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EVALUATION OF A HEALTH ENVIRONMENT TRAINING
FOR CHILDCARE PROVIDERS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology:
Child Development

by
Brianna Nicole Uhlhorn

June 2010

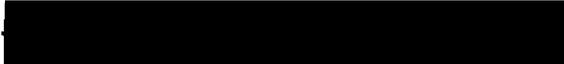
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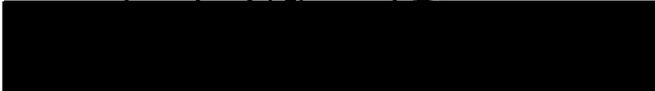
by
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June 2010

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Date

ABSTRACT

In the last decade, obesity rates have doubled in children, leading to such complications as Type 2 diabetes, heart disease, and asthma. Elementary school programs address the problem after children have already formed eating habits that might be detrimental to their health. It is critical to address the importance of healthy habits at a younger age. Preschool is a currently underused setting to provide this essential education. Healthy Habits for Life is a one-hour training for preschool children providers given by the Riverside County Nutrition Services, Department of Public Health. This preschool provider training is designed to make preschool providers aware of their role in preventing childhood obesity, and to instill good nutrition and physical activity related values in young children. This study is a short-term evaluation of the effectiveness of the Healthy Habits for Life training. A pre and post-test survey was administered before and after the training to see if preschool providers made any of the suggested changes. This study could bring to light the need for similar one-time trainings, or a more ongoing, intense intervention. The evaluation of Healthy Habits for Life

could be a valuable tool to jumpstart the current movement to make preschool health policies more consistent and universal within the state of California. The importance of implementing preschool childhood obesity prevention trainings, the critical evaluations of such programs, as well as how the ecological model is related is discussed.

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CHAPTER ONE

INTRODUCTION

Children in the United States are not physically the same as they were thirty years ago. Over 16% of children between the ages of two and 19 are considered obese (Institute of Medicine, 2009). Over the last three decades, the diagnosis of obesity in young children between the ages of two and five has more than doubled from 5% to 12.4% (Institute of Medicine, 2009). Roughly, one out of every four of those young children has a high Body Mass Index (BMI). Due to the current projected trends in weight gain, the Department of Health and Human Services (2000), the Centers for Disease Control and Prevention (2004), as well as the Council on Sports Medicine and Fitness Council on School Health (2006) have proclaimed the prevention of childhood obesity as an urgent national healthy priority (Brown, McIver, Pfeiffer, Dowda, Addy, & Pate, 2009). Not only is the obesity epidemic financially devastating to the nation, but this preschool generation might be the first generation that will not have a longer lifespan than their parents, causing a drastically reduced quality of

life due to highly preventable diseases (Center for Disease Control, 2009).

There are many programs aimed at reducing the weight of children across the nation; however, few programs target prevention. School-based programs that target promotion of consuming more fruits and vegetables or reducing heart disease have been widely inconclusive in their effect on combating childhood obesity (Warren, Lightowler, Bradshaw, & Perwaiz, 2003). Children form eating and physical activity habits early on in life; therefore, having a program in place in a preschool setting that targets these lifestyle habits could prove to be beneficial and cost efficient (Philippas & Lo, 2005).

Currently, there is an alarming lack of physical activity and nutrition related policies being regulated in the preschool environment (Kaphingst & Story, 2009). Early nutrition and physical activity education is a critical component in the fight against childhood obesity. In the year 2001, almost nine million children participated in a nonparental childcare setting at least once a week. Out of children ages three to four years old with working mothers, almost 60% participated in center

or home-based care (Kaphingst & Story, 2009). In a recent study, childcare was shown to have a protective effect on Latino children and the potential for them to become obese by the time they began kindergarten (Maher, Li, Carter, & Johnson, 2009). Childcare settings can be a powerful tool in combating childhood obesity when policy interventions are implemented at this critical time of development in a child's life (Maher et al., 2009).

Obesity: Definition and Epidemic

Obesity Definition

Almost one third of youth today are considered overweight or obese, equivalent to more than 23 million children and teenagers (Robert Wood Johnson Foundation, 2009). Childhood obesity is defined by having a body mass index (BMI) that is at or above the 95th percentile range for children equal in age and sex. A child is considered overweight if they are above the 85th percentile, yet below the 95th percentile (Center for Disease Control, 2009). Body mass index is a calculation of height and weight in relation to one another. Children's BMI calculations are not determined through the same BMI categories as adults. Body composition in children has

exclusive change rates and gender specific dynamics; therefore, specific age and sex classifications are used. The number of children between the ages of four and 11 that are obese has quadrupled in the last four decades resulting in a mounting epidemic. Overweight children are more likely to become obese adolescents. An obese teenager has almost an 80% chance of maturing into an obese adult. Complications to which obesity can contribute include heart disease, Type 2 diabetes, asthma, sleep apnea, joint problems, some types of cancer, and social discrimination (Center for Disease Control, 2009). Sadly, the next generation of preschoolers might be the first to have a shorter lifespan than their parents (Center for Disease Control, 2009). Childhood obesity cannot be effectively treated at this time; therefore, preventing obesity at an appropriate age and instilling proper nutrition habits may be the best options in fighting this epidemic (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). Children begin to form their eating habits early in life and they learn from family, friends, and teachers how to take care of their bodies.

Obesity Epidemic

Childhood obesity is a growing epidemic among today's youth. Currently, being overweight is the most commonly diagnosed medical condition for children (American Academy of Pediatrics, 2004). Most children that are entering school have already formed a foundation for eating habits, and poor habits will generally persist for the rest of their lives (Skinner, Carruth, Wendy, & Ziegler, 2002). A recent study in Sweden was conducted among well-educated parents in an urban community regarding childhood obesity. This study found that 18% of four-year olds were overweight or obese (Garemo, Lenner, & Strandvik, 2007). This highlights the fact that this epidemic is not specific to children of low socioeconomic status, or minority groups. The study by Garemo et al. (2007) reiterates the fact that genetics alone cannot attest to the rising number of children that are overweight. The increase in calorie consumption and a decrease in energy expenditure play a significant role in obesity (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). Unlike genetics, the amount of calorie consumption and physical activity can be regulated, in turn preventing obesity before it is an issue. Currently, there are no regulated

food or physical activity policies in place within the state of California that indicate what types of foods should be limited from a center or how much physical activity should be conducted throughout the day (Kaphingst & Story, 2009).

Intervention and Preschool Prevention

Currently, emphasis on nutrition education and physical activity has been placed on school-aged children with mixed results. At this time, consistency in results demonstrating BMI reduction, increased physical activity and fruit and vegetable consumption is not seen among programs that target children over the age of five. It is becoming evident that nutrition education needs to begin before children become obese, and while they are still forming their eating habits. Story (1999) conducted a review regarding the research on school-based obesity intervention programs and concluded that results are relatively meager. In one study that was reviewed, two schools in Nebraska were matched on student ethnicity and socio-economic status (SES) with one group being used as the control group and the other receiving the intervention. There was no difference in obesity

prevalence between the intervention school and the control school after two years. Story also went on to state that interventions that targeted younger children rather than adolescents were more promising (1999). Her extensive literature review concluded that the value of programs that target prevention has yet to be established due to the lack of early prevention programs. In a similar review of weight gain interventions, one study suggested that junior high school girls showed a reduction in the rate of obesity while boys did not. Out of five similarly inconclusive weight gain interventions, it was noted that prevention strategies that encourage adopting healthier lifestyles from the start, including being more physically active and making better nutrition choices, hold the greatest promise to combat the obesity epidemic (Fulton, McGuire, Caspersen, & Dietz, 2001).

Another potential concern among school-based obesity interventions is the social stigma that is attached to the program. Children who participate in obesity interventions are concerned with labeling, bullying, and social disgrace (Story, 1999). These negative effects can cause psychological damage that could be equally detrimental to a child's health. Many overweight students

who participate in programs aimed at weight loss are fearful of being ridiculed and embarrassed (Story, 1999). A more ideal environment would be to target every child at a young age and inform them on making better decisions about health that would carry on with them throughout their lives.

The preschool setting is an ideal environment to begin instilling healthy lifestyle habits. In the year 2001, nearly 8.6 million preschool aged children were placed in a childcare setting (Kaphingst & Story, 2009). More mothers are choosing to work and are placing their children in some type of childcare for extended hours of the day. In 2002, 60% of mothers in the nation were employed. Seventy percent of those mothers worked full-time and 30% worked part-time. Children spend an excessive amount of time away from their parents while in childcare. Forty percent of preschool age children spend over 35 hours a week in a childcare setting (Kaphingst & Story, 2009).

Preschoolers who begin to develop healthy lifestyle habits early are more likely to better manage and control nutrition aspects later in life (Warren, Henry, Lightowler, Bradshaw, & Perwaiz 2003). In addition,

addressing how and why it is important to make better food choices while children are in preschool can assist them in effectively controlling obesity. In an evaluation of a pilot study on a school nutrition program aimed at five to seven year olds, students were successful in eating more fruits and vegetables, and had better retention of nutrition education than a control group that did not have the nutrition program (Warren et al., 2003). They also noted that family participation in a nutrition program did not serve as an added benefit for the children involved. Therefore, healthier standards and consistency in the preschool setting can largely contribute to the fight against obesity even when parents are not completely involved in the intervention. A program that targets the children and their teachers can make a difference.

Health Environment

An important factor to consider in school-based intervention and preschool prevention is the nutritional/health environment surrounding the child. A child's experience and food role can greatly shape their eating habits (Satter, 2005). In addition, the food available,

sold, or allowed on school grounds has a direct effect on the child. Other potential causes for concern within a child's nutrition environment are fundraisers, classroom parties, advertising around schools, and using food as a discipline or a reward (Story, 1999). Potentially detrimental practices can take place in the school setting, including having fundraisers that consistently feature candy, cookie dough, and various sugar or fat laden, high calorie food that is essentially purchased by parents and family members and served in the home. In addition, snacks and parties that feature various cakes, cupcakes, candy, chips, and other "party food" on a regular basis can cause children to associate celebrations with these particular types of foods. Children may, in turn, never explore other nutritious choices; therefore, the consumption of "party food" can have a direct effect on weight management (Satter, 2005). Using food as a reward for good behavior in the school setting or withholding food as a form of discipline can also provoke damaging effects that will carry on with the child throughout their life. It is essential and ideal to provide a stable, positive nutrition environment for the

child beginning in preschool that will continually evolve throughout kindergarten and grade school.

The physical activity environment is also critical. Children can spend up to twelve hours a day in a preschool setting, so it is essential to provide opportunities for children to be active. The National Association for Sport and Physical Education (NASPE) recommends that preschoolers are involved with structured physical activity for at least 60 minutes a day, and an additional 60 minutes of free play (NASPE, 2010). If the preschool environment is not conducive to this activity level or has discipline policies that involve restriction from physical activity, then a child might not reach the daily recommendations. For instance, if a child is playing on the playground during free play and accidentally kicks a ball over the fence, a childcare provider could discipline a child by having them "sit out" for an extended period of time. This in turn, provides a deficit in the child's daily physical activity and if the same child is continually disciplined in this manner, could have a larger effect.

Policy

Nutrition standards in preschools that are set and strictly reinforced could be a hopeful solution for the prevention of childhood obesity. The regulations for food policies in a childcare setting are not the same for elementary schools; in fact, there is a lack of information about state policies regarding food consumption. Elementary schools that participate in the federally assisted National School Lunch Program (NSLP) are required to follow established nutrition guidelines. For purposes of this paper "policy" is defined as any written statement, or course of action outlined in the preschool center or home daycare's enrollment packet. A "guideline" is defined as activity or practice implemented by the preschool center or home day care on a consistent basis that could include an association with a formal policy (Trost, Ward, & Senso, 2010). Kaphingst and Story (2009) recently conducted a study reviewing the licensing regulations regarding nutrition, physical activity, and media use policies that would assist in the battle to prevent obesity. They found that only two states, Michigan and West Virginia, require childcare centers to follow the *Dietary Guidelines for Americans*,

and only twelve states have licensing regulation policies that prohibit or limit the amount of certain fatty foods or sugar-laden drinks that are allowed in a childcare center. The number of states that implement this policy for family daycare providers is even smaller. Currently, there is not one state in the nation that requires childcare facilities to meet explicit nutrient based standards. This is alarming considering that preventing childhood obesity begins at an early age, and is less expensive, more effective, and easier to do than treatment (Warren, Henry, Lightowler, Bradshaw, & Perwaiz, 2003).

Policies could prove to be an effective way to combat childhood obesity. In a current review by Sallis and Glanz, (2009), policy issues relating to nutrition and physical activity could in turn improve diet and physical activity practices. The most promising strategies reviewed were related to public health strategies that sought to identify and implement best practices in regard to obesity (2009). Preschool policies are a relatively unexplored field of study that could prove to be promising in order to improve the health of today's youth.

Healthy Habits for Life Health Environment
Training Workshop for Childcare Providers

Healthy Habits for Life was a training program designed by Riverside County Department of Public Health, Nutrition Services to assist in the prevention of childhood obesity based on the health environment in a preschool setting. The educational workshop revolved around how childcare providers could take into consideration the factors in a preschool health environment that contribute to childhood obesity. The Healthy Habits for Life training aimed at getting the preschool providers to consider changing certain aspects and policies within their center to be more health conscious. The training was provided free of charge to all licensed childcare providers that work with preschool age children within the County of Riverside. Providers received one-hour of professional growth, and were given a supplemental Sesame Workshop® based curriculum developed by Nemours Corporation. The curriculum provided the childcare provider with a fun way of doing activities, arts and crafts, recipes, and songs to reinforce the message of living a healthier lifestyle. Sesame Street® characters model this behavior. The

Healthy Habits for Life program was funded by a one-time grant provided by First Five, Riverside, and matched by Riverside County, Public Health. At the time of the Healthy Habits for Life training, providers were given supplemental materials such as recipe books, activity books, balls, music CD's, tricycles, water toys, parachutes, soccer goals, basketball hoops, bean bags, and various other physical activity equipment and nutrition related incentives. The training served as an informative session with preschool providers in order to bring to light current trends in obesity, contributions to childhood obesity, and what childcare providers can do within their health environment to help prevent obesity in the young children whom they encounter. Childcare providers were informed about policy changes that could restrict certain types of unhealthy foods into their center and the harmful practices that could inadvertently cause a negative food association among children. Adult and child food roles were also discussed, as well as the recommended physical activity guidelines for preschool children with ways to incorporate movement into their daily routine.

This project assessed the short-term changes that were made among childcare providers after attending the Healthy Habits for Life training. Food and physical activity issues cannot be fully addressed without consideration of an ecological model. It was expected that the Healthy Habits for Life training would have had a positive impact within the preschool setting by informing and empowering childcare providers to make important health-related changes in their centers. Examples of expected positive changes include: development of written policies regarding foods brought into the center or home; no longer using food as a reward, bribe, or enticement for children; not restricting physical activity as a form of punishment; and implementing mandated policies regarding daily physical activity requirements.

Importance of Evaluation

The continued evaluation of programs such as Healthy Habits for Life is especially significant during the current economic crisis. Evaluation is imperative for the function of public health agencies. It is so critical that evaluation is considered one of the top ten

essential public health services and should be utilized when planning any public health program (Jack, Mukhtar, Martin, Rivera, Lavinghouze, Jernigan, Siegel, Heath, & Murphy, 2006). Currently, budgets are being slashed in areas such as public health and prevention. Without evidence that public health is making improvements in the quality of life for people residing in Riverside County, more programs that are vital will become extinct. Evaluation is embedded in the role of accountability. It also is an important component to inform appropriate allocation of the limited amount of federal funding that remains (Jack et al., 2006). In a recent keynote address given by Katherine Pinch (2009), she stressed the following about the importance of evaluation research:

Certainly evaluations can be used to enhance practice within a particular organization or setting, but well-designed evaluation research can also be viewed by other agencies and evaluated for applicability. It can be used to influence public perception and policy decisions, and to give impetus to theory building and future research studies.

(p. 392)

Evaluation research is an essential tool to advance progress towards a common goal. In this case, the evaluation of Healthy Habits for Life could be used to sway public policy decisions regarding nutrition and physical activity regulations, and help to structure new mandatory policies that all licensed preschool providers must uphold. If the program is considered a success, then emulating this type of prevention could prove to be beneficial to the public, sparing the costly expense of treatment. In 2006, overweight, obesity, and physical inactivity cost Riverside County over \$1.5 billion in health care costs and lost productivity (Chenoweth & Associates, 2006). In California, the overall cost was \$41.2 billion. Chenoweth and Associates (2006) predicted that if this trend continues, by 2011 the total costs for the state of California would exceed \$52.7 billion. They also concluded that a small improvement of 5% in the prevalence of obesity would result in savings of almost \$2.4 billion per year. Preventing obesity at the preschool level with policy changes and better health environment education could save an enormous amount of funding county and statewide.

If policies are changed in preschool centers and home daycares, it would be a good indicator that programs such as Healthy Habits for Life are effective at providing education and incentives towards making the preschool environment more conducive to preventing childhood obesity. Currently, there is a lack of data about the effectiveness of programs designed to prevent obesity at an early age (Warren, Henry, Lightowler, Bradshaw, & Perwaiz, 2003). A recent study by Kaphingst and Story (2009) on current licensing regulations in preschool settings across the nation found most snacks served at childcare centers were insufficient in providing fresh fruits and vegetables for children. They also concluded that the dietary quality of food currently served in centers could be greatly improved. Kaphingst and Story further suggested that if the individual state regulations were strengthened, it would serve as a critical asset in improving the overall health of children placed in childcare settings. If the Healthy Habits for Life training proved to be successful at educating providers about the importance of fighting childhood obesity, then this program should be emulated throughout the state. It also would be beneficial to

improve state regulations for licensed childcare providers in order for them to be held accountable for what food children are consuming while under their care. Physical activity requirements also should be mandatory for all providers in order for children to be allotted time to expend the energy needed to combat weight gain and meet the current NASPE guidelines. It is essential to evaluate programs aimed at preventing childhood obesity in order to shape public perception and policy changes (Pinch, 2009).

Summary and Hypotheses

Obesity is costly to our nation, physically and economically. Cancer, psychological problems, and shorter life spans are just some of the ramifications of this preventable disease. The economic costs are astounding. There is evidence that preschool prevention programs can prove to be promising in the fight against obesity. However, without the accountability provided by careful program evaluation, there is little hope of sustainability for programs such as Healthy Habits for Life.

In this study, preschool centers received a health environment pre-test survey that served as a baseline to assess their current guidelines and policies on the food that is allowed or served at their center, as well as current physical activity issues. A post-test was administered after three to six months to assess if any policy changes were addressed, or if guidelines were improved upon. Using the data obtained, the following hypotheses were tested:

Hypothesis 1: Globally, nutrition environment post-test scores will be higher than the pre-test scores.

Hypothesis 2: There will be a difference in the existence of written policies regarding nutrition.

Hypothesis 3: There will be a difference in the existence of guidelines provided to parents regarding food brought from home.

Hypothesis 4: There will be a difference regarding restriction of physical activity as a discipline action.

Hypothesis 5: There will be a difference in the use of food as a reward.

Hypothesis 6: There will be a difference in the existence of written policies regarding physical activity.

Both quantitative and qualitative approaches were used in this study. In addition, we tested the impact of various covariates (control variables) such as teacher education, center vs. home differences, and attitudes concerning perceived obstacles related to nutrition or physical activity policy implementation. Differences pre to post will be tested quantitatively. Qualitative evaluation of written comments and verbal communication from center directors will be used to enhance/enlighten the interpretation of the quantitative findings.

CHAPTER TWO

METHODS

Participants

Almost 800 childcare providers throughout Riverside County were trained on Healthy Habits for Life from July 1, 2009 through December 31, 2009. Centers were for-profit commercial chains, state-funded preschools, or private centers, but they were not affiliated with a school district or a Head Start preschool. All trained providers had to have a current California preschool or daycare license. Riverside County Nutrition Services verified license numbers and good standing status against their preschool center and large home daycare provider database. All centers were located exclusively throughout Riverside County, California. Locations of the cities ranged from Blythe to Temecula throughout the county. Demographics indicated a wide variety of socioeconomic status based on preschool or home daycare location.

Measures

Archival data was used to evaluate the effectiveness of the Healthy Habits for Life training. Code numbers were assigned to participant surveys; therefore,

participants' information remained anonymous. The self-reported survey that Nutrition Services used is attached in Appendix A. The survey was presented in both English and Spanish. For the pre-test survey, there were ten items designed by Riverside County Nutrition Services. Of these items those most relevant to the health environment and those most likely to show change as a result of the training intervention were selected to test the hypotheses. A Likert Scale of "Yes", "Thinking about it", or "No", as well as a space for comments, was provided for responses. To test hypothesis one, survey items 1, 2, 3, 7, 8, 9, and 10 were intended to capture the nutrition environment. Item number 1 was intended to capture nutrition policies (hypothesis two). Items 2 and 3 were intended to capture hypothesis three in relation to food guidelines. Item number 4 was intended to capture hypothesis four, and item 10 was used to capture hypothesis five. For hypothesis six, item number 5 was used. A post-test with the exact same questions was administered through the website Survey Monkey three to six months after the training and pre-test occurred. In addition to the pre-test and post-test items, the post-test contained some additional supplemental items

regarding what types of fruits and vegetables had been served to children within the last month, as well as some specific checklists regarding the current nutrition issues that are seen as barriers in the preschool environment. The supplemental questions included items in a checklist addressed: "Please select the feelings that you have about your child care site". Some of the items included: "Holiday and birthday foods are usually not healthy," Families treat children with fast food, junk food, candy, or chocolate immediately before or after child care," Foods we provide do not offer enough nutritional value (whole grains, lean meats, fresh fruits & vegetables)", and "Our childcare site does not have enough structures or play equipment to keep all children physically active during recess".

Procedures

All data was archival as it was collected as part of a standard assessment and follow-up conducted by the Nutrition Services department for its own management. An application to the Institutional Review Board for California State University, San Bernardino was submitted, and the use of this archival data was

approved. Consistent with IRB guidelines, completion of both the pre and post surveys by all participants was completely voluntary. All participants were treated in accordance with the ethical standards of the American Psychological Association (APA, 2002).

Providers from licensed preschool centers and family daycare centers were solicited to attend the free Healthy Habits for Life training and receive the Sesame Workshop® curriculum. Advertisements were placed on the Riverside County Childcare Consortium website, as well as the First Five, Riverside website. This promoted the training to licensed childcare providers in Riverside County and provided information on what to expect. An incentive of one-hour of professional growth also was offered. Riverside County Nutrition Services also used personal phone calls, personal drop offs of flyers, direct home daycare and center mailers, and general word of mouth to recruit participants in order to distribute the Sesame Workshop® curriculum and train them on Healthy Habits for Life in their facility. Owners and teachers from home daycare centers also were solicited in the same manner and were encouraged to attend a Healthy Habits for Life training set up at various designated libraries

throughout Riverside County. A sample of advertising material is attached in Appendix B. All providers also received a binder format curriculum created by Sesame Workshop®, as well as various physical activity related music CD's, games, toys, DVD's, balls, and equipment, all funded by First Five, Riverside, and the Riverside Department of Public Health, Nutrition Services. All of the participants also received one-hour of professional growth, which contributes towards the 105 hours that is required in order to renew a Child Development Permit.

Three Health Education Assistants from Riverside County, Department of Public Health Nutrition Services created the Healthy Habits for Life training and presented it to childcare providers in their centers, at workshops, seminars, and conferences. The Health Education Assistants traveled to various preschool settings throughout Riverside County to provide the trainings. The one-hour training and free incentives were delivered in the work setting of the childcare providers, or in larger venues that attracted home day care centers. An example of the training material used by a Health Education Assistant is attached in Appendix C. The presentation was done in English or Spanish, depending on

the audience. The lead Health Education Assistant has a Master's degree in Exercise Science, and the other Health Education Assistants hold Bachelor degrees in psychology and are both currently in graduate programs (the researcher was one). A PowerPoint of the presentation often accompanied the training, and a copy was provided upon request.

The training was prefaced with some facts on childhood obesity, why First Five funded the program, and the importance of focusing on preventing obesity rather than exhausting expenses on treatment. Some items that were brought to providers' attention were using food as a discipline or reward, holding fundraisers that sell unhealthy food, having frequent birthday parties celebrated with fattening food, not providing enough physical activity opportunities throughout the day, and how preschool providers are role models for healthy habits -- whether positive or negative. There also was a discussion regarding adult and child food roles, how children play, and the national guidelines for physical activity for children.

The main goal of the training was to have childcare facilities establish a goal for themselves, and to make

at least one change in their center that is more health oriented. The media influence on children's eating habits also was brought to the providers' attention, and they were informed that Sesame Workshop is using the Sesame Street characters to promote healthy habits in children. Michelle Obama had recently recorded a Public Service announcement with Elmo from Sesame Street, reiterating the message that children need to be making healthier choices throughout their lives. Also, several name brands have Sesame Street characters affiliated with their products, and pictures of the characters are in the fresh produce aisle of select grocery stores enticing children to the healthy food.

As a supplement to the verbal presentation and the Sesame Workshop curriculum, Riverside County, Nutrition Services also provided a "Family Fun File" that had resources the provider could share with parents and children. Included were credible health oriented websites, a copy of the preschool nutrition pyramid, and some supplemental handouts about school lunches provided by the National Dairy Council.

Pre-test surveys were administered at the beginning of the trainings. Post-test surveys were administered via

Survey Monkey three to six months from the training dates. An incentive worth over \$15 was awarded to 100 randomly selected participants who completed the post-test.

Data Analysis

An exploratory factor analysis was conducted before beginning hypothesis testing. An exploratory factor analysis was run in order to test for a unidimensional solution for testing hypothesis one. More specific dimensions using single items or paired items were used to test hypotheses two through six. Pre to post-test differences for overall scores or subscales were tested using a dependent t-test. Three variables (food program participant, center vs. home, and education level of participant) were evaluated as potential covariates. These were intended for potential use in repeated measures ANCOVA's.

It was anticipated that there would be an appropriate change in post-test scores from pre-test scores. It was anticipated that more preschool providers would have made progress in changing some of their policies and practices to be more health oriented after

they received the Healthy Habits for Life training. The post-test should suggest that healthy practices and guidelines are now carried out, or at least being considered.

CHAPTER THREE

RESULTS

The sample of childcare providers included 40 from a home daycare setting and 48 from a preschool center. Fifty-seven providers reported that the preschool setting that they represented was a part of the food program. The provider's years experience in childcare ranged from one to thirty-five with the mean being 10.4.

As proposed, an exploratory factor analysis was conducted on items 1, 2, 3, 7, 8, 9, and 10 in an effort to develop a single dimension measure of "nutrition environment" for testing hypothesis number one. The results indicated that these items contained either three or four dimensions rather than one. The Cronbach's alpha for the proposed scale was a dismal .31. Apparently, nutrition environment is not a unidimensional construct. Consequently, an alternative combination of all items reflecting policy or guidelines implementation was tested. A scale based upon items 1, 2, 3, and 6 proved to be unidimensional, and resulted in an acceptable alpha of .74. It is proposed that this scale represents "structured approach to nutrition," and it will be used

to test a slightly revised hypothesis number one. The construct is somewhat more focused than the intended global "environment;" nevertheless, it reflects a relatively broad programmatic approach to "structure" designed to enhance nutritional quality.

The potential value of the three proposed covariates (food program participant, center vs. home, and education level of participant) was evaluated. None were significantly related to the post-test scores of the test variables. Consequently, the proposed ANCOVA analyses were abandoned. All hypotheses were tested using simple pre to post, dependent t's.

Aggregation by center was considered due to multiple respondents from some centers; however, there were only nine centers with more than one respondent, and eight of these had no more than three responses. Consequently, it was decided that a multilevel analysis would not be conducted.

The means and standard deviations for the variables used to test hypotheses one through six are shown below in Table 1.

Table 1. Descriptive Statistics for Test Variables

	Pre-test		Post-test	
	M	SD	M	SD
1. Structure (1, 2, 3, 6)	1.24	.63	1.40	.55
2. Nutr. Policy (1)	1.41	.87	1.62	.73
3. Food Guide. (2, 3)	1.40	.69	1.49	.69
4. Remove PA (4)	.40	.78	.28	.64
5. Reward Food (10)	.51	.84	.19	.56
6. PA Policy (6)	.75	.90	.98	.92

The test of each hypothesis is shown below (Table 2), and illustrated in Figure 1. Hypotheses 1, 2, 3, and 6 were expected to result in negative t 's (post-test scores larger), and hypotheses 4 and 5 were expected to produce positive t 's (post-test scores smaller). All changes were in the desired direction. Four of the six tests were statistically significant. Three of the four significant results produced relatively small effect sizes (Cohen's d 's ranging from $-.24$ to $-.25$). The effect size for hypothesis #5 was moderate in size ($d = -.50$).

Table 2. Dependent t Test of Hypothesis 1-6

Hyp.	r	p of r	Mean Difference	t	p	Cohen's d
1.	.52	<.001	-.15	-2.5	.016	-.24
2.	.51	<.001	-.22	-2.6	.013	-.25
3.	.43	<.001	-.08	-1.01	.31	-.11
4.	.32	.003	.12	1.4	.17	.16
5.	.27	.010	.32	3.4	.001	-0.50
6.	.55	<.001	-.23	-2.5	.016	-0.25

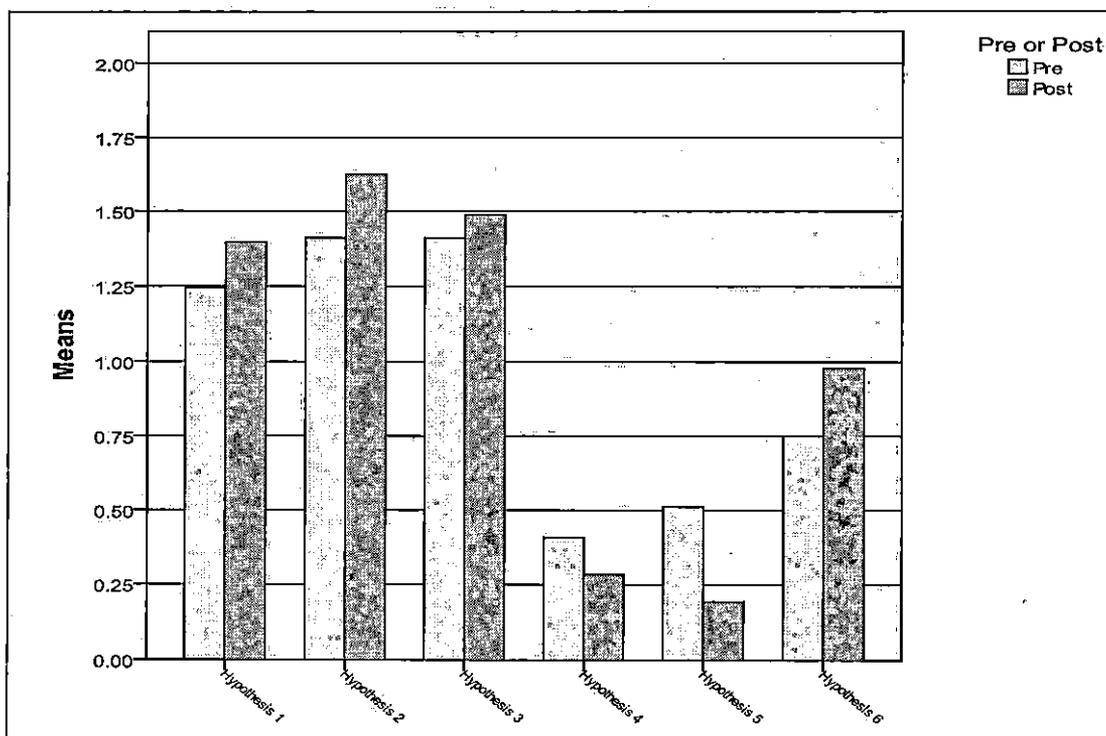


Figure 1. Means by Hypothesis Clustered by Pre to Post Test Scores

Supplemental Analysis Results

The results for the supplemental items are illustrated below in Figures 2 through 6. Each figure is clustered by conceptual relevance. The supplemental questions were meant for expression of extraneous obstacles related to the entire preschool health environment.

Figure 2 below illustrates that most of the childcare providers that responded to the supplemental section observed that Families treat children with fast food, junk food, candy, or chocolate immediately before or after childcare. Figure 2 also shows the large number of providers that felt that their childcare settings do not celebrate with healthy food or offer food with variety or cultural diversity.

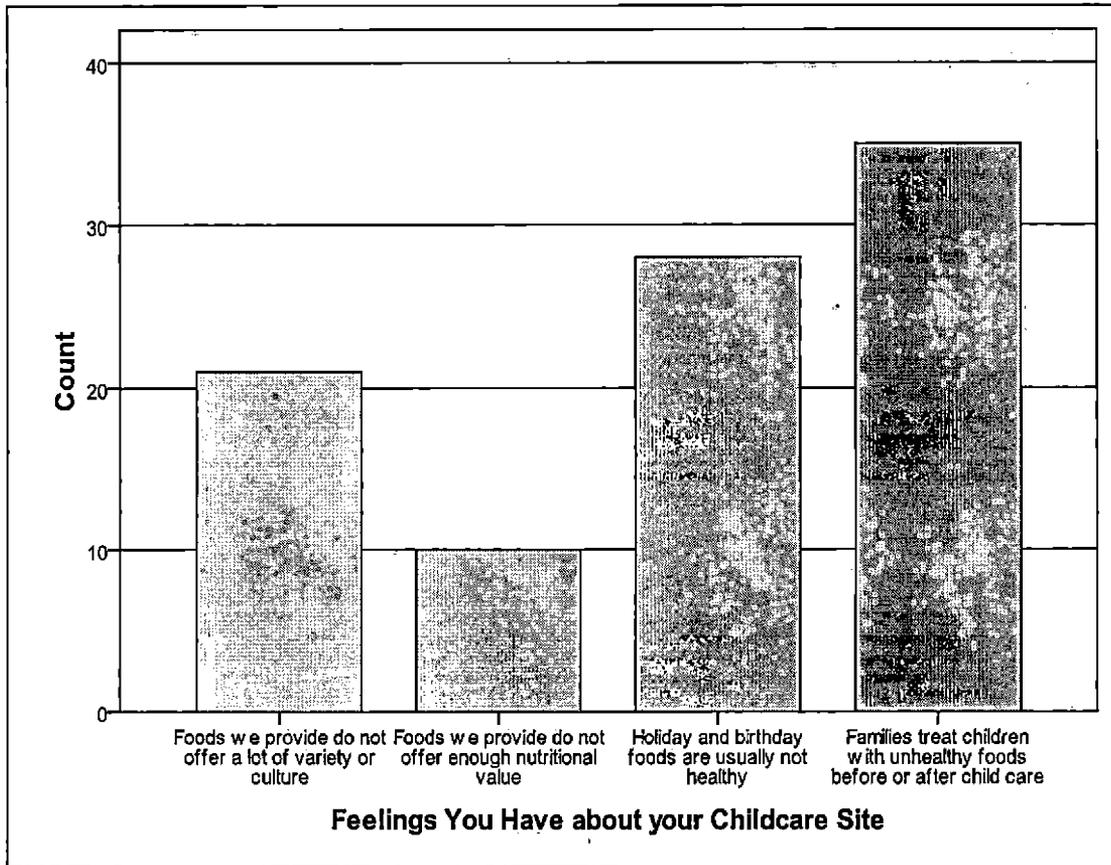


Figure 2. Foods Provided by the Center or Family (n = 60)

Figure 3 below shows the large majority of childcare providers that felt that families need more discussion about healthy foods. Providers felt that families could also use more discussion about fitness and exercise.

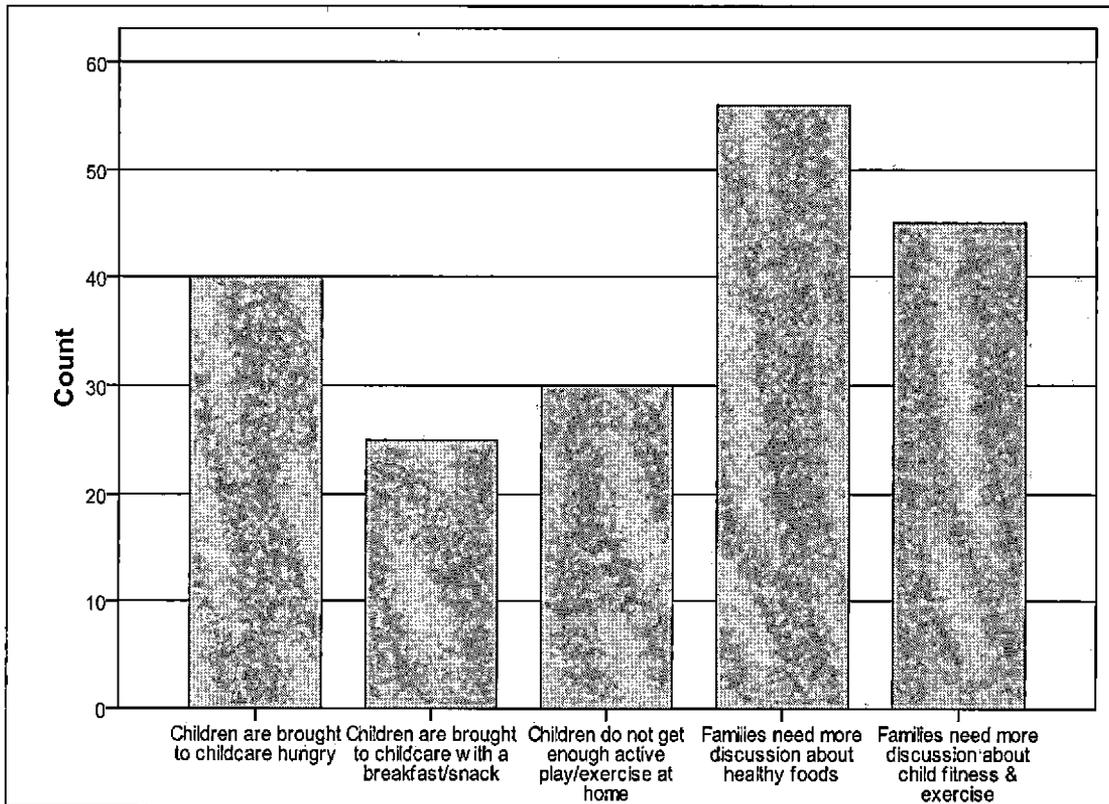


Figure 3. Child Needs and Family Discussion (74)

Figure 4 illustrates the need for more structures or play equipment to keep all children fully active during recess. This is in contrast to the low amount of childcare providers who felt that their coworkers are not interested in teaching fitness skills or leading exercises.

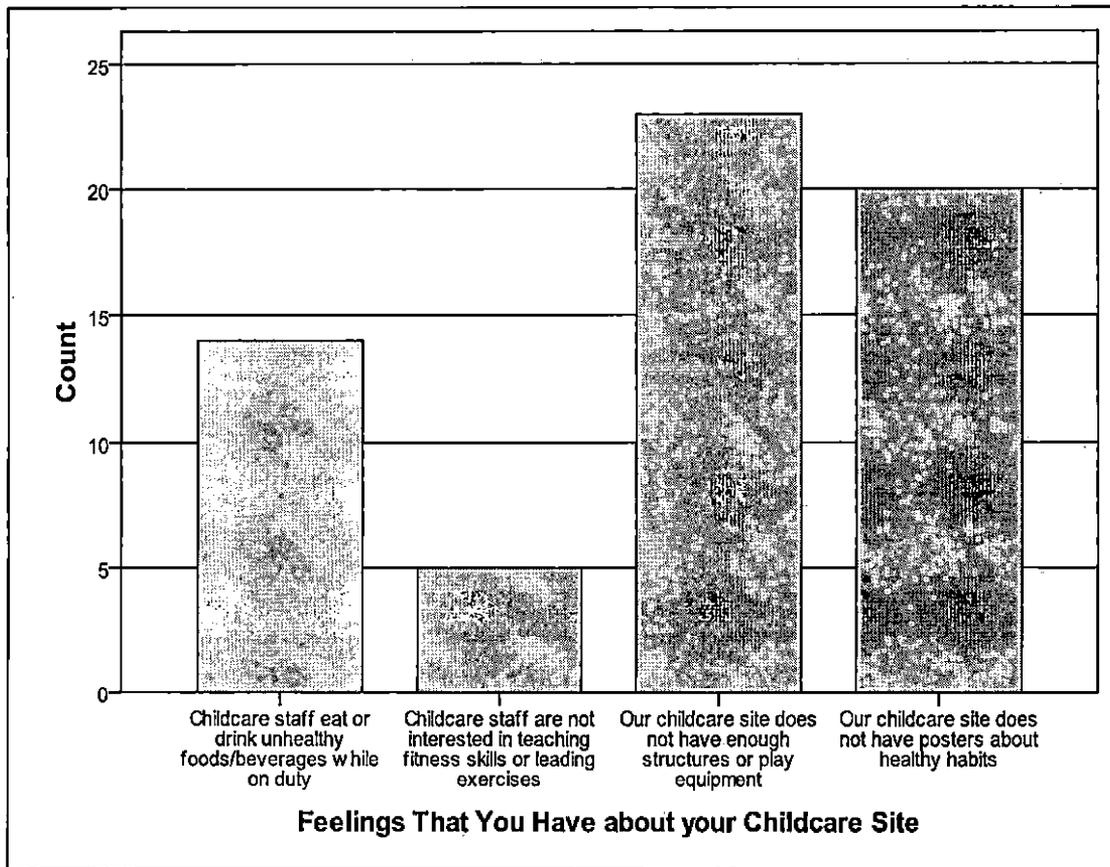


Figure 4. Site and Staff Practices (44)

Figure 5 demonstrates the high level of childcare providers that observed a large amount of parents bring drinks from home for their children that are high in sugar, and most meals and snacks are mainly prepackaged food items.

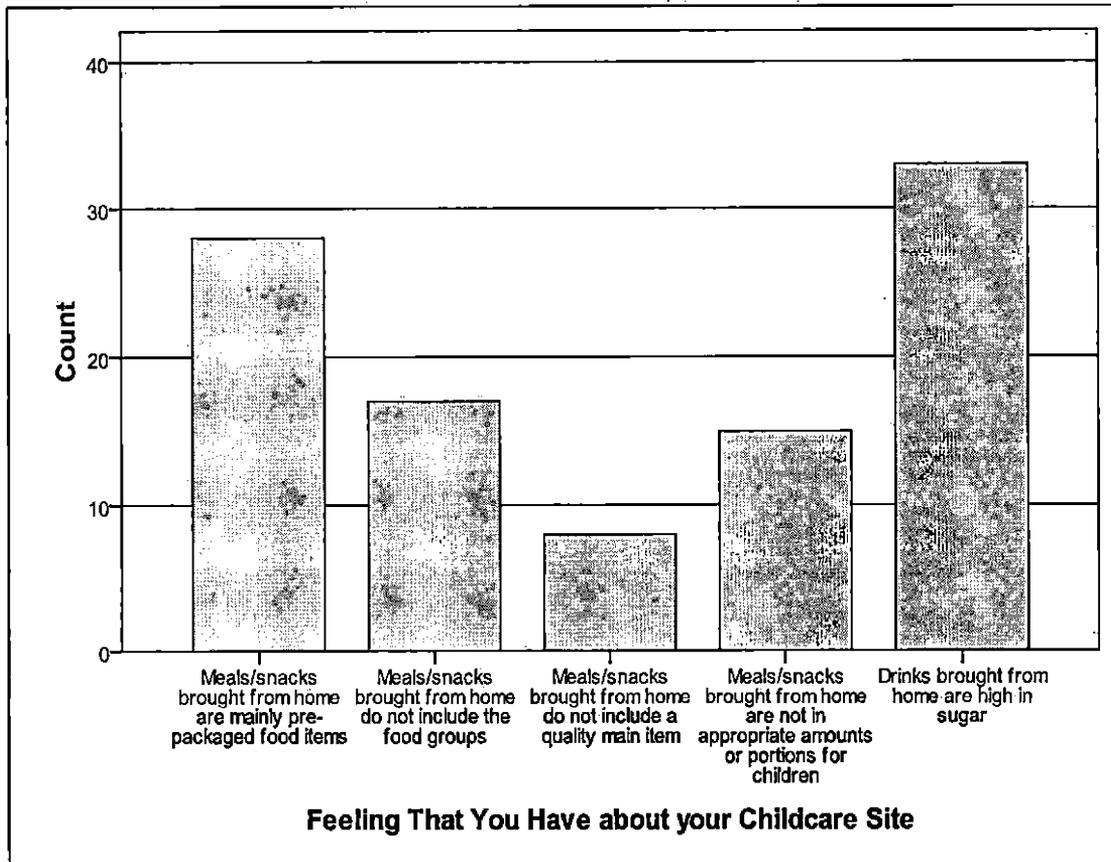


Figure 5. Foods Brought from Home (46)

Figure 6 below illustrates the importance for further discussion to children about fitness and exercise, as well as healthy foods.

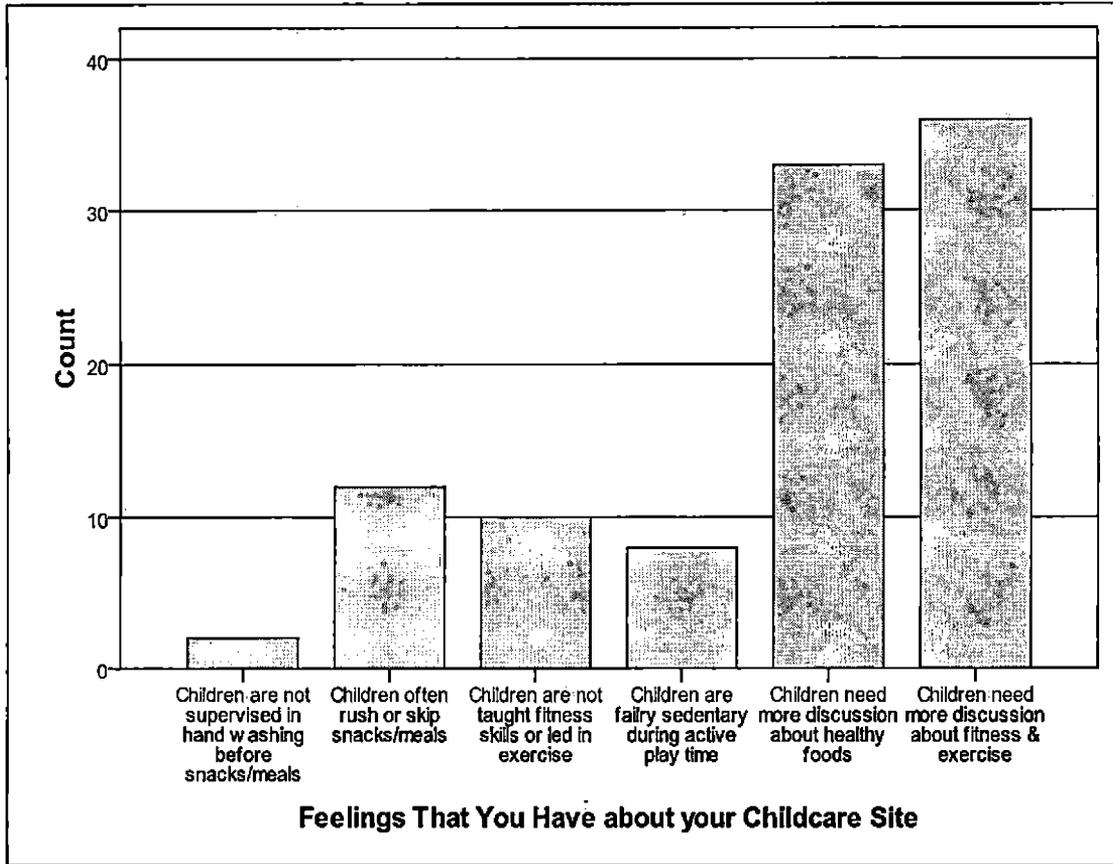


Figure 6. Child Needs (54)

CHAPTER FOUR

DISCUSSION

This short-term evaluation of the Healthy Habits for Life training was shown to be favorable overall. Global policy and guideline changes did occur from the pre to post-tests. There also was a significant difference in the existence of written nutrition policies in place after the training. Changes in food brought from home for lunches or celebrations was not significant, showing that guidelines continued to be loosely regulated after preschool providers received the Healthy Habits for Life training. Physical activity policies were also improved upon after the training. One area that did not see a significant improvement was the difference regarding restricting children from physical activity as a form of discipline. This might be due to the fact that "time out" is seen as short-term process. However, typically the same children get disciplined consistently and the accrued minutes of remaining sedentary could make a negative impact on the child's physical activity level. There was also a significant difference in the childcare provider use of rewarding a child with food or candy.

This is a promising finding given that using food as a reward can be an easy practice to adopt, and a harder habit to break.

The preschool health environment is a relatively new field of study for the promotion of well-being in children. Policy development and establishing guidelines in regard to physical activity promotion and nutrition practices could prove to be beneficial in the fight against childhood obesity. Emerging research is only beginning to scratch the surface of such benefits. Few policies are in place regarding the amount or type of physical activity that children should be practicing in preschool. Currently, there is an enormous amount of variability amongst preschool centers in relation to physical activity levels (Troost, Ward, & Senso, 2010). In a study regarding physical activity in preschoolers, 32% of the variability in moderate to vigorous exercise was accounted for by center or school (Pate et al., 2004). Due to the large variability between preschool centers in regard to the quality and quantity of required physical activity opportunities, it would be logical to implement policies to regulate beneficial behaviors for all children in preschool care (Troost, Ward, & Senso, 2010).

Due to the design of this study there were some validity issues. Construct validity might be taken into consideration depending on how clearly articulated the Nutrition Services survey was stated. It appeared as if some providers were unclear on the exact interpretation of the questions. When questioned, the participants were asked to interpret the survey to the best of their ability; in turn this might have caused a variation in expected answers. The survey questions might have been too vague or not extensive enough, and may bring up reliability issues. Experimenter effects also might have been an issue when participants filled out the pre-test survey because the Health Education Assistants could have been viewed as imposing figures due to their positions at Nutrition Services. Some providers might have falsely believed that the Health Education Assistants were there to regulate the childcare food program and possibly revoke any funding; in turn answering the questions on the survey to reflect what they felt was appropriate. The Nutritional Food Program is a separate entity for childcare providers' that is highly regulated and provides funding for meals served throughout the day. During the initial advertising stage, Public Health

Nutrition Services had a difficult time distinguishing themselves from the program, and some initial trepidation was felt until the purpose of the workshop was clarified. Some providers might have felt uneasy during the pre-test because the purpose of the workshop was not clearly defined at that point. Future educational campaigns should consider the source of information, and remain as neutral as possible in order for providers to feel comfortable in disclosing discrepancies among their preschools.

The post-test could also succumb to experimenter effects because the participants were already familiar with what the educators would like to see happen within the preschool setting after listening through the workshop, and answered accordingly. Another validity issue of the post-test survey is that it was administered over the Internet. Not only did this limit the amount of responses due to Internet accessibility, but it also was highly unregulated so there was no way to know if the participant who actually engaged in the workshop actually completed the survey. However, we felt that this risk was minimal. Childcare providers who had access to a computer might have been considered a unique group in themselves,

because they could afford Internet services. Some small home daycares might not have found the time to answer the survey online, or might not have an e-mail address or access to a computer at all. A large amount of childcare providers chose not to put their e-mail on the pretest, therefore 187 were not included in the study due to not participating in the post-test. There were 382 participants who took the pre-test. Language was not seen as a threat due to validity because the tests and workshops were both administered in Spanish as well. There did not seem to be a need of providing an alternative language to English or Spanish.

Potential for generalizability of the results was not an initial issue due to the large numbers of child care providers reached through the workshop, however because a great number did not participate in the study, there is a chance that the providers that filled out the pre and post-test are not a representative sample of Riverside County. This could be also be due to the fact that only providers that have time to attend the one-hour training have the resources, and the desire to make positive changes in their center or home daycare. However, we feel that a 30% response rate is typical for

most data collection efforts of this nature.

Nutrition/health environment is currently becoming a familiar topic, and some childcare providers might have known what the pre-test attempted to achieve and answered deceptively. However, most of the information provided seemed relatively new to most childcare providers throughout the workshops, so we do not see that as an internal validity issue.

Due to the fact that the public health employees did not access the children themselves who attended the preschools or home daycare, we cannot measure the direct prevention benefits that the children experience. Our measurement was on progress towards policy change. The workshop provided valuable information regarding the preschool health environment and small changes that could easily be implemented. For instance, one provider noted on the post-test that they used to reward the children with candy and stated "That is no longer the case because now we reward the children with fruit or vegetables thanks to you!" Also, childcare providers play an important role in children's lives and see a large amount of new children year after year. This allows them to

teach valuable information to many generations of children.

Future studies on evaluating health environment issues in the preschool setting could benefit from a larger sample of respondents. While the Healthy Habits for Life training reached a large amount of childcare providers in Riverside County, a pre and post-test was not received from every workshop participant. More detailed and consistent evaluation measures should have been determined for follow-up before the first workshop was conducted. Perhaps an outside source could have provided a way to assess the preschool settings health environment before and after the workshop. This study was also limited to an online survey for the post-test. Future studies could benefit from having different forms of the post-test that each participant was able to complete. In person follow-up, phone calls, or mailings might have provided the current study with a larger sample.

Supplemental Analysis Discussion

The results of the supplemental analysis results shed valuable light on the intricacies of childcare

health environment and the complex role of family influence. As shown in Figure 5, 60.9% of participants who answered the question: "Please select the feelings that you have about your childcare site" selected "Meals/snacks from home are mainly pre-packaged food items (Lunchables®, Un crustables®, fruit snacks." One childcare provider felt compelled to add "There are quite a few children who eat prepackaged food for lunch every time they are in school" (Childcare Provider A, July 2009). This might be related to more children being raised in a two parent-working household where parents are pressed for time to prepare a homemade lunch. Prepackaged foods seem to be an item of convenience and perhaps cost effectiveness. However, prepackaged foods tend to be higher in sodium and preservatives. One particular concern in regard to pre-packaged items containing lunchmeat is a link to diabetes (Vang, Lee, Haddard, & Brinegar, 2008). In addition, 71.7% of the childcare providers' surveyed stated that "Drinks brought from home are high in sugar (Soda, Kool-Aid®, or punch)." The consistent consumption of sugar-laden drinks has been linked to weight gain and increased cardiovascular

disease, and in turn has become a critical issue in public health domains (Brown, Duloo, & Montani, 2008).

Other observations added by child care providers were, "Junk foods like chips, donuts, candy and cookies have been a repeated cycle with new children and their family" and "The challenge has been educating parents on healthy nutritious eating and encouraging their child to eat good foods" (Childcare Provider B, August 2009). This could be due to a current disconnect between healthy living and making children happy. Some parents feel guilty about having to leave a child in a preschool- type setting for the duration of the day, and may "reward" a child with food that a child would like. Unfortunately, much of the food that is advertised to influence a child's food preference is not the most nutritionally beneficial. Some antidotal evidence gathered from the workshops included a consensus of the constant battle to educate parents on health issues. Parents are increasingly pressed for time, and childcare providers among the current sample say that informational educational resources sent home with the children often do not get read. A meeting at the center to assist in educating parents also seems to be a challenge due to

busy schedules of the families, conflicting hours, and other pressing priorities.

Currently, the counterintuitive paradox of food insecurity and obesity has been newsworthy. Validating this issue, we found that 58.3% of childcare participants who added insight in the supplemental section selected: "Families treat children with fast food, junk food, candy or chocolate immediately before or after child care" and 54.1% selected "Children are brought to child care hungry." While these two issues seem to be drastically different, they are intricately intertwined. Food insecurity is defined as "State of, or risk of, being unable to provide food (to oneself, a family, a nation, etc)." From the childcare providers responses we can gain some valuable insight into the double-edged sword of children being hungry, yet still being overweight. This might be due to consuming food that is high in calories and low in nutritional value.

The comment section also allowed childcare providers to provide a peak into some current practices occurring at their center. Almost half (46.7%) noted that "Holiday and birthday foods are usually not healthy". In relation to the health environment consistent consumption of

unhealthy "party food", could contribute to childhood obesity (Satter, 2005). The food brought in for celebrations of birthdays and holidays seems to be a controversial subject for parents and child care providers. Society has inflicted a "norm" of birthday cake, candy, cookies, chips, and sugar-laden drinks for consumption of all types of children involved celebrations. Even though it may not seem to be an issue of concern because such holidays and birthdays are only once a year, in reality, many childcare providers will celebrate each child's birthday on a separate occasion. This in turn leads to numerous celebrations throughout the month that include an abundance of high calorie food, and increased sugar consumption. In addition, parents often have a similar celebration for the child on the evening of their birthday, and a shared engagement on the weekend as well. This all adds up to increased calorie intake, and instills detrimental habits in young children that will carry on throughout their life. Modifications could include parental guidelines of what to bring in for celebrations such as fresh fruit, vegetables, and muffins. Or food could take backseat to another activity for the children to be involved in. Scavenger hunts,

group songs, making the "birthday child" the leader for the day all take the focus off of food. Parents and childcare providers sometimes see the celebrations as a "right" and rebuff any attempt to modify this ritual. Perhaps, if more education and awareness, plus a society shift on the "norms" of celebrations occurred, children would see a life-long benefit of making better choices.

Ecological Model

To date, there is a lack of evidence on the effectiveness of prevention programs for children under the age of five. This might be due to the fact that so few programs for preschoolers exist. Healthy Habits for Life was a unique program because it addressed the health environment of the preschool in order to have children develop healthy eating habits at a younger age. The Sesame Workshop® curriculum that accompanied this training was a tool to integrate health education into the preschool setting. While these two interventions targeted the children and the providers, the outreach beyond that was limited.

There is substantial literature regarding the framework of an ecological model and how it applies to

obesity prevention (Dwyer, Needham, Randall Simpson, & Shaver Heeney, 2007; Sallis & Glanz, 2009). An ecological model is multi-faceted in its approach to behavior change. For instance Public Health often utilizes this model in their health promotion campaigns to reach the public through leverage points and mediators within organizations in order to help assimilate new health promotion interventions (Stokols, 1994). With the ecological model it is imperative to take into consideration various influences on behavior change such as environment, genetic predisposition, culture, psychological disposition, life events, and behavior patterns. Although this approach has been in existence for decades, and is often used in behavioral science and public health, the ecological model has failed to make a large impact (Sallis & Glanz, 2009). Great strides have been made in regard to measurement methods, analyses, and models that aim to change exact behaviors (Sallis & Glanz, 2009). In addition environmental change such as healthy community initiatives have been backed by dedicated funding sources such as the Robert Wood Johnson Foundation.

Ecological models address the impact that multiple levels have on specific behaviors, in turn; effective interventions and preventions should attend to multiple levels as well. The Healthy Habits for Life training did not prove to be a substantial influence on childcare providers alone. However, if there was more support from the media, community, administrators, parents, and policy makers; then perhaps childcare providers would feel compelled to make a change in their health environment. In order to tackle the obesity epidemic, a multiple pronged approach would include the food environment of the family as well (Sallis & Ganz, 2009).

In a qualitative study that sought to identify barriers for supporting preschoolers' healthy eating habits and physical activity levels, the social ecological model was identified to organize the emerging themes of such challenges. Dwyer et al. (2007) found emerging patterns in the qualitative responses of parental challenges. Intrapersonal factors such as a child's own preferences for food and aversions posed as a challenge to eat healthy. Interpersonal factors such as the parents' practices and interactions came into consideration as well. If the grandparents brought over

unhealthy food in an attempt to spoil a child, the parents conveyed this as an obstacle, imposing on healthy eating. Childcare centers appeared to be beneficial in preschoolers' food choice because the children were more likely to eat what their peers were eating. While many parents claimed that their child would not touch anything green in the home setting, they were surprised to see that children ate a larger variety of foods in the preschool setting. Another interpersonal factor was the time that parents had to create a healthy meal, and plan ahead to avoid convenient foods (Dwyer et al., 2007). Physical activity opportunities were influenced by the socio ecological model as well. Intrapersonal issues such as the health of the preschooler and individual energy levels in regard to vigorous play can affect physical activity. Intrapersonal factors such as parents' time, family structure, and parents' views of physical activity can be an influence on activity opportunities. Environmental factors such as safety and weather conditions can inhibit physical activity as well (Dwyer et al., 2007). This study is an example of how multifaceted intervention regarding preschoolers can be,

and how interwoven the ecological model is on our behaviors.

The same can be said for childcare establishments and providers. Childcare providers are multifaceted in education levels, experience, culture, and individual preferences. Childcare centers vary in location, capital, management, and philosophy. In one corporate run preschool chain, avant-garde measures have been taken to sustain a healthy food environment. Currently, The Child Development Centers (CDI/CDC) distribute educational information to parents that reiterates their preschool philosophy regarding healthy celebrations. They believe that "Children have enough access to cakes and sweets outside of our centers", therefore they request that "...parents refrain from bringing in cakes, pastries, candies, junk foods, and sodas." A list of alternative food options is provided for parents. The CDI/ CDC is an example of what can be done at the preschool level to promote a healthier food environment. Unfortunately, they are the exception rather than the norm.

One way to utilize the ecological model is to implement policy change on various levels. If it was the norm rather than the exception to have more conducive

environments for health promotion, than a zeitgeist shift could be imminent. From grocery stores promoting local produce, parks being more accessible, cities being more conducive to walking, school lunches being healthier, and schools safer to ride a bike to; healthier community policies will help break down barriers that stand in the way of being more physically active and healthier eating. This study highlighted the variability among preschool establishments and their current practices in regard to the health environment. It will take more than a one-hour training to give children a better start in school. Some centers will serve unhealthy food for birthday parties up to five days a week, and some will restrict any food at all from being brought in to the center. Public policy could regulate all preschool nutrition and physical activity environments and would level the field for all children. Regardless of where children live, or what they could afford to pay for childcare, quality preschool health environments would give all children a chance to develop healthy habits for life.

APPENDIX A
SURVEY OF HEALTHY HABITS AT CHILDCARE
CENTERS AND HOMES

SURVEY OF HEALTHY HABITS AT CHILD CARE CENTERS AND HOMES

Name: _____ Date: _____ Email: _____

Child Care Center: _____ License Number: _____

Please check the ONE best answer for each row and explain as necessary...

	YES	Thinking about it	NO	Notes / Comments
1. Parents receive written nutrition <i>policies</i> upon enrollment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. If snacks or lunches are brought from home, parents are provided with <i>guidelines</i> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Parents are provided with <i>guidelines</i> when bringing in food for celebrations and special occasions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Discipline actions could involve restriction from physical activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Does your facility have <i>guidelines</i> for providing daily physical activity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. If your facility does have <i>guidelines</i> for daily physical activity, do the parents receive a written <i>policy</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Eating all the food on a child's plate is encouraged.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Adults eat the same foods as children do at meal time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Children decide which foods they will eat from what is served.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. A child could be rewarded with food and/or candy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

APPENDIX B
ADVERTISING MATERIAL

healthy habits for life



Our FREE staff presentation includes:

- ★ English & Spanish "Healthy Habits" binder
- ★ Coloring sheets, craft pages & activities
- ★ Sesame Street DVD & story book
- ★ Fitness & nutrition prizes
- ★ Professional growth hours
- ★ An invitation to **SPARK**

*Sports, Play and Active
Recreation for Kids
Early Childhood Training*

With our presentation, staff will be able to:

- Identify rules, policies, and environmental (structural) factors that inhibit healthy behaviors
- Envision their personal ideal of a "healthy" atmosphere for facilitating childhood experiences
- Set goals to improve the health potential of their facility, to benefit staff, children and families
- Understand the adult and child roles in promoting healthy foods and physical activity
- Utilize contents of the Sesame Workshop's "Healthy Habits for Life" Kit to enhance the quality and consistency of health-related messages
- Locate reputable sources of child-related health information available on the internet



*Brought to licensed
childcare (0-5) providers
in Riverside County by:*



*To schedule a presentation for your staff
or a group of home providers, please contact:*

"Healthy Habits for Life"

phone: (951) 358-5311

e-mail: adonald@co.riverside.ca.us

*Hablamos
español!*

Riverside County Department of Public Health, Nutrition Services Branch
4065 County Circle Drive, Riverside CA 92503

APPENDIX C
PRESENTATION MATERIAL USED BY HEALTH
EDUCATION ASSISTANTS

SESAME STREET

healthy habits for life



Provided by:



Outreach Goals:

- ★ Equip & train 2,900 licensed providers (RivCo)
- ★ Provide technical support to trained sites
- ★ Maintain follow-up (up to 5 years)



What is HH4L?

- ★ Familiar characters modeling healthy behaviors (and having fun)
- ★ Credible, recognizable, appealing
- ★ Age-appropriate pre-K activities
- ★ Encouragement to try new foods
- ★ Research-based materials by Nemours



HH4L Web Page

- ★ "Get Healthy Now Show" Clips
- ★ PDF's of Activities & Story Book
- ★ Lead & Asthma information
- ★ Newsletters

www.sesameworkshop.org/initiatives

child health

- ★ children are losing fitness and gaining weight
- ★ parents are at a loss for support & help
- ★ providers need more resources



health factors

- ★ Food available, sold, or allowed
- ★ Play time, rules & equipment
- ★ Physical skills learning
- ★ Discipline & rewards
- ★ Safe & enticing environment
- ★ Adult behaviors & modeling

change to "healthy"

- ★ rules, policies & perceptions
- ★ atmosphere, environment
- ★ schedule, structure
- ★ equipment, play materials
- ★ menus, parties, fundraisers
- ★ behaviors, attitudes of staff

set a goal to:

- ★ Improve the "healthy" potential of your facility
- ★ Inform & educate staff, children, and parents
- ★ Excite & motivate everyone to join in

adult food roles

- ★ selection of food available for meals, snacks, desserts
 - safe (allergies, choking)
 - healthy (fat, calories, sugar, vitamins, food groups)
- ★ timing of food, schedule
- ★ decision to offer alternate food
- ★ encouragement without threats

child food roles

- ★ amount of food they take/eat, quantity
- ★ order of eating each food
- ★ experimenting with food
- ★ stop eating when they are full
- ★ refuse food

how children play

- ★ they use everything accessible
- ★ they like to make noise
- ★ they like to experiment
- ★ they get bored with equipment
- ★ they seek permission from adults
- ★ they follow dominant children
- ★ they like color, variety, new ideas

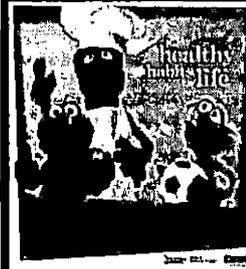
play guidelines

- ★ sedentary for less than one hour
- ★ free outdoor play time (recess)
- ★ skills development time (PE)
- ★ indoor movement opportunities
 - active reading/listening
 - clean-up, transition times
 - rainy day activities

play guidelines

- ★ play is not a punishment/reward
- ★ all children included at all times
- ★ adults are actively involved
- ★ encouragement to build skills, add challenge, change rules
- ★ monitor & intervene as needed
- ★ equipment is safe, fun, changing

Resource Kit



- ★ Binder of activities
- ★ DVD of video clips & songs
- ★ Story book

3 Sections



1. Get Moving!



2. Food and Drink to Grow On



3. Every Day is a Healthy Day

Main Themes

“Sometime” Foods

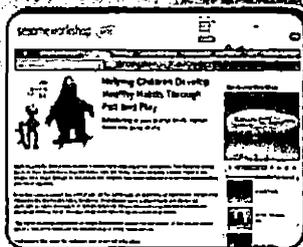


Hungry-Full Meter

Eating Colors of the Rainbow

Family Fun File

- o Website
- o My Family
- o Family Fun File



HH4L Trainings:

- ★ child nutrition & fitness presentation for staff
- ★ Sesame Street action-packed videos
- ★ Health materials & recipe books

Healthy Habits for Life

Why???

We are from Riverside County Department of Public Health, Nutrition Services. We received a grant from First 5 Riverside to promote child focused health education. We are here to provide you with the knowledge and the tools to assist in the prevention of childhood obesity. In the last decade, childhood obesity has doubled, and doctors are seeing more type 2 diabetes in children (usually develops later in life), sleep apnea, and high cholesterol. Obese children are much more likely to become obese adults.

You *can* make a difference in the lives of children at your center. Children spend a large amount of time in preschool and one study compared full time preschoolers with part time, and found them to be more overweight. Preschool is an ideal setting to instill healthy habits in children and promote physical activity.

Preschoolers in particular are in the middle of establishing their eating habits; therefore it is a crucial time for establishing healthy eating routines, and a foundation for good nutrition. The older that children get, the more set they are in their eating habits. Younger children are more receptive to new ideas, so it is important to instill healthy behaviors that they will be able to implement throughout their lives.

Because the children are so young, we can focus more on prevention, rather than exhausting expenses on treatment.

Healthy Habits.

Healthy Habits is a curriculum, in a binder format, that uses Sesame Street characters to model how fun it is to be healthy.

We all know the effects that advertising has on our children, and this is backed by years of research

You will start to get help in the grocery store by seeing Sesame Street characters on fresh produce, and on the Earth's Best products. Michelle Obama recently recorded a Public Service announcement with Elmo promoting Healthy Habits for Life.

So why Sesame Street? They are credible, recognizable, and parents trust them

In this binder you will find age appropriate activities for pre k, with encouragement to try new foods.

Child Health

Children today are losing fitness and gaining weight. They are eating more processed food and are playing more video games in front of the TV. Sadly, this younger generation might be the first to live a shorter lifespan than their parents.

Parents might not know how to make their children eat healthier. Or they may be pressed for time and they reach for convenient foods rather than a nutritious snack.

More resources and information needs to be made available to assist people in making better choices.

Health Factors

Food available, sold, or allowed. What is served, what can they buy, and are there rules on what they cannot bring to school?

Play time, rules, and equipment. How long is playtime? Children should be given enough time to play, and be active.

Physical Skills Learning Play is a key part in the proper development of children, they learn to use fine motor skills, and manipulate objects by using large motor skills. They also learn social skills.

Discipline and rewards Physical activity should not be used as a punishment, nor should inactivity. It is not uncommon for teachers to make children run laps if they misbehave, or to have them sit out of an activity for doing something wrong.

Food should not be used as a reward, or a bribe because then they are associated good behavior with food.

Safe and Enticing Environment- a new coat of paint, or rotation of equipment can work wonders. The rules should ensure that children stay safe and the equipment should be up to date and appealing to the children.

Adult modeling and behaviors- Because children learn from adults and imitate adults, it is important to watch what we do. We can tell them all day to eat better and exercise, but if we are eating a Big Mac, and a supersized coke, they will want to copy that. If we are fanning ourselves outside or looking unhappy, children will pick up on that. Are you outside playing, or looking miserable?

Change to Healthy

Rules, policies, and perceptions Limiting amount of unhealthy food in the center or not allowing certain foods, drinks in the center (candy, chips, and soda). Introduction to new foods, (cooked in different ways) every week, month, etc., child must try but not forced to eat if they don't want to after they have tried it once. No thank you bite.

Schedules & structure- setting a time for lunch and snack where children are more likely to be hungry, we have to take into consideration what time is the most beneficial for the students. Structure, do they serve themselves, do you sit down with them? Where do they sit?

Equipment, play materials- must be appealing to the child, materials must be kept in working conditions, and having different toys that can be used in a variety of ways. A sign over a playhouse can do wonders, it is the grocery store today!

Menus, parties, fundraisers- not promoting candy, and cookie dough for fundraisers, have healthier menus at lunch time and snack time, limiting food during parties, having healthier options. Celebrating with healthier foods or making eating healthy a celebration

Behaviors, attitudes of staff- Staff should be excited and be willing to motivate the students to eat healthier and be physically active

Set a goal!!

Our in-service.

What can you improve to increase the healthy potential in your facility?

Ways to inform and educate the staff, children and parents.
Excite and motivate everyone to join in
Can you think of a goal as an individual, or for your center?

Adult food roles

Selection of food available for: meals, snacks, desserts. We buy food for the children, therefore, they must choose from those foods that we are providing. When providing food we must take into consideration if the child has any allergies and if it is age appropriate, another factor to consider is how healthy the food is (fat, calories, vitamins, sugar).

Timing of food, schedule- we choose what time they will eat every meal.

Decision to offer alternate foods- will you be a short order cook?

Encouragement without threats- we must not force a child to eat nor threaten that if they don't eat a food then there will be negative consequences, if we do so then the child is creating a negative experience given food. Rather we must explain to the child how the food will help them grow.

Child Food Roles

They choose the amount of food they will eat. Their stomachs are only the size of their fist

They should also be able to choose the order in which they eat their food. We are giving them good choices to eat, but we do not need to tell them what to eat first and second

It is ok to experiment with food, and dip it into ketchup if they want to.

Stop eating when they are full- we should not force children to clean their plate because if we do then we they are adults they will feel as though they have to eat all the food which can lead to over eating and obesity.

Play guidelines

Children should not be sedentary for less than one hour. They have short attention spans anyway, so they should be taking quick breaks such as Simon says, follow the leader.

Free outdoor playtime should be just that, a chance to use large motor skills

PE is more of a structured time to learn how to kick a ball, or throw

We should have both!

Indoor movement opportunities such as active reading, listening, clean-up, transition times, and rainy day activities are good times to throw in some fun active movement

Play is not a punishment or a reward- should not be used a bribe

All children included at all times

Adults are actively involved, you work with children because you love them and enjoy having fun...sometimes we forget that

Encourage children to build new skills, add a challenge, and change the rules-children will typically follow the dominant child, so use that to your advantage. Let them take the initiative and lead everyone in a new game

Monitor and intervene as needed-children will look at you before they do a risky behavior, so keep an eye on children and make sure that anything that you would not like a child to play with is removed. Children will play with whatever is accessible so be sure to keep dangerous items locked up and out of reach!

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