ENHANCING OR IMPEDING NUTRITION AND PHYSICAL ACTIVITY
BEST PRACTICE IN EARLY CHILDHOOD EDUCATION CENTERS:
AN EXPLORATORY STUDY

by

Gertrud Julia Hunt

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ABSTRACT

Following is an exploratory investigation of factors that promote or hinder implementation of nutrition and physical activity best practices in early childhood education (ECE) centers. It is hypothesized that there may be layers of systemic and structural factors that have to be in place in order for ECE centers to be capable of building their capacity for higher quality nutrition and physical activity practices. Analysis is based largely on data collected during the 2011 calendar year as part of the Child Care Learning Collaborative (CCLC), a 12 month professional development intervention attempting to increase quality of nutrition and physical activity practices in 25 ECE centers throughout the state of Delaware. Follow-up qualitative interviews were conducted in May 2012 with the technical assistants who supported the centers during the CCLC year. Cumulative analysis of findings indicate various factors that appear to support the nutrition and physical activity capacity building abilities of ECE centers including: staff time, prioritizing, motivation, administrator buy-in, staff buy-in, parent involvement, problem solving barriers, bond with technical assistant, consistent staff, knowledge growth, licensing compliance, center-level control of nutrition policies, administrator leadership skills, creativity, center culture of healthful improvement, center-level system for staff training, and advocacy outside the center. The layered, cumulative nature of these structural building blocks appears to be supported by existing data, but further confirmatory analysis is necessary. These factors should be the targets of future investigations, and could possibly be useful to take into consideration in designing future professional developments.
Chapter 1

Nutrition and Physical Activity in Early Childhood

Introduction

One of the ways in which services are delivered to community members is via community programs. Programs can deliver useful services, but need to be monitored with continuing evaluation in order to assess whether or not the services that they intend to provide are being provided efficiently, and whether these services are impacting their target issues in the ways that they intend. This paper focuses in on one specific type of program and a specific aspect of services that they offer. Namely, early childhood education is the programmatic focus. The specific service within early childhood education that will be examined is promotion of healthful development through provision of nutrition and physical activity.

Following is a synthesis of existing published research, and current research analysis in order to attempt to increase understanding of both what factors promote nutrition and physical activity best practice in early childhood education and what factors hinder the implementation of nutrition and physical activity best practice in early childhood education. It is important to understand both sides of this focus question, in order to increase understanding of the processes and intermediate steps that impact changing practices in early childhood centers. This project is approached from a capacity building perspective, in which it is possible that there may be a
progressive hierarchy of practice improvement prerequisites, which is visually represented by a pyramid of building blocks (see Figure 1 below).

The base level of the pyramid may include factors and/or conditions that must be present in a center in order for there to be positive practice movement at all. There may be a threshold that must be reached by having an accumulation of preliminary factors in place, and if the threshold is not met, change may not be able to occur in the system. There may be base level factors, a foundation that has to be in place in order for building of capacities to begin. The middle level of the pyramid may be factors that are needed for specific capacities to be successfully built, beginning movement towards improved nutrition and physical activity practices. At the top tier of the pyramid, built on top of the middle and base levels, may be actually achieving nutrition and physical activity best practice, actually implementing the targeted change.

**Figure 1.** Hypothesized pyramidal framework. This figure illustrates a hypothesized structure that may support building capacity to improve nutrition and physical activity practices in early childhood education centers.
The factors that belong at each level will be sorted out via an informal pattern analysis using data from a twenty-three site case study. The goal is to understand which factors (or clusters of factors) in the learning collaborative training model and within the early childhood education centers are the most relevant for impacting centers’ abilities to implement nutrition and physical activity best practices. Existing empirical literature will highlight which factors should be targeted for examination of relevance in this pyramidal structure.

**Rationale**

“Recent cohorts of individuals are reaching a higher prevalence of obesity earlier in the life course, and they are experiencing a greater cumulative exposure to excess weight over their lifetime” (Lee et al., 2010, p. 618). This trend has been labeled as the obesity epidemic. According to the National Health and Nutrition Examination Surveys (NHANES), the prevalence of obesity among two- to five-year old children has increased from 5% in 1976-1980 to 12.4% in 2003-2006. Additionally, the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) found that four-year old children had an obesity rate of 18.4% (Anderson & Whitaker, 2009). These obesity statistics are concerning in that there are a variety of health risks that are related to obesity, including diabetes and heart disease (Friedman et al., 2007; Must & Anderson, 2006), and increasing risk for these diseases due to increased obesity at earlier ages can lead to increased early mortality. Therefore, attempting to combat increasing obesity rates in young children is an important target for research, due to the impending societal health risks.
Physical activity is one theorized method for combating weight gain. Janz et al. (2009) found that early physical activity levels (age 5 years) predicted later fat mass (age 8 and 11 years), even when controlling for physical activity level at 8- and 11-years old. Findings lead to a conclusion that “children who are less physically active at an early age may be more susceptible to fat accumulation in later childhood” (Janz et al., 2009, p. 39). As the prevalence of overweight children in the United States has tripled since 1980 (Ogden, Flegal, Carroll, & Johnson, 2002), and as body weight is a combination of caloric intake and caloric expenditure, it seems a logical conclusion that part of the problem is that children are not getting enough physical activity (caloric expenditure). The concern is that if children are not physically active early in life, then they will establish a pattern of a “sedentary lifestyle” (Schneider & Lounsbery, 2008, p. 19).

Research evidence supports that physical activity behavior patterns can be established during early childhood (Moore et al., 2003), meaning that early childhood is an opportunity to build physical activity routines into children’s days so that later in life physical activity is part of their familiar pattern. Lack of physical activity is only the caloric expenditure side of the equation, ingested foods and beverages is the caloric intake part of the equation. Nutritional intake is related to both healthy and unhealthy weight gain, as energy intake is essential for normal growth, but foods that are high in fat and calories and low in nutrition can lead to excessive weight gain and cardiovascular risk (Gidding et al., 2005). Since young children have small stomachs, and eat a smaller quantity of food than adults, it is especially important for young
children to eat nutrient dense foods that pack a lot of nutrition in a small package (Gidding et al., 2005). Although research supports that other factors (such as maternal obesity during pregnancy, breastfeeding, genetics, etc.) are also involved, this study focuses on the energy intake and expenditure, as they are widely recognized as two behavioral factors that may be accessible as targets for intervention. The research literature presented leads to the discussion of how best to help young children establish patterns of higher physical activity and healthier nutritional intake.

Hesketh and Campbell (2010) conducted a review of the literature on obesity prevention interventions in early childhood. Review results (Hesketh & Campbell, 2010) suggested that multi-setting and multi-modal intervention designs may be the most effective in increasing early childhood physical activity. Specifically, it was noted that many of the interventions targeting preschool settings did not include a parental component, and also were not effective in changing physical activity levels of preschoolers, implying the potential importance of having both center-based and home-based components in effective physical activity interventions. It was also found that interventions which included knowledge and behavioral components, rather than solely knowledge components, were more effective (Hesketh & Campbell, 2010). Therefore, the current research (described below) has both knowledge and behavioral intervention elements, targeted primarily at the child care center level, but with a parent involvement component.

Early child care centers are the primary target of the current research, as it enables the highest potential impact. With the original 25 centers included, there was
the potential for impacting the physical activity and nutrition of 2,356 young children, due to the capacity of the centers involved, according to the Delaware Office of Child Care Licensing. Targeting child care centers as the setting to attempt to improve nutrition and physical activity of young children is efficient, as it would require many more training hours to attempt to reach over 2,000 young children in their individual homes. Child care centers offer an opportunity to impact a larger number of young children than direct family-based interventions. In addition to the efficiency of targeting child care centers, there are also an increasing number of children being cared for in child care centers. According to the US Census Bureau (Laughlin, 2010), 63% of children under 5 years old were in some kind of care arrangement in 2005, and preschoolers spent an average of 32 hours per week at child care. This means that a majority of young children are spending a large portion of their waking hours in care outside their homes. During these hours in out-of-home-care, children eat at least one meal, and participate in varying levels of physical activity. Child care settings offer an efficient setting to potentially impact the nutrition and physical activity behaviors of a large number of children.

Potential Pyramidal Factor Targets Based on Previous Research

Previous researchers have designed and implemented a variety of interventions to attempt to enhance nutrition and physical activity in child care setting. Building on previous work in this area is an important step in making strides forward. Dunn et al. (2006) used a Train the Trainer model of intervention, wherein they conducted an informational training with local public health professionals and
cooperative extension employees about how to teach child care personnel the *Color Me Healthy* curriculum. The public health professionals and cooperative extension employees then went back to their communities and conducted their own trainings for child care providers on how to use the *Color Me Healthy* curriculum. The researchers then collected a follow-up questionnaire from the child care providers about their experiences with the training, and how useful they found the curriculum. Although an overwhelmingly majority found the *Color Me Healthy* curriculum and materials useful in their classrooms, there was a very low response rate. Only 36% of trained child care providers completed the follow-up questionnaire, and it is impossible to tell if the non-completers felt the same about the usefulness of the curriculum. The authors (Dunn et al., 2006) noted that this low response rate may be symptomatic of some issues in the child care field, namely that child care providers have very full plates at work, with little time to complete evaluations, and that job turnover in child care is high, such that some providers who were trained may not have still been at the same center 8 weeks later. This highlights time schedules that are overly full and employee turnover as potential factors in the pyramidal change model.

Wagner and French (2010) directly examined what factors impact early childhood teachers’ motivation for professional growth, and how this is related to making changes in teaching practices. Early childhood teachers engaged in a yearlong professional development series including both workshops and technical support site visits. Quantitative self-report questionnaire data indicated that relationships with supervisors, as well as the nature of the work that the staff were required to do were
both significantly related to teachers’ motivation for professional development and subsequent changes in their teaching/classroom. Salient issues that emerged through qualitative inquiry included intrinsic or extrinsic motivation for engaging in professional development (degree of choice/control), degree of support felt from supervisors, and degree of collegiality and/or isolation in their work place. If teachers felt forced to participate in the professional development, they also tended to feel that it was a waste of their time, and had no relevance to their work. In contrast, if teachers perceived changes in the children in their classrooms as a result of changes in their teaching (based on the professional development), then they were highly motivated to learn more, because of the changes in their children. Therefore, potential factors to focus on as building blocks in the pyramid could be: degree of control, supervisor support, feelings of collegiality/isolation, and changes in children of the center/classroom.

Peterson, Valk, Baker, Brugger, and Hightower (2010) also tried to understand the processes involved in inspiring change in early childhood teachers. These researchers were specifically examining the mentor-mentee relationship in one-on-one long-term professional development models, such as coaching, mentoring, or technical assistance. They conducted a two-year mentoring project with two mentor-mentee meetings per month. Qualitative data was gathered throughout the project and at its culmination in the form of focus groups and interviews with mentors, and phone surveys, written reflections, and interviews with mentees. The major themes that arose were: 1. Building the relationship, 2. Role of the mentor, 3. Readiness to change, and
4. Mentor reflection and professional growth (Peterson et al., 2010, p. 162). Building the relationship included features such as forming a genuine person-to-person connection, aligning as allies, validating importance of early educators’ work, and other social-emotional interactions. The role of the mentor included establishing clear boundaries and expectations, and gradually helping the mentee to view the relationship as collaborative rather than judgmental. Mentee readiness for change included explicit discussion about the TransTheoretical Model (Prochaska, DiClemente, & Norcross, 1992), and the usefulness of understanding one’s own stage of change in order to set appropriate, obtainable goals. Mentor reflection frequently occurred during mentor’s monthly group meetings where they shared about what helped to enhance the social and emotional bonding with their mentees, problem solved together, and received their own supervision. These themes are potentially important pieces of the pyramidal model in the current study, as they impact the potential efficacy of the technical assistance component of the intervention model, as well as helping to understand providers’ engagement in the workshop component, and their openness to changing their centers’ nutrition and physical activity policies and procedures.
Chapter 2

Child Care Learning Collaborative Intervention

Previous Research Support for Intervention Model

The intervention model that was used to collect the data for the following analysis was a year-long learning collaborative of professional development that was designed as an extension of Ammerman et al.’s (2007) Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) program. The goal of the NAP SACC developers was to address a gap in attention to young children in previous intervention models for obesity prevention and health promotion. NAP SACC is an intervention designed to have 5 key components: 1. Preliminary self-assessment using the NAP SACC questionnaire regarding nutrition and physical activity policies and procedures in the center, 2. Development of an action plan by center staff and NAP SACC consultants, 3. Educational workshops surrounding nutrition and physical activity best practices, 4. Ongoing technical assistance to support action plan implementation, 5. Follow-up assessment with NAP SACC questionnaire to evaluate changes. The NAP SACC intervention program was initially developed in 2001/2002 in North Carolina, and has been pilot tested and undergone further revision since then. Multiple sites in North Carolina are implementing and evaluating the efficacy of the NAP SACC intervention and assessment (Ammerman et al., 2007).
Drummond et al. (2009) present another example of using the NAP SACC program to intervene in child care settings, this time in Yuma County, Arizona. This is the first published obesity prevention effort focusing on young children in child care settings in the county. Their intent was to help child care providers change their policies and procedures to encourage nutrition and physical activity in their preschoolers. They essentially used the same five program components described above (Ammerman et al., 2007). In addition, centers were also provided with mini-grants to purchase physical activity materials. Drummond et al.’s (2009) results were promising, with the median total number of nutrition and physical activity best practices making a statistically significant increase from pre to post test. Child care providers also reported an increase in parent involvement in physical activity of their children. The apparent success of this model is encouraging, and lends support to repetition of this model in other settings, to see if their results are generalizable.

“NAP SACC was developed to be an evidence- and theory-based intervention that is guided by a self-assessment completed by the child care center director and relevant staff” (Ammerman, et al., 2007, p. 6). Benjamin et al. (2007) conducted a test of reliability and validity on the NAP SACC self-assessment tool. They concluded that it is a “stable and reasonably accurate instrument for use with child care interventions” (Benjamin et al., 2007, p. 9), but they recommended a less subjective measure that is less swayed by social-desirability to assess outcomes of interventions, such as observer time sampling, or accelerometers (Oliver, Schofield, & Kolt, 2007). Due to its relatively strong evidence base, and promising results of researchers that
have used NAP SACC previously, the NAP SACC training model is the foundation that the current research intervention was based upon.

**Current Intervention Model**

The current intervention model is a learning collaborative approach loosely based on the NAP SACC training model (Ammerman et al., 2007). It is a professional development intervention for early childhood providers (directors, teachers, etc.) to educate and support them in increasing the quality of their nutrition and physical activity components in their early childhood centers. Nemours Health and Prevention Services and the Delaware Institute for Excellence in Early Childhood worked together to plan and implement this year long collaborative training, called the 2011 Child Care Learning Collaborative (CCLC). The sequence of the intervention implementation is shown in Figure 2 below.

*Figure 2. Flowchart of learning collaborative intervention components.*
Similarly to the NAP SACC model (Ammerman et al., 2007) the learning collaborative included preliminary self-assessment, educational workshops, action planning, technical assistant support, and post assessment. Similarly to Drummond et al.’s (2009) NAP SACC program iteration, the learning collaborative also planned for a $500 mini-grant to purchase materials for each center. The materials had to be consistent with their action plan goals.

The technical assistant (TA) for each center was available for on-site support visits to assist in design and implementation of the action plans, modeling best practice, and problem solving with the child care providers. The preliminary- and post-intervention assessments expanded from the original NAP SACC model in that additional measures were added to capture different perspectives (i.e. the technical assistant’s observations) and different aspects (i.e. outdoor environment) in order to give a richer understanding of the policies and practices of the centers both before and after the collaborative intervention. The current study analyzes data collected during the learning collaborative in order to expand upon previous ‘black box’ models by attempting to begin understanding what it is about the NAP SACC style of intervention that is efficacious, trying to understand more about what the active ingredients of the packaged program are, and what factors in child care centers and providers might enhance or inhibit the efficacy of this program. This study intends to examine more about the processes within the program, rather than just the culminating outcomes.

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Chapter 3

Current Study

Methods for Current Study

Sample

Key stakeholders (teachers, owners, directors, etc.) in early childhood education centers in Delaware volunteered to participate in a yearlong learning collaborative promoting nutrition and physical activity. 25 centers were selected based on an emphasis on larger centers (to attempt to have the most possible children impacted), centers in Kent and Sussex counties (as previous trainings had focused on New Castle county), and centers accepting a high percentage of Purchase of Care (POC) families (to attempt to target centers serving children from low-income backgrounds). One center dropped out in the first month of the collaborative, and was replaced with another center (who therefore missed the first collaborative workshop). Throughout the remainder of the year, two other centers dropped out of the collaborative. Subsequently, there were 23 centers that completed the entire yearlong workshop and training series. There was also staff turnover within the centers that completed the full yearlong series, such that even the centers who completed the full yearlong series did not necessarily have the same staff participating (or even present in the center) throughout the year. Difficulty in quality staff retention over long periods of time is a widespread issue within the early childhood field, and will be
discussed in relation to study findings. Center demographics varied in center size, ages served, and funding sources (i.e. private for-profit, private non-profit, government funded non-profit). Participant demographics varied in education level, role/title in their center, years of experience in early child care, race, gender, and age. Specific of this demographic information will be provided in the thesis data analysis, as potentially meaningful variables.

**Measures**

Both quantitative and qualitative measures from multiple reporters were collected to attempt to evaluate the impact of the intervention (described below), to attempt to understand the relevant processes within the intervention model, and to attempt to understand what foundational factors need to be present (or absent) in order for the nutrition and physical activity intervention to be able to stimulate change towards best practice. Having data from multiple sources in various forms allowed for a synthesis of the accumulation of information into a cohesive conglomeration of factors.

The NAP SACC questionnaire (Benjamin et al., 2007) was one of the quantitative self-report measures that were collected pre-intervention and post-intervention. The NAP SACC consists of 37 nutrition items and 17 physical activity items. Each item has 4 response choices, ranging from worst to best practice. The scale is scored 0, 1, 1, 2, with both mid-level practice items rated “1.” A nutrition item example question is “Cooked vegetables are prepared with added met fat, margarine, or butter” and the answer choices are “all of the time” (scores 0), “most of the time”...
“some of the time” (scored 1), and “rarely or never” (scored 2). A physical activity item example question is “Outdoor active play is provided for all children” and the answer choices are “1 time per week or less” (scored 0), “2-4 times per week” (scored 1), “1 time per day” (scored 1), and “2 or more times per day” (scored 2). The summative score for this measure is the number of “best practices” (the number of items rated “2”) for nutrition and physical activity combined.

The Stages of Change self-report was the other quantitative self-report measure that was collected both pre- and post-intervention, and examined as part of this exploratory study. The Stages of Change mentor-report is the observer rating measure (collected pre-intervention and post-intervention) that was analyzed. Observer reports were completed by technical assistants, and research assistants. Both of the Stages of Change measures are identical in items (except for verb form) and scoring, but are rated by either the participant themselves (self-report) or their technical assistant (mentor-report). The Stages of Changes measures have 7 items each, with 5 response choices per item. The instructions for the mentor-report are “For each row (across), check one phrase that best completes the following: ‘When it comes to child care practices/program, this person…” and the instructions for the self-report are “For each row (across), check one phrase that best completes the following: ‘When it comes to my leadership/administrative practices…” For example, item 2 of the mentor-report has the choices: “Doesn’t think s/he needs to make any changes” (scored 1), “Thinks s/he might need to make a change someday” (scored 2), “Knows s/he needs to make some kind of change” (scored 3), “Knows that s/he needs to
change” (scored 4), and “Thinks about how to keep up changes s/he has made” (scored 5). The same item on the self-report has the choices: “I don’t think I need to make any changes” (scored 1), “I might need to make a change someday” (scored 2), “I need to make some kind of a change” (scored 3), “I know what I need to change” (scored 4), and “I think about how to keep up changes I’ve made” (scored 5). Both measures are scored by summing the points from each item choice (total possible scores ranging from 7 to 35), with higher scores indicating more readiness to change.

An additional observer report checklist (referred to as the “Final Observation”) was completed in the last month of the yearlong collaborative (after four of five workshops were completed). This checklist was created by the CCLC researchers for the purposes of further understanding an objective observer’s perspective on the nutrition and physical activity policies and practices of the centers. The Final Observation checklist consisted of 16 nutrition items, 13 physical activity items, and 8 outdoor environment items. Each item was rated with “Yes” (scored 2) for full accomplishment of the item, “Partial” (scored 1) for partial accomplishment of the item, and “No” (scored 0) for a lack of accomplishment of the item. The nutrition category consists of items such as “Beans or lean meats offered,” “Sweet or salty foods NOT offered” and “Nutrition education provided through curriculum/classroom resources.” The physical activity category consists of items such as “Children are not required to be seated for more than 30 minutes at a time,” “Fixed play equipment available; challenges a variety of skills,” and “Staff encourage children to be active and join children in active play.” The Outdoor Environment category consist of items
such as “Shade provided,” Open, grassy area available” and “Area for riding toys.” Sub-scores for each category as well as a cumulative score for the summation of all categories were examined. Higher scores indicated centers whose policies and practices were closer to what is considered best practice.

The qualitative self-report measure collected was an exit questionnaire with open-ended questions about participants’ and centers’ experiences in the past year of the collaborative training, and what changes were made in their centers as a result of the intervention. This questionnaire was designed for the CCLC training series. It consists of 19 short answer questions and a rating chart regarding participant experiences with their technical assistant. The current study examined only two of the open-ended questions on this questionnaire, as they were the most relevant to this study’s purposes. First, participants’ responses to the question “What have you gained in your role through the technical assistance?” (General question #3) were analyzed. Second, participants’ responses to the question “Have there been any challenges in implementing physical activity and nutritional changes in your program that you intended to make? Please explain” (General question #4) were also analyzed. Participants’ responses to these two items were transposed into a cumulative spreadsheet, coded for included content, and examined for patterns of responding.

The qualitative observer-report measure was a phone interview with each of the five technical assistants (TAs). During the week of May 7th, 2012 to May 12th, 2012, each TA completed an open-ended phone interview to gather their impressions of the change process for each of their centers. Open-ended interviews were
conducted with all five of the technical assistants (TAs) that worked on the CCLC team in 2011. The interview protocol is below, the introductory question and follow-up queries were asked for each center that the TA was responsible for. The full text of the interviews is in the appendix. TA responses were transposed into a cumulative spreadsheet, coded for included content, and examined for patterns of responding.

**TA Follow-Up Interview Protocol:**
Preamble: The following questions are intended to be answered based on your experience with the 4/5 centers that you were the technical assistant for during the 2011 Child Care Learning Collaborative (CCLC). We are interested in what helped or hindered the change process for specific centers, so I am going to ask about each center individually. If you have different observations from different times of the year (or stages of the training workshops), please tell me what time period you are remembering from. You can answer or not answer any of the interview questions, as you are comfortable, but it will be most helpful to the project if you can answer every question. Do you have any questions before we begin?

Introductory question:
1. For "Center 1," please tell me about their change process?
   - What did you find **helped** them in making changes throughout the year?
   - What did you find **hindered** them in making changes throughout the year?
   - Was there a difference in their ability to make nutrition changes from their ability to make physical activity changes?

**Intervention Implementation**

The yearlong collaborative intervention model consisted of five full-day educational workshops that occurred in February, March, May, September, and December 2011. The workshops included informational presentations about nutrition and physical activity best practice from experts in the field, testimonials (successes and problem solving suggestions) from pilot study participants, experiential learning through movement exercises and role-playing, and modeling of both good nutrition and incorporation of physical activity into limited indoor spaces. Participants had time
in the workshops to problem solve with their technical assistants and colleagues, plan for next steps (including working on action plans with their teams), and share progress stories with colleagues. Following each workshop, the participants went back to their own centers and conducted training with their own staff (Train the Trainer model) about how to improve nutrition and physical activity in their classrooms. Participants had homework between each workshop, such as working with their center’s team to identify center strengths and challenges (surrounding nutrition and physical activity), developing an action plan for how to achieve improvements in their chosen nutrition and physical activity goals (with collaboration from technical assistant), and planning for a Parent’s Night to share what changes were happening in their center and to encourage nutrition and physical activity in families. Technical assistants worked with participants once or twice between each workshop, providing guidance, feedback, modeling, and answering questions. Each TA had four or five centers that they were responsible for, which included periodic visits to bring materials, observe, provide suggestions, assist with goal-setting and action-planning, and generally provide support to centers to guide them in their nutrition and physical activity change process. Each center received a $500 equipment grant to purchase nutrition and physical activity materials for their centers. Participants consulted with their technical assistant in order to ensure that the materials ordered were linked to their action plans.

**Data Analysis**

The current study was of an exploratory nature and examined the data from these 23 centers as a qualitative case study. The goal of the analysis was to develop
composite descriptions of features of centers that achieved differing levels of implementation success following this intervention. The intent was to parse out salient factors that distinguish centers that had higher implementation success from those who made less improvement in their nutrition and physical activity practices.

The researcher seeks to understand more about the processes underlying successful competency building in early childhood education centers, and any factors that were significant barriers to centers making positive change. It was hypothesized that there is a pyramidal model of factors that support successful nutrition and physical activity practice improvement in early child care centers. For instance, there may be base level building blocks that must be present in a center in order for there to be any movement at all towards best practice. Beyond the foundational building blocks, there may be a threshold which, once attained, enables movement towards best practice. Various different combinations of base level building blocks might be sufficient to reach the threshold, meaning that there may be essentially different equations of variables that eventually lead to attaining the threshold. However, there may also be certain foundational building blocks that are not optional, without which the threshold cannot be reached. Beyond the threshold, there may be more advanced factors that are needed for specific successes beyond basic implementation, and as these more advanced factors are attained, successively more advanced steps towards best practice can be taken. In the highest tier of the pyramidal model, actual measurable nutrition and physical activity best practices begin to be reached.
The data was visually examined (via scatterplots and frequencies) to identify natural groupings of variables and/or centers, based on successful attainment of targeted action plan goals and/or attainment of various indicators of nutrition and physical activity promoting practices. Qualitative questionnaires underwent a content analysis to attempt to identify themes across participants’ responses, and then were further analyzed to attempt to identify factors relevant within each theme. Salient factors were categorized as either enhancing/allowing for change towards best practice, or inhibiting/limiting change towards best practice. Both barriers to implementation of nutrition and physical activity best practice, and facilitators of nutrition and physical activity best practice were examined. Targeted variables arose from qualitative theme analysis and from factors indicated by previous research, and were tested as potentially relevant factors in the pyramidal model of quality nutrition and physical activity implementation.

**Results**

**Results based on Self-Report Pre/Post Surveys (NAP SACC)**

Participants from 21 out of 24 centers (87.5% response rate) completed both pre and post NAP SACC assessments. The average NAP SACC score at pre-assessment was 23.2. The average NAP SACC score at post-assessment was 32.7. This 9.5 point increase in average NAP SACC score from pre- to post-assessment indicates a general increase in participants’ perception of their own center’s nutrition and physical activity best practices. A paired samples t-test showed that the change from pre- to post-NAP SACC score was statistically significant ($t = -4.66$, $df[20]$, $p <$
.001). This lends support to the CCLC workshop series being an effective means of guiding early childhood centers to improve their nutrition and physical activity practices; however this is a summative score that is averaging responses, giving no insight into change experiences of specific centers.

**Results based on Final Observations**

Final observation scores were plotted against a few different variables of interest, to attempt to examine factors that were hypothesized as potentially salient prerequisite building blocks for nutrition and physical activity healthy change to be achieved. Figure 3 shows Final Observation scores plotted against NAP SACC pre and post scores. This visual organization of centers’ perceived nutrition and physical activity best practice implementation prior to and following the CCLC workshop year (NAP SACC scores) in light of an observer rating of their nutrition and physical activity best practice implementation near completion of the CCLC workshop year allows for examination of variability in centers’ successfulness in implementing healthful practices. This scatterplot clearly shows that centers viewed their nutrition and physical activity policies and practices as increasing in quality over the course of the CCLC year. It also shows that some centers were more successful, both by their own assessment (NAP SACC self-report) and by observer assessment (Final Observation Score) than other centers. The reference lines in the plot indicate averages, allowing for examination of quadrants of scores. Unfortunately, due to the small sample size of this study, it is not possible to statistically analyze different clusters of scores. Informal visual examination of the relationship between centers’
self-assessment of healthful practices (NAP SACC scores) and observer-assessment (Final Observation scores) implies a positive relationship, wherein both sources tend to be high or low together. Notice the lack of scores in the upper-left and lower-right quadrants, showing the rarity of conflicting reports.

One potentially salient factor was the participants’ “readiness to change” (measured by the Stage of Change mentor report and self-report scales) at the

Figure 3. NAP SACC Scores by Final Observation Scores. This figure shows centers’ self-reported nutrition and physical activity practice prowess (pre and post intervention) against an observer’s observation (post intervention). Variation both between centers and within centers is clearly shown. Each center is represented by a number, 1001 to 1024.

One potentially salient factor was the participants’ “readiness to change” (measured by the Stage of Change mentor report and self-report scales) at the
beginning of the training year. It was hypothesized that centers with a higher “readiness to change” would be more able to create changes in their centers throughout the CCLC year, and hence should have the higher final observation scores. Figure 4 below shows the pre-Stages of Change scores (both self-report (SR) and mentor/coach report (MC)) plotted against the final observation scores. The limited range of readiness to change scores, with most scores varying between 3.5 and 5, and very few going below 3.0, makes interpretation from this scale difficult as there is not a full 5 point range of variability amongst the scores given.

Figure 4. Pre-readiness to change scores by final observation total score. This figure shows pre-intervention readiness to change scores from SR (self-report) and MC (mentor/coach report) against post-intervention observer rating of center prowess at nutrition and physical activity practices.
The author intended to compare pre-Stage of Change scores to post-Stages of Change scores, but was unable to do so as only half of the centers had both self-report and mentor/coach report Stages of Change scores for both pre and post measurement on the same participant. Although this makes a pre to post analysis very complicated, it also highlights inconsistent staffing and high turnover as potentially meaningful factors in understanding which centers were able to make significant changes.

**Results based on Qualitative Self-Report Exit Survey**

Participants from 22 out of 24 centers (91.7% response rate) completed an open response exit survey. The two centers that did not complete the exit survey dropped out of the professional development in the last two months of the year, and exit surveys were not returned from them. The purpose of the survey was to gather more in depth information about participants’ experiences within the year of professional development. One question applicable to understanding centers’ experiences with the professional development was, “What have you gained in your role through the technical assistance?” 10 out of 22 centers (45%) answered that they gained “knowledge” from the technical assistance.

Another potentially applicable question asked in the exit survey was “Have there been any challenges in implementing physical activity and nutritional changes in your program that you intended to make? Please explain.” Only 13 centers reported that there were any challenges. Out of the 13 centers who reported challenges, 9 centers (69%) responded that their staff was a barrier to making changes they wanted
to make. This was stated as “staff stubbornness,” “staff consistency,” or as a problem with getting staff to do what was required of them (by administration) in some way.

**Results based on Follow-Up Technical Assistant Interviews**

In examining center change success, there is no apparent pattern depending upon which TA was responsible for the center. This implies that despite five different professionals being responsible for the technical assistance amongst the 24 centers, there appears to have been consistent technical assistance delivery between the different TAs. There is no apparent pattern of success or lack of success (measured by self-report and observer rating) based on which TA a center was assigned.

During the follow-up interviews, all of the TAs spent significant time talking about the leadership or lack of leadership in each of the centers that they worked with. It was hypothesized that leadership within each center would be a salient factor that needed to be in place in order for centers to make any significant progress forward. TAs emphasized the importance of leadership, and used very descriptive language to discuss the leaders of each center (see Table 1 below). For instance, TAs described leaders who were viewed as consistent assets to change as “a mover and a shaker” (1001), “really enthusiastic” (1024), “very committed to this” (1015), and “inventive” (1005). TAs described leaders who were viewed less positively as “overwhelmed” (1020), “really busy” (1011), “a mess” (1008), or “hindered by leadership” (1006). Leaders in the centers were often in the role of director, but were sometimes curriculum coordinators or teachers. 13 centers’ leaders (54%) were described as assets
to the change process, whereas 8 centers’ leaders (33%) were described as hindering the change process.

Table 1
Summary of Technical Assistant (TA) Interview Responses

<table>
<thead>
<tr>
<th>TA</th>
<th>Centers</th>
<th>Motivation?</th>
<th>Leadership:</th>
<th>Leadership Descriptors:</th>
<th>Staff engagement:</th>
<th>Time for Staff Trainings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAI</td>
<td>Yes</td>
<td></td>
<td>director</td>
<td>1004: &quot;pretty much on board&quot;</td>
<td>No</td>
<td>&quot;biggest challenge was finding the time&quot;</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td>director</td>
<td>1006: &quot;very committed&quot;</td>
<td>No</td>
<td>&quot;designated training cycle, set aside time&quot;</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>changed</td>
<td></td>
<td>1017: exciting, but difficulty implementing changes</td>
<td>No</td>
<td>&quot;trouble going back &amp; getting with staff&quot;</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td>coordinator</td>
<td>1021: &quot;really committed leadership&quot;</td>
<td>Yes, consistently</td>
<td>not mentioned</td>
</tr>
</tbody>
</table>

| TAI  | Yes: new |             | director    | 1003: "they thought they already knew all of this" | Close to embrace change | not mentioned |
|      | Yes: new |             | director    | 1012: "really interested in gardening" | Yes, "real champion for PA" | Yes |
|      | No       |             |             | 1015: "very committed to this" | No, challenging | No, trainings done by pieces, by age group |
|      | No       |             | No          | 1022: No, "very challenging to work with" | No, "drowning in paperwork" | Yes |
|      | Yes: new |             | coordinator | 1024: "really enthusiastic" | Yes, uneven | Yes, able to schedule with everyone |

| TAI  | Yes      |             | director    | 1001: "a mover and a shaker, a change maker" | Yes, follow (director) led | Yes |
|      | Yes      |             | director    | 1009: "everybody on board" | Yes | not mentioned |
|      | No       | inconsistent |            | 1011: No, inconsistent | Not mentioned | No |
|      | Yes      |             | director    | 1014: "enthusiastic leadership brought them along" | not mentioned | not mentioned |
|      | No       |             | No          | 1020: No, not interested, "overwhelmed" | Yes | No |

| TAI  | Yes      |             | director    | 1002: very enthusiastic from the start | Yes, teacher as liaison | not mentioned |
|      | Yes      |             | director    | 1008: "a mess, "wow is me, I am just so busy" | not mentioned | not mentioned |
|      | No       | changed      | No          | 1010: No, "tired, staff left had no idea what to do" | No | No |
|      | Yes      |             | team        | 1019: Yes, smaller, easier to oversee | Yes, "very strong leadership" | Yes |
|      | No       | changed      | Not mentioned | 1019: No, changed | "she left and hasn’t followed through on it" | not mentioned |

| TAI  | Yes      |             | director    | 1015: "provided great leadership, "inventive" | Yes | Yes |
|      | No       | inconsistent | director    | 1006: No, inconsistent | not mentioned | not mentioned |
|      | No       |             |            | 1007: somewhat | not mentioned | not mentioned |
|      | Yes      |             | coordinator | 1018: Yes, coordinator | "a real cheerleader, "good ideas & energy" | not mentioned |
|      | Yes      |             | coordinator | 1023: Yes, coordinator | "did a good job of engaging the teachers" | Yes |

<table>
<thead>
<tr>
<th>TAI</th>
<th>Nutrition</th>
<th>Physical Activity (PA)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAI</td>
<td>Yes, menus, water</td>
<td>Yes, planned and free Advocacy</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>&quot;very good driver&quot;</td>
<td>Harder, parent change Advocacy</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>Yes, &quot;Leader really tried to do what she could&quot;</td>
<td>No, mostly in place, wanted more PA Creative</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>Yes, &quot;she is committed to her children&quot;</td>
<td>&quot;she is committed to her children&quot; Advocacy</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>Yes, &quot;CACP compliance&quot;</td>
<td>Yes, CACP audit CACP audit</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>Yes, &quot;dropped out&quot;</td>
<td>No, dropped out Parent lunch</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>Yes, &quot;giving gifts, the way she made them feel obligated&quot;</td>
<td>Yes, better Board building, Share building</td>
<td></td>
</tr>
<tr>
<td>TAI</td>
<td>&quot;they were really in the back seat, they had already heard this all before&quot;</td>
<td>Don’t know, never sawLight battle</td>
<td></td>
</tr>
</tbody>
</table>

| TAI  | Some, "in an area" | No, corporate decision Off-site menu |
| TAI  | No, "tired, staff had no idea what to do" | None mentioned Extra TA time |
| TAI  | No, "they wanted to...do the right thing, but nobody made it a priority" | None mentioned Dropped Out |
| TAI  | Yes, "giving gifts, the way she made them feel obligated" | Yes, better Board building, Share building |
| TAI  | Don’t know, never saw | Don’t know, never saw |

| TAI  | Some, "in an area" | None mentioned Extra TA time |
| TAI  | No, "they wanted to...do the right thing, but nobody made it a priority" | None mentioned Dropped Out |
| TAI  | Yes, "giving gifts, the way she made them feel obligated" | Yes, better Board building, Share building |
| TAI  | Don’t know, never saw | Don’t know, never saw |

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3 centers’ leaders (13%) were described ambivalently, such as “she is committed…[but] trying to retire” (1007), “pretty much on board” (1004), and “she felt that the need to make a change meant she was doing something wrong” (1003).

TAs also highlighted the staff buy-in, engagement in changes, or commitment to change in their centers. Again, it was expected that centers who were more successful in making changes would tend to have staff that were described as being on-board, willing, and engaged in the change process. TAs described staff that aided the change process in their centers by discussing how staff followed the lead of their director (1001), how a teacher served as a staff liaison (1002), and how teachers directly attended the CCLC workshops alongside their director (1005). TAs described staff that hindered their centers’ change process as “very challenging” (1016), not taking time to attend scheduled staff trainings (1017), and feeling that “they had already heard this all before” (1020). TAs described staff that were somewhat engaged in the change process as slow to embrace change (1003) and an uneven level of commitment to change by different staff members (1024). 8 centers’ staff members (33%) were described as engaged in the change process, 9 centers’ staff members (38%) were described as hindering the change process, 2 centers’ staff members (8%) were described ambivalently, and 5 centers’ staff members (21%) were not mentioned in discussing their centers’ change process.

Motivation to change was another area that was discussed by the TAs consistently as relevant in change processes of their centers. It was expected that centers with staff and/or leaders showing more motivation to change would be more
successful in making nutrition and/or physical activity changes. TAs described centers that were motivated to make changes as “saw the need to stress nutrition” (1016), “she is committed to her children” (1012), “she was so passionate about it” (1024), “very goal driven” (1009), and as feeling the need to be a model program for their student interns (1013). TAs described centers that were not motivated to make changes as “lack[ing] self-motivation” (1008), as having a lot in place already so it was “harder to see need for change” (1017), and as “nobody made it a priority” (1011). TAs described some centers’ motivation to change in ambivalent terms such as being interested in making changes but feeling “overwhelmed” (1015), “giving gifts along the way almost made them feel obligated” (1014), or discussing how some centers were motivated to change their nutrition or their physical activity practices, but not both (1022, 1023, 1002). 9 centers (38%) were described as motivated to make changes, 6 centers (25%) were described as not motivated to make changes, 6 centers’ motivation (25%) was described ambivalently, and 3 centers’ motivation to change (13%) was not mentioned by their TA.

Time was another factor discussed by many TAs when examining the change processes of their centers. 7 centers (29%) were explicitly noted as having found or made the time to do the staff training modules in between the workshops. 8 centers (33%) were explicitly noted as not being able to find the time to do the staff trainings, and TAs did not mention whether or not time for trainings was an issue for 9 of the centers (38%). Centers noted as having time as a barrier to implementing their nutrition and physical activity changes were described as “pulled in so many
directions” (1017), “overwhelmed” (1010), or bluntly, the "biggest challenge was finding the time" (1004). In contrast, centers that were able to find the time for the staff trainings were described as “prioritizing” (1001, 1012) the trainings. In one instance it was mentioned that it was helpful that a structure was already in place within the center for professional development time, and the CCLC staff trainings were easily inserted into this time slot (1016).

Another insight offered by the TA interviews was the importance of consistent staff. For both of the centers that ultimately dropped out of the CCLC workshop series completely (1010 and 1011), they had significant and sudden changes to their administration (change of director) as well as significant change to their staff (teachers and/or cooks), and subsequently discontinued their participation in the CCLC workshops. However, there were also two centers (1017 and 1019) that had a change to their administrative leadership (director or curriculum coordinator changed), but were able to maintain a high level of nutrition and physical activity practice and maintained participation in the CCLC workshops. Their ability to continue participating successfully in the CCLC trainings despite a change in center leadership was likely related to both center 1017 and 1019 being Head Start centers that are run by an umbrella corporation that values healthful policies and procedures.

Specifically querying TAs regarding any differential abilities of centers to make nutrition versus physical activity changes yielded responses indicating varying abilities. One of the most common reasons given by TAs for why physical activity change was easier for some centers, was that some centers’ nutritional decisions
(menus, ingredients, etc.) were made at a central location (i.e. one owner of multiple centers makes menus and individual centers do not have control), and were therefore inaccessible or very difficult to access to create nutritional change. Another reason commonly given for nutritional changes not being made was a “high baseline” (1019) wherein some centers’ nutritional guidelines were already largely in line with CCLC recommendations prior to the training. A final reason given for difficulty of making nutritional changes was that families sent in lunches for each individual child, such that making nutritional improvements required education of parents and parental buy-in to the importance of improved nutrition in early childhood. Alternately, for some of the smaller centers, it was much easier and more direct for them to create large improvements in the nutrition of ingredients and healthful food preparations, as the director was at times also the chef or at least in charge of the menu decisions. In the centers where the director was a direct participant in the CCLC workshops and also had direct control of menu and food purchasing decisions, nutrition changes were able to be made very quickly (1012, 1005). Physical activity change was cited as more difficult for some centers to accomplish, and this difficulty was most often explained by administrators having difficulty getting their staff to comply consistently with new physical activity standards. Since the CCLC participants were mostly administrators, in order for physical activity levels to increase in classrooms and outside on playgrounds, they had to utilize supervisory skills, staff education, and staff motivation, which was difficult for some center leaders.
Interestingly, there was only one center that completed the CCLC trainings (1020) for which the TA reported that she did not know if the center had made any nutrition or physical activity changes, and this was explained as due to a lack of opportunity (scheduling difficulty) to visit the center at the end of the CCLC workshop year. The only centers that were noted to have made no noticeable nutrition or physical activity change were the two centers that dropped out early from the training (1010, 1011). There was not a single completing center that TAs reported to have made no change in nutrition and no change in physical activity, and there was no center that TAs reported as declining in their nutrition or physical activity practices. Even for centers that self-reported little change or a decline, TAs noted at least some small change in a positive direction. It is possible that the TAs may have been invested to such a level with the program and with the centers that they worked with, that it may have been difficult for them to identify centers that were still struggling, instead finding at least some small movement forward to focus on. In consideration of the deviation scores between centers’ self-reported NAP SACC scores at the beginning and end of the CCLC year, it is not hard to understand the TAs’ impressions that nearly all of the centers made at least some improvement. Nearly all of the centers reported improvements in nutrition and/or physical activity policies and procedures on the NAP SACC, with only four centers rating themselves as having no change (1015, 1004) or having weaker practices after the CCLC workshop year (1018, 1006). The average increase in NAP SACC best practices reported by centers was 9, with NAP SACC change reported varying from an increase of 27 best practices
to a decrease of 12. Keeping these NAP SACC deviation scores in mind helps to explain how TAs could almost always find at least some movement forward to discuss for each of their centers.

All of the TAs spoke to what seems to have been a qualitative difference in the training experience of the seven Head Start centers (1017, 1018, 1019, 1020, 1021, 1022, and 1023) that were included in the CCLC workshops in 2011. All seven of these Head Start centers were operated under the same umbrella corporation, and the corporation had participated in previous Nemours health and nutrition trainings, such that many of the policies and procedures in place in the centers operated by this corporation were already consistent with CCLC guidelines. The TAs noted this particularly for the nutritional guidelines, as menu and food preparation choices are made centrally by the corporation and distributed to the individual centers. As such, these seven centers were not in control of their own nutrition and menu choices, leaving little ability for them to improve their nutrition.

Discussion

Conclusions

Examining the salient factors that were illuminated by the analysis of quantitative and qualitative data allows the author to propose structural building block factors for the hypothesized pyramidal framework. Figure 5 (below) shows a visual organization of illuminated factors in the proposed pyramidal structure. Figure 5 displays factors that emerged from analysis of data collected as part of the CCLC nutrition and physical activity workshop series. The factors displayed in Figure 3 are
structural building blocks that appear to enable and/or enhance the ability of early childhood centers to implement changes to their nutrition and physical activity policies and practices.

As this analysis was exploratory, this is just a proposed organization of factors that appear to support healthful change in centers.

The base level of the pyramidal organization shows factors that appear to be necessary as prerequisites to positive practice movement. Based largely upon qualitative interview evidence from technical assistants, it appears that these base level factors need to be in place in order for centers to make significant healthful change at all. These base level factors appear to support a threshold, such that once centers attain these base level factors, they are able to begin making changes in a positive direction. If there is a significant breakdown in these base level factors,
centers do not appear to be able to implement healthful changes. For instance, centers 1010 and 1011 both had significant staff turnover during the CCLC year, and were subsequently unable to complete the training. Their TAs did not believe that they were able to make or maintain any of the healthful changes that were initially set as goals. Center 1015 had a major CACFP violation at the beginning of the CCLC year as well as administrative staff turnover, and therefore spent the majority of the CCLC year trying to meet the requirements of the CACFP audit. They were able to make significant nutrition improvement as part of getting back into compliance with the CACFP regulations, but they were not able to make any physical activity improvement.

Another apparently significant base level building block is the buy-in and motivation of early childhood centers’ administrators. All of the technical assistants spoke to the importance of leadership in the change process of their centers. If the leadership in a center was not motivated to change their nutrition and physical activity policies and practices, or if they spoke to wanting to improve their practices, but did not prioritize actually making the changes, little change was observed. Center administration had to be willing to put in the time and effort to make healthful improvement goals and then to work towards attaining them. It appears that one of the final building blocks preceding significant healthful changes is the building of knowledge about what is more nutritious for young children and how to increase young children’s physical activity. Many of the centers reported that a major area of growth for them during the CCLC year was knowledge, and it makes logical sense
that one has to build knowledge prior to improving one’s behavior surrounding that content area.

The accessibility of nutrition policy was another factor that appears to be a necessary building block. Centers whose nutrition policies and menu decisions were made by higher levels of their corporation were not able to directly impact their nutrition policies. In contrast, centers in which the CCLC participant was also the chef were able to make nutrition improvements very quickly and easily. Similarly, centers that had a CCLC participant that was directly responsible for physical activity practices (i.e. was a classroom teacher) were able to make physical activity improvements very quickly. Most centers’ CCLC participants were administrators, and therefore, in order to make physical activity improvements, they had to be able to train and motivate their teaching staff (who did have direct control of children’s daily physical activity).

Moving beyond the base building blocks, past a threshold where positive changes could begin to occur, the second level of the pyramidal structure includes factors that appear to be necessary for specific healthful capacities to be built and maintained. The middle level appears to largely consist of leadership, communication and supervisory skills. Some changes can be made by the leadership alone, but many of the nutrition and physical activity changes require supervision, engagement, and skills of staff. Additionally, educating parents about obesity prevention can extend and increase the impact of center-level healthful changes, and potentially improve home-level healthful choices for young children. Parent involvement is particularly
important for centers that have families sending in lunches (rather than centers cooking lunches).

As CCLC participants began to make nutrition and physical activity changes in their center, they encountered challenges that inhibited their ability to implement changes that they desired to make. The most common challenge reported was a lack of staff engagement, but there were other barriers mentioned by some centers. Figuring out how to handle challenges and to eliminate or work around barriers appears to be one of the main mid-level change-supporting factors. If a center encounters a barrier and can creatively adjust to deal with the barrier, they can continue to make positive changes.

Most of the centers who participated in the CCLC workshop series were able to improve at least some of their nutrition and/or physical activity practices. A few centers reached a level of understanding and commitment to increasing health of young children through nutrition and physical activity that they became advocates within their field. Some CCLC participants went on to speak with legislatures to advocate for nutritious policies for early childhood centers, some spoke with local newspapers about their experiences, and some sent their story boards to national conferences. It appears that advocacy is a top-tier factor that is related to improving center-level healthful practices.

Technical assistants also spoke about the creativity and inventiveness of some centers, which seems to be a higher-level factor. Centers who reach the level of innovating methods or strategies for improving their health and nutrition practices,
extending their knowledge beyond what was presented, have reached a higher level of implementation success than basic understanding. Some centers were able to create what could be described as a culture of healthful improvement. For instance, one center director (1001) took her commitment to healthy environments to measuring the legs of different age groups of children in her center in order to have new furniture ordered that allowed children to sit comfortably with their feet touching the floor. This enabled more independent eating skills for her young children, as they were appropriately supported while at the table. She then compared incident reports prior to and following the new furniture, and found a significant decrease in falling accidents.

Establishing a center-wide culture of healthful improvement theoretically will enable centers to continue applying what was learned in the CCLC year, maintaining attention to nutrition and physical activity, and continuing positive movement towards nutrition and physical activity goals. This should theoretically enable centers to continue high quality healthful practices, even when they have staff turnover, as the new staff will be emerged in a culture of commitment to nutrition and physical activity of the children in the center.

Considering the broader cultural context in which healthy eating and physical activity are nested is important, in that it can be surprisingly difficult for people to actually change what they are eating and what they are feeding to their children. Some people appear to have deeply rooted values about what is healthy for young children, and these values and beliefs are not necessarily based in nutrition, but rather in ensuring that children are cleaning their plate and are not underfed. One thing that all
of the participants in the CCLC had in common was that they cared about the children that they served, and they wanted their children to be healthy. However, it was difficult to get past fears about underfeeding children, and difficult for some participants to grasp what was an appropriately sized serving for a young child. It is important to consider participants’ cultural understandings of the place of food in one’s life, and the importance of eating as part of a social experience. It can be difficult for people to accept that the food that they were fed growing up is not actually healthy for them, and is not healthy for the children that they serve. Adults who care for children, whether as family members or early childhood education staff, need not only to be educated about healthy foods, but also to have the opportunity to taste and experience healthy foods so that they can learn about how to make nutritional food taste good and still have it be part of a social dining experience. It is crucial that this learning process about nutrition is collaborative and not combative.

The other broader context to consider is that of professional development in early childhood education settings. Nutrition and physical activity are by no means the only important pieces of a high quality early childhood education, so it is important to consider what implications these specific findings have for the larger early childhood professional development community. This study provides support for the feasibility of “train the trainer” models of professional development. Only one or two people from each center actually attended the five professional development workshops, and they were then responsible for going back to their centers to disseminate the knowledge that they had gained to their centers’ teaching staff. Some center leaders
were more effective in conducting these staff trainings than others, and it will be
important going forward for early childhood education professional developments to
be able to support the administrators that struggle with conducting their own staff
trainings. The role of the technical assistant in this leadership support was important
during the CCLC, and is a feature of this training that can be applied to any subject
matter targeted by professional developments. Another feature of the CCLC trainings
that can be applied to any early childhood education professional development is the
focus on experiential, active learning. The workshops were not a lecture style, but
instead included cooking activities, a variety of physical activities, and lots of
discussion and collaborative learning. This style of workshop enabled participants to
do more than just passively absorb information, but rather communicated knowledge
in an interactive way that helped participants to take ownership of the importance of
healthful practices for the children that they serve.

Limitations & Future Directions

A significant limitation of this study was inconsistent participant
representation from centers. Many of the centers did not have the same staff members
attending all five of the workshops throughout the year, and some centers did not even
have the same core staff members present in the center. This turnover in center staff
and in workshop participants led to a lack of cohesion in the learning experience for
some centers, and it also made a pre-, post-comparison of data points difficult. When
there is a different respondent filling out the pre- and the post-assessments, there is
significant variability introduced that increases the likelihood of inaccuracy of
conclusions. In the same vein, more conclusions from the Final Observation could have been made if there had been a matching Preliminary Observation included in the study design.

Another major limitation of this study was a small sample size. The small sample size made quantitative statistical analysis of the various assessments very difficult. The qualitative analysis and the informal examination of the quantitative assessments enabled meaningful conclusions, but did not allow for the certainty of a confirmatory statistical analysis. The exploratory nature of this study was a strength in that it allowed for an over-arching synthesis of a variety of levels of data, but it was a weakness in that it allowed for only proposed conclusions and a proposed theoretical structure. Future research can hopefully take these proposed salient factors and conduct a confirmatory study with the ability to make more confident conclusions.
REFERENCES


45
Partnership in Learning, 18, 155-175. Doi: 10.1080/13611261003678895.


Appendix A

TECHNICAL ASSISTANT FOLLOW-UP INTERVIEW RESPONSES

TA Follow-Up Interview Protocol:
Preamble: The following questions are intended to be answered based on your experience with the 4/5 centers that you were the technical assistant for during the 2011 Child Care Learning Collaborative (CCLC). We are interested in what helped or hindered the change process for specific centers, so I am going to ask about each center individually. If you have different observations from different times of the year (or stages of the training workshops), please tell me what time period you are remembering from. You can answer or not answer any of the interview questions, as you are comfortable, but it will be most helpful to the project if you can answer every question. Do you have any questions before we begin?

Introductory question:
1. For "Center 1," please tell me about their change process?
   - What did you find helped them in making changes throughout the year?
   - What did you find hindered them in making changes throughout the year?
   - Was there a difference in their ability to make nutrition changes from their ability to make physical activity changes?

Note: In interview response text, N = nutrition, PA = physical activity, T. = name of corporation that ran a group of Head Start centers, B. = name of corporation that ran a group of childcare centers, all other names mentioned are abbreviated to first initial to maintain confidentiality, centers are referred to by their number (center names excluded) to maintain confidentiality.

TA1’s interview responses
1004:
   - The director was pretty much on board. She realized that there were things that they used to do that they just hadn’t been doing. She got really motivated to put policies aback in place that she had already been doing. She worked hard to get parents engaged. The change process was about getting the staff engaged.
   - Staff engagement...they are a small center. Biggest challenge was finding time to actually meet with them (staff).
   - HELPED? Having the materials and share them with the staff. I went down and met with her staff one time to go over one of the goals, and that seemed
to be helpful. In that center, she was the only one who came, no one else came.
- HINDERED? They only had one representative at the workshops, rather than a team present. She designated a second person, but they were never able to actually come.
- N v. PA? They were further along with nutrition changes, they were already doing some of the nice preparation. Instituting family dining was a challenge. Doing the PA changes was harder, their outdoor space is limited and no PA space inside. Outdoor space is huge, but not a lot of equipment...it gets really muddy, and they can’t go outside if it is muddy. (drainage)

1016:
- They had 2 people that came just about every time. The director was really on board, but getting her staff there was challenging. Family involvement tough. The director and person who came with them were very committed, and set aside designated time for staff trainings in between. They had a designated training cycle (Saturday), and were able to insert the CCLC training materials into it.
- HELPED? The materials that were provided (things to do for parent meetings), etc. Things to do at the beginning of the school year. They were changing some policies, but after summer camps, they started off the school year as a change time. They kicked off and just said, this is how their lunches need to be now (parents send in lunches). Lunches still were not perfect but much improved from a year ago.
- HINDER? Probably, I think they do a lot with portable equipment, but their playground is very small. They have some staff that are more active than others, and not just letting the kids have a free for all out on the playground, but getting the staff moving with the kids (for some) was a challenge.
- N V. PA? Probably made more nutrition changes. Made some in PA, but most noticeable change was in the nutrition piece. They saw the need to stress the nutrition b/c of the parents bringing the lunches. They would have good things on their snack menu, but then see them bringing out Dorito chips. They attacked it as an area that they really needed to focus on.
- They have become real advocates and writing letters about legislative change, since the CCLC (about nutrition).

1017:
- They were a little more challenging, b/c they don’t operate in the summer (gap). Their team changed between start and end. The key players were consistent (the cook), but some inconsistent. It was harder to connect with them, not sure why. Particularly b/c the cook was a male and very into sports,
and some of the things they wanted to do for families (i.e. baseball competition) was not developmentally appropriate for the younger kids. They are a head start, they already have a lot of the nutrition and PA in place. That was a challenge with the Ts [corporation name]...they already had a lot of things in place, but then seeing where what we were offering could fit into what they were doing. It might be harder for them to see the need for change. The people who were lower made the most progress (centers), and the others made less progress b/c they were already doing it (centers). Maybe gained understanding to WHY they were doing these things.

- HELPED? Having the time set aside to do it. Coming to the meetings they would get motivated, but then they would have trouble going back and getting with the staff and actually get implementing the changes that they were excited about was hard. They were a larger program, and it was harder...the schedule (half day afternoon, morning, etc)...finding time to get staff together to do the homework was a challenge.

- HINDERED? Getting staff together and try to do homework. Didn’t have the time to do it (40 hrs). They also do a lot of other things (i.e. home visits), this was just a little part of what they did...and it was a priority the week before the next session

- N v. PA? nutrition piece was pretty much fully in place already. They made more change with the PA, they felt the need to be more active. Their menus are already in compliance, and they have policies for not having junk on holidays. How much they enforce it...

1021:

- Their coordinator came pretty much by herself (mostly). They are smaller, only two teachers in one classroom (morning and afternoon). She was pretty motivated about making the changes. She really wanted to integrate it more (nutrition) and how they could have more physical activity. Really committed leadership.

- HELPED? Probably the leadership of the coordinator. Staff consistency from spring to fall, the same teachers probably helped them make changes (same teaching staff).

- HINDER? Their tiny playground. There was only so much that they could do with it. But the leader really tried to do what she could.

- N v. PA? made the most change with PA. Again, their nutrition stuff was mostly already in place. They may have made some modifications, but they felt the need to do more with the PA, b/c that is their biggest challenge with their tiny playground. Trying to be creative and figure out how to do that was where they put their greatest effort.
Follow-up prompt based on TA1’s responses: Was there something different about the T. centers’ change process?

T.’s change?…part of a big corporation that runs a number of head start programs. Some of their programs had already been through a learning collaborative, and the policies had been in place already due to the overarching management. The key was that although they had the policies in place, they didn’t understand WHY they were in place, and the CCLC helped them to understand WHY they were doing it now. When you have the WHY it makes it easier to believe what you are doing and not just to give it lip service. It gave them the opportunity to really implement things at a higher level. Their educational requirements are higher, for head start you have curriculum, etc. in place. It is somewhat of a different playing field…they have to address health b/c they are part of head start. They have been doing it longer, but it doesn’t mean that they do it perfectly. Again, I think that in the LAST learning collaborative, the programs that started higher made less change then the programs that scored lower…made bigger jumps b/c they had further to go. Sometimes there is complacency when you are doing something at a higher level…

With 1017 group…the person who was the leader of their team was pulled in so many directions that she couldn’t focus on this, b/c she had to do home visits, and she just didn’t have the time to focus on it. Their staff ended up with different roles, less so at 1021. 1021 was one of their [T.’s] smallest sites.

TA2’s interview responses
1003:
- When I first met with them, I really just wasn’t very sure what was going to happen with them. They seemed to...when I did their stages of change form, I believe that it was much lower when I did it in the beginning than near the end. I didn’t have a lot of confidence from her from our initial meeting that she was going to do something significant. Big center, moderately well resourced, and they seemed to have a lot of procedures in place. One of the other B. centers [corporation] had been through the learning collaborative process, so they thought that they already knew all of this. But actually...there were some things they were not able to change b/c they were a corporate wide policy (i.e. menu changes), but she took things to the top. But she did a great job. Is it perfect, no. by the end, they decided unilaterally to redo all their snack menus, whole grains, more water, they contracted with someone to do additional physical activity for everybody. Before when they had done special physical activity the kids had had to pay for it, but now he does it for everybody. Kind of like a phys ed fun teacher to come in and build some excitement. Over time they really made some significant changes. I was constantly pushing her to make those changes larger and more global. Sometimes I was successful and sometimes I wasn’t. I marked her much higher on the stages of change at the end b/c I saw her as more willing to
take an active stance, and she wasn’t so scared of changing. At the beginning, she felt that the need to make a change meant that she was doing something wrong, and badly. But by the end she was excited, b/c of the networking with the other centers and sharing with the other centers...this is our challenge, let’s all share ideas, and it became part of the norm, part of the process.

- HELPED? Part of it was the culture that evolved in those large learning sessions when they came together with colleagues. They had an opportunity to see what others were doing and it made everything seem doable. They were not in isolation, they were exposed to other ideas, they were comfortable saying let’s try it, and other people shared challenges and what they did to deal with it. The opportunity to share, and learn from, and help their colleagues. She had some staff turnover. The person that started was ok, but she left the center, and the new program coordinator was the daughter of the cook, and the new p.c. was quite enthusiastic. And she had been a prek teacher, and she was very enthusiastic about kids being active and healthy...this was the personal energy and commitment of that prek teacher. A personal commitment to kids health...she had breastfed her own kids...she personally had a lot of commitment to health.

- HINDERED? Yeah, I think that ...their corporate or their business affiliation with the other centers made them slow to embrace change. Corporate sets the menus, we are a great group of centers and this is what we do (initially). Changing the snack menus, embraced as she could. And she did pass information on to the corporate. As her TA, I would have been excited if she had been more active about meeting with the other directors and trying to change the menus to help us plan things that would better meet the guidelines. But I don’t know the corporate structure or how secure she is in her job. Also just time, she is super busy. Finding time to do the staff trainings that we are asking them to do...she always found a way to do it, but it was not easy. She tried to schedule her trainings in weeks where there was a holiday so that they were not going into overtime. And finding the time to go around and observe in classrooms and coach...that is always a challenge.

- N v. PA? they did both. I think that it is easier to make nutrition changes b/c there are, by definition, a center policy. For example, she improved the snack menus and she greatly reduced the sweet grains for snack. They moved to wholegrain crackers and cheese for snack from a sweet roll or a cookie. The physical activity, although they did make changes (i.e. that Thursday phys ed instructor all day with all ages of kids (toddler – schoolage), they put more PA time in their lesson plans, they bought equipment, they improved their environment...but I think that with PA, more so than with nutrition, it depends so much on the teachers in the classroom. You can have tons of PA in your schedule, and a few could be really doing it and engaging the kids,
but...some are more involved with their kids and encouraging kids to improvise games or try something harder and then there are the teachers that stand around and talk and watch the kids run around or not. I have more control of the menu. A lot has to do with the staff training implementations and the distribution of resources (this center did these well), there is a big resource room where you can just go in and get extra activity kits and balls and books...they did both, and they did both fairly well. Do I wish they had made more changes, of course I do. That is just me, I am always going to push for more. I am always making suggestions...such as to improve in their policy book (i.e. tummy time for infants, MVPA, etc.).

1012:

- They were really delightful to work with. I ...they are a small center. They are fairly poorly resourced. It is kind of a bizarre situation. I really didn’t expect a lot from them. I marked them lower on the stages of change in the beginning than I did at the final scoring. I gave them almost all the highest marks at the end. It is this big red, metal building in the middle of a parking lot in [town name in Delaware]. If you walk in the door, her desk is out in the middle when you walk in the door on the left and on the right is the kitchen with a low wall. She is both the director, the substitute teacher, and the cook. Over the summer, she also became the head gardener. They only have two classrooms, it is a really small little program. I was really troubled by her handbooks. For example, teachers were forbidden to talk to parents about anything of substance. I didn’t know if this would be a good fit for her..because we are so about developing partnerships with families. BUT she is so committed to her children, and she really gets the connection between children’s health and their learning and success. She was really appreciative of the opportunity to connect with other people and the resources...and she took them back and shared them with the teachers, and they used them, and it was great what they were able to accomplish.

- HELPED? They have a teacher (prek) who is a real champion for PA in particular. The director is the cook and really interested in gardening and healthy eating. She had already made some changes to bring into compliance with the rules...but now she was able to increase the access to whole grains and vegetables, fresh vegetables through the garden. And parents thought that their kids would never eat these things, but they did. She loved the learning sessions, and she said it was the best training she had ever been to and she got great ideas, and she prioritized the sessions over other commitments. She loved the resources and the activity kits. They really improved their outdoor space...I encouraged her...to...there are so many natural things right outside the fence...they rope off some of the blacktop...
area for bikes and riding toys. I encouraged her to think about changing that back fence to incorporate more of her backyard to have more grassy areas and access to the trees, so they could touch bark and touch trees. Near the end, she had bought a bunch of loose parts...stones and pinwheels and scarves...and I wouldn’t say that it was perfect, but the level of activity was so much higher, the things were in different parts of the playground so there was a lot of running back and forth between the stations. Their teacher is a very loving teacher, but she tends to be quite directive...she is constantly telling them what to do, and they do as a result get a lot of PA, but outside I have seen her try to do a structured PA but the rest of the group is either chaos or sitting on the bleachers. I don’t think that she is skilled yet in setting up engaging activity centers so that she can have a small activity group and still have the rest of the kids engaged and exploring something. If she could get some help in expanding her repertoire of teaching strategies that would be great.

- HINDERED? Again, the physical space of their center is extremely small...the outside space is really limited...to their credit they have taken steps to use the blacktop and the garden. I don’t know that they have used the broader grassy area as I have liked them to. They do walks at least 3 times a week...to the library to shops, around the town, and often they are integrating what they are talking about in school. But the space definitely has limitations. The prek teacher’s directive approach is more of a model for elementary school that she has brought down to early childhood and I think she is sensitive with her kids and has good relationships with them, but I think things would go better if she was more comfortable with a more balanced approach, and facilitating the kids own explorations. But they were really committed to implementing changes. The loose parts really helped them a lot, it made a big difference in her outdoor teaching (funnels, magnifying glasses, scarves).

- N v. PA? they were already committed to both. They just enhanced and approved both. They went way above the standards, such as adding fish to the menu regularly. She also went to almost exclusively whole grains. As she learned things in the collaborative, she implemented them because she is the director and the cook. When they did the garden they learned how vegetables grow and tasting them...and the do a cooking activity basically every week and this changed from sugary cooking to a whole range of healthier foods. They definitely improved their outdoor environment, now they only use DVDs to help structure the lesson (a special movement thing or for transition activities), they really decreased their screen time. Because both N and PA were already embedded in their center, they seemed to do well in both. What they need help on is unstructured outdoor physical activity...they need to develop that environment outdoors in a way that kids
can create their own play. But I think that they did great. I was happy to work with them and to see what they accomplished.

1015:
- They are...first of all, their director was very committed to this. They are a [sect of Christian] church. Although the children mostly do not belong to the church, it is in an old, inner city neighborhood. There are a lot of high poverty families that need childcare in that neighborhood. One of the church ideas is the body as a gift from god and a temple to be cared for. They are very explicit about healthy foods and physical activity, and this fit right into their values and beliefs. It was more than an obesity initiative, it tied into their essential values. They were motivated from the beginning. She expressed a lot of interest and commitment, but I did realize that she had huge challenges. She had only been there a short time, the previous director had walked out...they were about to lose their license, cacfp [Child and Adult Care Food Program] came about a month after she started and they went crazy. The teachers were not particularly skilled...she has a very challenging neighborhood. Even when they put out permanent or anchored equipment outside, it gets stolen or broken. She has support from the board and church, but the community, families, and staff are challenging, and the precarious position of the center is challenging. She started with a lot of challenges. She found it very challenging to do the trainings. It was hard to bring everybody together...so she did it in a unique way...she did the training by age group at nap time and lunch time. She had other teachers from other age groups supervising lunch and nap transition and do the dvds and trainings with each age groups teachers...and sometimes it would take a couple of days to get through each one. The trainings felt very onerous for the director, b/c this format was taking up a lot of her time. You have to plan ahead to do the trainings so that you doing it in a holiday week so that you are not paying overtime. It is a center that experiences a lot of crises from families and teachers. If she could have brought everybody together it would have been less burdensome for her, but it would also give synergy between the TEAM if they could have all gotten together and shared ideas. She did the best she could be committed to getting through it. She showed up about 2 pm in the afternoon to bring in documents and homework in the afternoon. The reason she didn’t come is that she hadn’t yet done the trainings and she was embarrassed and she didn’t want to come until they had done their final stuff and their storyboard. TA3 came out and did the trainings for learning session 5 with the staff at their center. The director seemed to think that this was great and would have liked an outside party to come in and do the trainings every time, but the idea of the CCLC was for the director to take on that role.
and make those connections and work through the tough disagreements and come out with some sort of plan going forward as a team. If you can bring your staff together to work on changes together, than you can apply this change leading format to any issue. To encourage staff to collaborate and learn from each other and be as a team, even when it is not comfortable. Their change process was committed by challenged.

- HELPED? She loved the learning sessions. The opportunity to hear that other people were facing challenges as well. That was helpful. The information, resources, TA support was helpful. For her, it was really helpful (remember the cacfp audit at the beginning), after the CCLC she was in no time in compliance with all the food regs, and had a cacfp audit from the same woman and she was written up with commendations for exemplary practice. She explained to this auditor about the CCLC workshops, and that the experience the year before with the auditors attitude had been really discouraging, and they had a really great discussion about how better to help struggling centers. Getting involved in DE STARS was a huge help to them, b/c it is emphasizing ongoing commitment to quality improvement through assessment, planning for change, implementing change...they changed their curriculum from something terrible to “creative curriculum” they were working with a TA, and they were working on star level 3. Key members of the teaching staff were committed to change, but they have a lot of work to do with many of their teachers. Support of their board also helped them...a board member is from Nemours...some of the things they did cost money, and they had such great support from the board and the church to do some of the things that they are trying to do. They are working on a solution to the outdoor space. They do walk to W. school...and when I did the POEMS I did 2, one for the walk to warner and play on the playground vs. staying on their playground. that is kind of their solution to the outside space. It is about a 20-25 minute walk and back with play on the playground in between. Having that neighborhood resource really helped mitigate their poor space that they have. Everything gets broken, stolen, vandalized, so they are trying to figure out what they can do...

- HINDERED? No, I did talk about it.

- N vPA? The food was easier. She orders the food, she sets the menus, she ordered the little pitchers and the serving utensils. And once you do it, it is just in place. She started family style dining. It is pretty easy to control that...there could be barriers in cost, but there are ways to order healthy food that meets guidelines. The PA is harder because it gets into the coaching staff, observing classrooms, developing a culture where everybody is committed to quality improvement, and that is harder...
*a lot of the centers shared their storyboards to present at conferences. (1005, 1016, and 1004). Their willingness to become advocates to share their work and talk to other people, and why they want to share. 1001 and 1016 actually met with legislatures to discuss why it is important to enforce the nutrition legislature. Their willingness to share what they have learned with colleagues, to advocate with the legislature and do whatever it takes to ensure children’s health. Shows their commitment to the change process. 1015 offered to let me use their storyboard.

1024:
- They have ...AR...assistant director or curriculum coordinator...but she is a cracker jack. She is just really enthusiastic, very confident about her ability to impact teachers and kids. And very excited about opportunities to make things better for kids. I was a little worried about working with her...b/c the owner of her center is one of the people leading the attack against the cacfp legislature rules. [another center owned by same corporation] and [a second center owned by same corporation] were in the first learning collaborative. They don’t like government mandating it...they have quality centers, they are about to go to star level 5, but b/c this legislative initiative to role back the requirements for food sent in from home. I didn’t know how it would go. But AR did not seem to be aware of any of this. At one point she said she was so appreciative about the licensing rules b/c it gave them an opportunity to talk with families. She was absolutely committed to this. I marked her pretty consistently at the highest levels at the end, and only one step below at the beginning. I was confident in her commitment to change. She was so excited about the trainings, she was able to schedule it for everybody to come. “oh yeah, everybody is going to come. When they come to my trainings there is great healthy food, and learn a lot of cool things, and everyone will come and it will be great.” When she did the first training they were so impacted by the obesity maps that they immediately said that they had to plan a parent night and show the parents so that they will understand why we are doing this. The negative about their change process...early on they wanted to add a play area for active play, their outdoor space is a typical pretty well resourced childcare center playground that was put in with commitment to climbing activity, but no nature/trees, etc. she wanted an additional space for running and biking...they claimed a blacktop area...and she really became obsessed with that space and that idea. It was one of my goals to expand her beyond this blacktop area that she was so passionate about. She was really stuck on that blacktop area, but it wasn’t my favorite. But it is what she wanted to do.
- HELPED? They are very well resourced. They had the experience of two other centers before them in their group having done the earlier CCLC. They are very comfortable with having TAs b/c they are in DE STARS, they understand quality improvement. She loved coming to the learning sessions. The
opportunity...she showed up with a really primitive story board for her pilot plan and when she saw how seriously others were taking this presentation.
The motivation from seeing the level that her colleagues were operating at really bumped her into action. Everything was done on time and done well. The sessions helped. TA was helpful b/c it kept her on track, and it gave her validation. I was able to add ideas for her to consider. Support from her admin team, her director was very supportive of what she wanted to do. Support from us. All of them really appreciated the stipend ($500 grant), and all bought loose part things that supported PA...this center spend their stipend on a raised garden bed to do gardening, b/c they have very little natural materials on their playground area.

- HINDERED? They are all really busy. Finding time for training, they seemed to be well setup for observing and coaching...I sensed that everybody knew about it, there were some teachers that were less supportive than others of PA than others...some encouraging, some standing around. The unevenness of classroom teachers is a challenge. I noticed AR one time...a young, inexperienced teacher, and AR just came in and began working alongside of her and asking open ended questions and modeled for that teacher what might be more appropriate. I think that is sort of what they do. Glad to see her working with teachers in that way. The outside play space is not very natural. They looked at how to make things better, not perfect, but better.

- N v. PA? the center controls the nutrition...when they wanted to do family dining and change the snack menus, they were just able to do it. Family engagement was one of their goals, and they did a “great race” where families go from room to room to make a healthy vegetable pasta salad with the kids and then did an obstacle course with the kids...it was a lot easier to get the families to participate in the nutrition activities than the PA activities. So much depends on the teacher leadership in the classrooms.

- It is a really interesting center. They are really high functioning in some ways but they were very challenging to work with. They are great people. One classroom is going to be in a video project as an example for best practice for physical activity. C. is such a skilled teacher, and integrating PA into every part of her classroom. They were very challenging to work with. They were already pretty highly functioning. They are a head start, and many of the other T.s were either in this collaborative or had been in the previous. T. had already implemented menus that meet the guidelines. Many had goals to increase water. For the most part they were pretty much meeting expectations at the beginning. This center wanted to increase family engagement as a goal. PA was another area that they wanted to improve, to
do a better job outside and inside. I guess what I am saying...they were so busy...with head start it is now competitive whether you can keep head start status, there are all these reporting standards, they are just drowning in paperwork. The family support worker and the program coordinator/prek teacher were the participants...and she (the teacher) was just drowning in paperwork. She was doing a great job, her practices were good, but it was challenging to find a time to meet with her, I sensed that she had a million things to go...I do not think that I was all that helpful to them other than as a validator. I could validate and recommend what would get them to the next level, but I had to just trust that they were doing it, it was very difficult to get action plans and paperwork from them...what would help? “just call me or email and give me a deadline 3 or 4 days from now, and call or email me with rude/pushy language and I promise I will get it to you” I did not send rude emails, but I did send increasingly assertive ones. It wasn’t the best change process. The good news is that they are doing a great job, and I consider them in many ways to be a model of how to integrate PA into a classroom. They were already operating at a high level and they got to an even higher level, but it wasn’t dramatic change. I don’t feel that I was especially helpful as a TA for them.

HELPED? they loved the learning sessions. They felt that the learning sessions provided great information and opportunities to connect with others. They were frequently in a role of demonstrating to other centers that this really could be done, that it was possible. With family engagement, we were thinking through some ideas...include the family support workers and they will start the conversation of the importance of family engagement from the beginning. Being able to see them functioning at a higher level might encourage others that it could be done, that it was possible. The T.s right from the first day shared best practices, particularly with nutrition. I think it was helpful to them to see themselves as a source of expertise. The resources were helpful. The stipend was helpful. Their corporate structure too and the support. One thing about that...we might want to limit the number of T.s the next time...the greatest change is probably made by centers that come in lower, don’t know if we want to invest so many resources in the highly performing centers.

HINDERED? Their overwhelming burden of paperwork. They were having dramatic change in organizational expectations. Home visiting, assessment requirements...there were new expectations and the competitive environment, they were under pressure to show outcomes in a very short time. 2 or 3 major initiatives at the same time is a big problem. The T.s were all told that there would be time in their head start training set aside for their nutrition trainings and could do one of the learning session trainings, and that
didn’t happen, so the nutrition training got bumped, and it got thrown back on the centers when they were starting a busy school year at the end of August. It was going to be a corporate initiative, but it didn’t happen that way, and it was really a problem, b/c it fell back on them in the centers at a very busy time. It was really too much. A feeling that they already did this very well was a problem. It wasn’t as high a priority for them as we would have like it to have been.

- N v. PA? PA was …nutrition was already done for them…nutrition and cooking activities in their classrooms already…they put water more available. The PA if C. wasn’t there, I wonder if her assistant would do as good a job. Her kids are never inactive for more than about 15 minutes. If they are having a group morning meeting, part of it is going to be PA, and then they are going to hop around the room as a transition. They do a great job for both, but PA is a bigger responsibility for teachers than N.

**TA3’s interview responses**

Disclaimer… I don’t have a very good memory, so I will answer as I remember. That was one of the reasons that I didn’t feel I was really great at this job, couldn’t remember all the details.

1001:

- You need to understand that B., their director, is a mover and a shaker by nature. When she was presented with the statistics, and what we need to do for best practice, she would go back to her center and make the change, put it in policy. She would really tell her staff and get her staff on board. They already had a cohesive unit to work with the staff following her lead, so to speak. They were quick to change. Whatever we were talking about at a particular center, they would go back and make changes.

- HELPED: because she was such a change maker, really all we had to do was to present her with the evidence, the statistics of childhood obesity is pretty frightening in itself. That was the big motivator for them, like we need to help these kids. She really took it upon herself to do whatever she could to help. Presenting them with the stats for motivation and then giving them examples. For instance, water, and how their little brains need water all day long. They, that week, they went out and got water coolers so that kids could get water whenever they wanted it. That was an example of how quickly they would put things in practice.

- HINDERED: I don’t think that they did, they were like above and beyond. Their first event nobody came, so they did things differently and then their final event was really good.

- I’ve been back to visit her after the CCLC, so now they are in the STARS program. She said that a stars TA came out and saw the little 18 month olds
doing family style dining, and the TA started getting overwhelmed (choked up). The TA starts crying and says “you don’t know what I’ve seen in other centers, and to see it all in action over here is so beautiful, and it makes me sad for the other centers”. Brenda goes out and gets grant money, replaced all the tables and chairs, measured all their little legs and got the right size tables and chairs for each of the classrooms. Then she documents the incident reports, and notes what a big difference it makes. The “can do” attitude that the children are getting from sitting alone in the chairs...

- N v. PA? no, they did both. They revamped everything...menus, water, PA, doing planned activities outside as well as free play, they worked on their outdoor environment.

1009:

- They are kind of up there with 1001 in their...well...they...umm...for instance their outside play time. They started taking out a lot more manipulatives. They put tables with pine cones and magnifying glasses. They would have different stations available for the kids. They were also very good at making changes. I think part of the key is having the owner/director and everybody on board.

- HELPED? They are very goal driven, very arts and craftsly. Having the storyboard as a project, I thought that they went way over and beyond with their presentations. They would have a party with a theme for the parents, and it was really cool how they decorated things. They put together packets for their families for their big event that were really full of information. I was really impressed with how creative they were.

- HINDERED? They complained a lot about the parents. Not being able to make a dent in how the parents thought about things. Like sending in warm outside clothing. Parents would write letters saying “don’t take my child outside”. A lot of it is cultural, a lot of Indian families, that didn’t want their kids getting dirty, or going outside in certain kinds of weather. That was one of their biggest stumbling blocks. 1009 families bring in lunches.

- N v. PA? yeah, because the families bring in lunches, the nutrition part they kept coming up against the parents and needing the parents to make changes. With PA, they were just able to make changes. They had a surface where they had trikes, but it wasn’t accessible to kids except when the kids asked, but by the end, it was always open to the kids each day with teacher coverage. The different things to play with got better. Providing them with structured activities outside when it was outside time. I think they also bumped up the amount of time outside too. The PA changes were bigger than the nutrition changes.
1011:
- Why did they drop out of the CCLC? They pulled out mostly, it was situational, in that they lost some workers and were training new workers. So the staff caused the problem as far as coverage goes. They served a lot of children but did not have a lot of wiggle room with staff coverage. A couple owns it, and they were on board with changes that happened, they always want to improve, that mentality of making improvements was top on their list, but they have always had their safety net of videos and practices that they would fall back on...I don’t think they totally got it. They were comfortable in some areas and didn’t want to change. They felt like they learned a lot and they appreciated the resources that we gave.
- Change process? I always felt like they were a bit shifty. Like nobody wanted to take it on. We had S. (a teacher) come the first time, then the owners came the second session, then one owner came the third session...it wasn’t consistent with the leadership there. They wanted to pay attention and do the right thing, but nobody made it a priority. On the change scale, I would mark that they know they need to make changes, but they weren’t ready to responsibility to make changes. When I first went in there to do the meet and greet for the program, the tom, the owner, sits down and says “to be honest, I don’t really know what you are here for”. I explained the whole thing and he said “this is great, I am going to have someone with credentials to back me up on what I am saying” but when push came to shove, he was really busy. I hardly ever saw him after that first visit. They felt far away (distance and in engagement). It felt like it was a hassle for them to get to D. [city in Delaware that the CCLC workshops were held in], they were very friendly and welcoming. The building is very large.
- HELPED? I think that when they attended the sessions, I think that they went back with good ideas. I don’t know how much of the homework they did. But also the resources, the music cds and the curriculum stuff, I am hoping that it made a difference.
- HINDERED? I don’t feel like they were very changey...they weren’t invested in the change process. They didn’t make a commitment. I think they thought of it as just one more thing to do and they already had enough on their plate. They didn’t want to think about it right now.
- N v. PA? N/A

1014:
- K. is the director and she has some key teachers that she works with that are very much on board. They did a good job of taking the information and doing the best that they could in making changes. Their ...they were a little...in the nutrition part they made some good changes. Family style dining, and a little
bit in the physical activity part…but I think their enthusiastic leadership kind of brought them along. She is good, and she gets it. She knows that changes need to happen.

- HELPED? I would say, the gift that we gave them every time that we went out, they were very appreciative. The assignments, like the storyboard, they were very proud to put them up in the hallways where the family came in. the assignments and homework, just being part of a bigger group, being accountable to doing the homework...I think that giving these gifts along the way almost made them feel obligated to do what they needed to do for the next session, to jump through the hoops we needed them to jump through, b/c we were giving them cds and curriculum and stuff like that. We were giving them something, and so they felt obligated to give something back, and that was their effort in the homeworks and changes.

- HINDERED? Yes. They are part of a big [social services corporation name] building that provides lots of other services. The kids are in a section of the building that is separate. The fact that they had to share the building, and even their gym and playground space was shared with a couple of neighborhood schools. When we talked about making things more accessible, with a shed or a box, that never really happened because they had all these other people coming into their space. Increasing their outside time, they were constrained with how much availability they had with the playground and the gym. They can only do so much in the constraints of the building resources that they had to share. In the nutrition part, they have a big dining room area. They do family style dining and posters up with portion sizes, and they seemed to talk about the nutrition part. Their end of the year thing was breakfast, and they made it on multiple days of the week, and they got a really good parent response rate and they did a little nutrition information talk with the parents, that went really well. I was really proud of them for doing all that they did. They are now in the STARS program, they just want to keep going and making better changes for the kids.

- N v. PA? they did better with the nutrition than with the PA b/c of the way that the playground was setup. It was a lot of stairs to even get out to the playground. So much harder than just a door out to the playground.

1020:

- They are not my favorite because it was always an uphill battle. I always felt like they had so many T. hoops to jump through that we were really in the back seat. They had already heard all this before and why do we need to hear this again and why do we need to do this…I didn’t feel like they were ready or wanting to make a change. The T. center headquarters were forcing them to do this, and they were not interested. I didn’t meet the director until I did a
makeup workshop for one they missed, and they even cut me a half hour short, b/c they had other T. business. It was too big of an organization and everybody passes the buck. When A. left and then it was just K., she was so overwhelmed with having this job, and her tone of voice towards the teachers was like “you have to do this, and we are not going to send/print announcements, you have to check your email before and after work…” it was like barking at them. It was not a good vibe.

- HELPED? Ummm…no, I can’t even say that the sessions…they had the attitude that we have doen this before, we already jump through so many hoops that T. makes us do...

- HINDERED? I would say…the remote leadership. It was like everybody was getting orders from somebody, but they were not a team all working together….there is the director over there who doesn’t seem to know what the curriculum coordinator is doing. They wouldn’t even entertain a conversation with you because it was not really their job. They are not even going to take a care or entertain a conversation…it’s not my problem. That is how I felt T. was. When I did meet with the teachers, they kind of have that sleepy energy, like ho-hum, oh good grief when do I get out of here.

- N v. PA? nope. I can’t. I didn’t really see them enough in action…I didn’t do my exiting poems down there because of weather and sickness. So my ending T. didn’t happen.

Any final thoughts?

- I like having the year long process, I think that was very helpful. I like the combination of giving gifts and having accountability with the homeworks. I like them doing presentations, doing a small one first and then a bigger one at the end. Having them do things at every session was very helpful. I had a really long conversation with B. (1001 director) about “let’s move” childcare website…project at UD to help centers sign onto the website and sign up for this program that is very similar to CCLC with action plan, goals, reach them, certificate, set more goals, reach them, get a certificate, and it works with the same areas (PA, N, breast feeding, reducing screen time, beverages). Those 5 topics…we asked all the CCLC people to sign up for this to help them continue on their track. I talked to B. about it and she did sign up, and asked her about it…She said that she hasn’t done any of the action plan stuff, and she said no, that there is not the personal accountability piece. There is not the homework due and I had to get it done. The computer and the website doesn’t have that, you can shelve it for months and months and just never get back to it. Nobody is standing over you making it accountable. I think that from hearing what she said as a director, having that person in your corner
makes a huge difference to whether you make the changes and do the work that has to be done.

**TA4’s interview responses**

1002:
- They were very enthusiastic from the start. They were very ready for change. They immediately jumped into it and made some changes right away and ...part of the reason that they were so enthusiastic about it was that they had a director that was really excited about it and their 4 year old teacher was directly involved in it, was part of the staff, so she was able to disseminate stuff from the workshops to the other staff members.
- HELPED? I don’t know, the fact that the director was very much on board. Probably the owner of the center had done some work with Nemours in the past, so the ground work had been layed, so it was easier for them to make some changes.
- HINDERED? Not that I can think of.
- N v. PA? I think that doing the PA was more of a priority for them. They had space to make a room, a multipurpose room/common area where materials could be stored and where indoor gross motor space was. They had more ability to make that change, b/c that was an onsite change. With the menus, their menu decisions were made for them (off site, 3 centers together), so that may have been not as easy for them to change.

1010:
- It was so chaotic. They had C., who was really excited about making changes director. After the 3rd/4th workshop, she was totally fired and ended up leaving. When she left, the people that were left behind had no idea what was going on. I ended up meeting with the interim director to get her up to speed, then went back 2 weeks later, and the new director had been hired, so I went in and talked to her and talked with her about the action plans. And she kept saying “I’ll get it to you, I’ll get it to you” but never sent anything in, and never attended the 5th session. I think she was totally overwhelmed with being in a new center and that was totally not on the priority list. Also, it is a church owned center, and a new pastor came in and it may not have been supported, so it got dropped. The one teacher that I had worked with in the fall (with social emotional project) she also got fired, and she was really good, and I don’t know, they cleaned house.
- HELPED? Ummm...I think that C. was just the kind of director that was like, it is going to happen. She didn’t really give her teachers much of a choice, you are not going to be drinking any more sodas. The change that did happen came from the top down, definitely. R. who was the chef got hired, and was coming to the sessions, got fired also.
- HINDERED? I know that one thing C. complained a lot about was that the teachers totally didn’t want to buy into it. It was a constant battle with the staff.
- N v. PA? I think when R. was still there, it seemed like the nutrition happened more quickly b/c she was the one buying the food and creating the menus, and she was on board with it, and she could just change it. The PA was more of a systemic change than the nutrition for them, so nutrition was easier to do.

1008:
- They were another one that was a mess. I don’t even think that they made any changes. They were really hard to ...I’m not sure how much change they actually made. The times that I was there, I noticed that they had the materials in the classroom, and the teacher did use one dance activity when I was there. I had a really hard time getting a hold of the director, and when I asked about the action plan it was “woe is me, I am just so busy” and it was just not getting done. They did seem to be working on changing their menus, maybe they worked a little harder on the nutrition side. When you go in and you are watching you mostly see PA, which didn’t change. They maybe made more headway in the nutrition part.
- HELPED? They really seemed to need a lot of hand holding. When I could actually get down there and meet with them and show them the materials, they seemed to really respond well to that...and when I went and sat with her and helped her to write the action plan, they definitely responded more if I was sitting there holding their hand than if they had to do it on their own.
- HINDERED? They seemed like they were overwhelmed all the time...but it was really small, only like 3 classrooms, so I never knew why they were so overwhelmed. It seemed like outside influences that were unapparent to TA. Lack of self-motivation. If I was there putting the fire under them, it was like, oh ok, but between visits and between sessions, that self-motivation wasn’t as apparent.
- N v. PA? nutrition was something they spent more time working on. I think that nutrition was the area that they probably made more change.

1013:
- They were wonderful to work with. They made lots of changes in both areas. They have very strong leadership and I think they had more buy-in by their staff. It is a smaller center, so it is easier for them to see what is happening and oversee the changes. The leadership team was really committed to making it happen.
HELPED? I think they had had some prior Nemours training, they already had 5-2-1 almost none banner hanging up. They are a lab school, they had a higher self-expectations, b/c they know that they need to be a model program for the high school interns. They were willing to make the changes to make that happen. They had a higher level of professionalism. Their outdoor play space...Kathy really did a great job bringing more stuff in (stuff from the POEMS), she looked at the POEMS and figured out ways to bring items outside. Does a lot of garage sale-ing.

HINDERED? No, I don’t think so. I think they came a long way.

N v. PA? no, I think It was equal. K. and M. really had their hands in planning the menus and cooking the food, so could make the changes right away and they could oversee the physical changes as well. They equally went hand in hand.

1019:

They ...I don’t think ...they had already had a high baseline because of the T.s already being involved in the program. I think that they probably made more structured PA in the classrooms, so that came along. I don’t think that they really were able to directly impact their menus (T. top down). They were already pretty good menus because T. had already been involved in the program. The problem with them was that the educational specialist that I had been working with left in May, so when we came back before the 4th session, they were really clueless as to what was going on and she hadn’t left any action plan information. She left and hadn’t followed through on anything. After a couple of extra TA visits, they got back on track and were able to make changes.

HELPED? No, I think that the extra TA visits helped but because there was a change in administration, they needed some extra hand holding to get them back on target and fill them in on the information.

HINDERED? With the nutrition, it came from corporate and they didn’t have direct control of the changes. And staff changes.

N v. PA? just the N top down.

Any final thoughts?
I think that even though there were some negative issues that came into play, I think a lot more change is able to be accomplished with the TA visits than if they were just going to the 5 sessions and coming back. The outside forces hindered some things, but the gains that happened were because of the support that they received from the visits.

TA5’s interview responses
1005:
- It was huge that their director was very motivated, committed to making the changes. She provided great leadership. She herself came to each learning session and brought two staff, team. She is also the chief cook, and could make overnight changes in recipes and menu changes. She became pretty inventive to using yard sales for equipment purchases for the playground. She read, all the materials we put out there, she really got into Ray Pica’s book and that sort of thing. She became really interested in the theory behind why we should be doing these things and how the children benefit. She really got into it herself. She became a champion and created story boards that have been used at national conferences. She was interviewed and photographed by the News Journal. She wasn’t doing it for the recognition, but for caring about what was best for the kids. She is older, it is a very small center with low resources, she is probably getting ready to turn it over to someone else, she really surprised me.

- Hindered?? Can’t think of anything specific. One thing she is not great at is engaging her parents. She would put up storyboards and posters and handouts, but she was not going to have a parent meeting. She communicated with her parents, and knows the parents, they know her, there is a cordial relationship, but she is not going to do a home visit, not that level of family engagement.

- Nutrition v. PA?? NO, because she was the cook she could quickly make nutrition changes. She did all kinds of tastes tests with the kids (i.e. mango) and have the kids sample them and rate them and graph how many kids liked what. For PA, they have a good-sized outdoor play space that is mostly sand, and they created an obstacle course around the perimeter...run 3 times around the perimeter and different things to do around the path.

** ALL of the centers improved their outdoor space due to their $500 outdoor equipment grant and definitely improved their outdoor play b/c of that equipment.

1006:

- They did not send their director, they sent their curriculum coordinator. I wonder if they might have been more able to make changes if their director had been involved (same for head starts, not the director, the curriculum coordinator...if we had it to do again, I would say that they have to send their director...important that the leadership needs to be sent, involved in the process). They initially sent two people (curriculum coordinator and an experienced teacher) and then the teacher had illness, and stopped coming. That was a change and that was not ideal. To have a consistent leadership group would have been helpful. They had a significant event (major licensing violation) during the year, they had been hoping to advance to star 3, and then had to go back to ground zero. They are up at E. community center and
have access to a full gymnasium (they had already participated in a PA training, Catch). They installed new outdoor play equipment outside in the fall (long term plan) and this was a plus and a minus. They tended to think of the moveable parts as indoor activities and not bring them out so much. The teacher got busy with tasting activities and had them plant seeds and grow something in the classroom. A new thing for them to be trying out.

- N v. PA? their N could do with improving. For holiday celebrations, they tended not to serve the healthiest foo din the world. Ran into parents that were “what do you mean I can’t send cupcakes”.
- Helped? Already talked about it.
- Hinder? Leadership and staff consistency.

1007:
- Yeah...I would say it was sporadic. They are a small center. They are a for-profit center (it is a business). They have two centers, only one of which was technically enrolled in the training, but trying to spread the information between the two. It is a mother and son running the program. I think mom is trying to retire. She is committed to making changes to the curriculum and trying to get her staff on board with family style meals was challenging, got some resistance. Again, she is the cook and she was able to make recipe and cooking changes easily. Her son serves as a teacher and bus driver, and therefore they always came late to the learning collaborative and had to leave early for him to get there and drive the bus. This was a challenge b/c they were not getting the full time of the learning collaborative. They are a center that really embraced the new resources (balls, balance beam), equipment made a real difference for the kids’ physical activity level.
- N & PA? they could make nutrition changes pretty quickly, but getting their staff on board with some of the PA stuff was more difficult. They did trainings with their staff with our videos, but they had difficulty getting their staff to attend their trainings. Folks at the 1005 did their staff trainings on a Sunday morning, 1007 tried to do it at the end of the day and did not get 100% attendance.
- Helped? Equipment got kids active on playground, they had limited loose parts on the playground. Other loose play equipment was pretty limited, indoors they set up a hop scotch map (as part of CCLC).

1018:
- Umm, again, those two centers did not have their directors directly involved in the project. 1018 had a brand new site director, and I tried to get her involved. Their curriculum coordinator was a real cheer leader. Provided good ideas and energy and pulled staff in. Having the loose parts on the
playground made a real difference for them. They were champions for giving kids ready access to drinking water. On a cart, so they could roll it out onto the playground. Now kids can self-serve drinking water.

- HELPED? Leadership. This curriculum coordinator was very enthusiastic, couldn’t help catching her enthusiasm. You’ve got to have a champion.

- HINDERED? Not having their site director directly involved. She was not an obstacle, but it helps to have that leadership process. One thing they were weak in was parental engagement...they targeted this and set up zumba class and setup a Saturday morning walk with healthy breakfast for their families. They changed what they were serving their families at family meetings.

T. as a whole instituted a family food policy at start of year.

Follow-Up Prompt: What was different about the change process for the T. corporation centers? As part of our pilot initiative, we threw $30,000 at these centers (2 were involved back in 2005/2006). The T. overall leader was big into health and nutrition. They had already gotten on board. Some of the T. centers had already been in the pilot, and were being recognized nationally for part of their initiatives. These centers were head start, but not part of T. in 2006 (changed to be T., from another head start group). These centers were kind of on board because T. was on board, but people said that they did not really understand WHY they were doing some of the things that they were doing. They became much more intentional.

1023:

- Again, they had been doing it kinda sorta, but they didn’t really understand why. The menus are all determined by T. Delaware, so they do not really have nutrition discretion. Food is purchased centrally, and then parceled out. They did not have much choice over their menus, but T. is making sure as a whole that they are meeting cacfp guidelines. And they are already eating family style. The loose parts made a big difference...first time there might have been a ball, they were climbing and sliding on equipment. They have a nice path, but did not initially take out their trikes to use it. The second time I went the teachers were much more interactive with the kids, the directed physical activity...getting the teacher involved in the active play of the kids was a big change and getting loose parts out on the playground.

- HELPED?? Getting the teachers to be more tuned in, aware, intentional in their interactions with the kids. The trainings (S. did a good job) of engaging the teachers in the training.

- HINDERED? Nothing specific, other than that their director was not directly involved. They have parent councils, but they did not have great turn out for some of their parent events.

- N& PA? the nutrition is determined centrally, they had already made changes there, so there wasn’t a lot to do. They had more opportunities to make changes with the kids getting physically active.
REITERATE: importance of leadership and having at least one enthusiastic advocate. I think that is really key. And having all the tools and resources. We threw a lot of stuff at them, I am a little concerned we may have thrown too much. But they can pick and choose, hoping that they are reading and opening the materials that we gave them.
Appendix B

INSTITUTIONAL REVIEW BOARD APPROVAL

DATE: November 1, 2011

TO: Mary Sonnenberg, M.Ed.

FROM: University of Delaware IRB

STUDY TITLE: [212827-2] Taking Steps to Healthy Success: A Child Care Learning Collaborative to Promote Healthy Eating and Physical Activity

SUBMISSION TYPE: Amendment/Modification

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: November 1, 2011

REVIEW CATEGORY: Exemption category #1

Thank you for your submission of Amendment/Modification materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or jberg@udel.edu. Please include your study title and reference number in all correspondence with this office.
DATE: February 1, 2011

TO: Mary Sonnenberg, M.Ed.
FROM: University of Delaware IRB

STUDY TITLE: [212627-1] Taking Steps to Healthy Success: A Child Care Learning Collaborative to Promote Healthy Eating and Physical Activity

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: February 1, 2011

REVIEW CATEGORY: Exemption category # 1

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Judy-Lynn Berg at (302) 631-1110 or jbergl@udel.edu. Please include your study title and reference number in all correspondence with this office.