to starting year 3, as illustrated below:

Program Year	Pre Survey Response Rate	Post Survey Response Rate
Year 2	40%	33%
Year 3	61%	43%
Difference	**21% increase**	**10% increase**

For our purposes, retention is defined as being part of the pre/post cohort, where participants have values for all 3 confirmatory research outcomes (Fruit and vegetable consumption, screen time, and amount of physical activity) at baseline and at least one of those values at follow up. Therefore the retention rate for the entire study sample was 1977/4845 = 40.80%.

a) Retention Rates Year 2

In year 2, every parent/guardian whose child participated in Regie's Rainbow Adventure® received a baseline and follow-up parent/guardian survey. However, a smaller, random sample of 18-20 children per center was selected for the parent and teacher report of individual level problem behaviors. Therefore, only 18-20 teachers and parents per center were asked to complete this survey. The parent version of this instrument is called the Child Behavior Checklist (CBCL/1.5-5) and the teacher version is called the Caregiver-Teacher Report Form (C-TRF). The classroom level surveys were distributed to all classrooms that received RRA. For the RRA evaluation, we administered 4,278 parent/guardian surveys. The CBCL 1.5/5 was distributed to 860 parents and teachers. Please refer to Table 11 below for the number of surveys received by program and survey type. As seen below, 1,665 baseline parent/guardian surveys and 1,009 follow-up surveys were collected.

Table 11. Year 2 Response Rates by Survey Tool

Survey	Pre Received	*Response Rate*	Post Received	*Response Rate*
Regie's Rainbow Adventure®				
Child Level Information				
Parent Guardian Survey	1,665	*38.9%*	1,009	*23.6%*
Parent CBCL/1.5-5	332	*39.0%*	289	*34.0%*
Teacher C-TRF	365	*42.0%*	349	*41.0%*
Classroom Level Surveys				
Classroom Behaviors	76	*29.0%*	81	*31.0%*
Implementation Checklist*	N/A	*N/A*	28	*11.0%*
Weekly Attendance Sheet*	N/A	*N/A*	87	*33.0%*

b) Retention Rates Year 3

See Table 12 below for the response rate by survey type in year 3. There was a noteworthy increase in response rate from Year 2 to Year 3 due to the increased funds spent on survey incentives and increased presence of survey staff at the early childhood centers during the pre and post time frames. In year 2, there was a 37.5% response rate for the baseline parent/guardian surveys, a 22.7% response rate for the follow-up parent/guardian surveys and a 14.8% response rate for matched pairs compared to 63.5% 46.0% and 36.8%, respectively in year 3.

The response rate analysis shows that for RRA, about a third (30-37%) of all child level survey data were a matched pre and post pair (the parent or teacher filled out both pre and post surveys for a single child). These rates still continued to be lower than what we hoped for due to the nature of data collection in a school: children may be absent on some data collection days and not others. Post survey rates were uniformly lower than pre survey rates, which could be due to challenges that accrue throughout the year such as illness, weather, paperwork, responsibility, and morale. NKFM recognized the hard work that teachers undergo as a part of typical teacher duties, and asking them to complete PEACH evaluation activities was an added burden even when incentives were offered. Additionally, PEACH does not have the funds for the traditional methods that serve to increase post survey response rates such as reminder postcards and phone calls.

Table 12: Year 3 Response Rates by Survey Tool

Survey	Pre Received	*Response Rate*	Post Received	*Response Rate*	Matched Pairs	*Response Rate*
Regie's Rainbow Adventure®						
Child Level Information						
Parent Guardian Survey	626	*63.5%*	454	*46.0%*	363	*36.8%*
Parent CBCL/1.5-5	569	*57.7%*	421	*42.7%*	303	*30.7%*
Teacher C-TRF	609	*61.8%*	407	*41.3%*	371	*37.6%*
Body mass index data	529	*47.0%*	461	*41.0%*	342	*30.4%*
Classroom Level Surveys						
Classroom Behaviors	76	*75.2%*	43	*42.6%*	34	*33.7%*
Implementation Checklist*	N/A	*N/A*	31	*57.4%*	N/A	*N/A*
Weekly Attendance Sheet*	N/A	*N/A*	35	*64.8%*	N/A	*N/A*

c) Retention Rates Year 4

Table 13 below shows the number (and percentage) of participants who provided responses to the survey questions that measure the main outcomes listed above. As shown, these responses were collected at either the baseline time point only, the follow-up timepoint only, or both the baseline and follow-up timepoints. Those who provided responses to these questions at both the baseline and follow-up timepoints make up the matched pair, pre/post cohort.

Table 13. Survey Response of Main Outcomes by Evaluation Timepoints (N=855)

Variable Name	Variable Description	Pre data only		Post data only		Both Pre and Post data	
		n	%	n	%	n	%
Amt_Fru	Servings Fruit	768	89.82%	513	60.00%	428	50.06%
Amt_Veg	Servings Vegetables	767	89.71%	513	60.00%	428	50.06%
FVComposite	Total fruit and vegetable, plus up to one serving juice	767	89.71%	513	60.00%	428	50.06%
Totaltvhrs	Total hours watching TV	758	88.65%	508	59.42%	418	48.89%
Totalgame	Total hours video games	719	84.09%	493	57.66%	387	45.26%
Totalscreentime	Total screen time hours	707	82.69%	492	57.54%	384	44.91%
PA_week	Total hours of physical activity	709	82.92%	474	55.44%	369	43.16%

Table 14 shows the response rate of all tools involved in the evaluation study in year 4.

Table 14. Year 4 Response Rates by Survey Tool

Survey	Pre Received	*Response Rate*	Post Received	*Response Rate*
Regie's Rainbow Adventure®				
Child Level Information				
Parent Guardian Survey	870	*65.61%*	654	*49.32%*
Parent CBCL/1.5-5	512	*38.61%*	614	*46.30%*
Teacher C-TRF	311	*23.45%*	725	*54.68%*
Classroom Level Information				
Classroom Behaviors	62	*58.49%*	64	*60.38%*
Implementation Checklist*	N/A	*N/A*	13	*12.26%*
Weekly Attendance Sheet*	N/A	*N/A*	22	*20.75%*

d) Retention Rates Year 5

Table 15 below shows the number (and percentage) of participants who provided responses to the survey questions that measure the main outcomes listed above. As shown, these responses were collected at either the baseline time point only, the follow-up timepoint only, or both the baseline and follow-up timepoints. Those who provided responses to these questions at both the baseline and follow-up timepoints make up the matched pair, pre/post cohort.

Table 15. Survey Response of Main Outcomes by Evaluation Timepoints Year 5 (N=897)

Variable Name	Variable Description	Pre data only		Post data only		Both Pre/Post	
		n	%	n	%	n	%
Amt_Fru	Servings Fruit	729	81.27%	546	60.87%	382	42.59%
Amt_Veg	Servings Vegetables	727	81.05%	544	60.65%	381	42.47%
FVComposite	Total fruit and vegetable, plus up to one serving juice	735	81.94%	548	61.09%	387	43.14%
Totaltvhrs	Total hours watching TV	726	80.94%	547	60.98%	382	42.59%
Totalgame	Total hours video games	714	79.60%	540	60.20%	376	41.92%
Totalscreentime	Total screen time hours	726	80.94%	548	61.09%	382	42.59%
PA_week	Total hours of physical activity	727	81.05%	545	60.76%	380	42.36%

Table 16 shows the response rate of all tools involved in the evaluation study in year 5.

Table 16. Year 5 Response Rates by Survey Tool

Survey	Pre received	*Response Rate*	Post received	*Response Rate*
Regie's Rainbow Adventure®				
Child Level Information				
Parent Guardian Survey	737	*57.26%*	547	*42.73%*
Parent CBCL/1.5-5	716	*55.63%*	499	*38.77%*
Teacher C-TRF	1023	*79.49%*	884	*68.69%*
Classroom Level Information				
Classroom Behaviors	86	*77.48%*	74	*66.67%*
Implementation Checklist*	N/A	*N/A*	43	*38.74%*
Weekly Attendance Sheet*	N/A	*N/A*	17	*15.32%*

e) Aggregate Retention Rates for Years 2-5

As explained in the Participant Flow Rubric, those participants who are part of the Pre/Post Cohort have values for all 3 confirmatory research outcomes at baseline and at least one of those values at follow up. Drop Outs are defined as having values for all 3 confirmatory research outcomes at baseline and none at follow up. Participants categorize as Post Only have values in any of the 3 confirmatory research outcomes at follow up only, or have values in any of the 3 confirmatory research outcomes at follow up and an incomplete number of values at baseline (1 or 2, but not 3). Those categorized as Missing have 1 or 2 values at baseline (but not all 3), and 0, 1 or 2 values at follow up (but not all 3), or have no values for these variables at all and only returned Parent and/or Teacher CBCL forms. Table 17 shows the breakdown of these categories for the entire sample. Of the 8,039 children allocated into the intervention, 7,789 participants stayed in the intervention for the entire duration of the evaluation. Of that number, 4,845 participants had any values at all in the confirmatory research variables, as described below.

Table 17. Sample Retention

Group	Totals (N = 4845)
Pre/Post Cohort	1977
Drop Outs	1833
Post Only	829
Missing	206

The overall response rate for the RRA impact study can be defined as the percentage of participants who completed both the baseline and follow up surveys divided by the number of participants who were enrolled in the study: 1,977 out of 8,039 = 24.59%. As previously mentioned, this provides limitations to the generalizability of the study, with such a specific study population, as well as the results of the study, due to the low overall response rate.

Table 18: Survey Responses of Main Outcomes by Evaluation Timepoints Years 2-5 (N = 4845)

Variable Name	Variable Description	Pre data only		Post data only		Both Pre and Post data	
		n	%	n	%	n	%
Amt_Fru	Servings Fruit	3864	79.75%	2607	53.81%	1849	38.16%
Amt_Veg	Servings Vegetables	3861	79.69%	2652	54.74%	1876	38.72%
FVComposite	Total fruit and vegetable, plus up to one serving juice	3886	80.21%	2804	57.87%	2013	41.55%
Totaltvhrs	Total hours watching TV	3836	79.17%	2663	54.96%	1869	38.58%
Totalgame	Total hours video games	3646	79.60%	2620	54.08%	1761	36.35%
Totalscreentime	Total screen time hours	3855	79.57%	2666	55.03%	1879	38.78%
PA_week	Total hours of physical activity	3831	79.07%	2653	54.76%	1856	38.31%

Given that only those who completed the baseline survey were the eligible to be in the pre-post sample, it is useful to present retention and attrition rates relative to the total number of individuals who completed the baseline survey. As Table 18 shows, 3,886 baseline surveys were completed and 1,977 participants completed both the baseline and follow up surveys. Therefore the overall retention rate for the baseline sample was about 51% (1,977 divided by 3,886 = 0.5087).

4. Sample Attrition

Attrition has a two-part definition in this study. "Drop Outs" were defined as anyone with baseline values for the confirmatory outcomes with no follow up values for the confirmatory outcomes. Also included in the attrition category are those participants who dropped out of their centers or had their centers close down during the evaluation, as they were lost both to the intervention and to follow up assessments. Within our final sample of 4,845 participants, 250 dropped out of their centers or had their centers close during the evaluation. These 250 participants are included in our definition of "Drop Outs", which Table 17 shows consists of 1833 participants.

1833 – 250 = 1583 participants lost to follow up (but not lost to intervention), only. With this definition in mind, overall attrition in the study sample was: (1583 + 250) /4,845 = 37.83%. Of the 3,886 participants with baseline data, 1,833 were then lost to follow up. This means the overall attrition rate for the baseline sample was about 47% (1,833 divided by 3,886 = 0.4717).

As described in the Participant Flow Rubric, we have knowledge of only 250 participants who dropped out of their centers and did not complete the intervention. Participants in the Drop Out, Post Only, and Missing groups who were included in the final sample completed the 7 weeks of the intervention but did not adequately complete the Parent/Guardian Survey tools such that they could be included in the pre/post cohort. The reason for the missingness of those lost to the intervention was due to subjects who physically left their centers. This can be considered, at the very least, missing at random and therefore discarding these subjects from the analyses did not cause any bias. We are mainly interested in the treatment effect on post-intervention outcomes (which are subject to missingness), and imputation did improved the efficiency of estimation (see Tables 36 and 37). Therefore, complete-case analyses was used for these analyses.

a) Selective Attrition

We investigated study participants by drop out status and cohort status by performing selective attrition analyses. Those who had matching pre/post surveys were considered part of the true re/post cohort. These analyses took place in order to ensure that no particular demographic group was more likely to drop out of the study.

(1) Selective Attrition in Year 2

Selective attrition was not calculated for the Year 2 sample.

(2) Selective Attrition in Year 3

Table 19 below depicts baseline-only characteristics of the drop out and the pre/post cohort groups and shows that no particular demographic group had a higher tendency to drop out in Year 3.

Table 19: Selective Attrition Analyses of Study Participants in Year 3 (N = 627)

	Drop Outs (n=264)	**Pre/Post Cohort** (n=363)	**p-value**
Age (mean, sd)	4.12 (0.55)	4.09 (0.54)	0.4925
Gender (%)			0.8849
Female	49.62	49.04	
Male	50.38	50.96	
Race/Ethnicity (%)			0.3297
Black	62.36	63.43	
White	1.90	1.94	
Hispanic/Latino	27.00	22.16	
Other	8.75	12.47	
Parental Education (%)			0.4297
Less than HS	21.57	24.43	
HS to some college	69.02	68.68	
College or above	9.41	6.90	
Parental Income (%)			0.2631
Less than 20K	73.98	69.23	
20K to 35K	20.33	26.04	
35K and above	5.69	4.73	
Group (%)			0.0003***
Comparison	32.95	47.38	
Intervention	67.05	52.62	

†P<.10 *p<.05 **P<.01 ***P<.001

(4) Selective Attrition in Year 4

Table 20 below shows baseline-only characteristics of the drop out group and the pre/post cohort group and illustrates that race/ethnicity correlates with dropping out of the study.

Table 20: Selective Attrition Analysis of Study Participants in Year 4 (N = 855)

Baseline Characteristics	Drop Outs (n = 353)	Pre/Post Cohort (n = 502)	p-value
Age (mean, sd)	4.16 (0.55)	4.10 (0.56)	0.1650
Gender (%)			0.9659
Female	47.44	47.29	
Male	52.56	52.71	
Race/Ethnicity (%)			<.0001***
Black	71.39	62.95	
White	3.68	3.19	
Hispanic/Latino	17.56	11.16	
Arab/Arab American	2.27	1.00	
Other	5.10	21.71	
Parental Education (%)			0.7261
Less than HS	15.13	16.67	
HS to some college	76.56	74.02	
College or above	8.31	9.31	
Parental Income (%)			0.5961
Less than 20K	72.33	72.00	
20K to 35K	19.50	21.50	
35K and above	8.18	6.50	
Group (%)			0.8384
Comparison	41.63	58.37	
Implementation	40.94	59.06	
†P<.10 *p<.05 **P<.01 ***P<.001			

(3) Selective Attrition in Year 5

Table 21 below shows baseline-only characteristics of the drop out group and the pre/post cohort group. The reason why N = 721 and not 897 (the total sample) is because 176 participants were part of neither group as they turned in post-assessments only.

Table 21: Selective Attrition Analysis of Study Participants in Year 5 (N = 721)

Baseline Characteristics	Drop Outs (n = 342)	Pre/Post Cohort (n = 379)	p-value
Age (mean, sd)	4.044 (0.51)	4.18 (0.55)	0.001***
Gender (%)			0.074†
Female	55.3	48.5	
Male	44.7	51.5	
Race/Ethnicity (%)			0.821
Black	77.8	80.6	
White	3.8	4.0	
Hispanic/Latino	11.2	9.0	
Arab/Arab American	2.4	2.7	
Other	4.7	3.7	
Parental Education (%)			0.956
Some grade school	3.6	3.2	
Some high school	13.4	13.2	
High school / GED	28.3	30.2	
Trade or Training Cert	8.0	8.6	
Some college	39.6	38.5	
Bachelor Degree	5.1	5.1	
Graduate Degree	2.1	1.1	
Parental Income (%)			0.211
Less than 10K	32.3	37.6	
10K – 15 K	19.1	22.8	
15K – 20K	16.9	14.2	
20K – 25K	12.2	12.0	
25K – 35K	56.7	8.1	
35K – 45K	4.1	3.9	
45K – 60K	2.8	1.1	
60K and more	0.9	0.3	
Group (%)			0.116
Comparison	50.1	49.9	
Implementation	44.1	55.9	

†P<.10 *p<.05 **P<.01 ***P<.001

(4) Selective Attrition for Years 2-5

Table 22 below shows baseline-only characteristics of the drop out group and the pre/post cohort group. The reason why N = 3,810 and not 4,845 (the total sample) is because 1,035 participants were part of neither group as they turned in post-assessments only or had too many missing baseline values to be considered part of the Drop out group or the Pre/Post Cohort group. Selective attrition analyses show that age as well as race/ethnicity are statistically significant differences between the drop out and cohort groups. The participants in the drop out group are younger than those in the cohort and more participants in the drop out group are black. And Figure 2 below shows that the following variables were included in the logistic regression model for drop out status, and none of them were found to be significant.

Table 22. Selective Attrition Analysis of Study Participants Years 2-5 (N = 3810)

Baseline Characteristics	Drop Out (n=1833)	Cohort (n=1977)	p-value
Age (mean, sd)	4.05 (.55)	4.10 (.55)	0.008**
Gender (%)			0.084†
Female	45.1	47.5	
Male	54.9	52.5	
Race/Ethnicity (%)			0.039*
Black	74.7	70.9	
White	2.3	2.4	
Hispanic/latino	19.1	21.7	
Arab/Arab American	1.7	1.5	
Other	2.2	3.5	
Parental Education (%)			0.257
Some grade school	3.8	5.1	
Some high school	13.7	15.3	
High School/GED	28.4	29.0	
Trade or training certificate	8.7	8.3	
Some college	37.1	34.5	
Bachelor degree	6.4	6.1	
Graduate degree	2.0	1.7	
Annual Household Income (%)			0.195
Less than 10K	38.1	37.1	
10-15K	20.7	22.0	
15-20K	14.3	14.2	
20-25K	10.6	11.3	
25-35K	9.1	9.5	
35-45K	3.6	3.7	
45-60K	2.8	2.0	
60K and above	0.8	0.2	
Insurance (%)			0.090†
Private	14.3	11.5	
Medicaid	80.4	83.9	
CHIP	0.9	0.4	
Military	0.2	0.2	
Indian Health Service	0.0	0.0	
Single Service Plan	2.1	1.8	
Other gov't plan	0.4	0.4	
None	1.7	1.7	
Public Assistance (%)			0.197
WIC	22.2	25.4	
SNAP	55.1	54.0	
FIP	7.9	6.8	
Other	2.1	1.9	
None	12.7	11.9	
Group (%)			0.003**
Comparison	45.9	54.1	
Implementation	50.8	49.2	

†P<.10 *p<.05 **P<.01 ***P<.001

Figure 2. No Characteristics in the Model Predict the Propensity to Drop out

Type III Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Study Condition	1	1676	0.01	0.9140
Center Size	1	1676	0.58	0.4472
Study Condition*Center Size	1	1676	0.36	0.5470
Gender	1	1676	0.01	0.9090
Race	4	1676	0.46	0.7645
Education	2	1676	0.03	0.9677
Income	2	1676	1.84	0.1597
Age	1	1676	0.00	0.9777

b) Differential Attrition

Differential attrition analyses of participants lost to follow up were performed each year based on baseline values of program outcome measures.

(1) Differential Attrition in Year 2

Statistically significant differences were not found in year 2 between the implementation and comparison at follow-up in terms of the main outcomes of the evaluation. Although there were a significant number of participants lost to follow-up, the fact that there were not statistically significant differences between the comparison and implementation group at follow-up strengthen the internal validity of the study.

(2) Differential Attrition in Year 3

Table 23 consists of a comparison of baseline values of outcomes for those who dropped out of the study, by group assignment. More participants who dropped out of the study were in the implementation group. Differential attrition results show that there was a significant difference between the comparison group and intervention group in terms of the outcome measure for actual screen time reported at baseline.

Table 23. Differential Attrition Analysis (Between Study Groups) (n = 267)

	Comparisoni (n = 87)	**Implementation[i]** (n = 180)	**P value**
Fruit & Veg. (actual)ii	5.46 (2.16)	5.51 (2.10)	0.8685
Fruit & Veg. (perceived)iii	0.71 (0.89)	0.55 (0.79)	0.1460
Physical Activity (actual)iv	19.74 (8.34)	18.02 (8.72)	0.1474
Physical Activity (perceived) [iii]	0.53 (0.78)	0.64 (0.80)	0.3017
Screen time (actual)[i]v	30.08 (12.72)	26.34 (12.28)	0.0335*
Screen time (perceived) [iii]	1.49 (1.01)	1.51 (1.05)	0.9142
†P<.10 *p<.05 **P<.01 ***P<.001			

i Given as mean (sd)

[ii] Number of Fruit and Vegetable servings on a typical day

i[ii] Grade given by parent (0 = A, 1 = B, 2 = C, 3 = D, 4 = F)

i[v] Measured in hours per typical week

(3) Differential Attrition in Year 4

The differential attrition analysis in Table 24 consists of a comparison of baseline values of outcomes for those who dropped out of the study, by group assignment. More participants who dropped out of the study were in the comparison group. This analysis shows that the only evidence of differential attrition between the comparison and implementation groups is in perceived screen time.

Table 24. Differential Attrition Analysis (Drop Out by Study Groups) (n = 353)

	Comparison[i] (n = 179 drop outs)	**Implementation**[i] (n = 174 drop outs)	**P value**
Fruit & Veg. (actual) [ii]	5.67 (.10)	5.55 (2.05)	0.5725
Fruit & Veg. (perceived) [iii]	0.67 (0.81)	0.73 (0.82)	0.4849
Physical Activity (actual) [iv]	14.80 (9.03)	15.61 (9.26)	0.4313
Physical Activity (perceived)[iii]	0.69 (0.79)	0.63 (0.84)	0.5234
Screen time (actual)[iv]	13.73 (9.71)	13.50 (7.35)	0.8189
Screen time (perceived)[iii]	1.36 (1.00)	1.59 (0.97)	0.0363*
†P<.10 *p<.05 **P<.01 ***P<.001			

i Given as mean (sd)

[ii] Number of Fruit and Vegetable servings on a typical day

i[ii] Grade given by parent (0 = A, 1 = B, 2 = C, 3 = D, 4 = F)

i[v] Measured in hours per typical week

(4) Differential Attrition in Year 5

In year 5, there were more drop outs in the comparison group. Differential analyses show that the only evidence of differential attrition between the two groups is in actual screen time.

Table 25. Differential Attrition Analysis (Drop Out by Study Groups) (n = 342)

	Comparison[i] (n = 199 drop outs)	**Implementation**[i] (n = 143 drop outs)	**P value**
Fruit & Veg. (actual) [ii]	5.72 (2.10)	5.31 (2.28)	0.0879†
Fruit & Veg. (perceived) [iii]	0.59 (0.77)	0.51 (0.74)	0.3564
Physical Activity (actual) [iv]	18.68 (7.60)	19.06 (8.36)	0.6842
Physical Activity (perceived)[iii]	0.59 (0.77)	0.58 (0.80)	0.9408
Screen time (actual)[iv]	19.10 (10.36)	15.86 (9.49)	0.0041**
Screen time (perceived)[iii]	1.31 (0.92)	1.25 (0.92)	0.5261
†P<.10 *p<.05 **P<.01 ***P<.001			

i Given as mean (sd)

[ii] Number of Fruit and Vegetable servings on a typical day

i[ii] Grade given by parent (0 = A, 1 = B, 2 = C, 3 = D, 4 = F)

i[v] Measured in hours per typical week

(5) Differential Attrition in Years 2-5 Final Sample

Our final sample of 4,845 participants had 1833 drop outs, as previously defined. The comparison group had more drop outs than the implementation group. Evidence of differential attrition is statistically significant in the actual fruit and vegetable consumption measurement, the actual screen time measurement, and the perceived screen time measurement.

Table 26: Differential Attrition Analysis (Drop by Study Groups) (n = 1833)

	Comparison[i] (n = 970 drop outs)	**Implementation**[i] (n = 863 drop outs)	**P value**
Fruit & Veg. (actual) [ii]	5.60 (2.10)	5.37 (2.10)	0.0169*
Fruit & Veg. (perceived)[iii]	0.69 (0.84)	0.72 (0.92)	0.5305
Physical Activity (actual) [iv]	18.44 (8.61)	18.21 (8.63)	0.5943
Physical Activity (perceived)[iii]	0.69 (0.92)	0.74 (0.96)	0.2808
Screen time (actual)[iv]	18.54 (10.39)	17.46 (9.70)	0.0288*
Screen time (perceived)[iii]	1.48 (1.12)	1.60 (1.10)	0.0252*
†P<.10 *p<.05 **P<.01 ***P<.001			

[i] Given as mean (sd)

[ii] Number of Fruit and Vegetable servings on a typical day

[iii] Grade given by parent (0 = A, 1 = B, 2 = C, 3 = D, 4 = F)

[iv] Measured in hours per typical week

Differential attrition was also calculated with regard to baseline demographic variables to understand what baseline demographics differed (and by how much) between drop outs from the comparison group and drop outs from the implementation group (see Table 27 on following page).

Table 27: Differential Attrition of Demographic Variables (Drop outs by Study Groups) (N =1833)

Baseline Characteristics	Comparison (n = 970 drop outs)	Implementation (n = 863 drop outs)	p-value
Age (mean, sd)	4.09 (.55)	4.01 (.56)	0.001**
Gender (%)			0.341
Female	49.1	47.7	
Male	50.9	52.3	
Race/Ethnicity (%)			<0.001**
Black	73.8	75.7	
White	2.1	2.6	
Hispanic/Latino	22.1	15.7	
Arab/Arab American	1.6	1.8	
Other	0.4	4.3	
Parental Education (%)			0.750
Some grade school	3.9	3.7	
Some high school	14.4	12.9	
High School/GED	28.9	27.9	
Trade or training certificate	8.2	9.2	
Some college	36.4	37.8	
Bachelor degree	6.7	6.0	
Graduate degree	1.6	2.4	
Annual Household Income (%)			0.938
Less than 20K	72.9	73.4	
20-35K	19.7	19.6	
25-35K	7.4	7.0	
35K and above			
Insurance (%)			0.474
Private	14.3	13.7	
Not private	85.1	86.3	
Public Assistance (%)			0.042*
WIC	21.3	23.3	
SNAP	53.5	56.9	
FIP	7.9	7.9	
Other	2.4	1.7	
None	15.0	10.1	

†P<.10 *p<.05 **P<.01 ***P<.001

b) Non-Response Bias and Missing Data

Nonresponse at pre-test is defined as missing at least two of these five variables: FV Composite, Total PA, Total Screen Time, Teacher Aggression Score, Teacher Externalizing Behavior Score. Logistic regression shown below indicates that none of the variables in the model were found to be predictive of pre-test missingness.

Type III Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
Study Condition	1	2062	3.78	0.0519
Center Size	1	2062	0.87	0.3507
Gender	1	2062	0.34	0.5591
Race	4	2062	1.51	0.1967
Education	2	2062	0.37	0.6920
Income	2	2062	0.01	0.9949
Age	1	2062	0.00	0.9863

Non response bias was also assessed by comparing participants who dropped out of the study to those who stayed in the study on key demographic factors including race/ethnicity, sex, parent/guardian education and household income. These are potential biases for non-response. As shown in Table 22, there was a significant difference in race/ethnicity between the drop out and cohort groups. Race was therefore used as a covariate in the model. Other potential biases for non-response which we did not analyze include parent/guardian health status and parent/guardian literacy levels, as parents/guardians were responsible for filling out all survey tools in regard to their child who was selected to participate.

The total number of people who did not consent for their child to be in the study throughout years 2-5 was 39. Only 39 children were not consented to participate in the study. To assess whether these non-consented individuals differed than those who took part in the study, we can again look at the tables that compare the race/ethnicity of those who participated in the study to the race/ethnicity of each entire center as a whole, which includes those who did participate in the study and those who did not. These tables in Appendix A (B1-B59) show that those who consented to be part of the study did not differ much in race/ethnicity from those who did not consent to be part of the study or those whose classrooms were not randomly selected to participate in the study. Other potential biases for non-consent include parent/guardian sex, parent/guardian education level, household income, parent/guardian health status and literacy level. However, with only 39 non consents out of the 8,039 children allocated into the evaluation, differences in any of these areas between those who consented to be in the study and those who did not would be negligible and insignificant our analyses.

We have used the multiple imputation method to re-run the analysis for the data and we get consistent results for the primary outcome (FV Consumption). There was a significant group x center size interaction effect for FVComposite_AllJuice but no significant interaction FVComposite_NoJuice. This output can be viewed in Appendix A, J-1 as well as in this document in Table 36 and Table 37.

5. Changes to SEP

In the original Subgrantee Evaluation Plan (SEP), NKFM committed to reaching 250 children in each of the ten identified high need regions in Detroit. For the first two years of the grant, NKFM included every child at the early childhood education centers in all program and evaluation activities. Parent survey instruments were distributed to all parents. In the third year, we decided to decrease the number of parents and children included in the evaluation in order to increase response rate and decrease threats to internal validity. All children at each center received Regie's Rainbow Adventure®. Classrooms were randomly selected to participate in the evaluation component and in those classrooms, approximately 50 children were selected to participate in the evaluation after going through the eligibility criteria. This SEP amendment was submitted in December of 2014. And, the use of the passive consent form was introduced in an SEP amendment in June 2014.

The third party reviewer JBS reviewed our SEP modifications that we submitted in February of 2016. In their SEP modification feedback review form received in November of 2016, JBS raised concern over the baseline equivalence of treatment and comparison centers with regards to center size. This concern had never been raised before in review of any our annual reports, SEP documents, or SEP amendments. In a memo written to JBS in December 2016 in response to this feedback, we responded that in our final report we would include a table of p-values of our confirmatory research outcomes at baseline, stratified by center size. In a subsequent feedback form from JBS dated January 2017, they acknowledged this contingency was addressed as we had provided an analysis plan for determining baseline equivalence at the center level.

E. Tools, Measures and Data Collection Activities in Impact Study

After RRA survey events, all surveys for the RRA impact study were brought back to the NKFM's office in a secured lockbox and stored in a locked cabinet. Surveys are securely kept for seven years from collection date. If capacity in the office was not available, data were moved to a secure offsite storage location. Any other information on participants and centers was shredded and disposed of. Survey data were entered electronically by specially trained staff into internal databases using Access and ADM software in a HIPAA-complied electronic drive. Once surveys were entered, data were validated to ensure accuracy. At the end of the grant year, data were analyzed by internal staff and external contracted specialists.

Before initializing the analysis phase, steps were taken to ensure valid and clean data were available to be analyzed. First, the data were exported from ADM and Microsoft Access into Excel documents separated into each form distributed by NKFM: Parent Guardian Surveys/Attendance Sheet, Parent Child Behavior Checklist, Teacher Child Behavior Checklist, Classroom Level Problem Behavior Survey, and Implementation Checklist (this last tool was classified as part of the implementation evaluation but plays a role in the impact evaluation). These Excel documents were imported into SPSS and merged with premade templates. These templates ensure variable names, lengths, and types are consistent across not only each form, but each year as well. Lastly, the SPSS databases were merged together to create two final databases: Child Merged and Classroom Merged. As the names suggest, Child Merged consists of any data pertaining to an individual child (Parent Guardian Surveys, Parent Child Behavior Checklist, Teacher Child Behavior Checklist and Weekly Attendance Sheet) and Classroom Merged contains data generalized to a classroom (Classroom Level Problem Behavior Survey and Implementation Checklist). Each merge done

was a simple join using the primary key of Child ID or Classroom ID for Child Merged and Classroom Merged, respectively.

Once the data were merged into the final databases, the data was then cleaned. The cleaning process consisted of calculating composite variables and creating cutoff values for variables to avoid extreme outliers. See Tables C, D, and E in Appendix A for more information on composite variables and how variables were combined and recoded. All data were de-identified prior to analyses taking place and all data (both physical and electronic) were stored in HIPAA compliant ways in order to protect the identities and sensitive information of our participants.

1. Regie's Rainbow Adventure Parent/Guardian Surveys

This survey was completed by parents or guardians about their child's eating, physical activity, and screen time habits at both the baseline and follow-up timepoints in order to measure any changes that may have occurred between the two timepoints. This survey was a primary data source using parent report. Survey collection took place during the baseline and follow-up time points at Palooza survey events held at centers, as well as immediately after the baseline and after the follow-up periods had ended. NKFM staff returned to centers when each of these specific timepoints ended to pick up the Parent/Guardian Surveys returned within these timepoints. A table of these data collection timepoints for every center in the RRA impact study are available in Appendix A, Tables F1-F4. These surveys were filled out by parents/guardians by hand with pencil or pen. All NKFM staff members who attended Palooza survey events received a standardized training detailing how to address questions pertaining to the surveys in an honest way that would also encourage response overall and increase response rate. A sample of these frequently asked questions and appropriate answers are in Appendix B.

Following data collection, all Parent/Guardian Surveys were returned to the NKFM Program Evaluator. The Program Evaluator checked the dates on all returned surveys to ensure they were filled out within the prescribed baseline or follow-up timepoint for each and every center. Any survey that was returned without a date on it but had been collected by NKFM staff within a prescribed timepoint for a given center was accepted, coded, and entered. Any survey that was returned without a date on it outside of a prescribed timepoint for a given center was not accepted and was placed in a "do not enter pile." And any survey that was returned with a date on it that was not within a prescribed timepoint for a given center was also not accepted and was placed in the "do not enter pile."

The prescribed time points, as indicated in Tables F1-4, were important for maintaining internal validity. For implementation C\centers, baseline surveys were not accepted after two weekly units of the program were implemented. No more than 1/3 of the program could have been implemented to ensure that pre-program habits were reported at baseline and not those that were improving or changing due to experiencing the program. This two week time limit was then instituted for the follow-up surveys as well as all surveys for the Comparison group to maintain consistency within and across groups.

Accepted Parent/Guardian Surveys were coded with child identification code that was unique to each and every child who participated in the study. The child's name and birthdate, as reported by the parent, was matched to the log of participants kept in an excel spreadsheet. The child's corresponding child

identification code was then written on the top of their Parent/Guardian Survey and filed in a secured filing cabinet for entry at a later date by data team members and evaluation team members.

Evaluation team staff members and NKFM staff members collected these completed surveys at Palooza survey events. Classroom teachers collected surveys that were not completed at Palooza events but were sent home to parents/guardians, completed by parents/guardians, and returned in their child's back pack to class. Classroom teachers were interventionists as well as raters for the Parent C-TRF from, the Implementation Checklist, and the Classroom Problem Level Behaviors Survey. Given the large number of centers and classrooms involved in this study, their widespread geographic locations, and the number of NKFM staff involved in the study, this was unavoidable. It was impossible for NKFM program staff to be present in classrooms during the course of programming to be able to observe child behaviors and programming fidelity such that they could have filled out the Classroom Problem Level Behavior Surveys and Implementation Checklist instead of the teachers.

The Parent/Guardian Survey has 24 questions total. Certain questions pertain to baseline measures used in baseline equivalence analyses, others pertain to our confirmatory research questions, and still others measure different behaviors related to children's overall health. One such example is internalizing behaviors such as sleep quality and mood. Internalizing behaviors form another domain of kindergarten readiness and have been found in nationally representative samples to be related to children's health and success in school (Datar & Sturn, 2004; Romano et al., 2010). Questions and measures that pertain to the confirmatory research outcomes are described in detail below. The entire Parent/Guardian Survey tool is in Appendix B.

a) Fruit and Vegetable Consumption Measurement

The source of the outcome data for the two confirmatory research questions is the Parent/Guardian Survey. An increase in children's daily fruit and vegetable consumption is one of the confirmatory outcomes of this impact study. FVConsumption_NoJuice is measured by creating a composite variable in SPSS that consists of two different variables as they related to 2 different questions in the Parent/Guardian Survey. The following question measures fruit consumption:

> How many servings of fruit (fresh fruit, frozen fruit, canned fruit, but NOT including juice) does your child eat on a typical day? A serving is about 8 oz, or one medium piece of fruit, or one half-cup of raw fruit.
> **Please <u>circle</u> only one answer below.**

Type of food	**Servings/day**					
Fruit:	Less than 1/day	1	2	3	4	5+

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey into a Microsoft ACCESS database.

The following question measures vegetable consumption:

How many servings of **vegetables** (fresh, frozen or canned, but NOT including potatoes) does your child eat on a typical day? A serving is about 8 oz, or one half-cup of cooked vegetables, or one cup of raw vegetables.
Please <u>circle</u> only one answer below.

Type of food	**Servings/day**					
Vegetables:	Less than 1/day	1	2	3	4	5+

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey into a Microsoft ACCESS database.

As stated above, these two questions comprise the composite fruit and vegetable consumption measurement. The composite measurement is a simple summation of the number of servings circled for fruits plus the number of servings circled for vegetables. The response range for this composite variable is: 0-10. Ten is the maximum value for this variable because a parent could respond that their child ate 5 servings of fruit a day and 5 servings of vegetables a day (5 + 5 = 10). System missing values for either of these two variables did not prevent the composite variable from being calculated. The composite variable simply ignored the system missing value and added any remaining real values.

FVComposite_AllJuice was also calculated from the Parent/Guardian Survey. It included 3 variables: the number of servings of fruit + the number of servings of vegetables + the number of servings of 100% fruit juice. The following question measures 100% fruit juice consumption.

For each of the following drinks, **circle** the number of servings your child drinks **on a typical day. Please circle only <u>one answer</u> for each type of drink listed.**

1 serving = 8 ounces = ¾ can = 2 juice boxes

Type of drink	**Number of servings**					
Juice (such as 100% juice; orange/apple/grape etc)	0 or less than 1/day	1	2	3	4	5+

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey into a Microsoft ACCESS database.

As stated above, these three questions comprise the composite fruit and vegetable consumption measurement FVComposite_AllJuice. The response range for this composite variable is: 0-15. Fifteen is the maximum value for this variable because a parent could respond that their child ate 5 servings of fruit a day, 5 servings of vegetables a day, and also reported that their child had 5 or more servings of 100% fruit juice per day (5 + 5+ 5 = 15). System missing values for any of these three variables did not prevent the composite variable from being calculated. The composite variable simply ignored the system missing values and added any remaining real values.

This variable was created and calculated post hoc in order to better understand under what circumstances there existed a program effect. The 2010 Dietary Guidelines for Americans indicates that 100% fruit juice is an essential part of total fruit consumption, but does recommend limiting its consumption given its lack of dietary fiber and potential for excess consumption. The American Academy for Pediatrics (Heymann & Abrams, 2017) recommends capping fruit juice consumption at 4-6 fluid ounces per day for children 1-6 years old. Therefore we found it appropriate to include 100% fruit juice consumption in the fruit and vegetable composite variable to determine if it made a difference in the model.

Fruit consumption alone was also measured separately from the composite fruit and vegetable measurement. It consists of the number of servings of fruit per day, only. The response range for fruit consumption is therefore 0-5. A parent could report the maximum servings of fruit a day, 5.

Vegetable consumption alone was also measured separately from the composite fruit and vegetable measurement. It consists of the number of servings of vegetables per day, only. Its response range is 0-5.

The parent/guardian survey used in the evaluation has been widely used and tested by Dr. Ken Resnicow of the University of Michigan School of Public Health. Dr. Resnicow used a similar version of this instrument in a study of the effect of motivational interviewing on childhood obesity among 633 children across the United States (Resnicow et al., 2010). The sample in the Resnicow study was very similar to this study's sample in that the children were between the ages of 2-8 years, had BMIs that ranged from normal to obese, and parents had varying income levels and race/ethnicities. Only minor modifications were made to Dr. Resnicow's original instrument for the purposes of this study. Additionally, numerous articles have been published in scholarly manuscripts that have either utilized a parent report of child food consumption or have validated the parent report of child food consumption (Bjelland et al., 2013; Taveras et al, 2011; Resnicow et al, 2011; Blum et al., 1993; Rifas-Shirman et al., 2001; Parris et al., 2003; Byers et al., 1993). These studies support the reliability, validity and precedence of use requested for the NKFM's choice of measures for fruit and vegetable and sugar sweetened beverage consumption.

b) Physical Activity Measurement

Physical activity and screen time are also measured by parent report via the Parent/Guardian Survey. The following question measures how much time a child spends being physically active on a typical weekday and also on a typical weekend:

> How many hours is your child involved in sports or active play on a typical weekday or weekend?
> **Please <u>circle</u> only one answer for weekday and one answer for weekend.**

Day	**Hours/day**					
Active play/sports on a typical **weekday:**	Less than 1 hour/day	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5+ hours
Active play/sports on a typical **weekend:**	Less than 1 hour/day	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5+ hours

The absence of responses to these questions resulted in system missing values being entered upon data entry of the Parent/Guardian Survey into a Microsoft ACCCESS database.

Total weekly physical activity for a child was measured in hours as follows: ((# hours of PA on a weekday * 5) + (# hours of PA on a weekend * 2)). It was calculated in this way to account for the 5 weekdays in a week and the 2 weekend days in a week. Because the possible answers to this question span lengths of time, we have coded the values for this composite measure (and both measures that comprise the composite measure) as follows:

	Less than 1 hour/day	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5+ hours
Coded as:	0	1.5	2.5	3.5	4.5	5.0

Therefore the response range for this composite variable is 0-35. System missing values for either these questions did not prevent the composite variable from being calculated. The composite variable simply ignored the system missing values and added any remaining real values.

(c) Screen Time Measures

Screen time was measured in two different ways to capture both passive screen time (watching TV shows and/or movies) as well as interactive screen time (playing computer and/or video games). The following questions measures screen time as measured by shows and/or movies as well as screen time as measured by video and/or computer games on a typical weekday:

On a typical **weekday,** how many hours does your child spend doing the activities below?

Watching shows or movies (including those on a TV or streaming device like a tablet, computer or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing video games and/or computer games on a console or handheld (including X-box, PlayStation, Wii, or Nintendo DS) or on a tablet, iPad and/or smartphone.	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day

The absence of responses to these questions resulted in system missing values being entered upon data entry of the Parent/Guardian Survey into a Microsoft ACCESS database.

The following question measured screen time as measured by shows and/or movies as well as screen time as measured by video and/or computer games on a typical weekend day:

On a typical **weekend day,** how many hours does your child spend doing the activities below?

Watching shows or movies (including those on a TV or streaming device like a tablet, computer or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing video games and/or computer games on a console or handheld (including X-box, PlayStation, Wii, or Nintendo DS) or on a tablet, iPad and/or smartphone.	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day

Total weekly TV show and/or movie screen time for a child was measured in hours as follows: (# of hours of TV and/or movies on a weekday * 5) + (# of hours of TV and/or movies on a weekend * 2)). It was calculated in this way to account for the 5 weekdays in a week and the 2 weekend days in a week. The response range for this composite variable is 0-21 hours as we have coded the values for this composite measure (and both measures that comprise the composite measure) as follows:

	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Coded as:	0	1	2	3

System missing values for either these questions did not prevent the composite variable of Total weekly TV show and/or movie screen time from being calculated. The composite variable simply ignored the system missing values and added any remaining real values.

Total weekly video and/or computer game screen time for a child is measured in hours as follows: ((# of hours of games on a weekday * 5) + (# of hours of games on a weekend * 2)). This is calculated in this fashion to account for the 5 weekdays in a week and the 2 weekend days in a week. Its response range is also 0-21 hours as it has the same coded values as the total weekly TV show and/or movie variable. System missing values for either these questions did not prevent the composite variable of Total weekly video and/or computer game screen time from being calculated. The composite variable simply ignored the system missing values and added any remaining real values.

Overall total weekly screen time for a child was measured in hours as follows: (TV and/or Movie Total + Video and/or Computer Games Total). This composite variable is a simple summation of the total TV and movie composite variable and the video and computer games composite variable. Therefore, its response range is 0-42 (max value 21 + max value 21 = 42 hours). System missing values for either TV and/or Movie Total or Video and/or Computer Games Total did not prevent the composite variable of Total Screen Time from being calculated. The composite variable simply ignored the system missing values and added any remaining real values.

Baseline analyses of these three confirmatory impact measures are shown in Table 28 below. Least square means were computed based on mixed effects models adjusting for center size and accounting for clustering within classrooms and centers. These differences in baseline values of fruit and vegetable consumption, screen time, and amount of physical activity were adjusted for in the final models by using the baseline values for each group in the final models.

Table 28. A Comparison of Confirmatory Outcomes at Baseline

Variable Name	Variable Description	Comparison	Intervention	P-value
FVComposite_NoJuice	Total fruit and vegetable consumption	5.63	5.38	0.0070**
Totalscreentime	Total screen time hours	17.56	16.55	0.0275*
PA_week	Total hours of physical activity	17.32	17.19	0.7561

†P<.10 *p<.05 **P<.01 ***P<.001

(d) Baseline Demographic Measures

Baseline demographic measures establish the equivalence of the implementation and comparison groups via the matching method we selected and have previously described. The baseline demographic measures we utilized to determine equivalence between groups are those reported by participants' parents/guardians in the Parent/Guardian Baseline Survey.

Child Age was calculated using a child's date of birth and the date the Parent/Guardian Baseline Survey was completed, as reported by the parent. In SPSS, age is calculated using CTIME.DAYS(Date Completed-Child DOB)/365. Missing ages were then filled in using other variables in place of Date Completed, including the date the Baseline Parent CBCL was filled out, and then followed by the date the Baseline Teacher C-TRF form was filled out. When the age of a child could not be determined by the aforementioned variables, it resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

Child Sex was reported by parents on the Parent/Guardian Baseline Survey as well. In the event parents/guardians did not specify their child's sex on the survey, we referred to the Parent CBCL. In the event parents did not specify their child's sex on the Parent CBCL, we referred to child sex reported in the Teacher C-TRF. When the sex of a child could not be determined by the aforementioned variables, it resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

Race/Ethnicity of the child was asked in the following manner:

What is your child's race? (**Check all that apply**)

- ☐ White
- ☐ Black or African American
- ☐ Hispanic/ Latino
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander
- ☐ Arab/Arab American OR Middle Eastern/Middle Eastern American
- ☐ American Indian or Alaska Native
- ☐ Other (fill in) _____

In the event that the race of the child was not reported on the Parent/Guardian Survey, it was pulled from the Parent CBCL and then from the Teacher C-TRF form. A single race variable was created from this question with these main Race/Ethnicities: Black (1), White (2), Hispanic (3), Arab/Arab-American (4), and Other (5). Because parents were able to check all that applied, mixed races/ethnicities were determined by our external evaluator as follows:

Black + Any Category (Except Hispanic) = 1
White + Other* = 2
Hispanic + Any Category = 3
Arab/Arab-American + White = 4
Arab/Arab-American + Other = 4
*Other is defined as: Asian, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander.

There is no widely accepted model for assigning race/ethnicity categories for mixed races/ethnicities, except that in general, a reporting of a minority race/ethnicity mixed with a non-minority race/ethnicity is categorized as the minority. The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

Parent Education was measured in the Parent/Guardian Baseline Survey by asking the following question:

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

- Some grade school
- Some high school
- High school diploma or GED
- Trade or training certificate
- Some college
- Bachelor's degree
- Graduate degree

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

Parent Income was measured in the Parent/Guardian baseline Survey by asking the following question:

What is your annual household income?
Please check only one answer below

- Less than $10,000 per year or about $800 per month
- $10,001 to $15,000 per year or about $801-$1,250 per month
- $15,001 to $20,000 per year or about $1,251- $1,600 per month

- ☐ $20,001 to $25,000 per year or about $1,601 - $2,000 per month
- ☐ $25,001 to $35,000 per year or about $2,001 - $2,900 per month
- ☐ $35,001 to $45,000 per year or about $2,901 - $3,750 per month
- ☐ $45,001 to $60,000 per year or about $3,751 - $5,000 per month
- ☐ $60,001 and above per year or $6,600 or more per month

Some people bring home paychecks weekly, others bi-weekly or monthly. Many families with children in Head Start live paycheck to paycheck, budgeting for every expense each week. Therefore, we asked this income question in two ways—income per year, and income per month so that more respondents were able to accurately estimate their household income. The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

We asked what type of health insurance children had in the Parent/Guardian Baseline Survey in this way:

What type of health insurance or health care coverage does your child have?

- ☐ Private health insurance
- ☐ Medicaid
- ☐ SCHIP (CHIP – Children's Health Insurance Program)
- ☐ Military Healthcare (TRICARE/VA/CHAMP-VA)
- ☐ Indian Health Service
- ☐ Other government Program
- ☐ Single Service Plan (e.g. Dental, Vision, Prescriptions)
- ☐ No health insurance

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

We determined if families were on any public assistance programs by asking the following question:

Are you on any of the following public assistance programs? **(Check all that apply)**

- ☐ WIC
- ☐ SNAP (Bridge Card, Food Stamps)
- ☐ FIP (Cash Assistance)

- ☐ Other: _____
- ☐ I am not on public assistance

The absence of a response to this question resulted in a system missing value being entered upon data entry of the Parent/Guardian Survey.

Baseline equivalence analyses of these aforementioned demographic characteristics were presented previously in Table 5 of Section II.

2. Parent CBCL 1.5/5 and Teacher Form CTRF

Stapled to the back of the Parent/Guardian Survey is the Parent CBCL 1.5/5. Parents and guardians are asked to also complete this form about their child. The data collection processes and timepoint cutoffs are the same for this form as they are for the Parent/Guardian Survey. The CBCL 1.5/5 is a survey about the frequency of a child's internalizing and externalizing behaviors filled out at both baseline and follow-up (Achenbach, 2014). The externalizing behaviors scale is made up of two subscales: the child's ability to pay attention, and the child's level of aggression. For our purposes, we utilize the externalizing behaviors scale only. This survey replaced the data that would have been collected through the Early Development Instrument (EDI). An SEP amendment documenting this change was submitted in August of 2013.

The Teacher Form C-TRF is the teacher version of the CBCL 1.5/5. It asks teachers to report on the same behaviors as parents, but form the perspective of a teacher in a classroom environment. Teachers were not able to fill out these forms during Palooza survey events in the same way parents/guardians were. Therefore NKFM staff did not collect filled out C-TRF forms at Palooza survey events. However, teachers were asked to fill them out within the prescribed baseline and follow-up time points, just like those parents and guardians who were not able to fill out surveys at Palooza survey events. NKFM staff returned to centers to collect this data immediately after these timepoints ended. Data collection activities and timepoint cutoffs were the same for the C-TRF form as they were for the Parent Guardian Survey and CBCL 1.5/5.

All CBCL 1.5/5 form and CTRF forms were returned to the NKFM Program Evaluator. The Program Evaluator checked the dates on all returned surveys to ensure they were filled out within the prescribed baseline or follow-up timepoint for each and every center. Any survey that was returned without a date on it but had been collected by NKFM staff within a prescribed timepoint for a given center was accepted, coded, and entered. Any survey that was returned without a date on it outside of a prescribed timepoint for a given center was not accepted and was placed in a "do not enter pile." And any survey that was returned with a date on it that was not within a prescribed timepoint for a given center was also not accepted and was placed in the "do not enter pile."

The tool (which consists of the Parent CBCL and the Teacher C-TRF Form) is a reliable and valid stand-in for kindergarten readiness as children who have been found to have behaviors such as aggression and attention problems are more likely to have academic problems and lower academic achievement (Brennan et al 2012; Hinshaw et al, 1997). Similarly, the total score for the teacher's form was found to be highly correlated with one of the Social Skills Rating System scales, a measure of social/emotional

development and academic competence that is also widely used across the United States (Pearson correlation of .81) (Brown et al, 2012).

The measure has been shown to be reliable. Achenbach's Child Behavior Checklist surveys have been used in approximately 6500 studies and have been translated into more than 80 different languages since first developed (Kristensen et al.). The test-retest reliability is high for the parent and teacher version with a Pearson correlation of .87, and .89, respectively (Achenbach et al). For the set of scales that include the externalizing and internalizing problem behaviors we will specifically use in this study, the test-retest reliability has been reported to range from .87 to .90 in Head Start populations similar to our study sample (Xinsheng et al, 2004). And, the CBCL ratings for the parent version are not significantly different when completed by the child's mother or father and parent-teacher agreement on each problem behavior is generally not impacted by child's sex (Achenbach et al., Xinsheng et al, 2004).

The validity of an instrument relates to its ability to measure what it intends to measure and allow for generalizations outside the sample. This measure has previously been used as an outcome in obesity interventions, and has been shown to be responsive to changes in diet (McGrath Davis et al, 2012; Oddy et al, 2009). Significantly lower total scores on the CBCL were found among those who had a greater intake of green vegetables and fresh fruit (Oddy et al, 2009). When tested among children of various demographic groups such as gender, age, socioeconomic status and those who were or were not referred to mental healthcare, only small differences in problem scale scores were found. The CBCL/1.5-5 has been successfully utilized in many western European countries, in the United States with European American middle-class families, and more specifically, with Head Start teachers and low-income African American families with children in Head Start preschools (Xinsheng et al, 2004).

It is important to note that outcomes from this tool are not our primary research interest. The RRA intervention very clearly targets fruit and vegetable consumption, physical activity, and screen time. These are the direct foci of the intervention and therefore questions relating to those practices and behaviors are the most logical and immediate measurements of its success. Changes in externalizing problem behaviors, as measured by the CBCL and CTRF, are not directly targeted by the intervention. We therefore consider any CBCL outcomes as distal and possibly mediated by changes in diet, physical activity, screen time, and even sleep. Therefore, given its indirect link to the intervention, we maintain its status as an exploratory outcome. We do acknowledge it is a valid and well normed tool, but conceptually, it remains a distal outcome.

As previously mentioned, there was an addition of positive behaviors and characteristics to the Parent CBCL in the beginning of Year 4. It was thought that the addition of positive items to this scale posed a threat to validity. The CBCL/CTRF tool was entered into a specific database designed for the tool, provided by its creator, Achenbach. The database was not altered when new questions were added to the Parent CBCL and therefore the negative and positive items were not analyzed together. Since the addition of these positive questions to the parent CBCL, there has been no uncharacteristic change in the ranges of the scores of the parent reported scales.

Evaluation staff attempted to run reliabilities to look at how each question item correlates with the total score for each form (in SPSS, Scale Reliabilities-Cronbach's Alpha). The goal was to then correlate the parent score with the corresponding teacher score. Many studies have looked at the differences between

parent and teacher reports on CBCL forms. If, using significance tests, our correlations had been approximately the same magnitude as what other studies have reported in the literature, then we would have been able to assume that our changing of one scale by adding positive items did not impact the tool's validity. As previously mentioned, we utilize only the externalizing behaviors scale, made up of the two subscales. This means there are several items in the tool that we do not utilize, as well as the other scales they make up. While we do have knowledge of which specific questions make up each subscale, we are unable to export the data from the database at the item level. Data can only be exported in subscale scores and the total externalizing behavior scale score. As such, we cannot determine how each question item within these subscales correlates with the total score for each form.

In addition to the reliability and validity scores provided from the studies mentioned above, the Manual for the ASEBA Preschool Forms & Profiles provides reliability, agreement, and stability measures as well. The test-retest reliability of the problem scale scores was supported by a mean test-retest of r = .85 for the CBCL scales and .81 for the C-TRF scales. For interparent agreement on the CBCL, the mean r was .61. The differences between the mean scale scores of mothers and fathers did not exceed chance expectations, which means that there was no significant tendency for parents of one gender to report more problems than parents of the other gender (Achenbach & Rescorla, 2000).

We have also reported the alpha of the 17 positive items in the Parent CBCL. These 17 positive items were phrased listed as follows: Plays well with others, enjoys school, is good at make believe play, dresses him/herself, enjoys listening to/reading books, expresses joy, does something you are proud of, enjoys learning letters and words, does chores without complaining, goes to bed when asked, can play by him/herself, laughs, shares, is appreciative/says thank you, can express him/herself well, cleans up his/her mess, does something fun with a parent/caregiver.

Below is the output of the Cronbach's Alpha for these 17 items from SPSS 23.

Table 29. SPSS Output Showing Reliability Statistics for Positive CBCL Items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.808	.828	17

Many methodologists recommend a minimum alpha coefficient between 0.65 and 0.8, and coefficients less than 0.5 are usually unacceptable as measures of reliability.

3. Classroom Level Problem Behavior Survey

The Classroom Level Problem Behaviors Survey is completed by teachers during baseline and follow-up timepoints. Again, it is not something that can be filled out by teachers during Palooza survey events as those are specifically geared toward garnering responses from parents/guardians. The survey is left with classroom teachers for them to fill out on their own time during the prescribed timepoints (both baseline and follow-up).

The Classroom Level Problem Behaviors Survey asks teachers the percentage of children in their class who exhibit behaviors such as being unable to sit still or obey class rules. The tool asks the exact same questions at baseline as it does at follow-up. This survey is used as another measure of kindergarten

readiness in order to increase the reliability of data collected for this construct and maximize the ability to make causal inferences about the programs and observed outcomes. The tool can be viewed in its entirety in Appendix B.

Cronbach's Alpha reliabilities of the questions in the tool can be seen below. Cronbach's alpha is a measure of internal consistency and is considered to be a measure of scale reliability. The baseline survey has an alpha of 0.591755 (acceptable) and the follow-up survey has an alpha of 0.646360.

Table 30. Cronbach Alpha Statistics for Baseline Classroom Level Problem Behaviors Survey

Variable	Label	N	Mean	Std. Dev	Sum	Minimum	Maximum
Fidgetx	Children fidgety, difficulty sitting still	205	1.04390	1.06781	214.000	0	3.000
PayAttentionx	Children pay attention	205	1.83415	0.90305	376.000	0	3.000
AreUnhappyx	Children are unhappy	206	0.17476	0.58313	36.000	0	3.000
TalkOutofTurnx	Children talk out of turn	205	1.41463	1.05197	290.000	0	3.000
ObeyClassRulesx	Children obey class rules	205	1.86341	0.93456	382.000	0	3.000
PoutAndSulkx	Children pout and sulk	205	0.64878	0.86521	133.000	0	3.000
DoNotCooperatex	Children do not cooperate	206	0.50485	0.78241	104.000	0	3.000
WorkHardx	Children work hard	207	2.02415	0.83863	419.000	0	3.000
BreakRulesx	Children break rules	206	0.87379	0.93370	180.000	0	3.000
PlayFairx	Children take turns and play fair	205	1.78537	0.91971	366.000	0	3.000
Fightx	Children fight	206	0.41262	0.75200	85.000	0	3.000

Variables	Alpha
Standardized	0.591755

Table 31. Cronbach Alpha Statistics for Follow Up Classroom Level Problem Behaviors Survey

Variable	Label	N	Mean	Std. Dev	Sum	Minimum	Maximum
Fidgety	Children fidgety, difficulty sitting still	167	0.86826	0.92847	145.000	0	3.00
PayAttentiony	Children pay attention	172	1.93605	0.9214	333.000	0	3.000
AreUnhappyy	Children are unhappy	172	0.18023	0.58944	31.000	0	3.000
TalkOutofTurny	Children talk out of turn	173	1.15607	1.03088	200.000	0	3.000
ObeyClassRulesy	Children obey class rules	172	1.94186	0.90295	334.000	0	3.000
PoutAndSulky	Children pout and sulk	172	0.63372	0.87166	109.000	0	3.000
DoNotCooperatey	Children do not cooperate	173	0.49133	0.74411	85.000	0	3.000
WorkHardy	Children work hard	173	2.18497	0.88292	378.000	0	3.000
BreakRulesy	Children break rules	173	0.67630	0.88223	117.000	0	3.000
PlayFairy	Children take turns and play fair	173	1.92486	0.86274	333.000	0	3.000
Fightx	Children fight	173	0.32948	0.68293	57.000	0	3.000

Variables	Alpha
Standardized	0.646360

4. Weekly Attendance Sheet

The Weekly Attendance Sheet was for teachers at Implementation centers only. It was filled out by teachers during the course of the program. It was given to the teachers during the baseline timepoint, prior to the start of the program. Each week of the program, teachers were instructed to mark student attendance on the sheet so that program dosage for the 7 weeks of the program could be calculated. NKFM staff picked up the Weekly Attendance Sheet along with other teacher and parent surveys during the follow-up timepoint. It was also one way we learned of students who dropped out of centers and therefore dropped out of the study. Teachers crossed out children's names and wrote "Dropped" for those who were no longer enrolled in their centers.

As mentioned, we intended to use the Weekly Attendance Sheets to measure dosage of the program along with the implementation checklists. However, very few Weekly Attendance Sheets were turned in throughout the course of the study and a dosage measurement variable was therefore not created.

5. Healthy Families Start with You Chats

HFSY chats were conducted at participating centers throughout the school year. Healthy Families Start with You Chats were conducted at both implementation and comparison centers. A table of HFSY programming timepoints for each center that had families who completed both health chats is in Appendix A, Table G-1 through G-5. HFSY chats were collected by NKFM staff and returned to Evaluation staff for data entry into a Microsoft ACCESS database.

The evaluation for HFSY consists of the two Health Chat forms used to facilitate the program. The first health survey form, completed at the first chat, helps focus and tailor the session to the participant while collecting baseline and demographic data. The form also collects baseline data about key health and nutrition behaviors such as the consumption of high fat and salt foods, whole grains, fruits and vegetables, and partaking in physical activity. In this session, the participant also sets health-related goals that will be discussed in the second chat session. The second chat session and the corresponding chat form are designed to measure improvement towards the participants' goals and improved health behaviors. To this end, the participant is asked the same questions about the types of food that they eat and how often they engage in physical activity in order to measure behavior change between the two chat sessions. HFSY had a more flexible timeline than RRA due to the nature of the program's implementation process. For instance, an optimal suggested timeline for HFSY is 4-6 weeks in between chats, however many times lay health educators cannot conduct a Chat 2 in that timeframe given the availability of the parent. HFSY Chats could take place any time throughout the school or calendar year. For example, Chat 1could take place at school during the school year, and Chat 2 could take place over the phone during summer after the school year had ended.

The following items were utilized in HFSY evaluation and compared to Chat 1 responses:

1. Do you limit the amount of salt in your diet? (Yes/No)
2. Do you usually choose foods that are low in fat? (Yes/No)
3. Do you currently smoke cigarettes or cigars? (Yes/No)
4. How many cups of pop do you drink per day? (0, 1, 2, 3, 4, 5+)

5. How many hours of TV do you watch per day? (0, 1, 2, 3, 4, 5+)
6. How many servings of fruit do you eat per day? (0, 1, 2, 3, 4, 5+)
7. How many servings of vegetables do you eat per day? (0, 1, 2, 3, 4, 5+)
8. How many servings of whole-grain foods do you eat per day? (0, 1, 2, 3, 4, 5+)
9. How many servings of low-fat or fat-free dairy products do you eat/drink per day? (0, 1, 2, 3, 4, 5+)
10. How many times do you eat fast food in an average week? (0, 1, 2, 3, 4, 5+)
11. How many days do you exercise for at least 30 minutes in an average week? (0, 1, 2, 3, 4, 5+)

The following centers had participants who completed both health chats:
Year 1: River Rouge
Year 2: Inkster-Hiveley, Cathedral St. Paul, Holy Redeemer, Simpson Center, St. Stephen, WC3D, Fiore Center
Year 3: Hamtramck Mitchell, Highland Park Cortland, Inkster-Hiveley, Mt. Zion, Kids in Zion, Mt. Calvary, NSP St. Timothy, Metropolitan Center.
Year 4: Hamtramck Mitchell, Inkster-Hiveley, Mt. Zion, Mt. Calvary, Charity, OLHSA Pontiac Head Start
Year 5: Mt. Zion, Mt. Calvary.

6. Secondary/Administration Data

We utilized data from early childhood education centers as well as the national census database to determine matching eligibility between centers. Income and racial composition data were analyzed by zip code when new SIF regions were added to the evaluation. The most recent data available online were used. We also utilized data from early childhood education centers in our eligibility processes. NKFM staff obtained classroom rosters from center teachers and administrators prior to starting the evaluation component. We cross referenced the names of the children and their birthdates in the rosters against our list of children and birthdates in our yearly program logs to ensure that no child who has ever received the program previously is selected for evaluation in any future programming year. These rosters were imperative in ensuring that no child who was evaluated ever received a double dose of the program and therefore could not skew evaluation results. The secondary data mention here was used only in the capacities as mentioned—no composite variables or composite measures were created out of the secondary data.

Section III. Analysis and Findings of Implementation Research Questions

Our implementation level research questions measure program fidelity and exposure, program satisfaction, MTK reach and NAP SACC implementation. Analyses and findings are described in the sections below. Findings from previous years are also included in these sections.

A. Fidelity to Program Design and Program Exposure Findings

1. Research Question: Were the interventions implemented with fidelity?

a) Year 3

Using the cumulative question on the Implementation Checklist asking what percentage of the program teachers felt they implemented overall, an average of 91% of the program was implemented in Year 3 with a maximum of 100% and a minimum of 50%. Thirty-one Implementation Checklists were returned, resulting in a response rate of 57.4%.

b) Year 4

Using the cumulative question on the Implementation Checklist asking what percentage of the program teachers felt they implemented overall, an average of 93% of the program was completed with a maximum of 100% and a minimum of 80%. Thirteen Implementation Checklists were returned out of 106, resulting in a response rate of 12.26%.

c) Year 5

Using the cumulative question on the Implementation Checklist asking what percentage of the program teachers felt they implemented overall, an average of 89% of the program was completed with a maximum of 100% and a minimum of 50%. Out of 11 Implementation Checklists, 17 were returned, resulting in a response rate of 15.32%

d) Cumulative Analyses Years 3-5

Taking the average of all the responses to the cumulative question that asks what percentage of the program teachers felt they implemented overall, from years 3, 4, and 5, an average of 90% of the program was completed with a maximum of 100% and a minimum of 50%.

As mentioned in the measures section, the weekly implementation measure uses a scale of 0-3, where 0 = None, 1 = Some, 2 = Most, 3 = All. The average implementation between years 3-5 as measured across the 7 weekly implementation measures of the program was: 2.39. The median was 2.50. Both of these measures show that in general, more than 'most' of the program was implemented by teachers.

Maintaining some level of program fidelity throughout the course of this evaluation study was a small but still important step in achieving a moderate evidence level, as it assesses the alignment between program theory and day-to-day practice in order to provide services to the target population and accomplish program objectives. While not many teachers returned this checklist and so true program fidelity is unknown for the sample, the median level of program implementation (fidelity to the program as planned) reported by teachers who did fill out this form was 2.50/3. This suggests that most teachers implemented somewhere between "most" and "all" of the program.

B. Program Satisfaction Findings

1. Research Question: What types of RRA content are most liked by participants?

Notes from and transcriptions of Key Informant Interviews helped NKFM staff determine what types of RRA content were most liked by and beneficial to participants, as reported by those who deliver the program (teachers). Participants would often tell their teachers their favorite parts of the RRA program, which teachers then relayed to us during Key Informant Interviews. Teachers would also share their own observations of what content they felt was most liked by participants and what content they felt was most beneficial to participants.

Teachers most often shared how much participants enjoyed the RRA book series. The books helped participants with literacy skills including letter recognition and understanding rhyming patters, reading, and writing. Participants especially liked that Regie was a superhero—they wanted to emulate Regie's healthy habits and were more like Regie by trying new fruits and vegetables. Teachers described how students would encourage each other to be healthy, and that they would share stories with the class that they would go home and tell their siblings and parents about RRA.

Teachers shared that the program helped participants to express their creativity. They saw participants drawing more, and using all colors of the rainbow to do so. The program also improved participants' shape and color identification skills. Lastly, it also helped in language communication and vocabulary development. Participants were learning new fruits and vegetables as well as how to talk about and describe them. These statements qualitatively describe the effect of RRA on several domains of kindergarten readiness.

C. Media Tool Kit Reach and Findings

1. Research Question: How many people are reached through the MTK via Regie's Rainbow Adventure® Facebook Page?

This research question is answered through Facebook Analytics and Insights to determine how many people were reached. Implementation efforts for this component of the MTK began in Year 3 and continued through Year 5.

a) Yearly Trends

Table 32: Reach and Engagement by Year

Year	Engaged Users	Total Reach
Year 3	792	7,511
Year 4	1,109	14,738
Year 5	1,516	31,046
Total	**3,417**	**53,295**

"Engaged Users" is defined as the number of unique users who engaged with the page, where engagement includes any click (including clicking on the page or a post, "likes", reactions, and comments) or story created (shares). "Total Reach" is the number of users who have seen any content associated with the page. The total values are the sums of all engaged users and the sum of total reach for each year.

b) General Page Analysis

Referring to table 13 below, daily metrics measure certain values that are calculated per day. The total value was calculated by adding all daily values across the three years the MTK was employed.

Table 33: Total Counts for Page-Level Metrics

Metric	Description	Year 3	Year 4	Year 5	Total
Total Likes	Users who have "Liked" page	124	218	71	**413**
Unlikes	Users who have "Unliked" page	3	7	8	**18**
Total Reach	Unique users who have seen content related to page	7,511	14,738	31,046	**53,295**
Total impressions	Number of times page posts are displayed	22,010	28,512	52,984	**103,506**
Total consumers	Unique users who clicked on any post content	462	381	730	**1,573**

2. Research Question: What types of MTK content are most "liked", "shared", and "commented" on by Facebook participants?

The top 25 posts from each program year starting in Year 3 (with the most clicks, likes, shares, and comments) were coded into four most prevalent themes to answer this research question: Child Health and Development Information (years 3, 4, and 5), Family Health Events and Information (years 3, 4, and 5), Physical Activity (years 4 and 5) and Recipes (years 3 and 5). These are comprised of photos, links, post shares from external pages, and posts written by the NKFM Facebook team. The top 3 most liked, shared, and commented on posts in each category for each year are shown in the lists below.

Top "Child Health and Development Information" posts from Year 3:

1. Why are kids more likely to eat what they make?
2. If your child isn't in a classroom this summer, keep their minds growing by talking together about things that interest them. Ask them real questions that get them thinking, and talk about their responses with them. Here are some examples: "Why are flowers different colors?" "What do worms do in the ground?" "Why does it rain?"
3. When teaching your child about new foods, use questions like: "How does it feel in your hand?", "What color is it?", and "If it made a noise, what would it sound like"? This way, trying something new is more than just about a new taste and your child can discover many aspects of the food before they try it!

Top "Child Health and Development Information" posts from Year 4:

1. Grab and Go! A Handy Guide to Help You Get the Recommended Amount of Fruits and Vegetables
2. Is your child typically hungry right before bedtime? Here are some great tips on giving your child a snack before they sleep!
3. Wondering what to have for lunch? Try experimenting with different wraps! Your child can help you put together some creative wraps, and might even have fun eating them, too. Some foods to include are cheese, meet, spinach, cucumbers, humus, and colorful bell peppers.

Top "Child Health and Development Information" posts from Year 5:

1. Are you looking for a way to keep your kids entertained while you grocery shop? Try this grocery store BINGO game!
2. Here's a fun song to teach your children to remind them how to stay healthy during cold and flu season!

3. We know kids love Regie's "Eat a Rainbow" song - here's a different variation to sing with your kids!

Top "Family Health Event and Information" posts from Year 3:

1. Come stop by Southwest Solutions health fair today for some healthy family nutrition education!
2. Regie is here at Matrix Head Start's Celebration of Cultures today- stop by and say hi!
3. Summer Meet Ups and Eat Ups are all over Michigan! Find a location near you.

Top "Family Health Events and Information" posts from Year 4:

1. It's time to get ready for summer Meet Up and Eat Up events! Please share this information with families who may be interested.
2. Save the date for a fun-filled event hosted by Kids-TALK Children's Advocacy Center! Everyone in the community is welcome!
3. Make sure you are taking precautions to keep your food safe to eat and keep those nasty illnesses away! Read up on these tips for food safety! http://articles.extension.org/pages/71082/summer-food-safety

Top "Family Health Events and Information" posts from Year 5:

1. Mark your calendars! Come visit Regie at a Meijer near you!
2. Regie at Matrix Head Start's Family Fun Night at Samaritan Center!
3. Play and Learn Children's Place hosted a family event with fruits and vegetables of every color to celebrate the end of their Regie's Rainbow Adventure! Check out that rainbow spread! We're so glad the children enjoyed the program.

Top "Physical Activity" posts from Year 4:

1. Have you ever heard your children say "I'm bored!" when they are out of school? Well here's a fun activity for them to do outside! It gets them moving and actively learning about their outside environment!
2. Wow! Being outside in nature has some amazing health benefits. Whether it's a walk around the block or a hike in the woods, the evidence is clear: getting outside and moving has positive benefits on the mind, body, and soul. http://www.wimp.com/what-hiking-does-to-the-brain-is-pretty-amazing/
3. Have you and your children been watching the Olympics? The Olympics are a great way to get your children excited about physical activity. Try making an "Olympic" recipe with your children while watching the games this week: 5 circle wheat crackers, strawberries (red ring), blueberries (blue ring), bananas (yellow ring), blackberries (black ring), grapes (green ring).

Top "Physical Activity" Posts from Year 5:

1. Love this idea to get kids up and moving! It's also a great way to practice spelling their names.
2. Stay cool this summer and have fun playing outside at these splash pads and pools!
3. Are you making a resolution to get healthier this year? Let NKFM help! Check out our free fitness classes in your area!

Top "Recipe" posts from Year 3:

1. For a colorful weekend breakfast, try this out!
2. Ever heard of a Broccoli Forest? What about a Stop Light Snack? Doesn't a Fruit Bug sound delicious?
3. This recipe is a healthy alternative to the deep fried French fries many children enjoy. You can also try baking yams and sweet potatoes!

Top "Recipe" posts from Year 5:

1. For St. Patrick's Day coming up, try a green fruit and veggie tasting platter!
2. Here's a fun, healthy breakfast recipe for your child to make. This is a great way to incorporate more than one food group into your child's meal, and it's a fun way for them to be involved in making their breakfast!
3. Love, Learn, and Laughter Montessori Preschool and Daycare tried yellow pears and a mango, pineapple, and yellow pepper salsa for yellow week!

3. Research Question: How many people are reached through the Media Toolkit: NKFM.org Early Childhood page?

The Early Childhood Resources page was evaluated using Google Analytics to determine how many people were reached throughout the year via this component of the MTK. Once users enter the webpage, they have the option of following several links that offer handouts, games, recipes, and other resources. The website functionality limits the analytical reach of these individual items, however this is a reflection of the current metrics.

Table 34: Website Page Metrics

Metric	Description	Year 3	Year 4	Year 5	Total
Total Page Views	Number of times page was viewed by any user	1,315	1,927	1,595	**4,837**
Unique Page Views	Number of times page was viewed by unique users	973	1,542	1,191	**3,706**

D. NAP SACC Analysis and Findings

Both the units of assignment and analysis are at the center level. Of the 29 centers that participated between Years 1-5, there were 126 positive changes made in the 20 questions utilized in the Nutrition section, and 61 changes in the 9 questions utilized in the Physical Activity section. As mentioned in the measurement section, a positive change could be counted in the following ways:

- Pre-assessment score of 0, Post-assessment score of 1
- Pre-assessment score of 0, Post-assessment score of 2
- Pre-assessment score of 0, Post-assessment score of 3
- Pre-assessment score of 1, Post-assessment score of 2
- Pre-assessment score of 1, Post-assessment score of 3
- Pre-assessment score of 2, Post-assessment score of 3

Table 35 shows that improvements were made in all of the relevant items to effectively answer the research question that yes, centers that completed making improvements in nutritional and physical activity as part of the NAP SACC program did offer healthier food options and more physical activity opportunities to the children in their care. NAP SACC analyses do not include tracking any decreases in any ratings in centers' self-assessments. Center staff and administration set their own goals in this program, and their improvements are reflective of the goals they find feasible and set for themselves. It is only these improvements that we track.

Table 35. NAP SACC Programming Evaluation and Improvements

Question	Number of centers that made the improvement	Percentage of centers that made the improvement (N=29)
NUTRITION SECTION		
Fruits and Vegetables		
1. How often fruit is offered (Not fruit juice)	4	13.80%
2. How often fruit is offered canned in own juice	7	24.12%
3. How often vegetables are offered (not potatoes)	11	37.93%
4. How often vegetables other than potatoes, corn, and green beans are offered	5	17.24%
5. How often vegetables are cooked with added butter	5	17.24%
Meats, Fats, and Grains		
1. How often fried potatoes are served	6	20.70%
2. How often fried meats/fish are served	6	20.70%
3. How often high fat meats are served	4	13.80%
4. How often beans/lean meats are offered	7	24.14%
5. How often high fiber foods are offered	9	31.00%
6. How often sweet/salty snack foods are offered	8	27.60%
Beverages		
1. Visibility/availability of drinking water outside	13	44.83%
2. Visibility/availability of drinking water inside	6	20.70%
3. How often 100% fruit juice is offered	8	27.60%
4. How often sugar drinks are offered	3	10.34%
5. How often reduced fat milk is served	6	20.70%
6. Location of vending machines in center	3	10.34%
Foods Offered Outside of Regular Meals and Snacks		
1. Are there written guidelines regarding food brought into center for celebrations	6	20.70%
2. Holidays are celebrated with mostly healthy foods	5	17.24%
3. Fundraising consists of selling only non-food items	4	13.80%
PHYSICAL ACTIVITY SECTION		
Active Play and Inactive Time		
1. Amount of active play time provided to preschool children	13	44.83%
2. Amount of structured activity time provided to all children	9	31.00%
3. Amount of outdoor active play provided to all children	5	17.24%
4. Active play is withheld from children who misbehave	4	13.80%
Play Environment		
1. Outdoor place space includes open running space for wheeled toys	4	13.80%
2. Indoor play space is available for all activities	4	13.80%

Section IV. Statistical Analyses of RRA Impact Study and Findings

A. Unit Assignment and Levels of Analysis

We have assigned the individual as the unit of analysis, and individuals were randomly assigned to the evaluation within early childhood education centers through the random selection of classrooms for participation. Out comes are measured at the individual child level. The center is the random effect nested term in our mixed effect, multivariate, multi-level model that nests the child within the classroom and the classroom within the center. We analyzed on the individual level accounting for clustering (nesting) within center.

Temporal nestedness of observations of the same participants over time is essentially a non-issue. Each participant has their post measurement as the outcome and their baseline measurement adjusted for as a covariate. Our pre-post outcome model considers the center as a random effect, which will account for the nesting of the child within the center.

B. Analysis Approach

We intended to use an ITT approach for primary analyses (where if you were randomized into the evaluation, you count) and TOT as our secondary approach to assess the effects of dosage on program outcomes. However, no dosage variable was calculated and therefore, an ITT approach was utilized for all our analyses. Interim analyses reported effect size statistics to determine if RRA was showing a generally positive effect on the study population. Final analyses in this report also indicate p-value findings. SAS 9.4 was used for all final analyses and model output is from the PROC MIXED from SAS, which considers the clustering within classroom and center as the random effect.

As previously mentioned, multiple imputation method was then used to account for missing data in the analyses, with results remaining consistent. The results of the Little's MCAR tests can be viewed in Tables 36 and 37.

Holm's method was used to adjust for multiple testing.

C. Formation of Matched Groups

The formation of the matched groups was described in detail in Section II, part B. These same matched groups were utilized for both the confirmatory research questions and both of the exploratory research questions that have to do with RRA programing. To reiterate, we did not use formal propensity score matching or nearest neighbor searches to determine appropriate comparison centers to match our implementation centers. We did so on a case-by-case basis. A list of possible comparison centers within the same region as the implementation center was compiled utilizing the follow matching process: The matching process is determined by comparing demographic data. Whenever possible, we used demographics provided to us by the centers themselves, as that portrays the most up to date data and was truly representative of each center's enrolled populations (who may or may not physically reside within the center's zip code). When that was not available, we used 9 digit zip code data from the US Census Bureau as a proxy measure. The hierarchy of matching was 1) Race/Ethnicity, 2) Median Family

Income and 3) Size (center compared to center, or if that is not available, zip code compared to zip code). The center which was most similar to the selected implementation center in those three categories (with Race/Ethnicity being most important, Median Family Income being next most important, and Size being least important) was then selected to be the matched comparison center. Sites were specifically selected because they were matched on these characteristics.

As centers are unable to be randomly assigned, nonrandom differences may exist between the implementation and comparison group. This was confirmed via baseline equivalence with a difference between implementation and comparison groups in race/ethnicity. There could be several reasons that differences may occur between the groups, even though centers were broken up by region first and then matched with the most similar center in the opposing condition using the three demographic matching criteria. The PEACH study includes two Great Start Readiness Programs (GSRP) centers, with the rest being Head Starts. GSRPs are different than Head Starts in that they have a different income requirement and their age group is for age four only, where Head Starts accept children aged three to five. In two instances in the PEACH study, a Head Start and GSRP were matched together. PEACH has justified these matched pairs by investigating characteristics at the center level. Further investigation revealed that the educational framework is similar for both systems and that income levels for the pairs were similar despite the different income requirements. Even though the age requirement is age four only, children still varied on age within the school throughout the year. Therefore, for some known characteristics, the centers were matched to the best of the study's ability. However, as they are different educational systems, there is still the chance that unknown differences exist between the two. In future studies of matched pairs, PEACH suggests the use of this center-specific matching method instead of using zip code level data.

Another reason differences may exist between matched groups is that PEACH assigns NKFM program coordinators to centers during SIF programming, and in many instances different program coordinators may be leading each center within a matched pair. Program coordinators train teachers on program implementation and evaluation processes. For example, one coordinator may train a comparison site and another coordinator may train its matched implementation site. This causes a difference in how matched sites may be treated. As in many quasi-experimental study designs, some aspects of a project are designed to fit the needs of the community. In this case, many program coordinators already had positive working (and sometimes long-term) relationships with sites. These relationships facilitate rapport and trust which ultimately lead to a smoother evaluation, particularly when troubleshooting is necessary.

When matching groups, more characteristics may remain unknown (such as religious propensity, household sizes, and parent vs. grandparent guardianship). Given these limitations to matched group formation, the statistical analyses will control for any demographic differences and also use effect size analysis to further standardize program effects.

D. Treatment of Missing Data

As mentioned in the attrition sections, the main reason for missingness was due to participants who physical left their center, transferred to another center, or whose center closed down. This was considered missing completely at random and therefore discarding these participants from the analyses

did not cause any bias. Given that we were mainly interested in the treatment effect on post-intervention outcomes which were subject to missingness, imputation would not have improved the efficiency of the estimation. Thus, only complete-case analyses was used for the final models and analyses. Multiple imputation was performed, however, and Tables 36 and 37 show the results of the Little's MCAR tests below.

Table 36. Multiple Imputation Little's MCAR Results for FVComposite_AllJuice

	Genderp	Race	Edu3	Inc3	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Theta0	t for H0: Paramet =Theta0	Pr > t
Intercept					1.501635	0.936561	-0.33399	3.33726	7.47E+07	1.461889	1.536904	0	1.6	0.1089
FVComposite_ AllJuice					0.509581	0.025489	0.45962	0.55954	2.85E+07	0.508207	0.511117	0	19.99	<.0001
CompInter					0.732363	0.366693	0.01366	1.45107	1.71E+09	0.725856	0.740032	0	2	0.0458
Center_Size					1.574121	0.651098	0.29799	2.85025	4.53E+08	1.559884	1.589679	0	2.42	0.0156
CompInter* Center_Size					-0.929405	0.432416	-1.77692	-0.08189	7.41E+08	-0.937657	-0.922326	0	-2.15	0.0316
GENDERp	0				0					0	0	0		
GENDERp	1				0.047777	0.130759	-0.20851	0.30406	2.90E+07	0.039346	0.055392	0	0.37	0.7148
Race		1.000000			0.216241	0.430927	-0.62836	1.06084	3.79E+09	0.209927	0.22267	0	0.5	0.6158
Race		2.000000			0					0	0	0		
Race		3.000000			-0.399476	0.469215	-1.31912	0.52017	1.49E+12	-0.401075	-0.398122	0	-0.85	0.3946
Race		4.000000			-1.048717	0.60353	-2.23161	0.13418	1.85E+10	-1.055265	-1.041324	0	-1.74	0.0823
Race		5.000000			0.470287	0.543097	-0.59416	1.53474	4.20E+10	0.465491	0.475216	0	0.87	0.3865
Edu3			1.000000		0.398717	0.294727	-0.17894	0.97637	4.41E+10	0.395917	0.401001	0	1.35	0.1761
Edu3			2.000000		0.367906	0.259556	-0.14081	0.87663	5.97E+09	0.364906	0.37025	0	1.42	0.1564
Edu3			3.000000		0					0	0	0		
Inc3				1.000000	0.301673	0.287914	-0.26263	0.86597	5.88E+09	0.297169	0.306348	0	1.05	0.2947
Inc3				2.000000	0.292808	0.306375	-0.30768	0.89329	4.34E+08	0.283397	0.299869	0	0.96	0.3392
Inc3				3.000000	0					0	0	0		
AGEx					-0.067819	0.126639	-0.31603	0.18039	9.33E+07	-0.071996	-0.062476	0	-0.54	0.5923

Table 37. Multiple Imputation Little's MCAR Results for FVComposite_NoJuice

Parameter	GENDERp	Race	Edu3	Inc3	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Theta0	t for H0: Parameter =Theta0	Pr > t
Intercept					1.506994	0.684999	0.15386	2.860133	154.99	0.846159	2.26592	0	2.2	0.0293
FVComposite _NoJuice					0.486383	0.02775	0.43132	0.541444	99.072	0.457603	0.521066	0	17.53	<.0001
CompInter					0.263949	0.202071	-0.13352	0.661415	340.15	0.072229	0.477127	0	1.31	0.1924
Center_Size					0.538839	0.357528	-0.16405	1.24173	395.76	0.214967	0.871191	0	1.51	0.1326
CompInter* Center_Size					-0.306085	0.241577	-0.78087	0.168697	442.21	-0.514269	-0.071571	0	-1.27	0.2058
GENDERp	0				0					0	0	0		
GENDERp	1.000000				-0.031395	0.110923	-0.25135	0.188559	104.41	-0.172404	0.112388	0	-0.28	0.7777
Race		1.000000			0.022808	0.32493	-0.61864	0.664254	168.92	-0.331235	0.410354	0	0.07	0.9441
Race		2.000000			0					0	0	0		
Race		3.000000			-0.304806	0.346789	-0.98939	0.379767	169.57	-0.689247	-0.007229	0	-0.88	0.3807
Race		4.000000			-0.57189	0.444867	-1.44811	0.304327	246.97	-0.937409	-0.061034		-1.29	0.1998
Race		5.000000			0.03495	0.409876	-0.77378	0.84368	181.69	-0.467216	0.389372	0	0.09	0.9321
Edu3			1.000000		0.150377	0.239497	-0.32347	0.624225	129.09	-0.0128543	0.390937	0	0.63	0.5312
Edu3			2.000000		0.148492	0.214443	-0.27631	0.573288	114.35	-0.127008	0.379335	0	0.69	0.4901
Edu3			3.000000		0					0	0	0		
Inc3				1.000000	0.188187	0.194863	-0.19459	0.570961	545.14	0.035487	0.325394	0	0.97	0.3346
Inc3				2.000000	0.172985	0.201236	-0.22183	0.567803	1185.6	0.033978	0.291165	0	0.86	0.3902
Inc3				3.000000	0					0	0	0		
AGEx					-0.01143	0.105523	-0.22059	0.197731	108.14	-0.153199	0.084781	0	-0.11	0.9139

E. Types of Analyses

1. Description of Effect Size Calculations

Most of the PEACH evaluation impact variables are continuous, which required statistical analyses methods of ANOVA and regression, while binary outcomes were analyzed via logistic regression. The PEACH evaluation team committed to running p-value analyses on effect sizes only for final analyses following year 5.

For each year's effect size analyses, new variables were calculated for the difference between follow-up and baseline outcome variables. The Cohen's d statistic was chosen because two means are being compared. SPSS was then used to acquire the mean, standard deviation, and n of each new variable grouped by Comparison (1) and Implementation (2). Using these values, the Cohen's d effect sizes were calculated for each outcome variable using the formula below:

$$d = \frac{\bar{x}_1 - \bar{x}_2}{s}, \quad \text{where} \quad s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 1}}$$

Baseline data was used for adjustment. Low-range (or small) program effects were classified as follows: small ≥ .20; medium ≥ .50; large ≥ .80. Cohen's d effect sizes were reported in Years 2-4 but only p-values were used in final cohort analyses.

2. Descriptions of Models

SAS 9.4 was used for all final analyses and model output is from the PROC MIXED (mixed procedure) from SAS which creates mixed linear models. There are two sets of parameters in mixed linear models and the parameters of the variance-covariance model are referred to as covariance parameters. These covariance parameters are what distinguishes the mixed linear model from the standard linear model, as mixed linear models contain both fixed- and random-effects parameters. The covariance parameters consider the clustering within classroom and center as the random effect. We employed multi-level regression models to assess program effects on these outcome variables: children's reported behavior in fruit and vegetable consumption, engagement in physical activity and screen time, controlling for child-level covariates. These child-level covariates include baseline outcome measurements, age, parent education, and parent income. Center-level covariates include additional center practices as well as center size.

At the lowest level (child level), the model can be expressed as

yij = b0j + b1j * yij_baseline + b2j * age + eij

where yij is the outcome variable measured at post-intervention for child i of center j, yij_baseline is the baseline measurement of yij, and eij is the residual error term. The intercept and the slopes may have varied across centers. We envisioned predicting intercept and the slopes with second level (center level) regression models:

b0j = a00 + a01 * (RRA) + a02 * (NAP) + a03 * (HFSY) + u0j

b1j = a10 + a11 * (RRA) + a12 * (NAP) + a13 * (HFSY) + u1j

b2j = a20 + a21 * (RRA) + a22 * (NAP) + a23 * (HFSY) + u2j

b3j = a30 + a31 * (RRA) + a32 * (NAP) + a33 * (HFSY) + u3j

b4j = a40 + a41 * (RRA) + a42 * (NAP) + a43 * (HFSY) + u4j

b5j = a40 + a51 * (RRA) + a52 * (NAP) + a53 * (HFSY) + u5j

where (RRA) indicates whether or not center j implemented RRA, (NAP) indicates whether or not center j implemented NAP SACC, (HFSY) indicates whether or not center j had families that participated in HFSY, and random intercept u0j and random slopes u1j, ..., u5j are the center specific random effect. We started out with the simplest model, namely, the intercept-only model, then included the explanatory variables but not the cross-level interactions, finally included the cross-level interactions, and used likelihood ratio tests and fitness tests to find the best model.

All the model assumptions were tested, including linearity between an outcome variable and its explanatory variables, collinearity between the same level explanatory variables, and normality of the outcome variables. There was no collinearity between the explanatory variables. The normality assumption was assessed by looking at residual plots of the models and there was no clear violation of normality assumptions. Data transformations took place (re-categorization of Education and Income variables) and some explanatory variables were dropped in various models via backward elimination.

All analyses adjusted for pre-test outcome and clustering within the classroom and center in addition to:

Gender: As described in this document, sex of the child.

Age: As described in this document, age of child at baseline.

Race: As described in this document, with five levels: White, Black, Hispanic/Latino, Arab/Arab American, Other.

Education: 3 levels: 1 = <HS/GED, 2 = HS/GED to some college, 3 = College degree and above

Income: 3 levels: 1 = $20,000 or less, 2 = $20,001 to $35,000, 3 = $35,001 and above

Study Condition: Comparison or Implementation group

Center Size: small (low enrollment) or big (high enrollment)

Additional terms and interactions specific to each of the models can be viewed in the output in Appendix A, Tables H-1 through H-12.

3. Brief Description of Coding of Variables

Reported variables within this analysis were physical activity and screen time amount, and fruit and vegetable consumption. Physical activity was created by generating means of weekday and weekend hours of physical activity and then weighted to create a combined variable. Screen time was created through the same method, plus creating a composite variable of TV, video game, and computer screen times. Fruit and vegetable measures were created into a composite variable of the number of servings of

fruits and vegetables. If the child drinks juice, up to one extra serving is added to this variable. See tables C, D, & E in Appendix A for more details on this information as well as Part E in Section II.

4. Assumptions of Power and Final Power Analyses

Effect size analyses rely on the assumption that there is low intraclass correlation. In Year 2, the assumption was made that there was a large ICC (intraclass correlation coefficient) of .05. In Year 3 evaluation, specific analysis was conducted to determine the estimate ICC to ensure that those power analyses were an accurate projection. An ICC of 0.10 or higher would require larger sample sizes and warrant efforts of over recruitment.

We performed ICC calculations for the initial, primary 12 models below. ICC1 was calculated:

ICC1 = ICC Center = (variance_IDCenter)/(variance_IDCenter + variance_ classroom + residual variance)

And ICC2 was calculated:

ICC Classroom | Center = (variance_IDCenter + variance_ classroom)/(variance_IDCenter + variance_ classroom + residual variance).

Table 38. ICC Calculations for Models

	IDCenter	Classroom	Residual	ICC1	ICC2
1. FV Composite, full sample	0.28	0.08	3.31	0.08	0.10
2. Total PA, full sample	0.45	1.20	49.86	0.01	0.03
3. Total Screen time, full sample	10.34	13.16	67.18	0.11	0.26
4. FV Composite, without 184 participants	0.35	0.10	3.26	0.09	0.12
5. Total PA, without 184 participants	0.90	0.97	50.20	0.02	0.04
6. Total Screen time, without 184 participants	14.31	11.04	65.79	0.16	0.28
7. CBCL Attention score: parent	0.56	0.27	33.45	0.02	0.02
8. CBCL Aggressive: parent	0.21	0.16	33.91	0.01	0.01
9. CBCL Externalizing: parent	4.24	3.25	72.90	0.05	0.09
10.C-TRF Attention: teacher	1.03	4.80	21.93	0.04	0.21
11. C-TRF Aggressive: teacher	0.36	1.10	9.15	0.03	0.14
12. C-TRF externalizing: teacher	0.43	12.97	36.38	0.01	0.27

There are ICCs in Table 38 that do exceed 0.10. This means it could be possible that any lack of effects could be due to a lack of power, and this is considered a limitation. However, this is only happens with an effect that is large, but just borderline significant. More power (additional cases) could only move those effects to significance if their p-values were close to being significant in the first place. As reported in subsequent sections below, the p-values of the variables in Table 36 that have ICCs above 0.10 are very insignificant in terms of program effects for implementation versus comparison groups, and therefore additional cases would have been very unlikely to have affected these p-values to the point where they would become significant.

5. Other Tests Used for Statistical Significance in Analyses

Independent samples t-tests were used to compare the means of the child age variable for the baseline equivalence and selective attrition tables in order to determine if child age was significantly different between the comparison and implementation groups and if child age was significantly different between drop outs and those in the pre/post cohort. Chi-square tests were also utilized in the baseline equivalence and selective attrition tables. Chi-square tests were performed as subcommands of the crosstab command to determine if there were significant differences in child sex, parent education, parent income, health insurance, and public assistance between the comparison and implementation groups and between drop outs and those in the pre/post cohort. The statistical significance of p-values were reported as follows: †p<.10, *p<.05, **p<.01, ***p<.001. Cohen's d effect sizes were described in section #1 of Part E above. For each effect in the models, the significance probability value (the p value) associated with the F Value is reported as Pr > F.

F. Assessments of Effects and Findings of Confirmatory Research Questions

1. Analyses and Findings of Fruit and Vegetable Consumption

The model for fruit and vegetable consumption without juice (FVComposite_NoJuicex) can be viewed in Appendix A, Table H-1. It included the FVComposite_NoJuicex variable at baseline and the variables for sex of child (Gender), race of child (Race), parent education (Education), household income (Income), intervention group (Study Condition), Center Size (high enrollment or low), the interaction of the intervention group with center size, and age of child at baseline (Age). The education and income variables (as reported in baseline equivalence table and selective attrition table) were transformed into the following:

-Education: 1 = < HS/GED, 2 = HS/GED to some college, 3 = College degree and above
-Income: 1 = $20,000 or less, 2 = $20,001 to $35,000, 3 = $35,001 and above

As seen in Table 39, race was a significant predictor of FVComposite_NoJuice. Table 40 shows that Arab/Arab Americans had the smallest estimate of consumption and participants categorized as Other had the highest estimate of consumption. There was no intervention effect for the implementation group nor a significant interaction with center size.

Table 39. Results of Type III Tests of Fixed Effects for FVComposite_NoJuice (N=1208)

Effect	Num DF	Den DF	F Value	Pr > F
FVComposite_NoJuicex	1	898	408.91	<.0001
Study Condition	1	898	0.88	0.3489
Center Size	1	898	0.71	0.4002
Study Condition*Center Size	1	898	2.71	0.1001
Gender	1	898	0.05	0.8205
Race	4	898	3.34	0.0101
Education	2	898	0.76	0.4679
Income	2	898	0.84	0.4318

Effect	Num DF	Den DF	F Value	Pr > F
Age	1	898	0.09	0.7619

Table 40. Results of Least Squares Means for FVComposite_NoJuice

Effect	Race	Estimate	Standard Error	DF	t Value	Pr > |t|
Race	**Arab, Arab and White, Arab and Other**	3.5782	0.3689	898	9.70	<.0001
Race	**Black, Black and anything else (except Hispanic)**	4.5443	0.1279	898	35.52	<.0001
Race	**Hispanic/Latino, Hispanic and anything else**	4.1234	0.1737	898	23.74	<.0001
Race	**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**	4.6902	0.2877	898	16.30	<.0001
Race	**White, White and Other**	4.6324	0.3483	898	13.30	<.0001

Figure 3 shows the Cohen's d effect size for FVComposite_NoJuice below. The effect size is 0.00.

Figure 3. Cohen's d Baseline Adjusted Posttest Effect Size for FVComposite_NoJuice

Variable Name	Variable Description	Comparison			Intervention			Pooled s	Cohen's d	p-values
		Mean	SD	n	Mean	SD	n			
FVComposite_NoJuice	Total fruit and vegetable, no juice	-0.27	2.19	1067	-0.26	2.08	829	2.14	0.00	0.97

The model for fruit and vegetable consumption with all servings of juice (FVComposite_AllJuice) can be viewed in full in Appendix A, Table H-2. It included the FVComposite_AllJuicex variable at baseline and the variables for sex of child (Gender), race of child (Race), parent education (Education), household income (Income), intervention group (Study Condition), Center Size (high enrollment or low), the interaction of the intervention group with center size, and age of child at baseline (Age).

As shown in Tables 41-43 below, with juice in the model, there is an interaction between intervention group and center size with the following pattern: For lower enrollment centers, the intervention group had 6.5 servings adjusted and comparison group had 5.7 servings, and this difference is statistically significant (p=0.04), which favors the implementation group. Alternatively, amongst high enrollment centers, there was little intervention impact (p=0.06) with implementation centers reporting 6.2 servings and comparison centers reporting 6.4. Thus it appears that the intervention worked amongst low enrollment centers and had little to no effect amongst high enrollment centers.

Table 41. Type III Tests of Fixed Effects for FVComposite_AllJuice (N=1222)

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
FVComposite_AllJuice	1	906	401.12	<.0001
Study Condition	1	906	1.57	0.2103
Center Size	1	906	0.52	0.4709
Study Condition*Center Size	1	906	4.86	0.0277
Gender	1	906	0.17	0.6844
Race	4	906	3.29	0.0109
Education	2	906	1.04	0.3537
Income	2	906	0.53	0.5868
Age	1	906	0.26	0.6111

Table 42. Least Squares Means Results for FVComposite_AllJuice

Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	6.3687	0.2635	906	24.17	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	5.7096	0.2908	906	19.63	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	6.1617	0.2675	906	23.04	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	6.4526	0.3493	906	18.47	<.0001

Table 43. Tests of Effect Slices for FVComposite_AllJuice

Effect	**Center enrollment #**	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Study Condition*Center Size	**High Enrollment**	1	906	0.85	0.3567
Study Condition*Center Size	**Low Enrollment**	1	906	4.13	0.0425

a) Fruit and Vegetable Consumption Model Without 184 Participants

The FVComposite_AllJuice model was run again without the 184 participants who switched treatment arms (N=1144). The model can be viewed in Appendix A, Table H-3. The interaction of group and center size was still significant, although less so (p = 0.0487). The least squares means did not change much at all and the same effects were seen.

b) Previous Years' Findings of Fruit and Vegetable Consumption

An optimistic outcome finding from year 2 showed several statistically significant differences in the parents' perceived report of child fruit and vegetable consumption in the implementation vs. the comparison group when adjusting for baseline level of the variable and clustering of children in the same classroom. Parents were asked the grade they gave their child regarding several health behaviors (Table 44). Parents could select any grade from A-F for behaviors such as physical activity/exercise, eating fruits, and drinking sweetened beverages. A grade of 'A', like an academic grade, was a positive score and corresponded with a healthy behavior while a grade of 'F,' corresponded with an unhealthy behavior.

Table 44. Year 2 Parental Perceived Intake of Fruit and Vegetables

Comparison	Odds of Reporting A or Not A for Fruit Consumption Odds Ratio (95% C.I.)	Odds of Reporting A or Not A for Vegetable Consumption Odds Ratio (95% C.I.)
Implementation vs. control	**1.64** (1.06, 2.53)*	**1.53** (1.07, 2.19)*
Implementation low dose vs. control	1.08 (0.58, 2.01)	1.14 (0.68, 1.91)
Implementation high dose vs. control	**1.96** (1.20, 3.19)*	**1.77** (1.19, 2.63)*
Implementation high dose vs. low dose	1.81 (0.96, 3.43)	1.55 (0.90, 2.69)

*p < .05
[a] Odds ratio calculated based on generalized linear mixed effect model adjusting for baseline level and clustering of students in the same classroom.
[b] Collapsed the variable so that grade 'A' was given a value of 1 and grades B-F were given values of 0

As shown in Table 45 below, a low-range posttest effect size of 0.19 was seen in the FVComposite variable upon comparison of the two intervention groups in the year 3 pre/post cohort.

Table 45. Baseline Adjusted Posttest Effect Sizes for Year 3 Pre/Post Cohort

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
FVComposite	Total fruit and vegetable, plus up to one serving juice	0.02	2.04	167	0.40	1.96	189	2.00	0.19

Table 46 shows that in year 4, only a very low effect size of 0.05 was seen for fruit and vegetable consumption.

Table 46. Baseline Adjusted Posttest Effect Sizes for year 4 pre/Post Cohort

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
FVComposite	Total fruit and vegetable, and up to one serving juice	0.00	2.02	212	0.10	1.80	216	1.91	0.05

2. Analyses and Findings of Physical Activity

The initial model for physical activity can be viewed in Appendix A, Table H-4. It included the Total_PAx variable at baseline and the same variables as in the models for the composite fruit and vegetable variables (see Table H-1). There was no significant interaction between intervention group and center size. Backward

elimination was used to trim the model to what is shown in Table 47 below. For the group variable (implementation or comparison), F = 1.53 and the p-value was not significant (p = 0.2163). For race, F = 3.01 and the p-value became significant at p = 0.0173. The income variable also had a significant p-value (p = 0.0244). The least squares means (Table 48 on following page) show that race and income were significant predictors of Total_PA and that there was no overall effect of the intervention for physical activity. White participants had the greatest number of hours physical activity per week while Arab/Arab American participants had the least.

Table 47. Results of Type III Tests of Fixed Effects for Total_PA (N=1190)

Effect	Num DF	Den DF	F Value	Pr > F
Total_PAx	1	1355	280.39	<.0001
Study Condition	1	1355	1.53	0.2163
Center Size	1	1355	2.97	0.0849
Race	4	1355	3.01	0.0173
Income	2	1355	3.72	0.0244

Table 48. Least Squares Means Results for Total_PA

Effect	Study Condition	Center enrollment #	Race	Income Levels	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition	**Comparison**				17.8659	0.5423	1355	32.94	<.0001
Study Condition	**Intervention**				18.3676	0.5404	1355	33.99	<.0001
Center Size		**High**			17.7154	0.5221	1355	33.93	<.0001
Center Size		**Low**			18.5181	0.5828	1355	31.78	<.0001
Race			**Arab, Arab and White, Arab and Other**		16.4394	1.3973	1355	11.77	<.0001
Race			**Black, Black and anything else (except Hispanic)**		18.1512	0.3432	1355	52.90	<.0001
Race			**Hispanic/Latino, Hispanic and anything else**		17.0120	0.5155	1355	33.00	<.0001
Race			**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**		18.2628	1.0306	1355	17.72	<.0001

Effect	Study Condition	Center enrollment #	Race	Income Levels	Estimate	Standard Error	DF	t Value	Pr > |t|
Race			**White, White and Other**		20.7184	1.2156	1355	17.04	<.0001
Income				**1**	18.6182	0.4763	1355	39.09	<.0001
Income				**2**	18.9412	0.5591	1355	33.88	<.0001
Income				**3**	16.7909	0.8173	1355	20.54	<.0001

The Cohen's d effect for physical activity is only 0.06, as shown below.

Figure 4. Cohen's d Baseline Adjusted Posttest Effect Size for Total_PA

Variable Name	Variable Description	Comparison			Intervention			Pooled s	Cohen's d	p-values
		Mean	SD	n	Mean	SD	n			
Total_PA	Total weekly hours of physical activity	0.51	9.50	1048	1.08	9.27	808	9.40	0.06	0.20

a) Physical Activity Model Without 184 Participants

The model for physical activity with the 184 participants who switched conditions removed from the model can be viewed in Appendix A, Table H-5 (N=1113). The model still reduced to the main effect of race and White participants had the most physical activity while Arab/Arab American participants had the least physical activity.

b) Previous Years' Findings of Physical Activity

In year 3, low range program effects were seen for the weekly total amount of physical activity when comparing the intervention groups in the year 3 pre/post cohort.

Table 49. Baseline Adjusted Posttest Effect Sizes for Year 3 Pre/Post Cohort

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
PA_Total	Total hours of physical activity	-0.31	9.61	146	0.90	8.44	153	9.03	0.13

Very low-range posttest effect sizes were seen for physical activity in the year 4 pre/post cohort.

Table 50: Baseline Adjusted Posttest Effect Sizes for Year 4 Pre/Post Cohort

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
PA_Total	Total hours physical activity	0.57	9.67	182	0.85	8.72	187	9.20	0.03

3. Analyses and Findings of Screentime

As Table H-6 shows in Appendix A, the effects in the model are the same as those used in the FVComposite and PA models. There was not a significant interaction between group and center size, and backward elimination was used to trim the model (Table 49). The least squares means results (Table 51) show that race was a significant predictor of screen time (F = 5.9, p = 0.0001) and Black participants had the most amount of screen time. There was no overall effect of the intervention for screen time.

Table 51. Results of Type III tests of Fixed Effects for Total_Screentime (N=1201)

Effect	Num DF	Den DF	F Value	Pr > F
TotalScreenTimex	1	1454	587.65	<.0001
Study Condition	1	1454	0.37	0.5445
Race	4	1454	5.90	0.0001

Table 52. Least Squares Means for Total_Screentime

Effect	Study Condition	Race	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition	**Comparison**		18.8417	0.8732	1454	21.58	<.0001
Study Condition	**Intervention**		19.3112	0.8912	1454	21.67	<.0001
Race		**Arab, Arab and White, Arab and Other**	19.5782	1.8862	1454	10.38	<.0001
Race		**Black, Black and anything else (except Hispanic)**	21.4353	0.5816	1454	36.85	<.0001
Race		**Hispanic/Latino, Hispanic and anything else**	17.7482	0.8901	1454	19.94	<.0001
Race		**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**	17.3313	1.5186	1454	11.41	<.0001
Race		**White, White and Other**	19.2890	1.4455	1454	13.34	<.0001

The effect size for Total_Screentime is shown in Figure 5 below. The negative cohen's d value for the variable of total hours of screen time results from a decrease in the intervention group and a slight increase in the comparison group. Despite the negative sign, this is indeed a positive intervention effect.

Figure 5. Cohen's d Effect Size for Total_Screentime

Variable Name	Variable Description	Comparison			Intervention			Pooled s	Cohen's d	p-values
		Mean	SD	n	Mean	SD	n			
Total_Screentime	Total weekly hours of screen time	3.02	10.67	1060	2.81	10.79	819	10.72	-0.02	0.67

a) Screentime Model without 184 Participants

The model for physical activity without the 184 participants whose centers switched conditions can be viewed in Appendix A, Table H-7 (N=1124). There was still no effect of the intervention and the model revealed no significant changes.

b) Previous Years' Findings of Screentime

A mid-range posttest effect size of 0.34 was seen when comparing the intervention groups for total screen time in the year 3 cohort.

Table 53. Baseline Adjusted Posttest Effect Sizes for Year 3

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
Totalscreentime	Total screen time hours	2.07	15.21	137	-2.29	10.62	151	13.00	0.34

Unlike in year 3, only a very low-range posttest effect size of 0.04 was seen when comparing the intervention groups for total screen time in the year 3 cohort.

Table 54: Baseline Adjusted Posttest Effect Sizes for Year 4 Pre/Post Cohort

Variable Name	Variable Description	Comparison			Implementation			Pooled SD	Cohen's d
		Mean	SD	n	Mean	SD	n		
Totalscreentime	Total screen time hours	-0.82	7.94	191	-0.50	8.31	193	8.12	0.04

G. Assessments of Effects and Findings of CBCL and C-TRF Exploratory Research Questions

1. Analyses and Findings of Parent CBCL Attention T-Scores

The model can be viewed in Appendix A, Table H-8. The model for the parent CBCL t-scores includes the attention t-score variable at baseline (sc6tpx), intervention group (Study Condition), center size, the interaction of intervention group and center size, sex of child (Gender), race, parent education (Education), household income (Income), age at baseline (Age), and gender of parent (Gender Parent). Backward elimination was used to trim the model, shown in Table 53, and the interaction of intervention group and center size became statistically significant ($F = 4.25$, $p = 0.0395$). There was a significant interaction of the implementation group and center size with participants in high enrollment centers improving their scores

compared to those in the comparison group in high enrollment centers, with little effect of center size in the comparison group. The implementation group was driving the interaction effect.

Table 55. Results of Type III Tests of Fixed Effects for Parent Attention T-Scores (N=743)

Effect	Num DF	Den DF	F Value	Pr > F
sc6tpx	1	778	293.61	<.0001
Study Group	1	778	0.00	0.9675
Center Size	1	778	0.26	0.6117
Study Condition*Center Size	1	778	4.25	0.0395

Table 56. Least Squares Means Results for Parent Attention T-Scores

Effect	Study Condition	Center enrollment #	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition*Center Size	**Comparison**	**High Enrollment**	55.8861	0.3653	778	152.98	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	55.2063	0.4357	778	126.72	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	54.9547	0.4257	778	129.10	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	56.1017	0.5577	778	100.60	<.0001

2. Analyses and Findings of Parent CBCL Aggression T-Scores

The model can be viewed in Appendix A, Table H-9. The initial model includes the aggression t-score variable at baseline (sc7tpx), intervention group (Study Condition), center size, the interaction of intervention group and center size, sex of child (Gender), race, parent education (Education), household income (Income), age at baseline (Age), and gender of parent (Gender Parent). Backward elimination was used to trim the model (Table 57) and there was a significant interaction between intervention group and center size (F = 4.5, p = .0287). As shown in Table 58, scores improved more among implementation participants in high enrollment centers versus those in low enrollment centers, with the opposite pattern occurring in the comparison group.

Table 57. Results of Type III Tests of Fixed Effects for Parent Aggression T-Scores (N=743)

Effect	Num DF	Den DF	F Value	Pr > F
sc7tpx	1	778	457.33	<.0001
Study Condition	1	778	2.49	0.1150
Center Size	1	778	0.01	0.9219

Effect	Num DF	Den DF	F Value	Pr > F
Study Condition*Center Size	1	778	4.80	0.0287

Table 58. Least Squares Means Results for Parent Aggression T-Scores

Effect	Study Condition	Center enrollment #	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition*Center Size	**Comparison**	**High Enrollment**	54.3710	0.3300	778	164.76	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	53.5124	0.3971	778	134.76	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	52.8236	0.3859	778	136.90	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	53.7639	0.5182	778	103.75	<.0001

3. Analyses and Findings of Parent CBCL Externalizing Behavior T-Scores

The model can be viewed in Appendix A, Table H-10. The initial model included the externalizing behavior t-score variable at baseline (sc10tpx) and all the effects used in the initial models for the two previously discussed parent CBCL models. The model was trimmed, as shown in Table 59 below, and there was a significant interaction between intervention group and center size (F = 5.69, p = 0.0173). As with the model for the aggression t-scores, scores improved more among implementation participants in high enrollment centers versus those in low enrollment centers, with the opposite pattern occurring in the comparison group. This is shown in Table 60.

Table 59. Results of Type III Tests of Fixed Effects for Parent Externalizing Behavior T-Scores (N=743)

Effect	Num DF	Den DF	F Value	Pr > F
sc10tpx	1	778	531.62	<.0001
Study Condition	1	778	0.00	0.9841
Center Size	1	778	0.82	0.3655
Study Condition*Center Size	1	778	5.69	0.0173

Table 60. Least Squares Means Results for Parent Externalizing Behavior T-Scores

Effect	Study Condition	Center enrollment #	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition*Center Size	**Comparison**	**High Enrollment**	50.1507	0.7077	778	70.86	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	47.3870	0.8504	778	55.72	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	48.1880	0.8183	778	58.89	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	49.3173	1.0335	778	47.72	<.0001

4. Analyses and Findings of Teacher C-TRF Attention T-Scores

The model can be viewed in Appendix A, Table H-11. The initial model included the teacher C-TRF attention t-score variable at baseline (sc6ttx) and all the effects used in the initial models for the parent CBCL models. Using backward elimination, the model was trimmed, as seen in Table 61, and there was a significant interaction between intervention group and center size (F = 4.40 and p = 0.0362). The least squares means in Table 62 show that within the implementation group, scores worsened in high enrollment centers versus low enrollment centers, with the opposite pattern occurring in the comparison group

Table 61. Results of Type III Tests of Fixed Effects for Teacher Attention T-Scores (N=1112)

Effect	Num DF	Den DF	F Value	Pr > F
sc6ttx	1	911	881.78	<.0001
Study Condition	1	911	0.02	0.8978
Center Size	1	911	0.02	0.8790
Study Condition*Center Size	1	911	4.40	0.0362
Education	2	911	8.41	0.0002

Table 62. Least Squares Means Results for Teacher Attention T-Scores

Effect	Study Condition	Center enrollment #	Education Level	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition*Center Size	**Comparison**	**High Enrollment**		54.8590	0.5000	911	109.72	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**		55.9679	0.5888	911	95.06	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**		55.9862	0.5462	911	102.50	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**		54.6936	0.7965	911	68.66	<.0001
Education			**1**	55.0979	0.4547	911	121.18	<.0001
Education			**2**	54.3231	0.3122	911	174.01	<.0001
Education			**3**	56.7090	0.6538	911	86.73	<.0001

5. Analyses and Findings of Teacher C-TRF Aggression T-Scores

Original model terms were the same as in all previous initial models for the Teacher C-TRF form. The model was trimmed to the following, using backward elimination (Table 61).The full model can be viewed in Appendix A, Table H-12.

Table 63. Results of Type III Tests of Fixed Effects for Teacher Aggression T-Scores (N=1112)

Effect	Num DF	Den DF	F Value	Pr > F
sc7ttx	1	887	500.59	<.0001
Study Condition	1	887	0.00	0.9505
Gender	1	887	15.64	<.0001
Education	2	887	2.41	0.0902

Given that there was no interaction term, the interaction term was then taken out of the model and run again; the Type III Tests of Fixed Effects changed somewhat (Table 64). The p-value grew closer to a significant level for the intervention group variable (from p = 0.95 to p = 0.35) and child sex was no longer significant (p = 0.75). There was no intervention effect (Table 65).

Table 64. Type 3 Tests of Fixed Effects without Interaction Term

Effect	Num DF	Den DF	F Value	Pr > F
sc7ttx	1	156	121.48	<.0001
Study Condition	1	156	0.89	0.3472
Center Size	1	156	0.20	0.6532
Gender	1	156	0.10	0.7526
Race	4	156	0.90	0.4670
Education	2	156	1.02	0.3620
Income	2	156	0.25	0.7822
Age	1	156	1.11	0.2933
Gender Teacher	1	156	0.08	0.7793

Table 65. Least Squares Means Results for Teacher Aggression T-Scores

Effect	Study Condition	Child gender as stated on parent form PRE	Education Level	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition	**Comparison**			54.0296	0.2392	887	225.91	<.0001
Study Condition	**Intervention**			54.0486	0.2755	887	196.20	<.0001
Gender		**Female**		53.6557	0.2257	887	237.69	<.0001
Gender		**Male**		54.4225	0.2319	887	234.70	<.0001
Education			**1**	54.1051	0.2749	887	196.85	<.0001
Education			**2**	53.6742	0.1766	887	303.98	<.0001
Education			**3**	54.3380	0.4084	887	133.05	<.0001

6. Analyses and Findings of Teacher C-TRF Externalizing Behavior T-Scores

Original model terms were the same as in all previous initial models for Teacher C-TRF form. The model was trimmed, as show in Table 66. The full model can be viewed in Appendix A, Table H-13. There was no interaction term, so the interaction term was then removed from the model and run again; no significant changes occurred.

Table 66. Results of Type III Tests of Fixed Effects for Teacher Externalizing Behavior T-Scores (N=1112)

Effect	Num DF	Den DF	F Value	Pr > F
sc10ttx	1	911	1098.30	<.0001
Study Condition	1	911	0.00	0.9769
Education	2	911	4.05	0.0178

There was no intervention effect, as shown in Table 67. Education was significant, and the least squares means results show that the middle education level had the best (lowest) score of externalizing behaviors.

Table 67. Least Squares Means Results for Teacher Externalizing Behavior T-Scores

Effect	Study Condition	Education Level	Estimate	Standard Error	DF	t Value	Pr > |t|
Study Condition	**Comparison**		43.5966	0.5149	911	84.66	<.0001
Study Condition	**Intervention**		43.6172	0.6059	911	71.98	<.0001
Education		**1**	43.7906	0.5687	911	77.00	<.0001
Education		**2**	42.6533	0.3774	911	113.03	<.0001
Education		**3**	44.3768	0.8335	911	53.24	<.0001

7. Analyses and Findings of the Classroom Level Problem Behaviors Outcomes

A polytamous regression was conducted. The 4 possible answers for each question in the tool were assigned values of 1-4 in a rating scale.

1.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Are fidgety and have difficulty sitting still
2.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Pay attention

Coded as 1 2 3 4

Each possible outcome was dichotomized to 1 (category 4) versus 0 (categories 1, 2, 3) and a model was run with the intervention group variable (with two levels: comparison and implementation) used a covariate. We intended to run a second model with a dosage variable that would have 3 levels (comparison, low implementers, high implementers). However, no dosage variable was calculated due to a lack of dosage data.

We employed two versions of the model, one adjusting for baseline outcomes and one without adjusting for baseline outcomes. Both models accounted for clustering with center. No difference was found among any of the outcomes between comparison and implementation centers. A sample of these analyses can be seen in Appendix A, Tables I-1 and I-2.

H. Analyses of the HFSY Exploratory Research Question

The unit of assignment was at the individual level as that is the level at which the program operates. However, there was no further assignment to any implementation or comparison group for this research question. The analyses for this research question also took place at the individual level. The approach was simple: use SPSS to assess whether there were significant behavior changes in pertinent questions between Chat 1 and Chat 2. For questions 1-3 shown below, the McNemar test was utilized. This is a procedure for testing if the proportions of two dichotomous variables are equal in the same population. The procedure determines if there is a statistically significant difference in the proportion of students in one value of the dichotomous variable and the proportion of students in the other value of the dichotomous value. For questions 4-11, paired sample t-tests were used. A paired samples t-test is used when there are two related observations and we need to know if the means of these two variables differ from one another. We tested whether the means of the pre scores for these questions differed from the means of the post scores for these questions. The 5 different values of the variables for these questions (0 through 5) enabled us to treat them as continuous variables such that the paired t-tests could be performed. Both the Mcnemar test and paired sample t-tests returned exact, 2 sided p-values, reported below in Table 68.

Table 68 below shows the number of people who made changes in specific questions as well as the percentage of people who made these changes out of the total number of people who completed both Chat 1 and Chat 2 (188 people). Of those 188 people who completed both chat forms, 25 recorded making no changes in the behaviors utilized in the analyses for the research question.

Table 68. Description and Significance of Changes made during HFSY programming

Question	Number who made improvement	% who made improvement (N=162)	p-value
1. Do you limit the amount of salt in your diet?	39	24.07%	0.000***
2. Do you usually choose foods that are low in fat?	36	22.22%	0.000***
3. Do you currently smoke cigarettes or cigars?	6	3.7%	0.344
4. How many cups of pop do you drink per day?	47	29.00%	0.008**
5. How many hours of TV do you watch per day?	49	30.25%	0.003**
6. How many servings of fruit do you eat per day?	71	43.83%	0.010**
7. How many servings of vegetables do you eat per day?	56	34.57%	0.606
8. How many servings of whole-grain foods do you eat per day?	72	44.44%	0.045*
9. How many servings of low-fat or fat-free dairy products do you eat and/or drink?	55	33.95%	0.284
10. How many times do you eat fast food in an average week?	46	28.40%	0.294
11. How many days do you exercise for at least 30 minutes in an average week?	67	41.35%	0.009**
†P<.10 *p<.05 **P<.01 ***P<.001			

While improvements were made in all 11 health behavior questions, these improvements were statistically significant in only 7 cases. Statistically significant differences were seen between Chat 1 and Chat 2 for the following health behaviors: limiting the amount of salt in the diet, choosing foods low in fat, the number of cups of pop consumed each day, number of hours of TV watched each day, servings of fruit consumed each day, servings of whole-grain foods consumed each day, and the number of days of exercise each week. These significant changes show that parents who participate in Healthy Families Start with your do display significantly higher levels of positive health behaviors. These health behavior changes in HFSY participants are important in factors in creating a culture of health and wellness within their own families and in encouraging those same changes in their family members.

There no changes to the most recent SEP that was accepted in Spring 2017. The analytic strategies we employed matched those we proposed and described in the SEP.

I. Holm's Method Outcomes

Fruit and vegetable consumption was considered the primary outcome, and therefore adjustments for multiple comparisons were made for all secondary outcomes. Prior to correcting for multiple comparisons, p-values for the interaction term of Study Condition x Center Size for the secondary outcomes were as follows:

Table 69. P-Values Prior to Holm's Adjustments for Multiple Comparisons

Secondary Outcome Variables	P-values
Total Physical Activity	0.6728
Total Screen Time	0.9110
Parent Attention Score	0.0026
Parent Aggression Score	0.0805
Parent Externalizing Behavior Score	0.0151
Teacher Attention Score	0.0054
Teacher Aggression Score	0.0396
Teacher Externalizing Behavior Score	0.1555

Holm's adjustments were made, and p-values for the interaction term of Study Condition x Center Size for the secondary outcomes are reported in Table 70 below.

Table 70. P-Values After Holm's Adjustments for Multiple Comparisons

Secondary Outcome Variables	P-values
Total Physical Activity	1.0000
Total Screen Time	1.0000
Parent Attention Score	0.0208
Parent Aggression Score	0.3220
Parent Externalizing Behavior Score	0.0906
Teacher Attention Score	0.0378
Teacher Aggression Score	0.1980
Teacher Externalizing Behavior Score	0.4665

This implies that after adjusting for multiple comparisons, center sizes plays a role for Parent Attention Score as well as Teacher Attention Score, but not for other secondary outcomes.

Section V. Findings, Lessons Learned, and Next Steps

A. Summary of Implementation Findings

The MTK was implemented with success starting in year 3, with the number of engaged users on the Facebook page, the number of unique users who have seen content related to the page, and the number of unique users who clicked on any post content rising steadily between years 3 and 5. The types of Facebook Posts that were most popular throughout the study were recipes, information regarding health events, information on child health and development, and physical activity ideas for family and children. These themes are very much in line with all PEACH program goals and objectives. In year 5, the total number of page views and number of page views by unique users decreased compared to year 4. This could be due to content saturation. Many families have multiple children who received RRA programming through the 5 years of the study. These families are already familiar with the MTK and given that the early childhood website does not post new information, page links, or recipes the way the Facebook page does, they may have no need to visit the page again. Likewise, NAP SACC outcomes support its program specific goals as well as our SIF-specific objectives. Centers that participated in NAP SACC offered healthier food options and more physical activity opportunities for the children in their care.

Given that so many Teacher C-TRF forms were filled out and returned for participants in the study, it was surprising that teachers then filled out so few classroom level surveys. So few Implementation Checklists and Weekly Attendance Sheets were returned such that we were unable to create a program dosage variable, which would have been very important in including in our final impact analyses models. We were also surprised to discover we did not receive many matched pre/post Classroom Level Problem Behaviors Surveys. While we did have enough to perform some polytamous regression analyses, that sample size was also small (N= 243 classrooms).

B. Summary of Impact Findings

1. Confirmatory Research Questions

As the analyses show, there was no intervention effect for the implementation group nor any interaction with center size for fruit and vegetable consumption without juice. With juice in the model, there was an interaction between the implementation group and center size. The implementation group had more servings (6.5) in lower enrollment centers than comparison groups (5.7 servings), and this difference was statistically significant ($p = 0.04$), favoring the implementation group. In high enrollment centers there was little intervention impact ($p = 0.06$) with implementation centers reporting 6.2 servings and comparison centers reporting 6.4 servings. Therefore, it appears that the intervention worked amongst low enrollment centers and had little no effect amongst high enrollment centers.

Additionally, there was no intervention effect in terms of increasing the weekly amount of physical activity. Race and income were significant predictors of physical activity. White participants had the greatest number of hours physical activity per week while Arab/Arab American participants had the fewest. Lastly, there was no intervention effect for screen time reduction. Race was a significant predictor of screen time. Black participants had the most amount of screen time followed by Arab/Arab Americans, and then those categorized as Other had the least amount of screen time.

There were no significant differences in the aforementioned analyses when the models were run without the 184 participants whose centers switched intervention arms, which shows that the center-level carryover was a non-issue in this aspect. As previously mentioned, the operationalization of center size played an important role in its interaction with the effectiveness of treatment. This is a possibly spurious relationship. Interaction effects for both the confirmatory and exploratory outcomes were inconsistent and not always in the same direction (at times the large centers showed the effect and at times the small center showed the effect), and for this reason we are reluctant to interpret this causally.

2. Exploratory Research Questions

Parent CBCL and Teacher C-TRF outcomes vary by center size and by scale. There were 4 variables for which the outcomes interacted with center size (the teacher aggression model and teacher externalizing behaviors models had no interaction term and no statistically significant intervention effects). This can be best summarized by the following table:

Table 71. Interpretation of Parent CBCL and Teacher C-TRF Outcomes

Measure	P-value of interaction term	Interpretation
Parent attention t-score	0.04	Significant interaction of implementation group and center size. High enrollment centers in implementation group improving over high enrollment centers in comparison group with little effect of center size in comparison group.
Parent aggression t-score	0.03	Significant interaction of group and center size. Scores improved more among Implementation subjects in high enrollment centers than in low enrollment centers, with the opposite pattern in the comparison group.
Parent externalizing behavior t-score	0.02	Significant interaction between group and center size. Scores improved more among Implementation subjects in high enrollment centers than in low enrollment centers, with the opposite pattern in the comparison group.
Teacher attention t-score	0.04	Amongst the Implementation group, scores were worse in high enrollment centers than they were in low enrollment centers, with the opposite patter in the comparison group.

Parent attention and aggression scores significantly improved for participants in the implementation group who attended large, high enrollment centers. Given that these two scales are subscales of the total externalizing behavior scale, it is appropriate that there similar findings for the parent externalizing behavior scale: participants in the implementation group who attended large, high enrollment centers had better (lower) scores compared to participants in the comparison group. Teacher C-TRF outcomes were less straightforward.

Lastly, Parents/guardians who participated in HFSY displayed significantly higher levels of positive health behaviors in 7 of 11 categories that pertain the nutrition, physical activity, and screen time reduction.

C. Level of Evidence Met by the Study

We employed a rigorous, quasi-experimental, force-matched pretest/posttest evaluation design for the RRA impact study. We coupled this with highly advanced evaluation methods including mixed effect, multivariate, multiple regression models. The analyses reveal that fruit and vegetable consumption improved in a statistically significant way for participants in the implementation group who were enrolled in small, low enrollment centers. This program outcome can be deemed worthy of a moderate level of evidence. Unfortunately, RRA therefore does not meet a moderate level of evidence for increasing physical activity and decreasing screen time.

NAP SACC and HFSY outcomes were more robust. Centers that participated in NAP SACC provided healthier food options and more physical activity opportunities for the children in their care, such that NAP SACC is worthy of obtaining a preliminary level of evidence in this specific evaluation study. Parents and guardians who completed HFSY chats made significant changes in several health behaviors such that HFSY, too, is worthy of obtaining a preliminary level of evidence.

A pre-preliminary level of evidence for the MTK is thought to be appropriate because the number of page visits and unique user visits to both the Facebook page and early childhood website grew rather steadily in the 3 years the MTK was implemented.

D. Discussion of Lessons Learned

We have anecdotal evidence that RRA was well received from teachers, parents, and participants. Teachers enjoyed implementing the program and participants and their families liked the curriculum, learned from it, and utilized the take home materials. Unfortunately, this did not translate in terms of sample retention and survey response rates. Research studies with Head Start populations are quite difficult given the many challenges these vulnerable families face. Shiftwork and working multiple jobs, housing difficulties and transiency, stretching food dollars and benefits to be able to feed one's family each month—all these challenges add up. It is incredibly hard for parents and guardians to take time out of their busy days to sit down and fill out surveys for even fifteen to twenty minutes. They just do not have the time or attention to spare. We were only able to give $5 gift card evaluation thank yous to parents and guardians who were able to fill out these surveys at a very specific timepoints-drop off and pick up at school. Again, these are very hectic times when parents and guardians are rushing to get to work, or pick up older siblings from school, etc. A $5 gift card is really not enough money to incentivize responses at the baseline and follow up time points. It is hard to imagine when else these parents or guardians could complete these surveys, however. Finding safe locations to meet in the community or making home visits during times that parents and guardians have more free time (including evenings and weekends), coupled with a greater monetary incentive, may have resulted in better response rates and a more complete cohort retention. However, constraints on staff time and the evaluation budget did not allow for such practices. Palooza events did increase response rates somewhat, but only took place on one day during the baseline timepoint and one day during the follow up time point. For example, having more Palooza days 3 days in a row during both the baseline and follow up time points may have engendered better response rates overall and more complete responses within tools. Again, due to constraints on staff time, this was not an option.

As previously discussed, teacher response rate was also an issue for some survey tools. Head Start and GSRP teachers are burdened with massive amounts of paperwork as it is, and we added to that burden with our survey tools that had very specific due dates. Better evaluation thank yous/incentives may have worked to encourage teachers to fill out more survey tools, and on time.

E. Description of Next Steps

This community-based evaluation study would not have been possible without our partners. The staff and teachers at these centers went above and beyond to help deliver an evaluation study to thousands of families over the course of the 5 years. With their continued support and partnership, we will continue to serve their families and communities with Regie's Raindbow Adventure, NAP SACC, and Healthy Families Start with you. Many of our findings differ based on center size (low enrollment versus high enrollment centers). This was an unexpected outcome and worthy of further study in order to determine what practices or characteristics at both the center and teacher level differ between smaller and larger centers, if any. Possible influences include class size at centers, number of teachers in the classroom, number of times classroom teachers had implemented the program, the number of days of the week that the program was actually implemented, etc. These inconsistent findings due to center size interaction are a better indication, though, that these are spurious relationships rather than causally related somehow. While this specific evaluation study has not proven RRA to be considered a program of moderate evidence, we will also continue to evaluate the program in other ways to guarantee full and proper teacher trainings take place, ensure program fidelity, improve program materials, update the teacher manual, and provide an educational, meaningful, low-cost nutrition and physical activity program to those children most in need.

F. Changes to SEP, As Previously Reported In This Report

1. August 2013

Key changes to the research team (hiring of an internal evaluator and academic assistance) and the change in the kindergarten readiness instrument from the EDI to the CBCL 1.5/5 were described.

2. June 2014

Updated consent process from active to passive consent, development of survey collection events, and a decrease of family take-home produce items for implementation sites from six times to two times per program year were described.

3. December 2014

Updates to evaluation sample size and power analysis are described. Additionally, the end of the IRB and evaluation partnership with MPHI was noted.

4. June 2015

Updates to the Media Toolkit and the evaluation questions of the project were described.

5. September 2015

A comprehensive list of research questions, analysis methods plan, updates to the evaluation of the Media Toolkit, and literature support for utilizing a parent reported fruit and vegetable metric were provided.

6. February 2016

A revised, comprehensive SEP was submitted, describing all current evaluation questions and tools, evidence levels, protocols and processes in full.

7. December 2016

An SEP memo was submitted, clarifying certain equivalence and analysis practices per the request of CNCS and JBS.

8. February 2016

An additional SEP memo was submitted that clarified the impact evaluation at the regional, center, classroom, and individual levels as well as further describing the matching practice, per the request of CNCS and JBS. Feedback was received from JBS/CNCS in November of 2016 and NKFM wrote a memo in response in January of 2017. It was this memo that clarified center size equivalence and analysis plan for such. Feedback from JBS/CNCS received in January 2017 confirmed this contingency was addressed.

9. March 2017

NKFM received official acceptance of the SEP document originally submitted in February 2017.

Section VI. Study Logistics and Updates

A. Protection of Human Subjects

The protection of human subjects was maintained by continual IRB approval in each year of SIF 2011. The most recent IRB approval letter for year 5 (2016-2017) is included in Appendix A, Section K. In November of Year 3, PEACH experienced a switch in IRBs. Previously, Michigan Department of Community Health (MDCH) served as PEACH's IRB, however a change in administration brought about a new policy that prevented MDCH from serving as an IRB for projects that it does not fund. As a result, PEACH applied for a new IRB with Argus. Argus was chosen because they were already familiar with the structure of SIF.

B. Budget and Timeline

The final budget for year 5 is reported on the following page.

Social Innovations Fund (SIF) - United Way
2016-17

Expenditures	Budget	Actual Expenses	Difference
Project Staff	161,190	164,982.89	(3,792.89)
Admin. Staff	8,990	6,412.90	2,577.10
Fringe Benefits 32%	54,457	54,846.71	(389.71)
TOTAL PERSONNEL	224,637	226,242.50	(1,605.50)
Program Mater/supplies	25,529	25,436.58	92.42
Convening Expenses	450	410.68	39.32
Travel	3,119	3,292.31	(173.31)
Evaluation	12,000	10,925.00	1,075.00
Consultant/Contract	38,300	37,470.23	829.77
TOTAL EXPENSES	79,398	77,534.80	1,863.20
TOTAL DIRECT COSTS	304,035	303,777.30	257.70
Indirect Cost	95,965	96,222.70	(257.70)
TOTAL	**400,000**	**400,000.00**	**0.00**

MATCH

Expenditures	Budget	Actual Expenses	Difference
Project Staff	156,902	157,177.53	(275.53)
Admin. Staff	14,895	13,692.05	1,202.95
Other Staff	6,841	7,432.66	(591.66)
Fringe Benefits 32%	57,164	57,056.76	107.24
TOTAL PERSONNEL	235,802	235,359.00	443.00
Program Expenses	6,975	7,602.42	(627.42)
Travel	1,349	1,483.59	(134.59)
Consultant/Contract	220	100.00	120.00
TOTAL EXPENSES	8,544	9,186.01	(642.01)
TOTAL DIRECT COSTS	244,346	244,545.01	(199.01)
Indirect Cost	105,654	105,454.99	199.01
TOTAL	**350,000**	**350,000.00**	**0.00**

C. Evaluation and Program Staff Involvement

Evaluation personnel changed near the end of year 4 (June 2015) with Sarah Wesolek-Greenson replacing Nicole Waller as the program evaluator for SIF 2011 and in Fall of year 5 (October 2016) with Karen Miller replacing Adrienne Cicci and Robert Schwarzhaupt as the evaluation data entry assistant. These changes did not affect the study's timeline or quality.

Appendix A: Tables and Figures

Table A: All Participating Centers

1	Bibleway I	34	Rainbow Academy
2	Bibleway II	35	New Genesis Center
3	Citadel of Praise	36	Maggie Lee Community Center
4	New Westside Central	37	Jones Memorial
5	Metropolitan	38	Leland Center
6	Third New Hope	39	St. Timothy's
7	Tower Center	40	Christian Fellowship of Love
8	River Rouge	41	Greater Mitchell
9	Inkster Hiveley	42	Clark Academy
10	Children's Center Head Start Academy	43	Frost Peace Academy
11	WC3D	44	Hamtramck Mitchell
12	Eternal Rock	45	Highland Park Cortland
13	Manuel Reyes	46	Ecorse GSRP
14	Hernandez	47	Hanley International GSRP
15	St. Peter Claver	48	OLHSA Pontiac Head Start
16	Simpson Center	49	Covenant
17	Holy Redeemer	50	Lighthouse
18	Fiore Center	51	Ser Metro
19	St Stephen	52	Mark Twain
20	Ss Peter & paul	53	NSP St. Timothy's
21	Cecil Center	54	7 Mile
22	Word of Truth	55	OLHSA Oak Park Head Start
23	Cathedral of St. Paul	56	Care Village
24	All about Kidz	57	Infinity II
25	Charity	58	Infinity II
26	Emmanuel	59	Samaritan A
27	Harper/Gratiot	60	Samaritan B
28	Mt Calvary	61	St John
29	Mt Zion	62	Centerline
30	Neighborhood School House	63	Crescentwood
31	St. Bartholomew	64	Kennedy
32	Kids in Zion	65	Durfee
33	Hartford Center	66	Winston

Figure A: PEACH SIF Logic Model

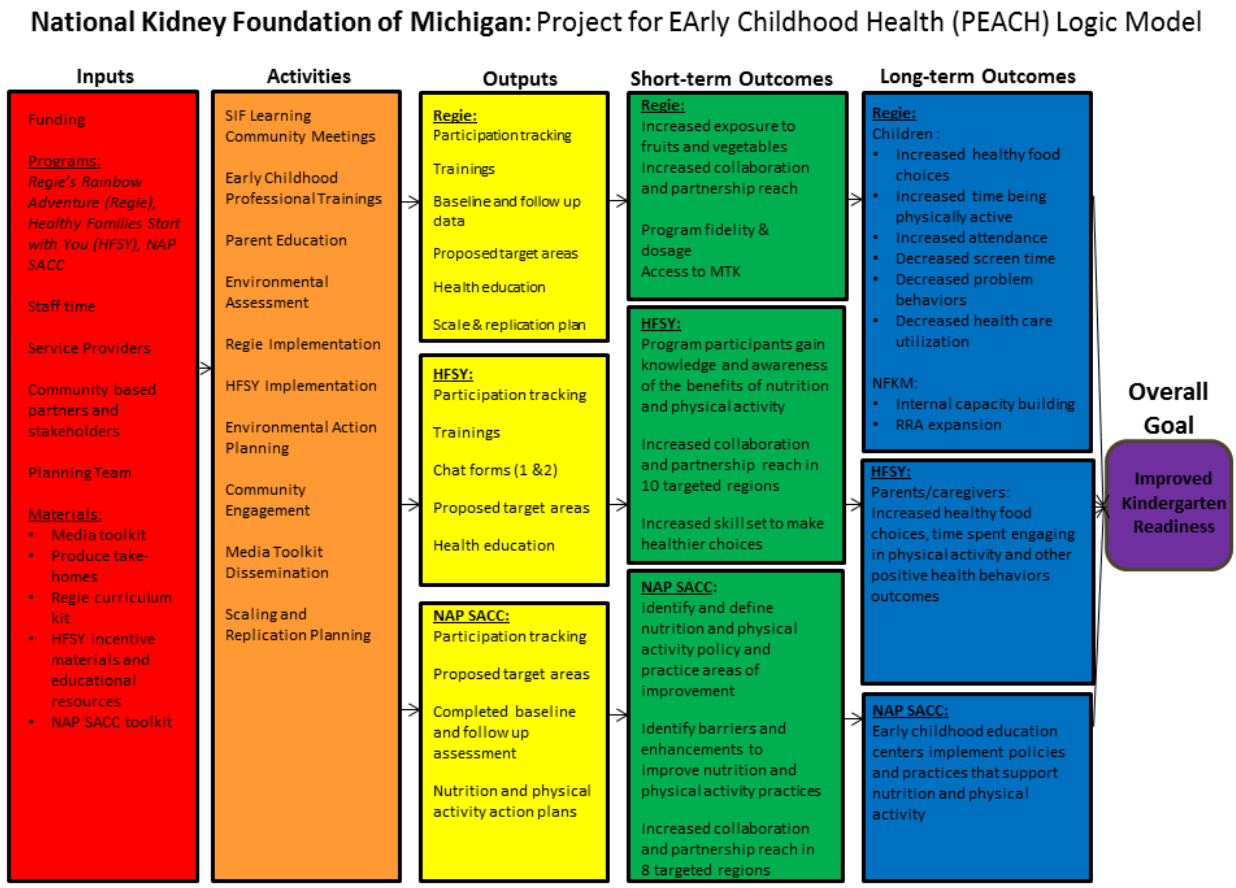


Table B1-B62: Race/Ethnicity Comparison Tables for Center Representativeness

1. Bibleway I

Race (%)	Center Reported (N = 68)	Individual Reported (N = 47)
Black	100.0	95.6
White		
Hispanic/Latino		2.2
Arab/Arab American		2.2
Other		

2. Bibleway II

Race (%)	Center Reported (N = N/A)	Individual Reported (N = 25 reported)
Black	Demo Form Not Returned	92.0
White		
Hispanic/Latino		8.0
Arab/Arab American		
Other		

3. Citadel of praise

Race (%)	Center Reported (N = 284)	Individual Reported (N = 131 reported)
Black	100.0	97.7
White		
Hispanic/Latino		
Arab/Arab American		2.3
Other		

4. New Westside Central

Race (%)	Center Reported (N = N/A)	Individual Reported (N = 42 reported)
Black	Demo Form Not Returned	95.1
White		
Hispanic/Latino		4.9
Arab/Arab American		
Other		

5. Metropolitan

Race (%)	Center Reported (N = 208)	Individual Reported (N = 134 reported)
Black	100.0	97.0
White		
Hispanic/Latino		2.2
Arab/Arab American		
Other		0.8

6. Third New Hope

Race (%)	Center Reported (N = 162)	Individual Reported (N = 50 reported)
Black	99.30	98.0
White		2.0
Hispanic/Latino	.70	
Arab/Arab American		
Other		

7. Tower Center

Race (%)	Center Reported (N = N/A)	Individual Reported (N = 42 reported)
Black	Demo Form Not Returned	100.0
White		
Hispanic/Latino		
Arab/Arab American		
Other		

8. River Rouge

Race (%)	Center Reported (N = 228)	Individual Reported (N = 133 reported)
Black	88.0	83.50
White	9.0	7.50
Hispanic/Latino	3.0	6.80
Arab/Arab American		
Other		2.20

9. Inkster-Hiveley Head Start

Race (%)	Center Reported (N = 729)	Individual Reported (N = 108 reported)
Black	83.5	77.8
White	8.00	6.50
Hispanic/Latino	3.50	7.40
Arab/Arab American	1.25	6.50
Other	3.75	1.90

10. Children's Center Head Start Academy

Race (%)	Center Reported (N = 322)	Individual Reported (N = 67 reported)
Black	90.0	92.50
White	7.0	3.0
Hispanic/Latino	1.0	3.0
Arab/Arab American		
Other	1.0	1.50

11. WC3D

Race (%)	Center Reported (N = 36)	Individual Reported (N = 8 reported)
Black	91.60	87.50
White	2.80	
Hispanic/Latino	2.80	12.5
Arab/Arab American		
Other	2.80	

12. Eternal Rock

Race (%)	Center Reported (N = 169)	Individual Reported (N = 39 reported)
Black	4.0	12.8
White	3.50	5.1
Hispanic/Latino	38.5	41.0
Arab/Arab American	23.33	36.0
Other	30.67	5.1

13. Manuel Reyes

Race (%)	Center Reported (N = 298)	Individual Reported (N = 142 reported)
Black	4.65	6.3
White	6.55	3.1
Hispanic/Latino	82.10	90.8
Arab/Arab American		
Other	6.70	

14. Hernandez

Race (%)	Center Reported (N = 183)	Individual Reported (N = 79 reported)
Black	83.0	84.0
White	2.5	3.0
Hispanic/Latino	12.0	13.0
Arab/Arab American		
Other	2.50	

15. St. Peter Claver

Race (%)	Center Reported (N = 17)	Individual Reported (N = 14 reported)
Black	100.0	92.9
White		
Hispanic/Latino		7.1
Arab/Arab American		
Other		

16. Simpson Center

Race (%)	Center Reported (N = 34)	Individual Reported (N = 24 reported)
Black	94.1	91.7
White		
Hispanic/Latino	5.9	8.3
Arab/Arab American		
Other		

17. Holy Redeemer

Race (%)	Center Reported (N = 34)	Individual Reported (N = 24 reported)
Black	7.15	7.10
White	3.15	4.10
Hispanic/Latino	81.00	88.8
Arab/Arab American	.50	
Other	8.2	

18. Fiore Center

Race (%)	Center Reported (N = 217)	Individual Reported (N = 65 reported)
Black	28.0	26.5
White	2.0	1.5
Hispanic/Latino	59.0	72.0
Arab/Arab American		
Other	11.0	

19. St. Stephen

Race (%)	Center Reported (N = 225)	Individual Reported (N =144 reported)
Black	5.35	4.1
White	6.85	4.7
Hispanic/Latino	83.70	91.2
Arab/Arab American		
Other	3.55	

20. SS. Peter and Paul

Race (%)	Center Reported (N = 228)	Individual Reported (N =89 reported)
Black	8.65	5.6
White	22.6	3.4
Hispanic/Latino	66.35	91.0
Arab/Arab American		
Other	2.4	

21. Cecil Center

Race (%)	Center Reported (N = 279)	Individual Reported (N =57 reported)
Black	12.60	10.5
White	2.4	1.8
Hispanic/Latino	84.0	87.7
Arab/Arab American		
Other	1.0	

22. Word of Truth

Race (%)	Center Reported (N = 100)	Individual Reported (N =32 reported)
Black	61.2	57.6
White	1.0	3.0
Hispanic/Latino	29.4	39.4
Arab/Arab American		
Other	8.4	

23. Cathedral St. Paul

Race (%)	Center Reported (N = 65)	Individual Reported (N = 46 reported)
Black	100.0	100.0

White Hispanic/Latino Arab/Arab American Other		

24. All About Kids

Race (%)	Center Reported (N = 60)	Individual Reported (N = 22 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

25. Charity

Race (%)	Center Reported (N = 150)	Individual Reported (N = 90 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

26. Emmanuel

Race (%)	Center Reported (N = 30)	Individual Reported (N = 5 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

27. Harper Gratiot

Race (%)	Center Reported (N = 120)	Individual Reported (N = 63 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	98.4 1.6

28. Mt. Calvary

Race (%)	Center Reported (N = 210)	Individual Reported (N = 84 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	97.6 2.4

29. Mt Zion

Race (%)	Center Reported	Individual Reported

	(N = 264)	(N = 132 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	99.2 0.8

30. Neighborhood School House

Race (%)	Center Reported (N = 21)	Individual Reported (N = 5 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

31. St. Bartholomew

Race (%)	Center Reported (N = 164)	Individual Reported (N = 26 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

32. Kids In Zion

Race (%)	Center Reported (N = 275)	Individual Reported (N = 65 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

33. Hartford

Race (%)	Center Reported (N = 78)	Individual Reported (N = 41 reported)
Black White Hispanic/Latino Arab/Arab American Other	98.7 1.3	95.2 2.4 2.4

34. Rainbow Academy

Race (%)	Center Reported (N = 91)	Individual Reported (N = 0 reported race)
Black White Hispanic/Latino Arab/Arab American	100.0	

Other		

35. New Genesis Center

Race (%)	Center Reported (N = 86)	Individual Reported (N = 40 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

36. Maggie Lee

Race (%)	Center Reported (N = 59)	Individual Reported (N = 32 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

37. Jones Memorial

Race (%)	Center Reported (N = 64)	Individual Reported (N = 24 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

38. Leland Center

Race (%)	Center Reported (N = 64)	Individual Reported (N = 16 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

39. St. Timothy's

Race (%)	Center Reported (N = 105)	Individual Reported (N = 21 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

40. Christian Fellowship of Love

Race (%)	Center Reported (N = 105)	Individual Reported (N = 21 reported)
Black	100.0	100.0

White Hispanic/Latino Arab/Arab American Other		

41. Greater Mitchell

Race (%)	Center Reported (N = 32)	Individual Reported (N = 26 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

42. Clark Academy

Race (%)	Center Reported (N = 94)	Individual Reported (N = 27 reported)
Black White Hispanic/Latino Arab/Arab American Other	100.0	100.0

43. Frost Peace

Race (%)	Center Reported (N = 292)	Individual Reported (N = 38 reported)
Black White Hispanic/Latino Arab/Arab American Other	59.58 6.50 30.5 3.42	55.3 44.7

44. Hamtramck Mitchell

Race (%)	Center Reported (N = 615)	Individual Reported (N = 102 reported)
Black White Hispanic/Latino Arab/Arab American Other	26.0 12.0 47.0 15.0	19.6 5.9 1.0 7.8 65.7

45. Highland Park Cortland

Race (%)	Center Reported (N = 175)	Individual Reported (N = 115 reported)
Black White Hispanic/Latino Arab/Arab American Other	97.0 0.7 2.3	96.5 2.6 0.9

46. Ecorse

Race (%)	Center Reported (N = 208)	Individual Reported (N = 74 reported)
Black	77.1	79.1
White	8.4	4.5
Hispanic/Latino	14.0	14.9
Arab/Arab American		
Other	0.50	1.4

47. Hanley International

Race (%)	Center Reported (N = 108)	Individual Reported (N = 61 reported)
Black	25.0	23.0
White	5.0	16.4
Hispanic/Latino		
Arab/Arab American	41.0	49.2
Other	6.0	11.5

48. Pontiac Head Start

Race (%)	Center Reported (N = 1207)	Individual Reported (N = 68 reported)
Black	63	57.4
White	9.0	10.3
Hispanic/Latino	14.25	23.5
Arab/Arab American	3.0	
Other	10.0	8.8

49. Lighthouse

Race (%)	Center Reported (N = 72)	Individual Reported (N = 33 reported)
Black	24.7	21.2
White	4.25	
Hispanic/Latino	65.65	78.8
Arab/Arab American		
Other	5.4	

50. Mark Twain

Race (%)	Center Reported (N = 100)	Individual Reported (N = 46 reported)
Black	85.0	93.5
White	1.0	
Hispanic/Latino	14.0	6.5
Arab/Arab American		
Other		

51. NSP St. Timothy's

Race (%)	Center Reported (N = 210)	Individual Reported (N = 78 reported)
Black	85.0	96.2
White	1.0	
Hispanic/Latino	14.0	2.6
Arab/Arab American		1.2
Other		

52. Seven Mile

Race (%)	Center Reported (N = 168)	Individual Reported (N = 74 reported)
Black	97.5	97.2
White		
Hispanic/Latino	2.0	1.4
Arab/Arab American		
Other		1.4

53. Oak Park Head Start

Race (%)	Center Reported (N = 106)	Individual Reported (N = 43 reported)
Black	88.0	90.7
White	1.5	
Hispanic/Latino	6.3	4.7
Arab/Arab American		
Other	4.2	4.6

54. CARE Village

Race (%)	Center Reported (N = 282)	Individual Reported (N = 43 reported)
Black	98.2	96.2
White		1.9
Hispanic/Latino	.40	1.9
Arab/Arab American		
Other	1.4	

55. Infinity I

Race (%)	Center Reported (N = 87)	Individual Reported (N = 46 reported)
Black	100.0	100.0
White		
Hispanic/Latino		
Arab/Arab American		
Other		

56. Samaritan

Race (%)	Center Reported (N = 216)	Individual Reported (N = 82 reported)
Black	100.0	100.0
White		
Hispanic/Latino		
Arab/Arab American		
Other		

57. St. John

Race (%)	Center Reported (N = 142)	Individual Reported (N = 90 reported)
Black	100.0	98.9
White		
Hispanic/Latino		1.1

Arab/Arab American Other		

58. Centerline

	Center Reported (N = 142)	Individual Reported (N = 90 reported)
Black	62.0	25.0
White	24.0	25.0
Hispanic/Latino	6.0	
Arab/Arab American	4.0	8.3
Other	4.0	41.7

59. Crescentwood

	Center Reported (N = 32)	Individual Reported (N = 23 reported)
Black	78.0	78.3
White		17.4
Hispanic/Latino	16.0	4.3
Arab/Arab American		
Other	6.0	

60. Kennedy

	Center Reported (N = 32)	Individual Reported (N = 22 reported)
Black	37.60	86.4
White	18.75	13.6
Hispanic/Latino	9.35	
Arab/Arab American	28.10	
Other	6.20	

61. Durfee

	Center Reported (N = 43)	Individual Reported (N = 24 reported)
Black	95.35	95.8
White		4.2
Hispanic/Latino	2.35	
Arab/Arab American		
Other	2.3	

62. Winston

	Center Reported (N = 68)	Individual Reported (N = 33 reported)
Black	100.0	100.0
White		
Hispanic/Latino		
Arab/Arab American		
Other		

Table C: Description of Composite Response Variables

Response Variables			
Composite Variable Name[1]	**Variables Used**	**Variable Location[2] (#[3])**	**Description**
PA_weekx	ACTWEEKx ACTWENDx	PG Survey (4) PG Survey (4)	The number of hours a child is physically active each week
Totaltvhrsx	TV_WEEKx TV_WENx	PG Survey (7) PG Survey (8)	The number of hours a child watches TV each week
Totalgamex	GAMEWEKx GAMEWENx	PG Survey (7) PG Survey (8)	The number of hours a child plays video/computer games each week
Totalscreentimex	Totaltvhrsx Totalgamex	See above See above	The number of hours a child spends in front of a screen each week
Totalsweetdrinksnochocmilkx	AMT Frudx AMTSPORx AMTREGSx AMTSTEAx	PG Survey (1b) PG Survey (1c) PG Survey (1d) PG Survey (1e)	The number of sweet drinks a child consumes on a typical day, not including chocolate milk
Totalsweetdrinksyeschocmilkx	AMT Frudx AMTSPORx AMTREGSx AMTSTEAx AMTCMLKx	PG Survey (1b) PG Survey (1c) PG Survey (1d) PG Survey (1e) PG Survey (1h)	The number of sweet drinks a child consumes on a typical day, including chocolate milk
FVComposite_AllJuicex	AMTJUICx AMT_FRUx AMT_VEGx	PG Survey (1a) PG Survey (2) PG Survey (3)	The number of servings of fruits and vegetables, including the total number of servings of juice
FVCompositex	AMT_FRUx AMT_VEGx	PG Survey (2) PG Survey (3)	The number of servings of fruits and vegetables

[1] Both Baseline and Follow-up composite variables were created, only Baseline are shown here.

[2] All response variables can be located in the Parent Guardian Survey, which can be found in Appendix B.

[3] If a variable is used from the Parent Guardian Survey, the number following it will indicate which question the variable represents.

Table D. Description of Composite Covariate Variables

Covariate Variables				
Composite Variable Name	**Variables Used**	**Variable Location (#)**	**Location in Appendix**	**Description**
Sex[4]	Genderp Gendert	PG Survey Parent CBCL Teacher CBCL	1A 1C 1D	The sex of the child
AGE2[4]	ChildDOB[5] DATE_COMPx DFOpx DFOtx	School Rosters PG Survey[6] Parent CBCL Teacher CBCL	N/A 1A 1C 1D	The age of the child at the beginning of the program
RACE[4]	WHITEx BLACKx ASIANx NATHAWx ARABx AMERINDx RACE_OTHx ETHNICCODEp ETHNICCODEt	PG SURVEY (19) PG SURVEY (19) PG SURVEY (19) PG SURVEY (19) PG SURVEY (19) PG SURVEY (19) PG SURVEY (19) Parent CBCL Teacher CBCL	1A 1A 1A 1A 1A 1A 1A 1C 1D	The race of the child grouped into Black, White, Hispanic, and Other

Table E. Description of Combined Variables

Construct	Question Numbers	Survey
Screen time	#7 & 8	Parent/Guardian Survey
Physical activity	#4	Parent/Guardian Survey
Fruit and vegetable consumption with addition of servings of juice	#1a & #2 & #3	Parent/Guardian Survey
Fruit and vegetable consumption	#2 & #3	Parent/Guardian Survey
Sugar sweetened beverage consumption with chocolate milk	#1b, c, d, e, h	Parent/Guardian Survey
Sugar sweetened beverage consumption without chocolate milk	#1b, c, d, e,	Parent/Guardian Survey
Parent reported externalizing behaviors percentile score	#4, 5, 6, 8, 10, 11, 13, 14, 16, 17, 18, 19, 22, 23, 25, 27, 29, 31, 32, 34, 35, 37, 38, 39 were combined, then compared to previous samples of children	Parent Child Behavior Checklist
Parent reported attention problems subscale percentile score	#4, 5, 25, 29, 38 were combined, then compared to previous samples of children	Parent Child Behavior Checklist
Parent reported aggressive behavior subscale percentile score	#6, 8, 10, 11, 13, 14, 16, 17, 18, 19, 22, 23, 27, 31, 32, 34, 35, 37, 39 were combined, then compared to previous samples of children	Parent Child Behavior Checklist
Teacher reported externalizing behaviors percentile score	#1-33 were combined, then compared to previous samples of children	Teacher Child Behavior Checklist
Teacher reported attention problems subscale percentile score	#1, 2, 11, 18, 19, 21, 23, 24, 32 were combined, then compared to previous samples of children	Teacher Child Behavior Checklist
Teacher reported aggressive behavior subscale percentile score	#3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 20, 22, 25, 26, 27, 28, 29, 30, 31, 33 were combined, then compared to previous samples of children	Teacher Child Behavior Checklist

Tables F1-F4. Timeline of RRA Evaluation and Programming By Center in Years 2, 3, 4 and 5.

Table F1. Timeline of Evaluation and Programming by Center in Year 2

Name of site	Study Group	Dates of Baseline	Dates of Follow-up
New St. Paul Tabernacle Head Start			
Bibleway I	Implementation	9/30-10/14/2013	11/25-12/16/2013
Bibleway II	Implementation	9/30-10/14/2013	11/25-12/16/2013
Citadel of Praise	Implementation	9/30-10/14/2013	11/25-12/16/2013
Metro	Implementation	9/30-10/14/2013	11/25-12/16/2013
New Westside Central	Implementation	9/30-10/14/2013	11/25-12/16/2013
Third New Hope	Implementation	9/30-10/14/2013	11/25-12/16/2013
Tower Center	Implementation	9/30-10/14/2013	11/25-12/16/2013
The Children's Center			
The Children's Center Head Start	Comparison	10/02-10/09/2013	11/25-12/16/2013
Starfish Family Services			
Inkster Hiveley Head Start	Implementation	9/24-10/7/2013	11/18-12/2/2013
Matrix Human Services Vistas Nuevas Head Start			
Cathedral	Comparison	11/11-11/21/2013	1/6-1/21/2014
Hernandez	Comparison	11/11-11/21/2013	1/6-1/21/2014
Holy Redeemer	Comparison	11/11-11/21/2013	1/6-1/21/2014
Manuel Reyes	Comparison	11/11-11/21/2013	1/6-1/21/2014
Simpson	Comparison	11/11-11/21/2013	1/6-1/21/2014
St. Peter Claver	Comparison	11/11-11/21/2013	1/6-1/21/2014
WC3D	Comparison	11/11-11/21/2013	1/6-1/21/2014
Word of Truth	Comparison	11/11-11/21/2013	1/6-1/21/2014
Cecil	Implementation	11/11-11/21/2013	1/6-1/21/2014
Eternal Rock	Implementation	11/11-11/21/2013	1/6-1/21/2014
Fiore	Implementation	11/11-11/21/2013	1/6-1/21/2014
Ss. Peter and Paul	Implementation	11/11-11/21/2013	1/6-1/21/2014
St. Stephen	Implementation	11/11-11/21/2013	1/6-1/21/2014
CDI Serving Northwest Detroit			
Christian Fellowship of Love	Implementation	1/20-1/29/2014	3/5-3/24/2014
Clark Academy	Implementation	1/20-1/29/2014	3/5-3/24/2014
Greater Mitchell	Implementation	1/20-1/29/2014	3/5-3/24/2014
Hartford Center	Implementation	1/20-1/29/2014	3/5-3/24/2014
Jones Memorial	Implementation	1/20-1/29/2014	3/5-3/24/2014
Leland Center	Implementation	1/20-1/29/2014	3/5-3/24/2014
Maggie Lee Community Center	Implementation	1/20-1/29/2014	3/5-3/24/2014
New Genesis Center	Implementation	1/20-1/29/2014	3/5-3/24/2014
Rainbow Academy	Implementation	1/20-1/29/2014	3/5-3/24/2014
St. Timothy's	Implementation	1/20-1/29/2014	3/5-3/24/2014
United Children and Family Head Start			
All About Kidz	Comparison	1/20-2/3/2014	3/10-3/31/2014
Charity	Comparison	1/20-2/3/2014	3/10-3/31/2014
Emmanuel	Comparison	1/20-2/3/2014	3/10-3/31/2014
Harper/Gratiot	Comparison	1/20-2/3/2014	3/10-3/31/2014
Kids-in-Zion	Comparison	1/20-2/3/2014	3/10-3/31/2014
Mt. Calvary	Comparison	1/20-2/3/2014	3/10-3/31/2014
Mt. Zion	Comparison	1/20-2/3/2014	3/10-3/31/2014
Neighborhood School House	Comparison	1/20-2/3/2014	3/10-3/31/2014
St. Bartholomew	Comparison	1/20-2/3/2014	3/10-3/31/2014
The Guidance Center			

River Rouge Head Start	Implementation	1/17-1/31/2014	3/19-4/25/2014
Frost Peace Academy			
Frost Peace Head Start	Comparison	2/18-3/4/2014	4/1-4/14/2014

Table F2. Timeline of Evaluation and Programming by Center in Year 3

Name of site	Study Group	Dates of Baseline	Dates of Follow-up
New St. Paul Tabernacle Head Start			
Bibleway I	Implementation	2/23 - 3/2/2015	4/27 – 5/8/2015
Citadel	Implementation	2/25 - 3/2/2015	4/27 – 5/8/2015
Metro	Implementation	2/24 - 3/2/2015	4/27 – 5/8/2015
Third New Hope	Implementation	2/24 - 3/2/2015	4/27 – 5/8/2015
NSP St. Timothy's	Implementation	2/25 - 3/2/2015	4/27 – 5/8/2015
The Guidance Center			
River Rouge	Implementation	1/13 – 1/23/2014	3/17 – 4/30/2015
Starfish Family Services			
Inkster – Hively	Implementation	10/9 – 10/17/2014	12/9 – 12/15/2014
Matrix Human Services Vistas Nuevas Head Start			
Eternal Rock	Implementation	3/19 – 3/25/2015	5/18 – 5/29/2015
Manuel Reyes Center	Implementation	3/19 – 3/25/2015	5/18 – 5/29/2015
Fiore Center	Implementation	3/18 – 3/25/2015	5/18 – 5/29/2015
St. Stephen	Implementation	3/17 – 3/25/2015	5/18 – 5/29/2015
Word of Truth	Implementation	3/16 – 3/25/2015	5/18 – 5/29/2015
Lighthouse	Implementation	3/20 – 3/25/2015	5/18 – 5/29/2015
Hernandez	Comparison	12/15 – 1/5/2015	3/6 - 3/9/2015
Holy Redeemer	Comparison	12/16 – 1/5/2015	3/5 - 3/9/2015
SS Peter & Paul	Comparison	12/14 – 1/5/2015	3/3 - 3/9/2015
Cecil Center	Comparison	12/18 – 1/5/2015	3/3 - 3/9/2015
United Children and Family Head Start			
Charity	Comparison	1/12 – 1/23/2015	3/16 – 3/27/2015
Mt. Calvary	Comparison	1/15 – 1/23/2015	3/19 – 3/27/2015
Mt. Zion	Comparison	1/14 – 1/23/2015	3/18 – 3/27/2015
Kids-in-Zion	Comparison	1/16 – 1/23/2015	3/20 – 3/27/2015
Wayne Metro			
Hamtramck Mitchell	Implementation	3/2 – 3/6/2015	4/27 – 5/1/15
Highland Park Cortland	Comparison	10/20 – 10/24/2014	12/17 - 12-19/2014
Wayne County RESA			
Ecorse GRSP	Comparison	12/10 - 12/18/2014	2/11 – 2/22/2015
Hanley International GSRP	Comparison	11/18 – 11/26/2014	1/12 – 1/26/2015
OLHSA			

Pontiac Head Start	Implementation	1/14 – 1/23/2015	3/24 – 4/1/2015
Southwest Solutions			
Mark Twain	Comparison	1/7 – 1/15/2015	3/11 – 3/23/2015

Table F3. Timeline of Evaluation and Programming by Center in Year 4

Name of Site	Study Group	Dates of Baseline	Dates of Follow Up
New St. Paul			
Bibleway I	Implementation	3/29 - 4/11/2016	6/2 - 6/13/2016
Citadel	Comparison	1/28 - 2/8/2016	3/24 - 4/4/2016
Metro	Implementation	3/30 - 4/11/2016	6/2 - 6/13/2016
Third New Hope	Comparison	1/27 - 2/8/2016	3/21 - 4/4/2016
St. Timothy's	Implementation	3/31 - 4/11/2016	6/1 - 6/13/2016
St. John	Comparison	1/28 - 2/8/2016	3/24 - 4/4/2016
The Guidance Center			
River Rouge	Implementation	2/29/ - 3/4/2016	5/2 - 5/10/2016
Starfish Family Services			
Inkster – Hiveley	Implementation	9/30 - 10/2/2015	11/25 - 12/3/2015
Matrix Head Start			
Eternal Rock	Implementation	4/4 - 4/13/2016	6/1/ - 6/13/2016
Hernandez	Comparison	1/27 - 2/3/2016	3/23 - 4/4/2016
Holy Redeemer	Comparison	1/26 - 2/3/2016	3/22 - 4/4/2016
Fiore Center	Implementation	4/5 - 4/13/2016	5/31 - 6/13/2016
St. Stephen	Implementation	4/5 - 4/13/2016	5/31 - 6/13/2016
SS Peter & Paul	Comparison	1/26 - 2/3/2016	3/22 - 4/4/2016
Lighthouse	Implementation	4/4 - 4/13/2016	6/1 - 6/13/2016
Care Village	Comparison	1/25 - 2/3/2016	3/21 - 4/4/2016
Infinity I	Comparison	1/27 - 2/3/2016	3/23 - 4/4/2016
Samaritan	Comparison	1/25 - 2/3/2016	3/21 - 4/4/2016
United Children and Family			
Charity	Implementation	1/11 - 1/21/2016	3/22 - 4/6/2016
Mt. Calvary	Implementation	1/12 - 1/21/2016	3/22 - 4/6/2016
Mt. Zion	Implementation	1/13 - 1/21/2016	3/23 - 4/6/2016
Kids-in-Zion	Implementation	1/14 - 1/21/2016	3/23 - 4/6/2016
Wayne Metro			
Hamtramck Mitchell	Implementation	2/25 - 3/3/2016	4/28 - 5/9/2016
Highland Park Cortland	Comparison	11/24 - 12/2/2015	2/2 - 2/10/2016
Wayne County RESA			
Ecorse GRSP	Comparison	1/5 - 1/19/2016	3/15 - 3/23/2016
Hanley International GSRP	Comparison	1/5 - 1/19/2016	3/8-3/16/2016
OLHSA			
Pontiac Head Start	Implementation	1/11 - 1/19/2016	3/14 - 3/23/2016
Oak Park Head Start	Implementation	1/12-1/19/2016	3/15 - 3/23/2016
Southwest Solutions			
Mark Twain	Comparison	12/10 - 12/18/2015	2/11 - 2/25/2016
Development Center			
7 Mile	Comparison	11/19 - 12/3/2015	1/26 - 2/5/2016

Table F4. Timeline of Evaluation and Programming by Center in Year 5

Name of Site	Study Group	Dates of Baseline	Dates of Follow-up
New St. Paul Tabernacle Head Start			
Bibleway I	Implementation	4/4 - 4/14/2017	6/12 - 6/20/2017
Citadel	Comparison	2/2 - 2/10/2017	3/29 - 4/14/2017
Metro	Implementation	4/4 - 4/14/2017	6/12 - 6/20/2017
Third New Hope	Comparison	2/3 - 2/10/2017	3/28 - 4/14/2017
NSP St. Timothy's	Implementation	4/21 – 5/1/2017	6/13 - 6/20/2017
St. John Center	Comparison	2/3 - 2/10/2017	3/28 - 4/14/2017
The Guidance Center			
River Rouge	Implementation	3/14 - 3/24/2017	5/16 - 5/24/2-17
Starfish Family Services			
Inkster – Hively	Implementation	10/5 – 10/14/2016	12/7 – 12/19/2016
Matrix Human Services Vistas Nuevas Head Start			
Eternal Rock	Implementation	4/3 – 4/14/2017	6/5 – 6/12/2017
Fiore Center	Implementation	4/4 – 4/14/2017	6/5 – 6/12/2017
St. Stephen	Implementation	4/4 – 4/14/2017	6/5 – 6/12/2017
Holy Redeemer	Comparison	2/6 - 2/17/2017	3/28 - 4/14/2017
SS Peter & Paul	Comparison	2/6 - 2/17/2017	3/28 - 4/14/2017
Care Village	Comparison	2/6 - 2/17/2017	3/28 - 4/14/2017
Infinity I	Comparison	2/6 - 2/17/2017	3/28 - 4/14/2017
Samaritan	Comparison	2/6 - 2/17/2017	3/28 - 4/14/2017
United Children and Family Head Start			
Mt. Calvary	Implementation	1/18 – 2/2/2017	3/15 – 3/24/2017
Mt. Zion	Implementation	1/18 – 2/2/2017	3/15 – 3/24/2017
Kids-in-Zion	Implementation	1/18 – 2/2/2017	3/15 – 3/24/2017
Wayne Metro			
Hamtramck Mitchell	Implementation	2/27 – 3/8/2017	5/4 – 5/12/2017
Highland Park Cortland	Comparison	11/29 – 12/9/2016	2/21 – 3/3/2017
Wayne County RESA			
Ecorse GRSP	Comparison	11/9 - 11/18/2017	1/19 – 1/27/20157
Hanley International GSRP	Comparison	1/11 – 1/17/2017	2/26 – 3/3/2017
OLHSA			
Pontiac Head Start	Implementation	1/18 – 2/3/2017	3/20 – 3/31/2017
Oak Park Head Start	Implementation	1/19-2/3/2017	3/20 – 3/31/2017
Southwest Solutions			
Mark Twain	Comparison	1/19 – 1/27/2017	3/21 – 4/3/2017
Durfee	Implementation	3/14 – 3/24/2017	5/17 - 5/24/2017
Development Centers			
7 Mile	Comparison	1/10 – 1/20/2017	3/21 – 4/3/2017
Winston	Comparison	1/10 – 1/20/2017	3/21 – 4/3/2017
Macomb County Community Services			
Centerline	Implementation	10/4 – 10/14/2017	12/12 – 12/19/2017
Crescentwood	Implementation	10/4 – 10/14/2017	12/12 – 12/19/2017
Kennedy	Comparison	10/3 – 10/14/2017	12/6 – 12/13/2017

As discussed in the report, the baseline and follow-up timepoint cutoffs are 2 weeks. Not all time periods in the tables above show a two week time period, however, surveys were always accepted up to the two week time period, regardless of when survey collection took place (Teachers mailed in surveys, NKFM staff returned to centers to pick up more surveys, etc).

Tables G-1 through G5: HFSY and NAP SACC Programming Timelines

Table G-1: Timeline of Completed HFSY and NAP SACC Programming by Center in Year 1

Name of site	HFSY: Baseline	HFSY: Follow-up	NAP SACC: Baseline	NAP SACC: Follow-up
New St. Paul Tabernacle				
Bibleway I			11/20/2012	6/1/2013
Citadel of Praise			11/20/2012	6/1/2013
New Westside Central			11/20/2012	6/1/2013
Metropolitan			11/20/2012	6/1/2013
Tower Center			11/20/2012	6/1/2013
The Guidance Center				
River Rouge	1/22/2013	5/27/2013		

Table G-2: Timeline of Completed HFSY and NAP SACC Programming by Center in Year 2

Name of site	HFSY: Baseline	HFSY: Follow-up	NAP SACC: Baseline	NAP SACC: Follow-up
Starfish Family Services				
Inkster-Hiveley	10/2/2013	12/15/2014	10/2/2013	5/16/2014
Vistas Nuevas Matrix Head Start				
Cathedral of St. Paul	1/18/2014	4/4/2014		
Holy Redeemer	1/22/2014	4/14/2014		
Simpson Center	2/01/2014	4/21/2014		
St. Stephen	1/07/2014	3/27/2014		
WC3D	1/27/2014	3/15/2014		
Fiore Center	1/16/2014	4/17/2014		
The Guidance Center				
River Rouge			12/6/2013	4/23/2014

Table G-3: Timeline of Completed HFSY and NAP SACC Programming by Center in Year 3

Name of site	HFSY: Baseline	HFSY: Follow-up	NAP SACC: Baseline	NAP SACC: Follow-up
New St. Paul Tabernacle				
Metropolitan	2/13/2015	4/2/2015		
NSP St. Timothy	2/13/2015	4/2/2015		
Starfish Family Services				
Inkster-Hiveley	1/30/2015	4/16/2015		
Wayne Metro				
Hamtramck Mitchell	2/17/2015	5/1/2015	11/4/2014	8/13/2015
Highland Park Cortland	2/17/2015	5/1/2015	11/1/2014	6/11/2015
United Children and Family Head Start				
Mt. Calvary	11/7/2014	4/7/2015		
Mt. Zion	11/7/2014	4/7/2015		
Kids In Zion	11/7/2014	1/16/2015		

Table G-4: Timeline of Completed HFSY and NAP SACC Programming by Center in Year 4

Name of site	HFSY: Baseline	HFSY: Follow-up	NAP SACC: Baseline	NAP SACC: Follow-up
Starfish Family Services Head Start				
Inkster Head Start	10/21/2015	5/4/2016	10/21/2015	5/13/2016
Westwood Head Start	-	-	2/10/2016	5/2/2016
Oakland Livingston Human Service Agency Head Start				
Pontiac Head Start	11/30/2015	5/12/2016	1/29/2016	5/9/2016
Oak Park Head Start	-	-	2/9/2016	5/9/2016
United Children and Family Head Start				
Charity	10/2/2015	5/27/2016	-	-
Mt. Calvary	10/2/2015	5/27/2016	-	-
Mt. Zion	10/2/2015	5/27/2016	-	-
Wayne Metro Community Action Agency Head Start				
Hamtramck Mitchell	1/21/2016	5/27/2016	1/4/2016	5/13/2016
Highland Park Cortland			2/14/2016	5/25/2016
Other Early Childhood Education centers				
Gracie Fox	-	-	1/14/2016	5/20/2016
Above and Beyond			1/14/2016	5/31/2016
Second Home Child Development	-	-	10/6/2015	2/18/2016
Something Special Daycare			1/14/2016	5/20/2016
Willi's Wonderland Home Child Care	-	-	10/13/2015	4/28/2016
A Place 4 Jake	-	-	10/13/2015	4/20/2016
Young Faith Child Care	-	-	10/13/2015	4/21/2016
Seay's Home Child Care	-	-	10/13/2015	4/28/2016
Lona's Learning Zone	-	-	10/13/2015	4/29/2016
Open Arms Child Care	-	-	10/13/2015	5/19/2016
DHDC	-	-	10/23/2015	4/28/2016

Table G-5: Timeline of Completed HFSY and NAP SACC Programming by Center in Year 4

Name of site	HFSY: Baseline	HFSY: Follow-up	NAP SACC: Baseline	NAP SACC: Follow-up
United Children and Family Head Start				
Kids in Zion	10/16/2016	5/23/2017	10/16/2016	5/9/2017
Mt. Calvary	10/16/2016	5/23/2017	10/16/2016	5/9/2017
Mt. Zion	10/16/2016	5/23/2017	10/16/2016	5/9/2017

Table H-1 through H-12

H -1. Model for Fruit and Vegetable Consumption FVComposite (no juice)

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.04623
Intercept	**ClassroomI(IDCenter)**	0.07461
Residual		3.2252

Fit Statistics	
-2 Res Log Likelihood	4895.6
AIC (Smaller is Better)	4901.6
AICC (Smaller is Better)	4901.6
BIC (Smaller is Better)	4907.7

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
FVComposite_NoJuicex	1	898	408.91	<.0001
Study Condition	1	898	0.88	0.3489
Center Size	1	898	0.71	0.4002
Study Condition*Center Size	1	898	2.71	0.1001
Gender	1	898	0.05	0.8205
Race	4	898	3.34	0.0101
Education	2	898	0.76	0.4679
Income	2	898	0.84	0.4318
Age	1	898	0.09	0.7619

Least Squares Means						
Effect	**Race**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Race	**Arab, Arab and White, Arab and Other**	3.5782	0.3689	898	9.70	<.0001
Race	**Black, Black and anything else (except Hispanic)**	4.5443	0.1279	898	35.52	<.0001
Race	**Hispanic/Latino, Hispanic and anything else**	4.1234	0.1737	898	23.74	<.0001
Race	**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**	4.6902	0.2877	898	16.30	<.0001
Race	**White, White and Other**	4.6324	0.3483	898	13.30	<.0001

H-2. Model for Fruit and Vegetable Consumption FVComposite_AllJuice (With All Juice)

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.4179
Intercept	**ClassroomI(IDCenter)**	0.05841
Residual		4.9982

Fit Statistics	
-2 Res Log Likelihood	5500.0
AIC (Smaller is Better)	5506.0
AICC (Smaller is Better)	5506.1
BIC (Smaller is Better)	5512.1

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
FVComposite_AllJuice	1	906	401.12	<.0001
Study Condition	1	906	1.57	0.2103
Center Size	1	906	0.52	0.4709
Study Composition*Center Size	1	906	4.86	0.0277
Gender	1	906	0.17	0.6844
Race	4	906	3.29	0.0109
Education	2	906	1.04	0.3537
Income	2	906	0.53	0.5868
Age	1	906	0.26	0.6111

Least Squares Means							
Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	6.3687	0.2635	906	24.17	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	5.7096	0.2908	906	19.63	<.0001

Study Condition*Center Size	**Intervention**	**High Enrollment**	6.1617	0.2675	906	23.04	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	6.4526	0.3493	906	18.47	<.0001

Tests of Effect Slices					
Effect	**Center enrollment #**	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Study Condition*Center Size	**High Enrollment**	1	906	0.85	0.3567
Study Condition*Center Size	**Low Enrollment**	1	906	4.13	0.0425

H-3. Re-run Analysis Model of Fruit and Vegetable Composite (with all juice) Without the 184 Participants Who Switched Treatment

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.3464
Intercept	**ClassroomI(IDCenter)**	0.1010
Residual		3.2639

Fit Statistics	
-2 Res Log Likelihood	4677.8
AIC (Smaller is Better)	4683.8
AICC (Smaller is Better)	4683.8
BIC (Smaller is Better)	4689.8

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
FVComposite_AllJuice	1	842	358.44	<.0001
Study Condition	1	842	2.48	0.1153
Center Size	1	842	0.46	0.4984
Study Condition*Center Size	1	842	3.90	0.0487
GENDER	1	842	0.24	0.6231

Race	4	842	2.03	0.0886
Education	2	842	1.04	0.3552
Income	2	842	1.21	0.2987
Age	1	842	0.00	0.9560

Least Squares Means							
Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	5.1927	0.2324	842	22.35	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	4.6676	0.2534	842	18.42	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	5.1170	0.2312	842	22.13	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	5.3320	0.2998	842	17.78	<.0001

H-4. Model for Physical Activity

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.4450
Intercept	**ClassroomI(IDCenter)**	1.2003
Residual		49.8622

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Total_PAx	1	1355	280.39	<.0001
Study Condition	1	1355	1.53	0.2163
Center Size	1	1355	2.97	0.0849
Race	4	1355	3.01	0.0173
Income	2	1355	3.72	0.0244

Least Squares Means									
Effect	**Study Condition**	**Center enrollment #**	**Race**	**Income Level**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**				17.8659	0.5423	1355	32.94	<.0001
Study Condition	**Intervention**				18.3676	0.5404	1355	33.99	<.0001
Center Size		**High Enrollment**			17.7154	0.5221	1355	33.93	<.0001
Center Size		**Low Enrollment**			18.5181	0.5828	1355	31.78	<.0001
Race			**Arab, Arab and White, Arab and Other**		16.4394	1.3973	1355	11.77	<.0001
Race			**Black, Black and anything else (except Hispanic)**		18.1512	0.3432	1355	52.90	<.0001
Race			**Hispanic/Latino, Hispanic and anything else**		17.0120	0.5155	1355	33.00	<.0001
Race			**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**		18.2628	1.0306	1355	17.72	<.0001
Race			**White, White and Other**		20.7184	1.2156	1355	17.04	<.0001
Income				**1**	18.6182	0.4763	1355	39.09	<.0001
Income				**2**	18.9412	0.5591	1355	33.88	<.0001
Income				**3**	16.7909	0.8173	1355	20.54	<.0001

H-5. Re-run Analysis Model of Total Physical Activity Without the 184 Participants Who Switched Treatment

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.9014
Intercept	**ClassroomI(IDCenter)**	0.9656
Residual		50.1966

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Total_PAx	1	1366	257.46	<.0001
Study Condition	1	1366	1.24	0.2665
Race	4	1366	2.64	0.0326

Least Squares Means							
Effect	**Study Condition**	**Race**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**		18.1178	0.5215	1366	34.74	<.0001
Study Condition	**Intervention**		18.5987	0.5116	1366	36.35	<.0001
Race		**Arab, Arab and White, Arab and Other**	17.0107	1.4141	1366	12.03	<.0001
Race		**Black, Black and anything else (except Hispanic)**	18.3822	0.2701	1366	68.06	<.0001
Race		**Hispanic/Latino, Hispanic and anything else**	17.3566	0.4978	1366	34.87	<.0001
Race		**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**	18.2253	1.0328	1366	17.65	<.0001
Race		**White, White and Other**	20.8165	1.1037	1366	18.86	<.0001

H-6. Model for Screentime

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	10.3427
Intercept	**ClassroomI(IDCenter)**	13.1643
Residual		67.1819

Fit Statistics	
-2 Res Log Likelihood	13303.5
AIC (Smaller is Better)	13309.5
AICC (Smaller is Better)	13309.5
BIC (Smaller is Better)	13315.8

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
TotalScreenTimex	1	1454	587.65	<.0001
Study Condition	1	1454	0.37	0.5445
Race	4	1454	5.90	0.0001

Least Squares Means							
Effect	**Study Condition**	**Race**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**		18.8417	0.8732	1454	21.58	<.0001
Study Condition	**Intervention**		19.3112	0.8912	1454	21.67	<.0001
Race		**Arab, Arab and White, Arab and Other**	19.5782	1.8862	1454	10.38	<.0001
Race		**Black, Black and anything else (except Hispanic)**	21.4353	0.5816	1454	36.85	<.0001
Race		**Hispanic/Latino, Hispanic and anything else**	17.7482	0.8901	1454	19.94	<.0001

Race		**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**	17.3313	1.5186	1454	11.41	<.0001
Race		**White, White and Other**	19.2890	1.4455	1454	13.34	<.0001

H-7. Re-run Analysis Model of Total Screen Time Without the 184 Participants Who Switched Treatment

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	14.3073
Intercept	**ClassroomI(IDCenter)**	11.0438
Residual		65.7911

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
TotalScreenTimex	1	1314	529.36	<.0001
Study Condition	1	1314	1.12	0.2893
Race	4	1314	5.44	0.0002
Income	2	1314	2.59	0.0755

Least Squares Means								
Effect	**Study Condition**	**Race**	**Income Level**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**			20.2354	0.9694	1314	20.88	<.0001
Study Condition	**Intervention**			19.3589	0.9750	1314	19.85	<.0001
Race		**Arab, Arab and White, Arab and Other**		20.5564	1.9273	1314	10.67	<.0001
Race		**Black, Black and anything else (except Hispanic)**		22.2503	0.6953	1314	32.00	<.0001

Race		**Hispanic/Latino, Hispanic and anything else**		18.6772	0.9876	1314	18.91	<.0001
Race		**Other, Just Asian, Just Amer Ind, Just NATHAW, or any combination of these**		18.2429	1.5706	1314	11.62	<.0001
Race		**White, White and Other**		19.2588	1.5919	1314	12.10	<.0001
Income			**1**	18.9657	0.8651	1314	21.92	<.0001
Income			**2**	19.5838	0.9266	1314	21.14	<.0001
Income			**3**	20.8419	1.1786	1314	17.68	<.0001

H-8. Model of Parent CBCL Attention T-Scores

The initial full model included the following terms:

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc6tpx	1	496	177.28	<.0001
Study Condition	1	496	0.89	0.3460
Center Size	1	496	1.56	0.2121
Study Condition*Center Size	1	496	3.46	0.0635
Gender	1	496	3.24	0.0724
Race	4	496	1.48	0.2084
Education	2	496	0.81	0.4467
Income	2	496	2.31	0.1008
Age	1	496	0.25	0.6148
Gender Parent	1	496	0.63	0.4275

The model was trimmed to:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.5557

Intercept	**ClassroomI(IDCenter)**	0.2739
Residual		33.4450

Fit Statistics	
-2 Res Log Likelihood	6756.8
AIC (Smaller is Better)	6762.8
AICC (Smaller is Better)	6762.8
BIC (Smaller is Better)	6768.9

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc6tpx	1	778	293.61	<.0001
Study Condition	1	778	0.00	0.9675
Center Size	1	778	0.26	0.6117
Study Condition*Center Size	1	778	4.25	0.0395

Least Squares Means							
Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	55.8861	0.3653	778	152.98	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	55.2063	0.4357	778	126.72	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	54.9547	0.4257	778	129.10	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	56.1017	0.5577	778	100.60	<.0001

H-9. Model of Parent CBCL Aggression T-Scores

The initial model was the same as in H-8 and was trimmed to the following:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.2134
Intercept	**ClassroomI(IDCenter)**	0.1645
Residual		33.9081

Fit Statistics	
-2 Res Log Likelihood	6761.0
AIC (Smaller is Better)	6767.0
AICC (Smaller is Better)	6767.0
BIC (Smaller is Better)	6773.1

There was a significant interaction between group and center size.

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc7tpx	1	778	457.33	<.0001
Study Condition	1	778	2.49	0.1150
Center Size	1	778	0.01	0.9219
Study Condition*Center Size	1	778	4.80	0.0287

Least Squares Means							
Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	54.3710	0.3300	778	164.76	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	53.5124	0.3971	778	134.76	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	52.8236	0.3859	778	136.90	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	53.7639	0.5182	778	103.75	<.0001

H-10. Model of Parent CBCL Externalizing Behavior T-Scores

The initial model was the same as in H-8 and was trimmed to the following:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	4.2388
Intercept	**ClassroomI(IDCenter)**	3.2486
Residual		72.8997

Fit Statistics	
-2 Res Log Likelihood	7629.9
AIC (Smaller is Better)	7635.9
AICC (Smaller is Better)	7636.0
BIC (Smaller is Better)	7642.1

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc10tpx	1	778	531.62	<.0001
Study Condition	1	778	0.00	0.9841
Center Size	1	778	0.82	0.3655
Study Condition*Center Size	1	778	5.69	0.0173

Least Squares Means							
Effect	**Study Condition**	**Center enrollment #**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**	50.1507	0.7077	778	70.86	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**	47.3870	0.8504	778	55.72	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**	48.1880	0.8183	778	58.89	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**	49.3173	1.0335	778	47.72	<.0001

H-11. Model of Teacher C-TRF Attention T-Scores

The initial model was the same as in H-8 and was trimmed to the following:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	1.0257
Intercept	**ClassroomI(IDCenter)**	4.7979
Residual		21.9271

Fit Statistics	
-2 Res Log Likelihood	6745.3
AIC (Smaller is Better)	6751.3
AICC (Smaller is Better)	6751.3
BIC (Smaller is Better)	6757.2

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc6ttx	1	911	881.78	<.0001
Study Condition	1	911	0.02	0.8978
Center Size	1	911	0.02	0.8790
Study Condition*Center Size	1	911	4.40	0.0362
Education	2	911	8.41	0.0002

Least Squares Means								
Effect	**Study Condition**	**Center enrollment #**	**Education Level**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition*Center Size	**Comparison**	**High Enrollment**		54.8590	0.5000	911	109.72	<.0001
Study Condition*Center Size	**Comparison**	**Low Enrollment**		55.9679	0.5888	911	95.06	<.0001
Study Condition*Center Size	**Intervention**	**High Enrollment**		55.9862	0.5462	911	102.50	<.0001
Study Condition*Center Size	**Intervention**	**Low Enrollment**		54.6936	0.7965	911	68.66	<.0001

Education			**1**	55.0979	0.4547	911	121.18	<.0001
Education			**2**	54.3231	0.3122	911	174.01	<.0001
Education			**3**	56.7090	0.6538	911	86.73	<.0001

H-12. Model of Teacher C-TRF Aggression T-Scores

Original model:

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc7ttx	1	156	121.47	<.0001
Study Condition	1	156	1.07	0.3017
Center Size	1	156	0.06	0.8059
Study Composition*Center Size	1	156	0.22	0.6393
Gender	1	156	0.11	0.7450
Race	4	156	0.92	0.4522
Education	2	156	0.99	0.3728
Income	2	156	0.23	0.7960
Age	1	156	1.11	0.2941
Gender Teacher	1	156	0.09	0.7667

No interaction term. Backward elimination used to create the following:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.3645
Intercept	**ClassroomI(IDCenter)**	1.0995
Residual		9.1508

Fit Statistics	
-2 Res Log Likelihood	5574.4
AIC (Smaller is Better)	5580.4

AICC (Smaller is Better)	5580.4
BIC (Smaller is Better)	5586.3

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc7ttx	1	887	500.59	<.0001
Study Condition	1	887	0.00	0.9505
Gender	1	887	15.64	<.0001
Education	2	887	2.41	0.0902

Least Squares Means								
Effect	**Study Condition**	**Child gender as stated on parent form PRE**	**Education Level**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**			54.0296	0.2392	887	225.91	<.0001
Study Condition	**Intervention**			54.0486	0.2755	887	196.20	<.0001
Gender		**Female**		53.6557	0.2257	887	237.69	<.0001
Gender		**Male**		54.4225	0.2319	887	234.70	<.0001
Education			**1**	54.1051	0.2749	887	196.85	<.0001
Education			**2**	53.6742	0.1766	887	303.98	<.0001
Education			**3**	54.3380	0.4084	887	133.05	<.0001

H-13. Model of Teacher C-TRF Externalizing Behaviors T-Scores

Initial full model included these terms:

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc10ttx	1	156	310.86	<.0001
Study Condition	1	156	0.03	0.8635
Center Size	1	156	0.61	0.4369
Study Condition*Center Size	1	156	0.36	0.5482
Gender	1	156	0.79	0.3766
Race	4	156	0.16	0.9569
Education	2	156	0.11	0.8984
Income	2	156	0.57	0.5654
Age	1	156	3.88	0.0505
Gender Teacher	1	156	0.19	0.6624

There was no interaction term. Model was trimmed to the following:

Covariance Parameter Estimates		
Cov Parm	**Subject**	**Estimate**
Intercept	**IDCenter**	0.4318
Intercept	**ClassroomI(IDCenter)**	12.9672
Residual		36.3767

Fit Statistics	
-2 Res Log Likelihood	7350.7
AIC (Smaller is Better)	7356.7
AICC (Smaller is Better)	7356.7
BIC (Smaller is Better)	7362.6

Type 3 Tests of Fixed Effects				
Effect	**Num DF**	**Den DF**	**F Value**	**Pr > F**
sc10ttx	1	911	1098.30	<.0001
Study Condition	1	911	0.00	0.9769
Education	2	911	4.05	0.0178

Least Squares Means							
Effect	**Study Condition**	**Education Level**	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Study Condition	**Comparison**		43.5966	0.5149	911	84.66	<.0001
Study Condition	**Intervention**		43.6172	0.6059	911	71.98	<.0001
Education		**1**	43.7906	0.5687	911	77.00	<.0001
Education		**2**	42.6533	0.3774	911	113.03	<.0001
Education		**3**	44.3768	0.8335	911	53.24	<.0001

Table I-1. Sample of Model Output from Classroom Level Problem Behaviors Analyses Adjusting for Baseline Values

Model Information	
Data Set	WORK.CLASSRM1
Response Variable	Fidgety1
Response Distribution	Binomial
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	IDCenter
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	**Levels**	**Values**
Fidgetx1	2	0 1
CompInter	2	Comparison Intervention
IDCenter	38	Bibleway I Citadel of Praise Metro Third New Hope River Rouge Inkster Hively Eternal Rock Manuel Reyes Center Hernandez Holy Redeemer Fiore Center St Stephen Ss Peter & paul Cecil Center Word of Truth Charity Mt Calvary Mt Zion Kids In Zion Early Learning Community Larkins Highland Park Cortland Ecorse GSRP Hanley International GSRP Pontiac Head Start Lighthouse Mark Twain NSP St Timothys 7 Mile Oak Park Head Start Care Village Infinity I Samaritan St. John Centerline Crescentwood Kennedy Durfee 66

Number of Observations Read	243
Number of Observations Used	134

Dimensions	
G-side Cov. Parameters	1
Columns in X	5
Columns in Z per Subject	1
Subjects (Blocks in V)	38
Max Obs per Subject	12

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	1	594.80635246	2.00000000	7.716655
1	0	0	706.07877743	0.63045222	2.860607
2	0	0	822.53051109	0.31271858	0.848465
3	0	0	940.65373805	0.19179702	0.041727
4	0	3	1057.6881625	2.00000000	0.000054
5	0	3	1173.2635273	0.44063461	0.000024
6	0	3	1289.4417405	0.17261901	4.915E-6
7	0	2	1405.5792671	0.10743198	0.000045
8	0	2	1521.6480227	0.09711018	2.79E-6
9	0	2	1637.6764194	0.08855045	1.557E-7
10	0	1	1753.6874272	0.08135970	7.339E-6
11	0	1	1869.6915965	0.07524279	9.841E-7
12	0	1	1985.6931204	0.06997899	1.394E-7
13	0	1	2101.6936841	0.06540273	1.018E-8
14	0	1	2217.6938926	0.06138798	2.808E-8
15	0	0	2333.6939697	0.05783756	8.991E-6
16	0	1	2449.6939676	0.05467526	9.09E-6
17	0	1	2565.693969	0.05184086	9.982E-6
18	0	1	2681.69397	0.04928584	5.533E-6
19	0	0	2797.6940322	0.04697083	6.436E-6

Did not converge

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	IDCenter	0.4080	.

Table I-2. Sample of Model Output from Classroom Level Problem Behaviors Analyses without Adjusting for Baseline Values

Model Information	
Data Set	WORK.CLASSRM1
Response Variable	Fidgety1
Response Distribution	Binomial
Link Function	Logit
Variance Function	Default
Variance Matrix Blocked By	IDCenter
Estimation Technique	Residual PL
Degrees of Freedom Method	Containment

Class Level Information		
Class	**Levels**	**Values**
CompInter	2	Comparison Intervention
IDCenter	38	Bibleway I Citadel of Praise Metro Third New Hope River Rouge Inkster Hively Eternal Rock Manuel Reyes Center Hernandez Holy Redeemer Fiore Center St Stephen S s Peter & paul Cecil Center Word of Truth Charity Mt Calvary Mt Zion Kids In Zion Early Learning Community Larkins Highland Park Cortland Ecorse GSRP Hanley International GSRP Pontiac Head Start Lighthouse Mark Twain NSP St Timothys 7 Mile Oak Park Head Start Care Village Infinity I Samaritan St. John Centerline Crescentwood Kennedy Durfee 66

Number of Observations Read	243
Number of Observations Used	167

Dimensions	
G-side Cov. Parameters	1
Columns in X	3
Columns in Z per Subject	1
Subjects (Blocks in V)	38
Max Obs per Subject	14

Optimization Information	
Optimization Technique	Dual Quasi-Newton
Parameters in Optimization	1
Lower Boundaries	1
Upper Boundaries	0
Fixed Effects	Profiled
Starting From	Data

Iteration History					
Iteration	Restarts	Subiterations	Objective Function	Change	Max Gradient
0	0	1	782.68488096	2.00000000	6.707222
1	0	0	934.11998735	0.54860695	0.894793
2	0	4	1019.6415666	2.00000000	1.836E-6
3	0	2	983.20308707	0.01597702	8.94E-8
4	0	3	991.5242267	0.12695562	5.882E-6
5	0	3	988.52659191	0.01560757	2.484E-7
6	0	2	988.26473253	0.00377553	3.713E-6
7	0	2	988.17946558	0.00058439	8.942E-8
8	0	1	988.1661439	0.00014757	0.00006
9	0	1	988.16275836	0.00005958	0.000024
10	0	1	988.16412631	0.00002408	9.814E-6
11	0	0	988.16357349	0.00000000	6.073E-6

Convergence criterion (PCONV=1.11022E-8) satisfied.

Fit Statistics	
-2 Res Log Pseudo-Likelihood	988.16
Generalized Chi-Square	105.88
Gener. Chi-Square / DF	0.64

Covariance Parameter Estimates			
Cov Parm	Subject	Estimate	Standard Error
Intercept	IDCenter	0.6240	1.0999

Odds Ratio Estimates					
Comparison or intervention	Comparison or intervention	Estimate	DF	95% Confidence Limits	
Comparison	Intervention	1.716	130	0.278	10.577

Type III Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
CompInter	1	130	0.34	0.5581

Multiple Imputation Little's MCAR Results for FVComposite_AllJuice

	Genderp	Race	Edu3	Inc3	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Theta0	t for H0: Paramet =Theta0	Pr > t
Intercept					1.501635	0.936561	-0.33399	3.33726	7.47E+07	1.461889	1.536904	0	1.6	0.1089
FVComposite _AllJuice					0.509581	0.025489	0.45962	0.55954	2.85E+07	0.508207	0.511117	0	19.99	<.0001
CompInter					0.732363	0.366693	0.01366	1.45107	1.71E+09	0.725856	0.740032	0	2	0.0458
Center_Size					1.574121	0.651098	0.29799	2.85025	4.53E+08	1.559884	1.589679	0	2.42	0.0156
CompInter* Center_Size					-0.929405	0.432416	-1.77692	-0.08189	7.41E+08	-0.937657	-0.922326	0	-2.15	0.0316
GENDERp	0				0					0	0	0		
GENDERp	1				0.047777	0.130759	-0.20851	0.30406	2.90E+07	0.039346	0.055392	0	0.37	0.7148
Race		1.000000			0.216241	0.430927	-0.62836	1.06084	3.79E+09	0.209927	0.22267	0	0.5	0.6158
Race		2.000000			0					0	0	0		
Race		3.000000			-0.399476	0.469215	-1.31912	0.52017	1.49E+12	-0.401075	-0.398122	0	-0.85	0.3946
Race		4.000000			-1.048717	0.60353	-2.23161	0.13418	1.85E+10	-1.055265	-1.041324	0	-1.74	0.0823
Race		5.000000			0.470287	0.543097	-0.59416	1.53474	4.20E+10	0.465491	0.475216	0	0.87	0.3865
Edu3			1.000000		0.398717	0.294727	-0.17894	0.97637	4.41E+10	0.395917	0.401001	0	1.35	0.1761
Edu3			2.000000		0.367906	0.259556	-0.14081	0.87663	5.97E+09	0.364906	0.37025	0	1.42	0.1564
Edu3			3.000000		0					0	0	0		
Inc3				1.000000	0.301673	0.287914	-0.26263	0.86597	5.88E+09	0.297169	0.306348	0	1.05	0.2947
Inc3				2.000000	0.292808	0.306375	-0.30768	0.89329	4.34E+08	0.283397	0.299869	0	0.96	0.3392
Inc3				3.000000	0					0	0	0		
AGEx					-0.067819	0.126639	-0.31603	0.18039	9.33E+07	-0.071996	-0.062476	0	-0.54	0.5923

Multiple Imputation Little's MCAR Results for FVComposite_NoJuice

Parameter	Genderp	Race	Edu3	Inc3	Estimate	Std Error	95% Confidence Limits		DF	Minimum	Maximum	Theta0	t for H0: Paramet =Theta0	Pr > t
Intercept					1.506994	0.684999	0.15386	2.860133	154.99	0.846159	2.26592	0	2.2	0.0293
FVComposite_NoJuice					0.486383	0.02775	0.43132	0.541444	99.072	0.457603	0.521066	0	17.53	<.0001
CompInter					0.263949	0.202071	-0.13352	0.661415	340.15	0.072229	0.477127	0	1.31	0.1924
Center_Size					0.538839	0.357528	-0.16405	1.24173	395.76	0.214967	0.871191	0	1.51	0.1326
CompInter* Center_Size					-0.306085	0.241577	-0.78087	0.168697	442.21	-0.514269	-0.071571	0	-1.27	0.2058
GENDERp	0				0					0	0	0		
GENDERp	1.000000				-0.031395	0.110923	-0.25135	0.188559	104.41	-0.172404	0.112388	0	-0.28	0.7777
Race		1.000000			0.022808	0.32493	-0.61864	0.664254	168.92	-0.331235	0.410354	0	0.07	0.9441
Race		2.000000			0					0	0	0		
Race		3.000000			-0.304806	0.346789	-0.98939	0.379767	169.57	-0.689247	-0.007229	0	-0.88	0.3807
Race		4.000000			-0.57189	0.444867	-1.44811	0.304327	246.97	-0.937409	-0.061034		-1.29	0.1998
Race		5.000000			0.03495	0.409876	-0.77378	0.84368	181.69	-0.467216	0.389372	0	0.09	0.9321
Edu3			1.000000		0.150377	0.239497	-0.32347	0.624225	129.09	-0.0128543	0.390937	0	0.63	0.5312
Edu3			2.000000		0.148492	0.214443	-0.27631	0.573288	114.35	-0.127008	0.379335	0	0.69	0.4901
Edu3			3.000000		0					0	0	0		
Inc3				1.000000	0.188187	0.194863	-0.19459	0.570961	545.14	0.035487	0.325394	0	0.97	0.3346
Inc3				2.000000	0.172985	0.201236	-0.22183	0.567803	1185.6	0.033978	0.291165	0	0.86	0.3902
Inc3				3.000000	0					0	0	0		
AGEx					-0.01143	0.105523	-0.22059	0.197731	108.14	-0.153199	0.084781	0	-0.11	0.9139

K. IRB Approval Letter for Year 5, 2016-2017

Argus Independent Review Board

6668 S. Hidden Flower Way
Tucson, AZ 85756-5111
520-398-7494
argusirb@juno.com
www.argusirb.com

From: Argus Independent Review Board (AIRB)
To: **Sarah Wesolek-Greenson**
Subject: PEACH
Sponsor: National Kidney Foundation of Michigan, Inc.

On November 1, 2017, AIRB reviewed the year end evaluation and report submitted for the above protocol, consent forms, and attachments.

This letter is to inform you that Argus has approved this final report for 2016-2017.

Congratulations on a successful completion of your project, and thank you for choosing Argus to be your IRB!

Argus Independent Review Board is in compliance with the regulations of the Food and Drug Administration as described in 21CFR parts 50 and 56.

Sincerely,

Valerie Golembiewski

Valerie Golembiewski
Chairperson

Appendix B: Survey instruments

1. RRA PG Survey English*
2. RRA PG Survey Spanish*
3. RRA PG Survey Arabic*
4. RRA Parent CBCL*
5. RRA Teacher CBCL*
6. RRA Classroom Level Problem Behaviors Survey*
7. RRA Implementation Checklist
8. RRA Weekly Attendance Sheet
9. NAP SACC Nutrition Section*
10. NAP SACC Physical Activity Section*
11. HFSY Chat 1 English
12. HFSY Chat 2 English
13. HFSY Chat Spanish
14. Key Informant Interview Guide
15. Standardized Survey Language and FAQs for Program Coordinators

*Only pre surveys are included. All post surveys are available upon request.

Parent Questionnaire-Baseline

Thank you for agreeing to take part in this important survey about you and your child!

The information you provide us will help us to understand the nutrition and physical activity needs of preschool aged children in the Detroit area. This survey is voluntary and all responses are confidential. If you have any questions or concerns, please contact Maria Houroian (313) 259-1574 ext. 223

General Information

Today's date _____/_____/_____

Parent/Guardian Name: _____

Child's Name: _____

Child's Date of Birth _____/_____/_____

Child's Sex (circle one): Male Female

Teacher's name: _____

Drinks

1. For each of the following drinks, **circle** the number of servings your child drinks **on a typical day. Please circle only <u>one answer</u> for each type of drink listed.**

   1 serving = 8 ounces = ¾ can = 2 juice boxes

	Type of drink	Number of servings					
a.	Juice (such as 100% juice; orange/apple/grape etc)	0 or less than 1/day	1	2	3	4	5+
b.	Fruit drinks (such as Hi-C, Hawaiian punch, lemonade, Koolaid, Capri-Sun)	0 or less than 1/day	1	2	3	4	5+
c.	Sports drinks (such as Gatorade)	0 or less than 1/day	1	2	3	4	5+
d.	Regular Soda (pop)	0 or less than 1/day	1	2	3	4	5+
e.	Sweetened Tea	0 or less than 1/day	1	2	3	4	5+
f.	Water	0 or less than 1/day	1	2	3	4	5+
g.	Skim (fat-free), 1-2% milk	0 or less than 1/day	1	2	3	4	5+
h.	Chocolate/flavored milk	0 or less than 1/day	1	2	3	4	5+

Fruits & Vegetables

2. How many servings of fruit (fresh fruit, frozen fruit, canned fruit, but NOT including juice) does your child eat on a typical day? A serving is about 8 oz, or one medium piece of fruit, or one half-cup of raw fruit.
   Please <u>circle</u> only one answer below.

Type of food	**Servings/day**					
Fruit:	Less than 1/day	1	2	3	4	5+

3. How many servings of **vegetables** (fresh, frozen or canned, but NOT including potatoes) does your child eat on a typical day? A serving is about 8 oz, or one half-cup of cooked vegetables, or one cup of raw vegetables.
   Please <u>circle</u> only one answer below.

Type of food	**Servings/day**					
Vegetables:	Less than 1/day	1	2	3	4	5+

Activity

4. How many hours is your child involved in sports or active play on a typical weekday or weekend?
   Please <u>circle</u> only one answer for weekday and one answer for weekend.

Day	**Hours/day**					
Active play/sports on a typical **weekday:**	Less than 1 hour/day	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5+ hours
Active play/sports on a typical **weekend:**	Less than 1 hour/day	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5+ hours

5. Compared to other children of the same age and sex, how would you rate your child's activity level?
   <u>Circle</u> one answer below:

Much less active	Somewhat less active	About the same	A little more active	Much more active

6. During a typical week, how many hours do **you** exercise (for example: walk, run, play ball) with your child?
   _____ hours per week.

Television and Screen Time

7. On a typical **weekday,** how many hours does your child spend doing the activities below?

Watching shows or movies (including those on a TV or streaming device like a tablet, computer or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing video games on a console or handheld (including X-box, PlayStation, Wii, or Nintendo DS)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing computer or internet games (including a tablet, iPad and/or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day

8. On a typical **weekend day,** how many hours does your child spend doing the activities below?

Watching shows or movies (including those on a TV or streaming device like a tablet, computer or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing video games on a console or handheld (including X-box, PlayStation, Wii, or Nintendo DS)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day
Playing computer or internet games (including a tablet, iPad and/or smartphone)	Less than 1 hour/day	1-2 hours/day	2-3 hours/day	More than 3 hours/day

Current Eating/Exercise Habits

9. Does your child usually eat breakfast?
   - ☐ No
   - ☐ Yes

10. For each of the behaviors below **grade** how well your child is doing from A (great/healthy) to F (poor/unhealthy)
in terms of how much or how often they are doing each thing. **<u>Circle</u> the response.**

	Great/Healthy				Poor/Unhealthy
a. Snack foods	A	B	C	D	F
b. Drinking sweetened beverages	A	B	C	D	F
c. Eating out/ carry out dinners	A	B	C	D	F
d. Eating fruits	A	B	C	D	F
e. Eating vegetables	A	B	C	D	F
f. Watching TV/ screen time	A	B	C	D	F
g. Playing video games/ internet	A	B	C	D	F
h. Physical activity/ exercise	A	B	C	D	F

Your Child's Health

11. On the scale below of 0-10, where 0 = very unhappy and 10 = very happy, select the answer that best represents your child's general mood.
Please <u>circle</u> only one option below.

		Very unhappy					**In between**					**Very happy**
My child's mood:	Don't know	0	1	2	3	4	5	6	7	8	9	10

12. How often was your child unhappy, sad or depressed **in the past month?**
<u>Circle</u> only one answer below.

Never	Rarely	Sometimes	Usually	Always	Don't know

13. How often did your child have trouble falling or staying asleep **in the past month?**
<u>Circle</u> only one answer below.

Never	Rarely	Sometimes	Usually	Always	Don't know

14. **In the past month,** how often was your child tired during the day?
<u>Circle</u> only one answer below.

Never	Rarely	Sometimes	Usually	Always	Don't know

15. How would you rate the quality of your child's sleep?
<u>Circle</u> only one answer below.

Very good	Fairly good	Fairly bad	Very bad

School

16. For the following statements where 0 = strongly disagree and 10 = strongly agree, **circle only one answer that best represents** your child's participation in school or daycare activities.

	Strongly Disagree				Neutral						Strongly Agree
a. My child is not interested in school	0	1	2	3	4	5	6	7	8	9	10
b. My child tries his/her best at school	0	1	2	3	4	5	6	7	8	9	10
c. My child enjoys school	0	1	2	3	4	5	6	7	8	9	10
d. My child gets good grades at school	0	1	2	3	4	5	6	7	8	9	10
e. My child dreads going to school	0	1	2	3	4	5	6	7	8	9	10
f. My child gets teased at school	0	1	2	3	4	5	6	7	8	9	10
g. My child has trouble finding friends to play with	0	1	2	3	4	5	6	7	8	9	10
h. My child joins in with family activities	0	1	2	3	4	5	6	7	8	9	10

Your Family History

This is the last section. We are required to ask these questions. **Your answers will not be shared with your child's preschool or Head Start and will not in any way affect your eligibility for services.**

17. What is your annual household income? **Please check only one answer below**

- ☐ Less than $10,000 per year or about $800 per month
- ☐ $10,001 to $15,000 per year or about $801-$1,250 per month
- ☐ $15,001 to $20,000 per year or about $1,251- $1,600 per month
- ☐ $20,001 to $25,000 per year or about $1,601 - $2,000 per month
- ☐ $25,001 to $35,000 per year or about $2,001 - $2,900 per month
- ☐ $35,001 to $45,000 per year or about $2,901 - $3,750 per month
- ☐ $45,001 to $60,000 per year or about $3,751 - $5,000 per month
- ☐ $60,001 and above per year or $6,600 or more per month

18. What type of health insurance or health care coverage does your child have?

- ☐ Private health insurance
- ☐ Medicaid
- ☐ SCHIP (CHIP – Children's Health Insurance Program)

- ☐ Military Healthcare (TRICARE/VA/CHAMP-VA)
- ☐ Indian Health Service
- ☐ Other government Program
- ☐ Single Service Plan (e.g. Dental, Vision, Prescriptions)
- ☐ No health insurance

19. Over the past 12 months, about how many of the following types of health care visits has your child had?

	Type of visit	Number of visits
a.	Emergency room visits	
b.	Sick visits to a physician for a new illness/problem	
c.	Sick visits to a physician for a chronic illness/problem (asthma etc.)	
d.	Check-up visits to a physician	

20. Are you on any of the following public assistance programs? **(Check all that apply)**
    - ☐ WIC
    - ☐ SNAP (Bridge Card, Food Stamps)
    - ☐ FIP (Cash Assistance)
    - ☐ Other: _____
    - ☐ I am not on public assistance

Thank you! Please return this form to your child's school.

Cuestinario Para Padres-Baseline

¡Gracias por participar en este cuestionario importante sobre usted y su niño!

La información que usted nos proporcione nos ayudará entender las necesidades de nutrición y actividad física de niños de edad preescolar en el área de Detroit. Este cuestionario es voluntario y todas las respuestas son confidencial. Si usted tiene alguna pregunta o preocupación, por favor no dudé en contactar a Maria Houroian (313) 259-1574 ext. 223

Información General

Fecha: ____/____/____

Nombre del cuidador/padre: _____

Nombre del niño(a): _____

Fecha de nacimiento del niño(a): ____/____/____

Sexo del niño(a): Masculino Femenino

Nombre del maestro del niño(a): _____

Bebidas

1. En cada una de las siguientes bebidas, haga un círculo en **el número de porciones** que su niño(a) toma en **un día típico.**

   Por favor elija una respuesta para <u>cada tipo de bebida</u> en la lista (a – h).
   1 porción = 8 oz = ¾ lata = 2 pequeñas cajas de jugo

	Tipo de bebida	Porciones					
a.	Jugo (100% jugo; por ej. naranja/manzana/tropical/uva)	Ninguna / menos de 1 por día	1	2	3	4	5+
b.	Bebidas de fruta (por ej. Hi-C, Hawaiian Punch, limonada, Koolaid, Capri-Sun)	Ninguna / menos de 1 por día	1	2	3	4	5+
c.	Bebidas deportivas (por ej. Gatorade, Poweraid)	Ninguna / menos de 1 por día	1	2	3	4	5+
d.	Soda regular (no de dieta; por ej. Coca-Cola, Pepsi, Sprite)	Ninguna/ menos de 1 por día	1	2	3	4	5+
e.	Té Endulzado	Ninguna/ menos de 1 por día	1	2	3	4	5+
f.	Agua	Ninguna/ menos de 1 por día	1	2	3	4	5+
g.	Leche sin grasa o con 1-2% grasa	Ninguna/ menos de 1 por día	1	2	3	4	5+
h.	Leche con chocolate u otro sabor	Ninguna/ menos de 1 por día	1	2	3	4	5+

Frutas & Vegetales

2. ¿Cuantas porciones de **frutas** come su niño(a) en **un día** típico – incluyendo fruta entera, congelada o enlatada pero no incluyendo jugo? Una porción pesa aproximadamente 8 oz, o es equivalente a una fruta de tamaño mediano o media taza de fruta fresca.
   Por favor haga un círculo solamente en la repuesta adecuada.

Tipo de comida	**Porciones**					
Fruta:	Menos de 1 por día	1	2	3	4	5+

3. ¿Cuantas porciones de **vegetales** come su niño(a) **en un día** típico – incluyendo vegetales frescos, congelados o enlatados pero no incluyendo patatas/papas o yuca? Una porción pesa aproximadamente 8 oz, o es equivalente a media taza de vegetales cocinados o una taza de vegetales crudos.
   Por favor haga un círculo solamente en la respuesta adecuada.

Tipo de comida	**Porciones**					
Vegetales:	Menos de 1 por día	1	2	3	4	5+

Actividad

4. ¿En una semana típica, cuántas horas en **un día** está involucrado su niño(a) en deportes o juego físico?
   ¿Y por cuantas horas en **un día** típico del fin de semana?
   Por favor haga un círculo solamente en la respuesta adecuada.

Día	**Horas por Día**					
Juego físico/deportes por día: **durante una semana** típica**:**	Menos de 1 hora por día	1-2 horas	2-3 horas	3-4 horas	4-5 horas	5+ horas
Juego físico/deportes por día: **fin de semana** típica	Menos de 1 hora por día	1-2 horas	2-3 horas	3-4 horas	4-5 horas	5+ horas

5. ¿En comparación a otros niños de la misma edad y sexo, como usted calificaría el nivel de actividad física de su niño(a)? **Por favor haga un círculo solamente en la respuesta adecuada.**

Mucho menos activo	Un poco menos activo	Más o menos igual	Un poco más activo	Mucho más activo

6. ¿Durante una semana típica, por cuántas horas usted hace ejercicios (caminar, correr, juega) con su niño(a)?
   _____ horas por semana

Televisión y Tiempo Frente La Pantalla

7. ¿En un día típico durante la semana, cuánto tiempo dura su niño(a) en las próximas actividades?
   Por favor haga un círculo solamente en la respuesta adecuada.

Tiempo viendo televisión o películas (incluyendo la tableta electrónica, computadora o celular)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día
Tiempo jugando videojuegos (incluyendo X-box, PlayStation, Wii, o Nintendo DS)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día
Tiempo jugando juegos en la computadora o internet (incluyendo la tableta electrónica, iPad o celular)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día

8. ¿En un día típico durante el **fin de semana**, cuánto tiempo dura su niño(a) en las próximas actividades?
   Por favor haga un círculo solamente en la respuesta adecuada.

Tiempo viendo televisión o películas (incluyendo la tableta electrónica, computadora o celular)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día
Tiempo jugando videojuegos (incluyendo X-box, PlayStation, Wii, o Nintendo DS)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día
Tiempo jugando juegos en la computadora o internet (incluyendo la tableta electrónica, iPad o celular)	Menos de 1 hora/día	1-2 horas/día	2-3 horas/día	Más de 3 horas/día

Hábitos de Comida y Ejercicio

9. ¿Su niño(a) come desayuno usualmente?
   - ☐ No
   - ☐ Si

10. En cada una de los siguientes comportamientos (líneas a-h), califique como su niño(a) se comporta desde A (muy bien/saludable) hasta F (mal/no saludable) de CUANTO o que tan FRECUENTE su niño hace cada uno.
    Por favor haga un círculo solamente en la respuesta adecuada.

	Muy Bien/Saludable				**Mal/ No Saludable**
a. Bocadillos	A	B	C	D	F
b. Tomar bebidas endulzadas	A	B	C	D	F
c. Comer fuera de la casa/pedir comida para llevar	A	B	C	D	F
d. Comer frutas	A	B	C	D	F
e. Comer vegetales	A	B	C	D	F
f. Mirar TV o pasar tiempo frente a la pantalla	A	B	C	D	F
g. Jugar videojuegos (cualquier tipo) o usar el internet	A	B	C	D	F
h. Hacer actividad física/ ejercicios	A	B	C	D	F

La Salud De Su Niño(a)

11. En una escala de 0 a 10, donde 0 = muy infeliz/descontento y el 10 = muy feliz/bien contento, elija la respuesta que mejor representa el estado de ánimo general de su hijo(a). **Por favor haga un círculo solamente en la respuesta adecuada.**

	Muy infeliz/descontento					**Entre Medio**					**Muy feliz/bien contento**
El estado de animo de mi niño:	No se	0	1	2	3	4	5	6	7	8	9	10

12. **¿En el mes pasado,** cuántas veces estuvo su niño(a) descontento, triste y/o deprimido?
Por favor haga un círculo solamente en la respuesta adecuada.

Nunca	Casi nunca	Algunas veces	Usualmente	Siempre	No sé

13. **¿En el mes pasado,** con qué frecuencia su niño(a) tuvo problemas quedándose dormido y/o hiendo a dormir?
Por favor haga un círculo solamente en la respuesta adecuada.

Nunca	Casi nunca	Algunas veces	Usualmente	Siempre	No sé

14. **¿En el mes pasado,** con qué frecuencia estuvo su niño(a) cansado durante el día?
Por favor haga un círculo solamente en la respuesta adecuada.

Nunca	Casi nunca	Algunas veces	Usualmente	Siempre	No sé

15. ¿Cómo calificarías la calidad del sueño de su niño(a)?
Por favor haga un círculo solamente en la respuesta adecuada.

Muy bien	Más o menos bien	Más o menos mal	Muy mal

Escuela

16. Para **cada una** de las siguientes declaraciones (a – h) donde 0 = muy en desacuerdo y 10 = muy de acuerdo, por favor elija **la respuesta que mejor representa** la participación de su niño(a) en la escuela o actividades durante el cuidado de niños.

	Muy en Desacuerdo					Neutral					Muy en Acuerdo
a. Mi niño(a) no está interesado en la escuela	0	1	2	3	4	5	6	7	8	9	10
b. Mi niño(a) intenta lo mejor que puede en la escuela	0	1	2	3	4	5	6	7	8	9	10
c. Mi niño(a) disfruta la escuela	0	1	2	3	4	5	6	7	8	9	10
d. Mi niño(a) recibe buenas calificaciones en la escuela	0	1	2	3	4	5	6	7	8	9	10
e. A mi niño(a) no le gusta ir a la escuela	0	1	2	3	4	5	6	7	8	9	10
f. Mi niño(a) es intimidado por otros en la escuela	0	1	2	3	4	5	6	7	8	9	10
g. Mi niño(a) tiene problemas en encontrar amigos con quien puede jugar	0	1	2	3	4	5	6	7	8	9	10
h. Mi niño(a) comparte en actividades junto a la familia	0	1	2	3	4	5	6	7	8	9	10

Su Historial Familiar

Esta es la última sección. Es requerido hacer estas preguntas. **Sus respuestas no serán compartidas con la escuela preescolar o el Head Start de su niño(a) y no afectarán en ninguna manera la elegibilidad para servicios.**

17. ¿Cuál es su relación con el niño(a) que usted cuida?
    - ☐ Madre
    - ☐ Padre
    - ☐ Abuelo/a
    - ☐ Padre adoptivo
    - ☐ Otro (especifique): _____

18. ¿Quién vive con usted aparte de sus niños? (Marque todas que apliquen.)
    - ☐ Nadie
    - ☐ Mi pareja (esposo/a, novio/a, conviviente)
    - ☐ Abuelo(s)
    - ☐ Otro pariente(s)
    - ☐ Otra persona no pariente(s)

19. ¿Cuál es la raza de su niño(a)? (Marque todas que apliquen.)
    - ☐ Blanco
    - ☐ Negro o Africano Estadounidense
    - ☐ Hispano/Latino
    - ☐ Asiático
    - ☐ Hawaiano Nativo u otro Isleño Del Pacifico
    - ☐ Árabe/Árabe Americano O Personas del Oriente Medio/Personas del Oriente Medio Americano
    - ☐ Indio Americano o Nativo de Alaska
    - ☐ Otro (especifique): _____

20. ¿Cuál es el nivel escolar más avanzado que usted cumplió?
    - ☐ Parte de la escuela primaria
    - ☐ Parte de la escuela secundaria
    - ☐ Diploma de escuela secundaria o GED
    - ☐ Certificado en algún tipo de comercio o de entrenamiento
    - ☐ Parte del colegio/universidad
    - ☐ Bachillerato
    - ☐ Postgrado (Maestría o Doctorado)

21. ¿Qué es el ingreso anual de su hogar (en total)?
    Por favor marque una sola respuesta a continuación.

☐ Menos de $10,000 anual	o	casi $800 mensual
☐ $10,001 a $15,000 anual	o	casi $801-$1,250 mensual
☐ $15,001 a $20,000 anual	o	casi $1,251- $1,600 mensual
☐ $20,001 a $25,000 anual	o	casi $1,601 - $2,000 mensual
☐ $25,001 a $35,000 anual	o	casi $2,001 - $2,900 mensual
☐ $35,001 a $45,000 anual	o	casi $2,901 - $3,750 mensual
☐ $45,001 a $60,000 anual	o	casi $3,751 - $5,000 mensual
☐ $60,001 o más anual	o	$6,600 o más mensual

22. ¿Qué tipo de seguro médico o plan/programa médico tiene su niño(a)? (Marque todas las que apliquen)
    - ☐ Seguro privado
    - ☐ Medicaid
    - ☐ SCHIP (CHIP – Children's Health Insurance Program, Programa De Seguranza De Salud De Niños)
    - ☐ Seguranza militar (TRICARE/VA/CHAMP-VA)
    - ☐ Servicios Médicos Para Indígenas
    - ☐ Otro programa del gobierno
    - ☐ Plan de servicio individual (ej. Dental, Visión, Recetas)
    - ☐ Sin seguro médico o plan/programa médico

23. ¿En los últimos 12 meses, cuantas veces visitó su niño(a) una clínica, hospital etc.? **Por favor llene un número para cada tipo de visita (a-d).**

	Tipo de visita	Número de visitas
a.	Visitas a la sala de emergencias	
b.	Visitas a un doctor para una nueva enfermedad y/o problema médica	
c.	Visita a un doctor para una enfermedad y/o problema crónica (por ej. asma, diabetes etc.)	
d.	Visitas de seguimiento/rutinarias a un doctor	

24. ¿Usted es parte de algunos de los siguientes programas de asistencia pública? (Marque todas que apliquen)

- ☐ WIC
- ☐ SNAP (Asistencia Alimenticia)
- ☐ FIP (Asistencia en efectivo)
- ☐ Otra (especifique): _____
- ☐ No estoy recibiendo asistencia pública

¡Gracias! Por favor devuelva esta encuesta al maestro/a de su niño(a).

ستبيان الأب أو الأم إ

شكراً لموافقة على المشاركة في هذا الاستقصاء الهام عنك وعن طفلك!

هذا الاستقصاء إختياري وكل الإجابات سرية. إذا كان لديكم أسئلة أو استفسارات فضلوا بالإتصال بتريزتا جادا 1574-259 (313) ext. 223

معلومات عامة

تاريخ اليوم ____/____/____

اسم الأب أو الأم/ولي الأمر _____

اسم الطفل _____

تاريخ مولد الطفل ____/____/__

نوع الطفل (ضع دائرة حول أحد الاختيارات): ذكر أنثى

اسم المعلم/المعلمة _____

المشروبات

1. لكل من المشروبات آلتية **ضع دائرة** حول عدد الحصص التي يتناولها طفلك **في اليوم عادة**

من فضلك ضع دائرة حول إجابة واحدة فقط لكل من المشروبات المذكورة.

الحصة = 8 أونصات = 3/4 مليون (كان = 2 علبة عصير

	نوع المشروب	عدد الحصص					
a.	عصير (مثل 100% عصير برتقال/تفاح/عنب إلخ)	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
b.	مشروبات فواكه (مثل هاي-سي، هاوايان بانش، الليموندة، كوليد، كابري-صن) (Hi-C, Hawaiian punch, lemonade, Koolaid, Capri-Sun)	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
c.	مشروبات رياضية (مثل جيتوريد) (Gatorade)	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
d.	مشروبات غازية عادية	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
e.	شاي محلى	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
f.	ماء	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
g.	حليب خالي من الدسم لبن بنسبة دسم 1-2%	صفر أو أقل من 1 في اليوم	1	2	3	4	5+
.h	لحيب بنكهة الشوكولاتة أو بنكهات أخرى	صفر أو أقل من 1 في اليوم	1	2	3	4	5+

فواكة & خضروات

2. كم حصة من الفواكه (فواكه طازجة مثل تفاح، برتقال، **لا يشمل** عصير) تأكل فلان/ة يوميا عادي ؟ الحصة الواحدة تساوى حوالى 8 أونصات أو ثمرة متوسطة أو نصف كوب من الفاكهة غير المطبوخة.

ضع دائرة حول إجابة واحدة فقط لأنه

نوع الأكل	عدد حصص يومياً				
فواكه:	أقل من 1 في اليوم	1	2	3	4	5+

نوع الأكل	عدد حصص يومياً				
خضروات:	أقل من 1 في اليوم	1	2	3	4	5+

3. كم حصة من الخضروات (طازجة أو مثلجة أو على شكل "بطاطا" **لا تشمل** بطاطس) تأكل فلان/ة يوميا عادي؟ الحصة الواحدة تساوى حوالى 8 أونصات أو نصف كوب من الخضروات المطبوخة أو كوب من الخضروات غير المطبوخة.

من فضلك ضع دائرة حول إجابة واحدة فقط لأنه

النشاط

4. كم عدد الساعات التي يشارك فيها فلان/ة في الرياضة أو **التمرين** يوميا عادي من أيام السبوع أو أيام عطلة نهاية الاسبوع؟

من فضلك ضع دائرة حول إجابة واحدة فقط لأيام الاسبوع و إجابة واحدة فقط لأيام عطلة نهاية الاسبوع.

اليوم	عدد الساعات في اليوم				
التمرين/الرياضة يوميا عادي من **أيام الاسبوع:**	أقل من ساعة في اليوم	1-2 ساعات	2-3 ساعات	3-4 ساعات	4-5 ساعات	+5 ساعات
التمرين/الرياضة يوميا عادي من **أيام عطلة نهاية الاسبوع**	أقل من ساعة في اليوم	1-2 ساعات	2-3 ساعات	3-4 ساعات	4-5 ساعات	+5 ساعات

5. بالمقارنة مع الأطفال الآخرين من نفس العمر والنوع كيف تقيم مستوى نشاط طفلك: **ضع دائرة حول إجابة واحدة لأنه:**

.

أقل نشاط ممكن	أقل نشاط أنوعاً ما	نفس المستوى تقريباً	أكثر نشاط بعض الشيء	أكثر نشاط جداً

6. خلال الأسبوع العادي كم ساعة تمارس أنت الرياضة (مثل المشي، الجري، لعب الكرة) في وقت فراغك؟

عدد الساعات في الأسبوع _____

عدد ساعات مشاهدة التلفاز أو الشاشات الأخرى

7. في يوم عادي من أيام الأسبوع كم ساعة تقضي في كل من الأنشطة التالية؟

	لا شيء في اليوم	1-2 ساعات في اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم
مشاهدة البرامج والأفلام في التلفاز أو أجهزة الفيديو (مثل الفيديوهات أو الكمبيوتر أو الهاتف الذكي)				
اللعب أو استخدام الكمبيوتر أو ذات وحدات التحكم أو الموسيقى (مثل الألعاب التي تشمل الحركة أو الرقص أو الدراجة الثابتة)	لا شيء في اليوم	1-2 ساعات/ اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم
اللعب أو استخدام الكمبيوتر (مثل الألعاب أو التصفح أو الهاتف الذكي)	لا شيء في اليوم	1-2 ساعات/ اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم

8. في يوم عادي من أيام عطلة نهاية الأسبوع كم ساعة تقضي طفلك في كل من الأنشطة التالية؟

	لا شيء في اليوم	1-2 ساعات في اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم
مشاهدة البرامج والأفلام في التلفاز أو أجهزة الفيديو (مثل الفيديوهات أو الكمبيوتر أو الهاتف الذكي)				
اللعب أو استخدام الكمبيوتر أو ذات وحدات التحكم أو الموسيقى (مثل الألعاب التي تشمل الحركة أو الرقص أو الدراجة الثابتة)	لا شيء في اليوم	1-2 ساعات/ اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم
اللعب أو استخدام الكمبيوتر (مثل الألعاب أو التصفح أو الهاتف الذكي)	لا شيء في اليوم	1-2 ساعات/ اليوم	2-3 ساعات في اليوم	أكثر من 3 ساعات في اليوم

عادات الأكل/ النشاط حالياً

9. هل يتناول طفلك وجبة الإفطار عادةً؟

☐ لا

☐ نعم

10. لكل من السلوكيات المذكورة أدناه، **قيم** أداء طفلك باختيار حرف من A (مطابق للصحيح) إلى F (غير صحيح) وليس تقييماً عن مدى قيام طفلك بكل منها. **ضع دائرة حول اختيارك.**

مطابق/صحيح غير صحيح/ سيئ

a.	البدائل الخفيفة	A	B	C	D	F
b.	شرب المشروبات المحلاة	A	B	C	D	F
c.	الأكل الخارج / إحضار الغذاء من مطعم	A	B	C	D	F
d.	الأكل الفوري	A	B	C	D	F
e.	الأكل الخضروات	A	B	C	D	F
f.	مشاهدة التلفاز/ الشاشات أخرى	A	B	C	D	F

.g	لعب ألعاب فيديو/ترنت	A	B	C	D	F
.h	النشاط البدني/الرياضة	A	B	C	D	F

صحة طفلك

11. على المقياس أدناه من 0 إلى 10 حيث 0 = غير سعيد بالمرة و 10 = سعيد جداً، إختر أحسن إجابة تمثل المزاج العام لطفلك.
من فضلك ضع دائرة على إجابة واحدة فقط أدناه.

		غير سعيد بالمرة					متوسط السعادة					سعيد جداً
وضع مزاج طفلي:	لا أعرف	0	1	2	3	4	5	6	7	8	9	10

12. كم مرة كان طفلك غير سعيد أو حزين أو مكتئب في الـ الشهر الماضي؟
ضع دائرة حول إجابة واحدة فقط أدناه.

بأبدًا	نادرًا	أحيانًا	عادةً	دائماً	لا أعرف

13. كم مرة على طفلك من صعوبة في الخلود إلى النوم أو البقاء نائماً **خلال الشهر الماضي؟**

ضع دائرة حول إجابة واحدة فقط أدناه.

بأبداً	نادراً	أحياناً	عادةً	دائماً	لا أعرف

بأبدًا	نادرًا	أحيانًا	عادةً	دائماً	لا أعرف

14. **في خلال الشهر الماضي**، كم مرة كان طفلك متعبًا خلال النهار؟
ضع دائرة حول إجابة واحدة فقط أدناه.

15. كيف تقيم نوعية نوم طفلك ؟
ضع دائرة حول إجابة واحدة فقط أدناه.

جيدة جداً	جيدة نوعاً ما	سيئة نوعاً ما	سيئة جداً

المدرسة

16. بالنسبة لجمل آتية حيث 0 = لا أوفق بأبداً و 10 = أوفق بشدة، **ضع دائرة واحدة فقط حول فأضل إجابة تمثل** مشاركة طفلك في أنشطة المدرسة أو الحضانة.

		لا أوفق بأبداً				محايد				أوفق بشدة		
a.	طفلي غير مهتم بالمدرسة	0	1	2	3	4	5	6	7	8	9	10
b.	طفلي يحاول قدر استطاعته في المدرسة	0	1	2	3	4	5	6	7	8	9	10
c.	طفلي يستمتع بالمدرسة	0	1	2	3	4	5	6	7	8	9	10
d.	طفلي يحصل على درجات جيدة في المدرسة	0	1	2	3	4	5	6	7	8	9	10
e.	طفلي يخشى الذهاب إلى المدرسة	0	1	2	3	4	5	6	7	8	9	10
f.	طفلي يتعرض للسخرية في المدرسة	0	1	2	3	4	5	6	7	8	9	10
g.	طفلي لديه مشكلة في إيجاد أصدقاء للعب معهم	0	1	2	3	4	5	6	7	8	9	10
h.	طفلي يشارك في الأنشطة العالية	0	1	2	3	4	5	6	7	8	9	10

معلومات عائلية

هذا هو الجزء الأخير يتوجب علينا طرح هذه الأسئلة. **إجابتك لن تعرض على مسؤولي حضانة طفلك أو برنامجه يدستارت ولن تؤثر بأي شكل من الأشكال على أيلتك للخدمات.**

17. ما هي الفتك بالطفل الذي تقوم برعايته

- ☐ أم
- ☐ أب
- ☐ جد / جدة
- ☐ فرد آخر من أفراد الأسرة
- ☐ ألب المتحضن أو الم المتحضنة / الألب أو الام التبني
- ☐ آخر: _____

18. من يعيش معك بخلاف طفلك/ أطفالك؟ **(علم على كل من ينطبق عليه)**

- ☐ لا أحد
- ☐ شريكي سواء ذكر او أنثى (زوج، زوجة، صاحب، صاحبة)
- ☐ جد / جدة
- ☐ قريب آخر او أقارب آخرون
- ☐ آخر أو آخرون غير أقارب

19. ما هو لون عرق الصلبة لطفلك)على مقياس يطابق لونه(

- ☐ أبيض
- ☐ أسود / أمريكي من أصل إفريقي
- ☐ أسباني / لاتيني
- ☐ آسيوي
- ☐ من هاواي أو جزر المحيط الهادي الأخرى
- ☐ هندي / هندي أمريكي/ شرق أوسطي /شرق أوسطي أمريكي
- ☐ هندي أمريكي أو من سكان ألاسكا الأصليين
- ☐ آخر (يرجى التوضيح) _____

20. ما هو أعلى مستوى دراسي أكملته؟

- ☐ بعض من الدراسة الابتدائية
- ☐ بعض من الدراسة الثانوية
- ☐ بديل مؤهل أو اجتياز اختبارات التطوير التعليمي العام)GED(
- ☐ شهادة تجارية أو مهنية
- ☐ بعض من الدراسة الجامعية
- ☐ البكالوريوس
- ☐ شهادة أعلى من البكالوريوس

21. ما هو دخل الأسرة السنوي ؟ **من فضلك ضع علامة على إجابة واحدة فقط.**

- ☐ أقل من $10,000 في السنة أو حوالي $800 في الشهر
- ☐ 10,001 إلى $15,000 في السنة أو حوالي $801 إلى $1,250 في الشهر
- ☐ $15,001 إلى $20,000 في السنة أو حوالي $1,251 إلى $1,600 في الشهر
- ☐ $20,001 إلى $25,000 في السنة أو حوالي $1,601 إلي $2,000 في الشهر
- ☐ $25,001 إلي $35,000 في السنة أو حوالي $2,001 إلي $2,900 في الشهر
- ☐ $35,001 إلي $45,000 في السنة أو حوالي $2,901 إلى $3,750 في الشهر
- ☐ $45,001 إلى $60,000 في السنة أو حوالي $3,751 إلى $5,000 في الشهر
- ☐ $60,001 أو أكثر في السنة أو $6,600 أو أكثر في الشهر

22. ما نوع التأمين الصحي أو الرعاية الصحية التي يتمتع بها طفلك ؟

- ☐ تأمين صحي خاص
- ☐ ميديكيد (MEDICAID)
- ☐ برنامج التأمين الصحي لأطفال – SCHIP (CHIP)
- ☐ الرعاية الصحية العسكرية (TRICARE/VA/CHAMP-VA)
- ☐ خدمات صحية للهنود
- ☐ برامج حكومية أخرى
- ☐ خدمات صحية أخرى (أسنان، عيون، أدوية)
- ☐ لا يوجد تأمين صحي

23. على مدى الإثني عشر شهراً الماضية، كم نوعاً من أنواع الزيارات الصحية التالية أقام به أطفالك ؟

	نوع الزيارة	عدد الزيارات
a.	زيارة لغرفة الطوارئ	
b.	زيارة للطبيب لمرض جديد أو شكوى جديدة	
c.	زيارة للطبيب لمرض مزمن أو متابعة مزمنة (ربو، إلخ)	
d.	زيارة للطبيب لفحص عام	

24. هل أنت مدرج في برنامج من برامج المساعدة الحكومية ؟ **(ضع علامة على كل ما ينطبق)**

- ☐ WIC
- ☐ SNAP (طوابع الغذاء أو كارت بريدج)
- ☐ مساعدات نقدية (FIP)
- ☐ أخرى: _____
- ☐ أنا لا أحصل على مساعدات حكومية

شكراً ! لرجاء إعادة هذه الإستمارة إلى مدرسة طفلك .

Parent Child Behavior Checklist Baseline

Child's Full Name First Middle Last		
Child's gender ☐ Boy ☐ Girl	**Child's age**	**Child's ethnic group or race**
Today's Date Mo. _____ Day_____ Year _____	**Child's Birthdate** Mo. _____ Day _____ Year _____	**Name of preschool**
This form filled out by: (print your full name)		
Your relationship to child: ☐ Mother ☐ Father ☐ Other (specify): _____		
Does the child have any illness or disability? (Either physical or mental)? ☐ No ☐ Yes – Please describe:		
Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2. **Be sure to answer all items.**		
Below is a list of items that describe children. For each item that describes the child **now or within the past 2 months**, please circle the 2 if the item is **very true or often true** of the child. Circle the 1 if the item is **somewhat or sometimes true** of the child. If the item is not true of the child, circle 0. Please answer all items as well as you can, even if some do not seem to apply to the child. **0 = Not True (as far as you know) 1= Somewhat or Sometimes True 2 = Very true or Often True**		

1.	**0**	**1**	**2**	Plays well with others
2.	**0**	**1**	**2**	Enjoys preschool/child care
3.	**0**	**1**	**2**	Is good at 'make believe' play
4.	**0**	**1**	**2**	Can't concentrate, can't pay attention for long
5.	**0**	**1**	**2**	Can't sit still, restless or hyperactive
6.	**0**	**1**	**2**	Can't stand waiting; wants everything now
7.	**0**	**1**	**2**	Dresses him/herself
8.	**0**	**1**	**2**	Defiant
9.	**0**	**1**	**2**	Enjoys listening to/reading books
10.	**0**	**1**	**2**	Demands must be met immediately
11.	**0**	**1**	**2**	Destroys things belonging to his/her family or other children
12.	**0**	**1**	**2**	Expresses joy
13.	**0**	**1**	**2**	Disobedient
14.	**0**	**1**	**2**	Doesn't seem to feel guilty after misbehaving

0 = Not True (as far as you know)		**1 = Somewhat or Sometimes True**	**2 = Very true or Often True**	
15.	**0**	**1**	**2**	Does something you are proud of
16.	**0**	**1**	**2**	Easily frustrated
17.	**0**	**1**	**2**	Gets in many fights
18.	**0**	**1**	**2**	Hits others
19.	**0**	**1**	**2**	Hurts animals or people without meaning to
20.	**0**	**1**	**2**	Enjoys learning letters and words
21.	**0**	**1**	**2**	Does chores without complaining
22.	**0**	**1**	**2**	Angry moods
23.	**0**	**1**	**2**	Physically attacks people
24.	**0**	**1**	**2**	Goes to bed when asked
25.	**0**	**1**	**2**	Poorly coordinated or clumsy
26.	**0**	**1**	**2**	Can play by him/herself
27.	**0**	**1**	**2**	Punishment doesn't change his/her behavior
28.	**0**	**1**	**2**	Laughs
29.	**0**	**1**	**2**	Quickly shifts from one activity to another
30.	**0**	**1**	**2**	Shares
31.	**0**	**1**	**2**	Screams a lot
32.	**0**	**1**	**2**	Selfish or won't share
33.	**0**	**1**	**2**	Is appreciative/says thank you
34.	**0**	**1**	**2**	Stubborn, sullen or irritable
35.	**0**	**1**	**2**	Temper tantrums or hot temper
36.	**0**	**1**	**2**	Can express him/herself well
37.	**0**	**1**	**2**	Uncooperative
38.	**0**	**1**	**2**	Wanders away
39.	**0**	**1**	**2**	Wants a lot of attention
40.	**0**	**1**	**2**	Cleans up his/her mess
41.	**0**	**1**	**2**	Does something fun with a parent/caregiver

Teacher Child Behavior Checklist Baseline

Child's Full Name First	Middle	Last
Child's gender ☐ Boy ☐ Girl	**Child's age**	**Child's ethnic group or race**
Today's Date Mo. ___ Day ___ Year _____	**Child's Birthdate** Mo. ___ Day ___ Year _____	**Name of preschool**
How many hours does the child spend at the facility? _____ hours per week		
Has he/she ever been referred for a special education program or special services? ☐ Don't know ☐ No ☐ Yes – what kind and when?		
This form filled out by (print your full name):		
Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2. **Be sure to answer all items.**		
Below is a list of items that describe children. For each item that describes the child **now or within the past 2 months**, please circle the 2 if the item is **very true or often true** of the child. Circle the 1 if the item is **somewhat or sometimes true** of the child. If the item is not true of the child, circle 0. Please answer all items as well as you can, even if some do not seem to apply to the child. **0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very true or Often True**		

1.	**0**	**1**	**2**	Can't concentrate, can't pay attention for long
2.	**0**	**1**	**2**	Can't sit still, restless or hyperactive
3.	**0**	**1**	**2**	Can't stand waiting; wants everything now
4.	**0**	**1**	**2**	Cruel to animals
5.	**0**	**1**	**2**	Defiant
6.	**0**	**1**	**2**	Demands must be met immediately
7.	**0**	**1**	**2**	Destroys his/her own things
8.	**0**	**1**	**2**	Destroys property belonging to others
9.	**0**	**1**	**2**	Disobedient
10.	**0**	**1**	**2**	Cruelty, bullying or meanness to others
11.	**0**	**1**	**2**	Difficulty following directions
12.	**0**	**1**	**2**	Doesn't seem to feel guilty after misbehaving

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very true or Often True				
13.	**0**	**1**	**2**	Disturbs other children
14.	**0**	**1**	**2**	Easily frustrated
15.	**0**	**1**	**2**	Gets in many fights
16.	**0**	**1**	**2**	Hits others
17.	**0**	**1**	**2**	Angry moods
18.	**0**	**1**	**2**	Fails to carry out assigned tasks
19.	**0**	**1**	**2**	Fidgets
20.	**0**	**1**	**2**	Physically attacks people
21.	**0**	**1**	**2**	Poorly coordinated or clumsy
22.	**0**	**1**	**2**	Punishment doesn't change his/her behavior
23.	**0**	**1**	**2**	Quickly shifts from one activity to another
24.	**0**	**1**	**2**	Inattentive, easily distracted
25.	**0**	**1**	**2**	Screams a lot
26.	**0**	**1**	**2**	Selfish or won't share
27.	**0**	**1**	**2**	Not liked by other children
28.	**0**	**1**	**2**	Stubborn, sullen or irritable
29.	**0**	**1**	**2**	Teases a lot
30.	**0**	**1**	**2**	Temper tantrums or hot temper
31.	**0**	**1**	**2**	Uncooperative
32.	**0**	**1**	**2**	Wanders away
33.	**0**	**1**	**2**	Wants a lot of attention

Does the child have any illness or disability (either physical or mental)? □ No □ Yes – Please describe:

Please describe the best things about the child:

Classroom Level Problem Behaviors Survey

Teacher Name: _____

Classroom Name (ex: 1 or red): _____

Type of class (circle one): AM PM FULL DAY GSRP Blend

Center Name: _____

Today's Date: _____

Below is a list of statements about children. **Please circle the response that indicates the percentage of children in your classroom that can be described by the statement**. Please answer all items as well as you can, even if some do not seem to apply to your classroom.

What percentage of children in your classroom can be described by this statement?

1.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Are fidgety and have difficulty sitting still
2.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Pay attention
3.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Are unhappy
4.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Talk out of turn
5.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Obey class rules
6.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Pout and sulk
7.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Do not cooperate
8.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Work hard
9.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Break rules
10.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Take turns and play fair
11.	**0-25%**	**26-50%**	**51-75%**	**76-100%**	Fight

Thank you!

Please fill this checklist out honestly each week so that we can improve our program and training.

Early Childhood Site: _____

Teacher Name: _____

Classroom Name (ex: 1 or red): _____ **Classroom type:** AM / PM / Full Day / GSRP Blend

Some teachers find that they only have time to read the story to their class and sample the fruit or vegetable. There are other parts to the lesson:

- Introducing the color of the week and describing fruit/ vegetables of that color
- Encouraging students to share their favorite fruit/vegetable of that color
- Reading the riddle in the book
- Asking students to describe their senses during the sampling
- Giving the parent handouts to the children
- Additional activities in the manual

The questions below ask how much of each lesson you were able to do.

Week 1 – RED WEEK **Today's Date: _____ /_____ /_____**

How much of the **red** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 2 – ORANGE WEEK **Today's Date: _____ /_____ /_____**

How much of the **orange** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 3 – YELLOW WEEK **Today's Date: _____ /_____ /_____**

How much of the **yellow** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 4 – GREEN WEEK **Today's Date: _____ /_____ /_____**

How much of the **green** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 5 – BLUE/WHITE/BROWN WEEK **Today's Date: _____ /_____ /_____**

How much of the **blue** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 6 – PURPLE WEEK **Today's Date: _____ /_____ /_____**

How much of the **purple** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

Week 7 – PHYSICAL ACTIVITY WEEK **Today's Date: _____ /_____ /_____**

How much of the **physical activity** lesson were you able to do?
☐ None ☐ Some ☐ Most ☐ All

The Entire Program

When you think about the seven weeks of the Regie's Rainbow Adventure program and the seven lessons, what percentage of the **whole program** do you think you completed?

_____%

Thank you very much for your help with Regie's Rainbow Adventure®!

Mark the weekly attendance of the children in your class with this worksheet. For each week that you did the Regie lesson, **put an A if the child is absent and a ✓ if the child is present**. Thank you very much!

Site: _____ Teacher's Name: _____

Circle one: AM / PM / Full Day / After School Program Classroom name (ex: 1 or red): _____

Start date: _____ / _____ / _____

Child's Name	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**	**Week 7**
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							

NAPSACC NUTRITION SECTION PRINT VERSION

Introduction:
The Nutrition Section of the online Nutrition and Physical Activity Self-Assessment for Child Care is comprised of 49 questions organized into 12 sub-sections or subject areas. Each question represents a best practice. The online assessment saves the child care center's or home's responses and when the assessment is submitted, the online system provides a customized feedback report. The report shows which best practices the child care center or home is

- Achieving
- Nearly achieving
- Started but more effort is needed to achieve
- Not achieving at all

The feedback report is used to help the child care center or home build an action plan for improvement.
This document provides a print version of the Nutrition Section of NAPSACC, listing the questions and response options, and organized in the same subject area groups as the online version.

- Fruits & Vegetables
- Meats, Fats & Grains
- Beverages
- Menus & Variety
- Feeding Practices
- Foods Offered Outside of Regular Meals & Snacks
- Support for Healthy Eating
- Nutrition Education
- Nutrition Policy
- Breastfeeding Support
- Breastfeeding Education
- Breastfeeding Support Policy

NAPSACC NUTRITION SECTION
Fruits & Vegetables
1. Fruit (not juice) is offered:

- ❍ 3 times a week or less
- ❍ 4 times per week
- ❍ 1 time per day
- ❍ 2 or more times per day

2. Fruit is offered canned in its own juice (no syrup), fresh or frozen:

- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

3. Vegetables, (not including French fries, tater tots, hash browns or dried beans) are offered:

- ❍ 2 times a week or less
- ❍ 3 to 4 times per week
- ❍ 1 time per day
- ❍ 2 or more times per day

4. Vegetables, other than potatoes, corn and green beans are offered:
- ❍ Less than 1 time per week
- ❍ 1 to 2 times per week
- ❍ 3 to 4 times per week
- ❍ 1 or more times per day

5. Cooked vegetables are prepared with added meat fat, margarine, or butter:
- ❍ All of the time
- ❍ Most of the time
- ❍ Some of the time
- ❍ Rarely or never

Meats, Fats & Grains

1. Fried or pre-fried potatoes (French fries, tater tots, hash browns) are offered:
- ❍ 3 or more times per week
- ❍ 2 times per week
- ❍ 1 time per week
- ❍ Less than once a week or never

2. Fried or pre-fried (frozen and breaded) meats (chicken nuggets) or fish (fish sticks) are offered:
- ❍ 3 or more times per week
- ❍ 2 times per week
- ❍ 1 time per week
- ❍ Less than once a week or never

3. High-fat meats (sausage, bacon, hot dogs, bologna, ground beef) are offered:
- ❍ 3 or more times per week
- ❍ 2 times per week
- ❍ 1 time per week
- ❍ Less than once a week or never

4. Beans or lean meats (baked or broiled chicken, turkey or fish) are offered:
- ❍ Less than 1 time per week
- ❍ 1 to 2 times per week
- ❍ 3 to 4 times per week
- ❍ 1 or more times per day

5. High-fiber, whole grain foods (whole wheat bread, oatmeal, brown rice, Cheerios, etc.) are offered:
- ❍ 1 time per week or less
- ❍ 2 to 4 times per week
- ❍ 1 time per day
- ❍ 2 or more times per day

6. Sweets or salty foods (cookies, cakes, muffins, chips, etc.) are offered:
- ❍ 1 or more times per day
- ❍ 3 to 4 times per week
- ❍ 1 to 2 times per week
- ❍ Less than once a week or never

Beverages

1. Drinking water outside is:
- ❍ Not visible
- ❍ Visible but only available during designated water breaks
- ❍ Easily visible and available on request
- ❍ Easily visible and available for self serve

2. Drinking water inside is:
- ❍ Not visible
- ❍ Visible but only available during designated water breaks
- ❍ Easily visible and available on request
- ❍ Easily visible and available for self serve

3. 100% fruit juice is offered:
- ❍ 2 or more times per day
- ❍ 1 time per day
- ❍ 3 to 4 times per week
- ❍ 2 times per week or less

4. Sugary drinks (Kool-Aid, sports drinks, sweet tea, punches, soda) other than 100% juice are offered:
- ❍ 1 or more times per week
- ❍ Less than 1 time per week
- ❍ Less than 1 time per month
- ❍ Rarely or never

5. Milk served to children ages 2 years and older is usually:
- ❍ Whole or regular
- ❍ 2% reduced fat
- ❍ 1 to 2% reduced fat
- ❍ Always 1% or Skim/Nonfat

6. Soda and other vending machines are located:
- ❍ In the entrance or front of the building
- ❍ In public areas, but not at the entrance
- ❍ Out of sight of parents and children
- ❍ No vending machines on site

Menus & Variety

1. Menus used are:
- ❍ 1-week cycle or no menus used
- ❍ 2-week cycle
- ❍ 3-week cycle or more without seasonal changes
- ❍ 3-week cycle or more with seasonal changes

2. Weekly menus include a combination of both new and familiar foods:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

3. Weekly menus include food from a variety of cultures:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

Feeding Practices

1. When children eat less than half a meal or snack, caregivers help determine if they are full before removing the plate:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

2. When children request seconds, caregivers help determine if they are still hungry before serving additional food:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

3. Children are encouraged by caregivers to try a new or less favorite food:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

4. Food is used to encourage positive behavior:
- ❍ All of the time
- ❍ Most of the time
- ❍ Some of the time
- ❍ Rarely or never

Foods Offered Outside of Regular Meals & Snacks

1. Guidelines provided to parents for food brought in for holidays or celebrations are:
- ❍ Not available
- ❍ Loose guidelines with healthier options encouraged
- ❍ Written guidelines for healthier options that are not always enforced
- ❍ Written guidelines for healthier options that are usually enforced

2. Holidays are celebrated with mostly healthy foods or non-food treats, like stickers:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

3. Fundraising consists of selling only non food items (like wrapping paper, coupon books, magazines):
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time OR We do not conduct fundraising activities

Support for Healthy Eating

1. Caregivers join children at the table for meals:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

2. Meals are served family style (children serve themselves with limited help):
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

3. Caregivers consume the same food and drinks as the children:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

4. Caregivers eat or drink less healthy foods (especially sweets, soda and fast food) in front of the children:
- ❍ All of the time
- ❍ Most of the time
- ❍ Some of the time
- ❍ Rarely or never

5. Caregivers talk informally with children about trying and enjoying healthy foods:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time

6. Support for good nutrition is visibly displayed in common areas by:
- ❍ No posters, pictures or books about healthy foods displayed
- ❍ Visual support for healthy eating is available for lessons or upon request
- ❍ Posters, pictures or books about healthy foods displayed in some areas
- ❍ Posters, pictures or books about healthy foods displayed in all areas where children spend most of their time.

Nutrition Education

1. Training opportunities on nutrition (other than food safety and food program guidelines) are provided for caregivers:

- ❍ Rarely or never
- ❍ Less than 1 time per year
- ❍ 1 time per year
- ❍ 2 or more times per year

2. Nutrition education for children is offered:

- ❍ Rarely or never
- ❍ 1 time per month
- ❍ 2 to 3 times per month
- ❍ 1 time or more per week

3. Nutrition information is offered to parents (workshops, activities, and take home materials):

- ❍ Rarely or never
- ❍ Less than 1 time per year
- ❍ 1 time per year
- ❍ 2 or more times per year

Nutrition Policy

1. We have a nutrition policy which addresses all key nutrition areas: food/beverages offered, menu variety, feeding practices, provider behaviors, healthy eating support and education:

- ❍ No such policy exists
- ❍ Informal policy, not written
- ❍ Written policy, but not always followed
- ❍ Written policy that is regularly followed

2. Our nutrition policy is communicated to parents, families and visitors.

- ❍ Rarely or never OR No such policy exists
- ❍ Sometimes
- ❍ Usually
- ❍ Always

Breastfeeding Support

1. A designated area for mothers to breastfeed their infants, other than a bathroom, is:

- ❍ Not available
- ❍ Only available upon request
- ❍ Always available, but lacks one or more of these: appropriate seating, privacy, or electrical outlet
- ❍ Always available, with appropriate seating, an electrical outlet, shielded from view and free from Intrusion

2. Culturally appropriate breastfeeding support materials, such as pictures, posters, pamphlets and other print/media resources, are: *(Do not include materials produced by commercial entities, such as manufacturers of infant formulas):*

- ❍ Not displayed
- ❍ Available but not displayed
- ❍ Displayed and include at least one of the following: pictures, posters, pamphlets, other print/media resources

- ❍ Displayed and include all of the following: pictures, posters, pamphlets, other print/media resources

3. Our childcare facility provides sufficient refrigerator/freezer space for mothers to store expressed milk:
- ❍ Never/not provided
- ❍ Limited or occasional availability
- ❍ Available space most of the time
- ❍ Always available

4. Our childcare program provides learning and play materials that normalize breastfeeding, including books with pictures of breastfeeding and baby dolls that are nursing:
- ❍ No such toys and books are available
- ❍ Available for lessons or upon request
- ❍ Available in some areas
- ❍ Available in all areas where children spend most of their time

5. A feeding plan filled out by the parent/guardian and/or healthcare provider is:
- ❍ Not posted /No feeding plan
- ❍ Posted but not regularly updated
- ❍ Posted and regularly updated
- ❍ Posted, regularly updated, with a daily report made to parents

6. Explicit support for breastfeeding is included in the feeding plan completed by the parents/caregivers. Plan includes age-appropriate introduction of solid food, feeding in response to baby's cues, and inviting the mother to nurse her baby onsite.
- ❍ Support not explicitly included or There is no feeding plan
- ❍ Sometimes included or only some of the topics covered
- ❍ Usually included and most of the topics covered
- ❍ Always included with all topics covered

Breastfeeding Education

1. Caregivers obtain training on age-appropriate infant feeding practices and safe handling and storage of human milk.
- ❍ Rarely or never
- ❍ Once as part of new staff orientation or less than once per year
- ❍ At least once per year on some topics
- ❍ At least once per year on all these topics

2. Caregivers obtain training on promoting and supporting breastfeeding, including exclusive breastfeeding:
- ❍ Rarely or never
- ❍ Once as part of new staff orientation or less than once per year
- ❍ Once per year
- ❍ Two or more times per year

3. Breastfeeding families are instructed on how to properly label and store human milk for use in the child care facility:
- ❍ Instruction rarely or never provided
- ❍ Most/all instruction is informal/not in writing
- ❍ Most/all instructions are written guidelines provided to some but not all families
- ❍ Written guidelines provided to all families

Breastfeeding Support Policy

1. We have a breastfeeding policy which includes both promotion of breastfeeding and support of breastfeeding families:

- ❍ No policy exists
- ❍ Informal policy, not written or not followed
- ❍ Written policy, but not always followed
- ❍ Written policy that is regularly followed

2. Our breastfeeding policy is communicated to expectant mothers, families of infants and visitors.

- ❍ Rarely or never OR No such policy exists
- ❍ Sometimes
- ❍ Usually
- ❍ Always

NAPSACC PHYSICAL ACTIVITY SECTION

Introduction:

The Physical Activity Section of the online Nutrition and Physical Activity Self-Assessment for Child Care is comprised of 33 questions organized into 9 sub-sections or subject areas. Each question represents a best practice. The online assessment saves the child care center's or home's responses and when the assessment is submitted, the online system provides a customized feedback report. The report shows which best practices the child care center or home is

- Achieving
- Nearly achieving
- Started but more effort is needed to achieve
- Not achieving at all

The feedback report is used to help the child care center or home build an action plan for improvement.
This document provides a print version of the Physical Activity Section of NAPSACC , listing the questions and response options, and organized in the same subject area groups as the online version.

- Active Play Time & Inactive Time
- Play Environment
- Support for Physical Activity
- Physical Activity Education
- Physical Activity Policy
- Screen Time Use
- Screen Time Provider Behaviors
- Screen Time Education
- Screen Time Policy

PHYSICAL ACTIVITY SECTION

Active Play Time & Inactive Time

1. Short supervised periods of tummy time are provided for ALL infants, including those with special needs:

❍ Less than once per day or no daily schedule
❍ At least once per day, every day
❍ At least twice per day, every day
❍ More than twice per day, every day
❍ There are no infants in our care

2. Active play time (indoor and outdoor) is provided to ALL toddlers, included those with special needs.

❍ Less than 30 minutes each day or no routine daily active play time
❍ 30 to 45 minutes each day, every day
❍ 46 to 60 minutes each day, every day
❍ More than 60 minutes each day, every day
❍ There are no toddlers in our care

3. Active play time is provided to preschool children:

❍ 45 minutes or less each day
❍ 46 to 90 minutes each day
❍ 91 to 120 minutes each day
❍ More than 120 minutes each day

4. Structured physical activity is provided to all children:
- ❍ 1 time per week or less
- ❍ 2 to 4 times per week
- ❍ 1 time per day
- ❍ 2 or more times per day

5. Outdoor active play is provided for ALL children:
- ❍ 1 time per week or less
- ❍ 2 to 4 times per week
- ❍ 1 time per day
- ❍ 2 or more times per day

6. When outdoors, infants are provided opportunities for exploration, such as rolling, scooting, crawling, walking:
- ❍ Rarely/never or Infants are not given outdoor time
- ❍ Sometimes
- ❍ Usually
- ❍ Always
- ❍ There are no infants in our care

7. Active play is withheld for children who misbehave:
- ❍ Often
- ❍ Sometimes
- ❍ Never
- ❍ Never and we provided more active play for good behavior

8. Children are seated (excluding naps and meals) more than 30 minutes at a time:
- ❍ 1 or more times per day
- ❍ 3 to 4 times per week
- ❍ 1 to 2 times per week
- ❍ Less than once a week or never

9. Swings and infant seats, such as exersaucers, car seats, molded seats are used:
- ❍ More than 15 minutes at a time or more than 4 times per day for ANY child
- ❍ 3 to 4 times per day, less than 15 minutes per time for ANY child
- ❍ 2 times per day, less than 15 minutes per time for ANY child
- ❍ 1 or fewer times per day, less than 15 minutes per time for ANY child

Play Environment

1. Fixed play equipment (tunnels, balancing equipment, climbing equipment, overhead ladders) is:
- ❍ Unavailable at our site
- ❍ Only one type of equipment is available
- ❍ Different equipment available that suits most children
- ❍ Wide variety of equipment available and accommodates the needs of all children

2. Portable play equipment (wheel toys, balls, hoops, ribbons) consists of:
- ❍ Little variety and children must take turns

- ❍ Some variety but children must take turns
- ❍ Good variety but children must take turns
- ❍ Lots of variety for children to use at the same time

3. Outdoor portable play equipment is:
- ❍ Available during special times only
- ❍ Located out of child sight and reach; caregivers must access
- ❍ In child sight but not reach; caregivers must access
- ❍ Freely available by children at all time

4. Outdoor play space includes:
- ❍ No open running spaces or track/path for wheeled toys
- ❍ Very limited open running space; no track/path for wheeled toys
- ❍ Plenty of open running space; no track/path for wheeled toys
- ❍ Plenty of open running space and a track/path for wheeled toys

5. Indoor play space is available:
- ❍ For quiet play only
- ❍ For limited movement (jumping and rolling)
- ❍ For some active play (jumping, rolling and skipping)
- ❍ For all activities, including running

Support for Physical Activity

1. During active play time, caregivers:
- ❍ Supervise play only (mostly sit or stand)
- ❍ Sometimes encourage children to be active
- ❍ Sometimes encourage children to be active and join children in active play
- ❍ Often encourage children to be active and join children in active play

2. Supportfor physical activity is visibly displayed in common areas by:
- ❍ No posters, pictures or books about physical activity displayed
- ❍ Visual support for physical activity is available for lessons or upon request
- ❍ Posters, pictures or books about physical activity displayed in some areas
- ❍ Posters, pictures or books about physical activity displayed in all areas where children spend most of their time.

Physical Activity Education

1. Training opportunities are provided to caregivers on physical activity (not including playground safety):
- ❍ Rarely or never
- ❍ Less than 1 time per year
- ❍ 1 time per year
- ❍ 2 or more times per year

2. Physical activity education for children (motor skill development) is provided:
- ❍ Rarely or never
- ❍ 1 time per month
- ❍ 2 to 3 times per month
- ❍ 1 time or more per week

3. Physical activity information is offered to parents (workshops and take home materials):
- ❍ Rarely or never
- ❍ Less than 1 time per year

- ❍ 1 time per year
- ❍ 2 or more times per year

Physical Activity Policy

1. We have a physical activity policy which includes most of the topics covered in the physical activity sections of this assessment, including active play time, play equipment and space, provider behaviors, support and education:

- ❍ No such policy exists
- ❍ Informal policy, not written
- ❍ Written policy, but not always followed
- ❍ Written policy that is regularly followed

2. Our physical activity policy is communicated to parents, families and visitors.

- ❍ Rarely or never OR No such policy exists
- ❍ Sometimes
- ❍ Usually
- ❍ Always

Screen Time Use

1. Toddlers and infants are allowed:

- ❍ 1 or more hours per week of total screen time
- ❍ 30 to 59 minutes per week of total screen time
- ❍ Fewer than 30 minutes per week of total screen time
- ❍ No screen time ever
- ❍ There are no toddlers and infants in our care

2. Preschool children are allowed:

- ❍ More than 2 hours a week of total screen time
- ❍ 1 to 2 hours per week of total screen time
- ❍ 31 to 59 minutes per week of total screen time
- ❍ 30 minutes or less per week of total screen time

3. Televisions are:

- ❍ Located in every room where children spend their time
- ❍ Located in most rooms where children spend their time
- ❍ Located in some rooms where children spend their time
- ❍ Stored outside of rooms where children spend their time/No televisions onsite

4. For preschool children, television/DVD viewing includes:

- ❍ All types of programming and videos
- ❍ Mix of educational and commercial programming
- ❍ Mostly educational programming
- ❍ All education, noncommercial programming, or no TV/DVD viewing

5. Television/DVD are turned on during meals or snacks:

- ❍ All the time
- ❍ Most of the time
- ❍ Some of the time
- ❍ Rarely or never

6. Television/video watching is used as a reward:

- ❍ All the time
- ❍ Most of the time
- ❍ Some of the time
- ❍ Rarely or never

7. Computers are available to preschool children:
- ❍ All the time and there are few or no limits on duration
- ❍ Several times per day and/or more than 30 minutes per day
- ❍ At one set time per day for 15 to 30 minutes
- ❍ At one set time per day for 15 minutes or less or not available

Screen Time Provider Behaviors

1. During screen time activities with preschool children, providers supervise and watch with the children:
- ❍ Rarely or never
- ❍ Some of the time
- ❍ Most of the time
- ❍ All of the time/There are no screen time activities

Screen Time Education

1. Providers are offered training opportunities on screen time reduction and/or media literacy:
- ❍ Rarely or never
- ❍ Less than once per year
- ❍ Once per year
- ❍ Two or more times per year

2. Parents are offered screen time reduction and/or media literacy information, such as special programs, newsletters, or information sheets:
- ❍ Rarely or never
- ❍ Less than once per year
- ❍ Once per year
- ❍ Two or more times per year

Screen Time Policy

1. We have a screen time policy which includes screen time use, provider behaviors and education:
- ❍ No such policy exists
- ❍ Informal policy, not written
- ❍ Written policy, but not always followed
- ❍ Written policy that is regularly followed

2. Our screen time policy is communicated to parents, families and visitors.
- ❍ Rarely or never OR No such policy exists
- ❍ Sometimes
- ❍ Usually
- ❍ Always

Healthy Families
Start with You

Health Chat Survey #1

Date: _____

Early Childhood Site: _____

Family Service Coordinator/Family Advocate Name: _____

Parent/Caregiver Name: _____

Child/Children's Name(s): _____

Home Address: _____

City, State, Zip: _____

Telephone: _____

Email address: _____

Are you at risk for type 2 diabetes? One in four Americans with diabetes is undiagnosed. Take this test to learn more about your risk for developing type 2 diabetes.

Diabetes Risk Test	**Write your point score in the box**
How old are you? a. Less than 40 years (0 points) b. 40-49 years (1 point) c. 50-59 years (2 points) d. 60 years or older (3 points)	
Are you a man or a woman? a. Man (1 point) b. Woman (0 points)	
Are you a woman who has ever been diagnosed with gestational diabetes or given birth to a baby weighing 9 pounds or more? a. Yes (1 point) b. No (0 points)	
Do you have a mother, father, sister or brother with diabetes? a. Yes (1 point) b. No (0 points)	
Have you ever been diagnosed with high blood pressure? a. Yes (1 point) b. No (0 points)	
Are you physically active? a. Yes (0 points) b. No (1 point)	
What is your weight status? (Look at the chart)	
TOTAL (add up your score)	

The higher your score, the higher your risk.

- If you scored **below 5 points:** Even if you scored below 5, you may be at an increased risk for pre-diabetes. Talk to your doctor about your risk for diabetes and small steps you can take to prevent or delay type 2 diabetes.
- If you scored **5 or more** points, you are at a higher risk for having diabetes. Check with your doctor as soon as possible to learn if you have diabetes.

Height	Weight (lbs.)		
4’ 10”	119-142	143-190	191+
4’ 11”	124-147	148-197	198+
5’ 0”	128-152	153-203	204+
5’ 1”	132-157	158-210	211+
5’ 2”	136-163	164-217	218+
5’ 3”	141-168	169-224	225+
5’ 4”	145-173	174-231	232+
5’ 5”	150-179	180-239	240+
5’ 6”	155-185	186-246	247+
5’ 7”	159-190	191-254	255+
5’ 8”	164-196	197-261	262+
5’ 9”	169-202	203-269	270+
5’ 10”	174-208	209-277	278+
5’ 11”	179-214	215-285	286+
6’ 0”	184-220	221-293	294+
6’ 1”	189-226	227-301	302+
6’ 2”	194-232	233-310	311+
6’ 3”	200-239	240-318	319+
6’ 4”	205-245	246-327	328+
	(1 point)	**(2 points)**	**(3 points)**
	You weigh less than the amount in the left column (0 points)		

Find out if you are at risk for having high blood pressure. Circle the number for each answer. When you are done, add up the numbers to get your total score.

High Blood Pressure Risk Assessment	Yes	No
Does anybody in your family have high blood pressure?	1	0
Are you 50 years old or older?	1	0
Are you African American?	1	0

Do you have diabetes?	1	0
Do you or someone else add salt to the food that you eat?	1	0
Are you overweight? (Also circle 1 for 'yes' if you got 2 or 3 points on the scale above for your weight status.)	1	0
Do you do less than 25 minutes of physical activity per day??	1	0
Do you smoke cigarettes?	1	0
Do you regularly have more than two alcoholic drinks* each day?	1	0
TOTAL (add up the values you circled)		

*NOTE: one alcoholic drink = a shot (1oz); a glass (4oz) of wine; or a can (12oz) of beer

The more numbers that you have circled, the greater your risk for having or developing high blood pressure.

If you do have a high risk, go to your doctor regularly to get it checked. He/she can also talk to you more about ways to prevent high blood pressure.

1.	Has a doctor ever told you that you have:			
	a. Diabetes?	Yes	No	Don't Know
	b. High Blood Pressure?	Yes	No	Don't Know
	c. Kidney Disease (reduced kidney function)?	Yes	No	Don't Know
	d. Kidney Failure (requires dialysis or kidney transplant to live)?	Yes	No	Don't Know
	e. Heart Disease?	Yes	No	Don't Know
	f. Stroke?	Yes	No	Don't Know

2.	Has a biological parent, child, brother, or sister ever been diagnosed with:			
	a. Diabetes?	Yes	No	Don't Know
	b. High Blood Pressure?	Yes	No	Don't Know
	c. Kidney Disease (reduced kidney function)?	Yes	No	Don't Know
	d. Kidney Failure (requires dialysis or kidney transplant to live)?	Yes	No	Don't Know
	e. Heart Disease?	Yes	No	Don't Know
	f. Stroke?	Yes	No	Don't Know

3.	Has your doctor prescribed medications for any of the above conditions? **(If No, please skip to Question 5)**	Yes	No
4.	Are you taking prescription medications the way they were prescribed? (e.g., same amount, number of times/day as written on the prescription label)	Yes	No

5.	Do you limit the amount of salt in your diet?	Yes	No
6.	Do you usually choose foods that are low in fat?	Yes	No
7.	Do you currently smoke cigarettes or cigars?	Yes	No

The next few questions ask about the number of times you do something in an average day.

8.	How many cups of pop do you drink per day?) 1 cup = 8 ounces OR ¾ can	0	1	2	3	4	5 +
9.	How many hours of TV do you watch per day?	0	1	2	3	4	5 +
10.	How many servings of **fruit** do you eat per day? (NOTE: one serving = ½ cup fresh, frozen or canned fruit; 1 medium-sized fruit; ¼ cup dried fruit; ½ cup 100% fruit juice)	0	1	2	3	4	5 +

11.	How many servings of **vegetables** do you eat per day? (NOTE: one serving = ½ cup cut-up raw or cooked vegetable; 1 cup raw leafy vegetable; ½ cup vegetable juice)	0	1	2	3	4	5 +
12.	How many servings of **whole-grain foods** do you eat per day? (NOTE: one serving = 1 slice whole-grain bread; 1 cup dry cereal; ½ cup cooked rice, pasta or cereal)	0	1	2	3	4	5 +
13.	How many servings of **low-fat** or **fat-free dairy** products do you eat and/or drink? (NOTE: one serving = 1 cup low-fat/fat-free milk or yogurt; ½ cup low-fat/fat-free cottage cheese; 1½ ounces low-fat/fat-free natural cheese; 2 ounces low-fat/fat-free processed cheese (e.g., Velveeta, Kraft singles)	0	1	2	3	4	5 +

The next few questions ask about the number of times you do something in an average week.

14.	How many times do you eat **fast food** in an average week?	0	1	2	3	4	5 +
15.	How many days do you exercise for at least 30 minutes in an average week?	0	1	2	3	4	5 +

16.	What is your current age?	
	☐ 18 – 30 years ☐ 31 – 45 years ☐ 46 – 60 years	☐ 61 – 75 years ☐ 76 years or older

17.	What is your gender?	Female	Male

18.	Do you currently have health insurance? If Yes, what type of insurance do you have (please check the box that applies)? -Medicare - Medicaid - Private Insurance - Veterans Insurance - Other	Yes	No

19.	What is your race?		
	☐ White / Caucasian ☐ Black / African American ☐ American Indian or Alaskan Native	☐ Asian or Pacific Islander ☐ Other (specify): _____	
20.	Are you Hispanic?	Yes	No
21.	During the past month:		
	☐ I have not been concerned about my health ☐ I have had some concerns about my health, but have not thought about changing my lifestyle ☐ I have thought about making changes in my lifestyle to improve my health ☐ I have made healthy changes in my lifestyle		
22.	Based on today's chat, which of the following steps do you plan to take to improve your health?		
	☐ Eat healthier meals and snacks ☐ Exercise regularly ☐ Stop smoking ☐ Change my food shopping habits ☐ Change my cooking methods	☐ Take prescription medicine as prescribed ☐ Other (specify): _____	

Thank you!

Please remember to complete Health Chat Survey #2

about <u>4 -6 weeks from today</u>

OFFICE USE (Do Not Complete)	**Diabetes** ☐ ☐	**High Blood Pressure** ☐ ☐

Chat #2

Today's Date: _____

FSC / FA Name: _____

1.	Do you limit the amount of **salt** in your diet?	Yes	No
2.	Do you usually choose foods that are **low in fat?**	Yes	No
3.	Do you currently smoke cigarettes or cigars?	Yes	No
4.	Has your doctor prescribed medications for diabetes, high blood pressure, kidney disease/failure heart disease or stroke? **If No, please skip to Question 7)**	Yes	No
5.	Are you taking your prescription medications as prescribed? (e.g., same amount, number of times/day as written on the prescription label)	Yes	No
6.	Do you currently have health insurance?	Yes	No

The next few questions ask about the number of times you do something in an average day.

7.	How many cups of **pop** do you drink per day? 1 cup = 8 ounces OR ¾ can	0	1	2	3	4	5 +
8.	How many hours of **TV** do you watch per day?	0	1	2	3	4	5 +
9.	How many servings of **fruit** do you eat per day? (NOTE: one serving = ½ cup fresh, frozen or canned fruit; 1 medium-sized fruit; ¼ cup dried fruit; ½ cup 100% fruit juice)	0	1	2	3	4	5 +
10.	How many servings of **vegetables** do you eat per day? (NOTE: one serving = ½ cup cut-up raw or cooked vegetable; 1 cup raw leafy vegetable; ½ cup vegetable juice)	0	1	2	3	4	5 +
11.	How many servings of **whole-grain foods** do you eat per day? (NOTE: one serving = 1 slice whole-grain bread; 1 cup dry cereal; ½ cup cooked rice, pasta or cereal)	0	1	2	3	4	5 +
12.	How many servings of **low-fat** or **fat-free dairy** products do you eat and/or drink? (NOTE: one serving = 1 cup low-fat/fat-free milk or yogurt; ½ cup low-fat/fat-free cottage cheese; 1½ ounces low-fat/fat-free natural cheese; 2 ounces low-fat/fat-free processed cheese (e.g., Velveeta, Kraft singles)	0	1	2	3	4	5 +

The next few questions ask about the number of times you do something in an average week.

13.	How many times do you eat **fast food** in an average week?	0	1	2	3	4	5 +
14.	How many days do you **exercise** for at least 30 minutes in an average week?	0	1	2	3	4	5 +

15.	Since Chat 1:
	☐ I have not been concerned about my health ☐ I have had some concerns about my health, but have not thought about changing my lifestyle ☐ I have thought about making changes in my lifestyle to improve my health ☐ I have made healthy changes in my lifestyle

16.	Since Chat 1, which of the following steps did you take to improve your health?	
	☐ Eat healthier meals and snacks ☐ Exercise regularly ☐ Stop smoking ☐ Change my food shopping habits ☐ Change my cooking methods	☐ Take prescription medicine as prescribed ☐ Other (specify): _____

17.	Did anyone else in your household make changes in their behavior because of the information provided by your Family Service Coordinator / Family Advocate?	Yes	No
	If yes, please list those individuals by relationship (<u>not</u> name) and the changes they made: (*Example = child*)_____ (*Example = plays outside more*)_____ _____ _____ _____ _____ _____ _____		

18.	Have you seen a primary care doctor since the first health chat?
	-Yes (Go to **Question #19**) -No, but I did make an appointment (Skip to **Question #21)** -No (Skip to **Question #21)**

19.	If you saw a primary care doctor since the first chat, did you discuss diabetes, high blood pressure, or kidney disease with your doctor during your visit?
	-Yes -No (Skip to **Question #21)**

20.	If you answered yes to the above question, tell us whether you were tested for the following disease or diagnosed with the disease.				
		Tested for the disease		**Diagnosed with the disease**	
	a. Diabetes (e.g., drew blood or checked urine)	Yes	No	Yes	No
	b. High Blood Pressure (e.g., used blood pressure cuff)	Yes	No	Yes	No
	c. Kidney Disease (e.g., drew blood or checked urine)	Yes	No	Yes	No

21. Please tell us how the *Healthy Families* Program helped you:

_____

_____

_____

Thank you for completing this survey!

Encuesta #1 de Las Charlas De Salud

Fecha: _____

Local De La Edad Temprana: _____

Nombre de la Coordinadora De Servicios Familiares/Apoyo De Familias: _____

Nombre del Padre(s)/Cuidador: _____

Nombre del Niño/Niños: _____

Dirección del hogar: _____

Ciudad, Estado, Código Postal: _____

Teléfono: _____

Correo electrónico: _____

¿Está en riesgo de tener diabetes tipo 2? Uno de cada cuatro Americanos con diabetes no está diagnosticado. Tome este examen para aprender más sobre su riesgo de desarrollar diabetes tipo 2.

Examen de riesgo de diabetes	**Escriba su puntuación en la casilla**
¿Cual es su edad? e. Menos de 40 años (0 puntos) f. 40-49 años (1 punto) g. 50-59 años (2 puntos) h. 60 años o más (3 puntos)	
¿Es hombre o mujer? c. Hombre (1 punto) d. Mujer (0 puntos)	
¿Es usted una mujer que alguna vez ha sido diagnosticada con diabetes gestacional o ha dado a luz a un bebe que pesó 9 libras o más? c. Sí (1 punto) d. No (0 puntos)	
¿Tiene una madre, padre, hermana o hermano con diabetes? c. Sí (1 punto) d. No (0 puntos)	
¿Alguna vez ha sido diagnosticado/a con presión alta? c. Sí (1 punto) d. No (0 puntos)	
¿Usted está activo/a físicamente? c. Sí (0 puntos) d. No (1 punto)	
¿Cual es el estatus de su peso? (Mire la grafica a la derecha)	
TOTAL (añada su puntuación)	

Mientras más alta su puntuación, más alto su riesgo

- Si su puntuación fue **menos de 5 puntos:** Aun si su puntuación fue menos de 5, puede estar en riesgo de pre-diabetes. Hable con su doctor sobre su riesgo de diabetes y sobre pequeños pasos que usted puede tomar para prevenir o atrasar el diabetes tipo 2.

- Si su puntuación fue **más de 5 puntos,** está en riesgo alto de tener diabetes. Haga sita con su doctor lo más pronto posible para saber si tiene diabetes

Altura	Peso (lbs.)		
4’ 10”	119-142	143-190	191+
4’ 11”	124-147	148-197	198+
5’ 0”	128-152	153-203	204+
5’ 1”	132-157	158-210	211+
5’ 2”	136-163	164-217	218+
5’ 3”	141-168	169-224	225+
5’ 4”	145-173	174-231	232+
5’ 5”	150-179	180-239	240+
5’ 6”	155-185	186-246	247+
5’ 7”	159-190	191-254	255+
5’ 8”	164-196	197-261	262+
5’ 9”	169-202	203-269	270+
5’ 10”	174-208	209-277	278+
5’ 11”	179-214	215-285	286+
6’ 0”	184-220	221-293	294+
6’ 1”	189-226	227-301	302+
6’ 2”	194-232	233-310	311+
6’ 3”	200-239	240-318	319+
6’ 4”	205-245	246-327	328+
	(1 punto)	**(2 puntos)**	**(3 puntos)**
	Si pesa menos que la cantidad en la columna de la izquierda (0 puntos)		

Conozca si está en riesgo de tener presión alta. Circule el número para cada contestación. Cuando haya terminado, añada los números para obtener su puntuación total.

Evaluación de riesgo de presión alta	Sí	No
¿Alguien en su familia tiene la presión alta?	1	0
¿Tiene 50 años de edad o más?	1	0
¿Es usted africano-estadounidense?	1	0
¿Tiene diabetes?	1	0

¿Usted u otra persona le añade sal a la comida que usted come?	1	0
¿Esta sobrepeso? (Favor circule 1 para 'sí' si sacó 2 o 3 puntos en la escala arriba sobre el estatus de su peso.)	1	0
¿Usted hace menos de 25 minutos de actividad física por día?	1	0
¿Usted fuma cigarrillos?	1	0
¿Usted bebe más de dos tragos alcohólicos* regularmente cada día?	1	0
TOTAL (añada los valores que usted circuló)		

*NOTA: un trago alcohólico = un trago (1oz); una copa (4oz) de vino; o una lata (12oz) de cerveza

Mientras más números usted haya circulado, más alto su riesgo de tener o desarrollar presión alta.

Si usted tiene alto riesgo, vaya a su doctor regularmente para verificarlo. El/Ella también le puede hablar más sobre maneras de prevenir la presión alta.

1.	Alguna vez un doctor le ha dicho que usted tiene:			
	a. ¿Diabetes?	Sí	No	No se
	b. ¿La presión alta (hipertensión)?	Sí	No	No se
	c. ¿Enfermedad del riñón (función reducida de su riñón)?	Sí	No	No se
	d. ¿Insuficiencia renal (requiere diálisis o un trasplante de riñón para vivir)?	Sí	No	No se
	e. ¿Enfermedad del corazón?	Sí	No	No se
	f. ¿Derrame cerebral?	Sí	No	No se

2.	Alguna vez sus padres biológicos, hijos, hermanos, o hermanas han sido diagnosticado con:			
	a. ¿Diabetes?	Sí	No	No se
	b. ¿Presión alta?	Sí	No	No se
	c. ¿ Enfermedad del riñón (función reducida de su riñón)?	Sí	No	No se
	d. ¿Insuficiencia renal (requiere diálisis o un trasplante de riñón para vivir)?	Sí	No	No se
	e. ¿Enfermedad del corazón?	Sí	No	No se
	f. ¿Derrame cerebral?	Sí	No	No se

3.	¿Su doctor ha recetado medicamentos para alguna de las condiciones listadas arriba? **(Si No, por favor brinque a la Pregunta 5)**	Sí	No
4.	¿Está tomando los medicamentos recetados de acuerdo a la manera en que fueron recetados? (ej., la misma cantidad, cantidad de veces al día como está escrito en la etiqueta de la receta)	Sí	No

5.	¿Usted limita la cantidad de sal en su dieta?	Sí	No
6.	¿Usualmente escoge comidas que son bajas en grasa?	Sí	No
7.	¿Actualmente fuma cigarrillos o cigarros?	Sí	No

Las próximas preguntas examinan la cantidad de veces que hace algo en un día normal.

8.	¿Cuantas tazas de soda usted toma al día? 1 taza = 8 onzas O ¾ de una lata	0	1	2	3	4	5 +
9.	¿Cuantas horas de TV mira al día?	0	1	2	3	4	5 +
10.	¿Cuantas porciones de **fruta** come al día? (NOTA: una porción = ½ taza de fruta fresca, congelada o enlatada; 1 fruta mediana; ¼ taza fruta seca; ½ taza 100% jugo de fruta)	0	1	2	3	4	5 +
11.	¿Cuantas porciones de **vegetales** come al día? (NOTA: una porción = ½ taza de vegetales frescos picados o cocinados; 1 taza de vegetales frescos de hoja verde; ½ taza de jugo de vegetales)	0	1	2	3	4	5 +
12.	¿Cuantas porciones de **comidas con harina 100% integral** usted come al día? (NOTA: una porción = 1 pedazo de pan integral; 1 taza de cereal seco; ½ taza de arroz cocinado, pasta o cereal)	0	1	2	3	4	5 +
13.	¿Cuantas porciones de productos **lácteos bajos en grasa** o **sin grasa** usted come y/o bebe al día? (NOTA: una porción = 1 taza de leche o yogurt bajo en grasa/sin grasa; ½ taza "cottage cheese" bajo en grasa/sin grasa; 1½ onzas de queso natural bajo en grasa/sin grasa; 2 onzas de queso procesado bajo en grasa/sin grasa (ej., "Velveeta", "Kraft Singles")	0	1	2	3	4	5 +

Las próximas preguntas investigan la cantidad de veces que usted hace algo en una semana normal.

14.	¿Cuantas veces usted come en un restaurante de **comida rápida** en una semana normal?	0	1	2	3	4	5 +
15.	¿Cuántos días a la semana usted hace por lo menos 30 minutos de ejercicios?	0	1	2	3	4	5 +

16.	¿Cuál es su edad?
	☐ 18 – 30 años ☐ 31 – 45 años ☐ 46 – 60 años ☐ 61 – 75 años ☐ 76 años o más

17.	¿Cuál es su género?	Mujer	Hombre

18.	¿Actualmente tiene seguranza medica? Si es asi, qué tipo de seguro médico o plan/programa médico? (Marque todas las que apliquen) - Medicare - Segura privado -Otro - Medicaid - Seguranza militar	Sí	No

19.	¿Cual es su raza?
	☐ Blanca ☐ Negra o africana americana ☐ India americana o nativa de Alaska ☐ Asiática o de las islas del pacifico ☐ Otro (especifique): _____

20.	¿Es usted hispano?	Sí	No

21.	Durante el mes pasado:
	☐ No he estado preocupado sobre mi salud ☐ He tenido algunas preocupaciones sobre mi salud, pero no he pensado sobre cambiar mi estilo de vida ☐ He pensado en hacer cambios a mi estilo de vida para mejorar mi salud ☐ He hecho cambios saludables a mi estilo de vida

22.	¿Basado en la charla de hoy, cuales de los pasos siguientes planifica ejecutar para mejorar su salud?	
	☐ Comer comidas y meriendas más saludables ☐ Hacer ejercicios regularmente ☐ Parar de fumar ☐ Cambiar la manera en que acostumbro a comprar comida ☐ Cambiar mis métodos de cocinar	☐ Tomar mis medicamentos recetados de la manera recetada ☐ Otro (especifique): _____

¡Gracias!

Por favor recuerde completar la Encuesta #2 de Las Charlas De Salud

en <u>4 -6 semanas del día de hoy</u>

PARA USO DE LA OFICINA (No Complete)	**Diabetes** ☐ ☐	**Presión alta** ☐ ☐

PEACH Key Informant Interview Guide

Date:_____ /_____ /_____

Center Name:_____

Interviewer:_____

Start Time: ____:____ End Time: ____:____

PURPOSE

The PEACH Key Informant Interview Guide will be used to collect qualitative data from day care providers. The goal is to get teachers' thoughts about the program and evaluation and recent changes to the program and evaluation. The main changes to the evaluation are the parent/guardian survey and child behavior checklist. We are also asking about their general experiences implementing the program.

NOTES TO INTERVIEWER

Please complete this interview, taking notes on this paper. Begin by introducing yourself and reading the text in italics, including the informed consent, followed by the questions below.

INTRODUCTION

Hello, my name is _____ and this is _____and we are from the National Kidney Foundation of Michigan. We really care about improving the health of kids in the community and we think you can help us do our work better. We believe that you are the experts about how the program runs in the community. We would like to hear from you about your experience with the program in the classroom. We will make every effort to change the program based on your suggestions.

RIGHTS INTHIS PROCESS

Before we begin, I need to explain a bit more about this chat session. Please let me know if you have any questions.

The purpose of this interview is to learn more about your experiences implementing Regie's Rainbow Adventure. The chat session should last around 30 minutes and will be recorded through typing out the responses.

Please keep in mind that there are no right or wrong answers to any of these questions. We are just looking for your honest opinions to improve Regie's Rainbow Adventure. These opinions may include both positive and negative opinions about the program.

Everything we speak about today will be kept private. We will not use your name when talking about or writing about anything you say. In the next half hour, we will be taking notes and taking a recording to make sure we remember what you say. Your name will not be linked to the notes that we take. Also, you do not have to participate in these chat sessions. You may change your mind and decide not to participate at any time. You do not have to answer all questions. Choosing not to participate will not change your center's eligibility to participate in Regie's Rainbow Adventure.

Ice Breaker and Introductions

Great. First, we are going to go around the room and say what your name is, your role is at the center, and share a story with the group about Regie's Rainbow Adventure program in your classroom at your site. (WE START)

Evaluation

Now we are going to ask you about the evaluation of Regie's Rainbow Adventure. I'll be asking some questions about the surveys we asked you and parents to fill out.

Parent Questionnaire

1. *This year, NKFM staff came to your center(s) to distribute parent surveys and questionnaires during child drop-off or site events. What are your thoughts on this?*
    - What (if anything) can we change for the future?

Teacher Questionnaire

You completed a lot of surveys for us. Thank you!

2. How would you describe your experience completing the new implementation checklists for Regie's Rainbow Adventures? (Show it)

- *Probes for this survey and all others below:*
    - *Confusion about specific questions?*
    - *Confusion about when to do them?*
    - *Have more difficulty completing one survey or another?*

3. How about the weekly attendance list? (Show it)

4. Classroom level problem behaviors? (Show it)

5. Lastly, you were asked to complete this green extra survey about one child's behavior. How did you find this survey? (Show it)

RRA BARRIERS TO IMPLEMENTATION

Next, I would like to discuss your experiences implementing Regie's Rainbow Adventures. This includes the day to day activities you did for the program like reading the books, doing the activities, etc.

6. What barriers or challenges, if any, did you experience while teaching Regie's Rainbow Adventures?

Probes:

- *What did you do to overcome [barrier XXX]?*
- *How did [barrier XXX] affect program implementation?*
- *What, if anything, could be changed to avoid [barrier XXX] in the future?*

7. To what extent do you feel the program components (including materials, lessons, activities, food samplings) were culturally relevant and appropriate for your students reading and comprehension level?

8. Some teachers have come up with really creative activities and games to teach children outside of our program. What activities have you done to expand the Regie program?

- *Probes:*
    - *This could be during the program implementation or after*
    - *For example, one teacher made a puzzle out of the small Regie poster for the kids to play with.*

SATISFACTION

Next, we would like to ask you about your satisfaction with Regie's Rainbow Adventure program and how it could be improved in the future.

9. Overall, how satisfied or dissatisfied were you with your experience participating in Regie's Rainbow Adventures?

Probes:

- *What did you like best about the program?*
- *What did you like least about the program?*
- *What was the most successful part of Regie's Rainbow Adventures?*

10. What changes could be made to improve Regie's Rainbow Adventures in the future?

11. What advice would you give to other child care center directors and staff interested in implementing Regie's Rainbow Adventures in the future?

Similarly, we would like to ask you about your thoughts about some of our online resources.

12. Do you use/ visit Facebook?
    a. *If yes: what times in a day do you most go on Facebook?*
13. Have you visited the Regie's Rainbow Adventure Facebook page or website at NKFM.org?
    a. *If yes: Can you tell us about your experience?*
        i. *Prompts:*
            1. *How often do you go on?*
            2. *Do you find the information useful?*
14. What would you like to see on a Regie-related Facebook page or web site? What posts would you be most likely to "like" or "share" with friends?
    a. *Prompts:*
        i. *Ideas: recipes, local stories, highlighting local centers, pictures of local students, Regie riddles, games and activities, learning about nutrition and exercise*

EVALUATION INFORMATION

Last, we would like to ask you some questions about how the program helped prepare the kids in your class for kindergarten. You might remember that this is one of the goals of the grant. We ask questions on our surveys about one way that kindergarten readiness can be measured – problem behaviors. There are also other ways that this can be measured though, such as children's language and early literacy, and early learning in math. We are going to ask you about how the program aligns with the some of the parts of kindergarten readiness that the Michigan Department of Education talks about in their Early Childhood Standards of Quality document in 2013. These are: creative arts, language and early literacy, social, emotional and physical health, and early learning in math.

15. How do you think this program helps children become more ready for kindergarten in the following ways: (Probe: Please provide specific examples after each one)

- *Creative arts*
    - *How does the program help children:*
        - *Show how they are feeling, thinking and learning through art, music, play or movement?*
- *Language and early literacy*
    - *How does the program help children:*
        - *Develop reading, writing and communication skills?*
- *Social, emotional and physical health*
    - *How does the program help children:*
        - *Develop a healthy sense of self, develop healthy habits, focus and be able to listen to directions?*

16. We would like to share evaluation information with you all since you helped us so much. We could provide information about how the kids in your class are doing. How would you like to learn about this information?

Probes:

- *Newsletter*
- *Presentation*
- *Email?*
- *Any other way?*

Lastly, we just want to thank you so much. We know your jobs are so busy we really appreciate the time you spend helping our programs run.

Please also take any leftover food with you on the way out.

Survey Event Frequently Asked Questions

General SIF Year 3 Evaluation

Q: Who are you?

A: We are from the National Kidney Foundation of Michigan. We bring health and nutrition programs to preschools and Head Start Centers all over Michigan. Today we are here giving out a food sample, some health information and asking some parents to complete surveys about their children. The information on these surveys will help us to better understand the nutrition and physical activity needs of preschool aged children in the Detroit area. If you have any questions about this, please contact Theresa Tejada at 734-222-9800 or ttejada@nkfm.org .

Q: What are these surveys for?

A: The National Kidney Foundation of Michigan was given a Social Innovations Fund (SIF) grant to look at how Regie's Rainbow Adventure® helps children be healthier and more ready for school. Your child's daycare center is one of a few in the Detroit area that have been picked to be part of this project this year. We are asking questions about kids and teachers to see whether our programs make kids healthier and more ready for school. The information you give us will be not be shared with anyone and will be kept in a locked cabinet. If you complete the surveys, you will get a gift card and your name will be entered into a raffle for a big gift card!

Q: Why do you need my name and my child's name?

A: We are not asking all parents to complete surveys. We are using your child's name to see if you were picked to complete a survey.

Q: Why can't I fill out a survey and get a gift card?

A: We are only asking a small group of parents to complete surveys. If your child's name is not on the list, you can still take some of this health information and try a food sample! Whether or not your child's name is on this list, he or she will still get the health and nutrition program called Regie's Rainbow Adventure®!

Q: How long does this survey take to fill out?

A: The survey takes about 10-15 minutes to complete.

Q: Why do you need to know about my income or race?

A: This information is required by our funder. None of the information you share with us will affect your child's ability to receive services through the Head Start center. Feel free to leave any questions blank!

Q: The questions on this green survey are racist and offensive.

A: We are using a tool that has been tested with thousands of parents and teachers in schools, hospitals and a lot of other settings. This tool measures how ready kids are for kindergarten. When a child gets a low score on this survey, this is a very positive thing and means that the child is more ready for kindergarten. Please feel free to leave any question blank.

Confusion about specific questions on the child behavior checklist

Q: What does defiant mean?

A: Here is a definition. If this doesn't help you, just use your best guess when answering this about your child.

Defiant means challenging authority and being aggressively independent.

Q: What does disobedient mean?

A: Here is a definition. If this doesn't help you, just use your best guess when answering this about your child.

Disobedient means not doing what someone or something authority tells you to do: refusing to obey rules.

Q: What does uncooperative mean?

A: Here is a definition. If this doesn't help you, just use your best guess when answering this about your child.

Uncooperative means not being willing to work together for a common purpose.

Appendix C: References

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