

RUTGERS

BIOMEDICAL AND
HEALTH SCIENCES

Evaluation of KEY 2 a Healthy Start:

A WV Statewide Implementation of Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) to prevent childhood obesity in early care and education

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Fieldwork Site: KEYS 4 Healthy Kids at CAMC Charleston, WV

Concentration: Health Education Behavioral Science



Introduction:

- Obesity and overweight has become a major public health threat. This epidemic is increasing rapidly at earlier age.
- About 63% of WV children are in non-parental care.
- KEYS 4 HealthyKids targeted the early care and education system where children from 6 weeks-5 years spend most of their day.
- KEY 2 a Healthy Start is a quality improvement initiative in the early care and education addressing nutrition and physical activity practices, policies and environments.

Pictures from the KEY 2 a Healthy Start intervention:



Pictures from the KEY 2 a Healthy Start intervention:





- The assessment tool utilized was the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC).
- This primary obesity prevention initiative included group peer learning, goal setting, action planning and one-on-one technical assistance for participating childcare programs.

NAP SACC (Self Assessment)



Nutrition and Physical Activity Self-Assessment for Child Care

Your Name: _____ Date: _____

Child Care Facility Name: _____

Please read each statement or question carefully and check the response that best fits your child care facility. Refer to the instruction sheet for clarification of question, examples, and definitions.

SECTION I: NUTRITION

(N1) Fruits and Vegetables

A. Fruit (not juice) is offered:	<input type="checkbox"/> 3 times per week or less	<input type="checkbox"/> 4 times per week	<input type="checkbox"/> 1 time per day	<input type="checkbox"/> 2 or more times per day
B. Fruit is offered canned in own juice (no syrups), fresh, or frozen:	<input type="checkbox"/> Rarely or never	<input type="checkbox"/> Some of the time	<input type="checkbox"/> Most of the time	<input type="checkbox"/> All of the time
C. Vegetables (not including French fries, tater tots, hash browns, or dried beans) are offered:	<input type="checkbox"/> 2 times per week or less	<input type="checkbox"/> 3-4 times per week	<input type="checkbox"/> 1 time per day	<input type="checkbox"/> 2 or more times per day
D. Vegetables, other than potatoes, corn, and green beans, are offered:	<input type="checkbox"/> Less than 1 time per week	<input type="checkbox"/> 1-2 times per week	<input type="checkbox"/> 3-4 times per week	<input type="checkbox"/> 1 or more times per day
E. Cooked vegetables are prepared with added meat fat, margarine or butter:	<input type="checkbox"/> All of the time	<input type="checkbox"/> Most of the time	<input type="checkbox"/> Some of the time	<input type="checkbox"/> Rarely or never

(N2) Meats, Fats, and Grains

A. Fried or pre-fried potatoes (French fries, tater tots, hash browns) are offered:	<input type="checkbox"/> 3 or more times per week	<input type="checkbox"/> 2 times per week	<input type="checkbox"/> 1 time per week	<input type="checkbox"/> Less than once a week or never
B. Fried or pre-fried (frozen and breaded) meats (chicken nuggets) or fish (fish sticks) are offered:	<input type="checkbox"/> 3 or more times per week	<input type="checkbox"/> 2 times per week	<input type="checkbox"/> 1 time per week	<input type="checkbox"/> Less than once a week or never
C. High fat meats (sausage, bacon, hot dogs, bologna, ground beef) are offered:	<input type="checkbox"/> 3 or more times per week	<input type="checkbox"/> 2 times per week	<input type="checkbox"/> 1 time per week	<input type="checkbox"/> Less than once a week or never

Ammerman, AS, Benjamin, SE, Sommers, JK, Ward, DS. 2004. The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) environmental self-assessment instrument. Division of Public Health, NC DHHS, Raleigh, NC, and the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill. Revised May 2007.

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Facility director completes self-assessment instrument with help from key staff, i.e. the cook or program planner.

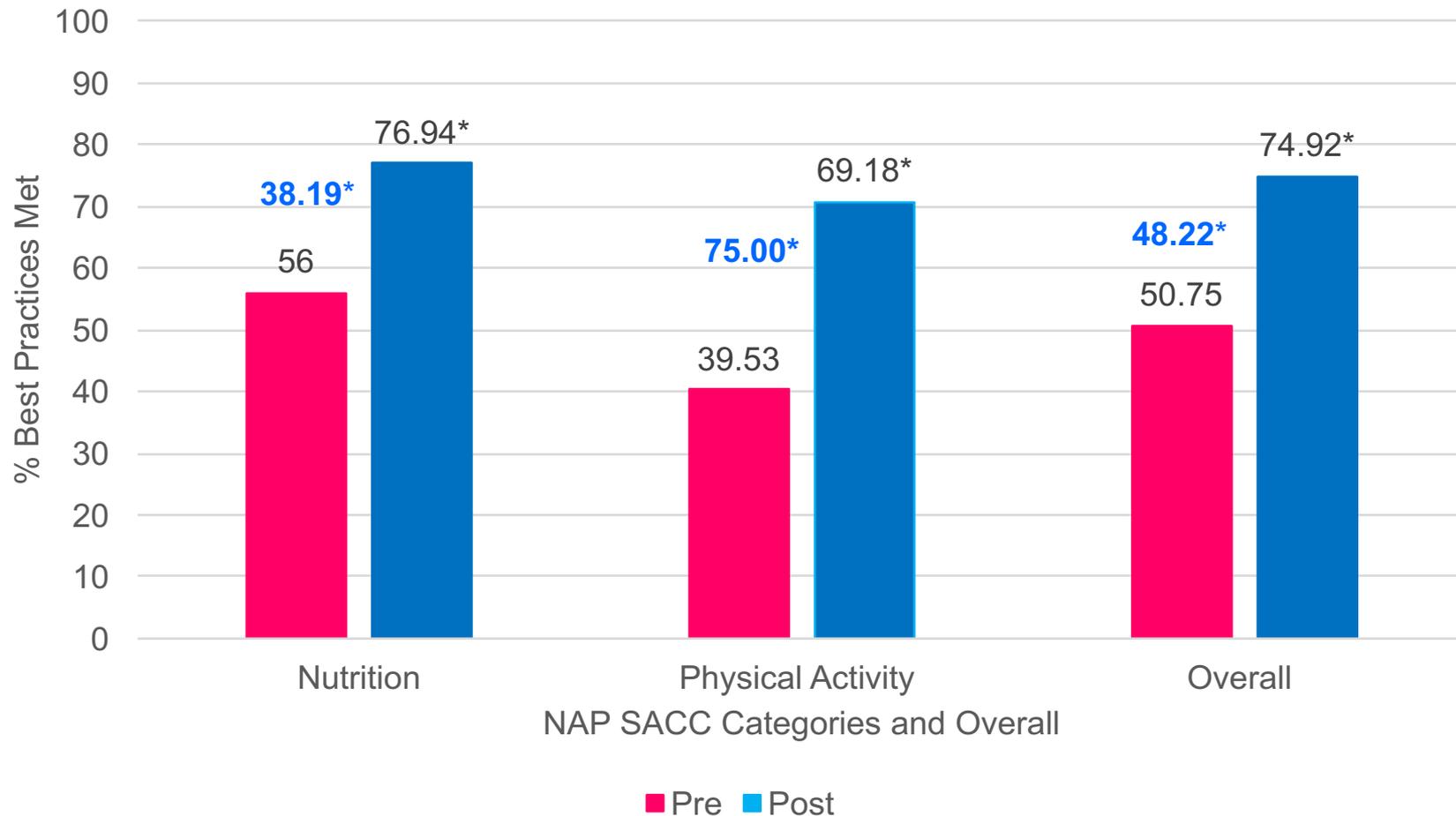
Project/Study Goals and Objectives

1. Organize and analyze the pre and post NAP SACC to understand improvements on the nutrition and physical activities practices, policies and best practices met from participation in KEY 2 a Healthy Start.
2. Conduct Key Informant interviews via phone conversation, with the childcare center directors and staff, to evaluate the challenges and successes each center faced with the intervention.
3. Analyze the difference in the physical activity best practices met between the northern sites and southern sites.
Northern sites used “I am moving, I am learning” with Choosy as the health hero and southern sites use the original physical activity training from NAP SACC.

Methodology

- Quantitative:
 - Entering pre and post NAP SACC data into Microsoft Excel and then running a Chi Square analysis in SAS software 9.3 to compare percent improvement in best practices met from pre to post for each center; per line item, category and overall.
 - Analysis of the difference in Choosy versus Non-Choosy sites using Physical Activities best practices met.
 - Comparing Workshop Evaluations with Interview Data for consistency
- Qualitative:
 - Conducting 23 interviews with the childcare centers that participated in the program and typing responses.
 - Organizing responses into an Excel document for comparison.
 - Scoring each answer for themes and quantitative consensus.

Pre vs. Post NAP SACC % Best Practices Met



*Results from Chi Square analysis are statistically significant with a p-value at <0.001

Key Informant Interviews

- A total of **23** key informant interviews were completed.
 - Only one center was omitted from the interviews because they closed their business due to insurance reasons.
 - Two centers completed one interview together because they were operated under the same director.
- Interview time to completion ranged from 25-60 minutes.
- Scheduling was very difficult given the nature of childcare and unexpected events: health inspections, fire inspections, child crisis, etc.
 - Most of the interviews had to be rescheduled at least once via phone calls, email or both.
- The first interview was in February and the last interview was in April
- Every interview began with informed consent being read to participants and verbal consent received before continuing

Key Informant Interviews | Sample of Questions:

- Please tell me about your experience with KEY 2 a Healthy Start. What are some useful or helpful parts of the program? What parts of the program were not useful? Why?
- How did the children react to the changes made to your center as part of KEY 2 a Healthy Start?
 - Did the children's reactions change over time, if yes, how?
- Did you make any personal changes or changes in your home/with your family related to eating or physical activity as a result of participating in KEY 2 a Healthy Start?
- What is one suggestion to improve KEY 2 a Healthy Start? Would you change anything? Why?

Key Informant Interview Data

- How many years have you been working in an early child care setting (ECC)?
 - Everyone has worked in ECC for at least two years. Average is 16 years. Mode is 13 years. Median is 15 years.
- What is your current position? How long have you been in that position?
 - Everyone was either a director, co-director, assistant director or owner/administrator.
- What were the main accomplishments in the past 6 months?
 - 66% Nutrition, 16% Physical Activity, 14% Parental Involvement, 5% Garden
- Did you meet all of the goals you set for your center?
 - 78% met all, 17.4% were still working on one or two, 4.3% met all but one goal due to inability to meet goal.

Key Informant Interview Data continued

- How did the children react to the changes made to your center as part of KEY 2 a Healthy Start?
 - 63% positive, 22% neutral and 15% negative
- Did the children's reactions change over time, if yes, how?
 - 63% saw no change since children were on board from beginning
 - 37% saw a positive change as children became more accustomed and excited for changes in center.
- Did you make any personal changes or changes in your home/with your family related to eating or physical activity as a result of participating in KEY 2 a Healthy Start?
 - 30% **did not** make changes at home and 70% **did** make positive/healthy lifestyle changes at home.

Key Informant Interview Data continued

- What were your staff's initial attitudes towards Key 2 a Healthy Start?
 - 52% had a positive response, 26% had a mixed response, 17.4% had a negative response and 4.35% had a neutral response.
- Did those change over time?
 - 78% of centers had an increase in positive attitudes, 26% stayed positive and 4.35% had a decrease in positive attitudes.
 - Of the centers who were initially negative or mixed, staff attitudes became more positive.
- Did you notice any changes with your staff during this project?
 - All 21 centers who answered the question reported positive seeing their staff making positive sustainable healthy choices like eliminating soda and exercising more.

Key Informant Interview Data continued

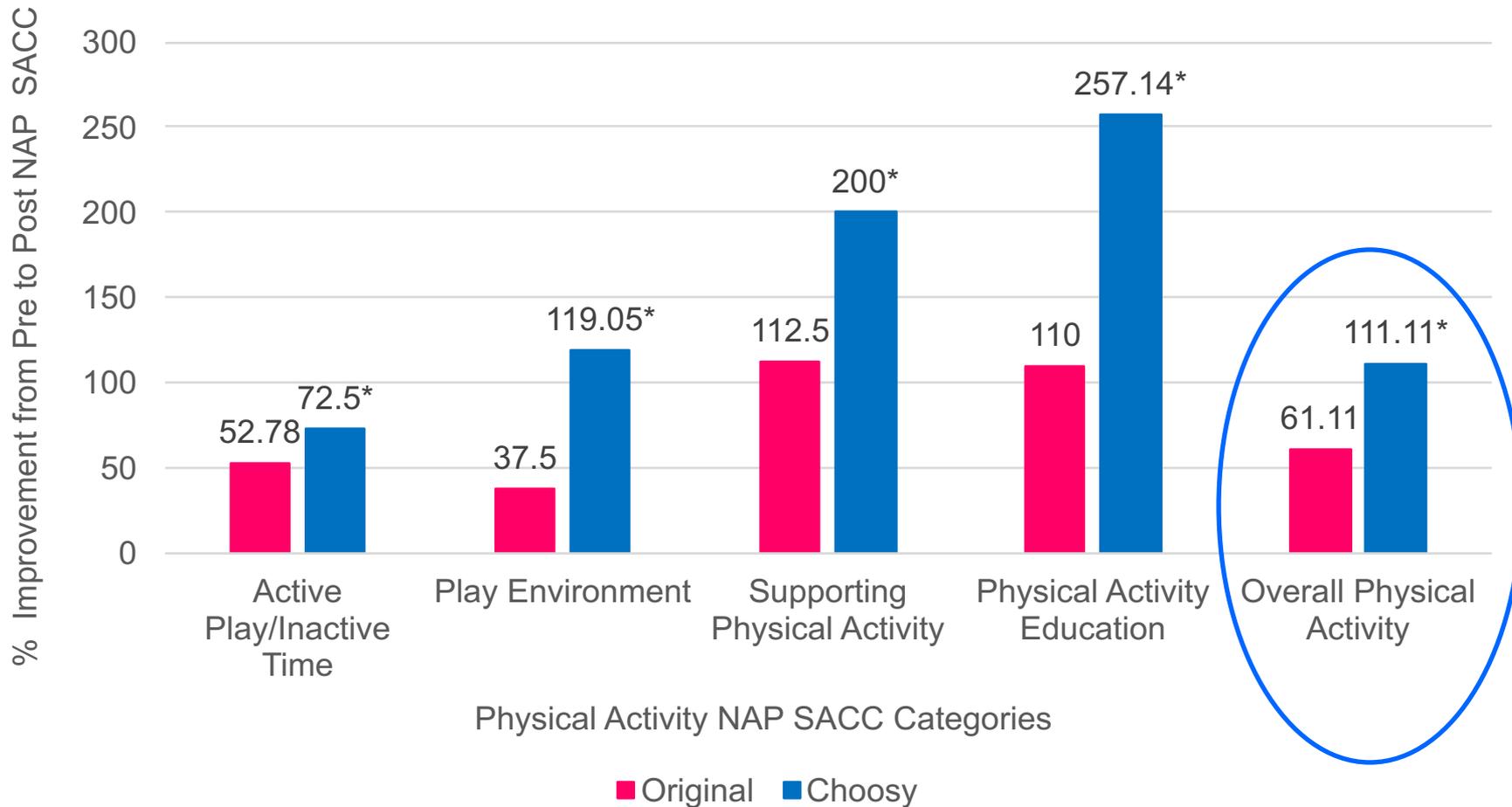
- Would you recommend KEY 2 a Healthy Start to another center?
 - 100% would recommend to another center and 26% already have.
- Do you plan to use the KEY 2 a Healthy Start self-assessment tool again? If so, how/when?
 - 70% centers said yes, and plan on doing it on a 6-month-yearly basis in Spring/ early summer or in Fall, or with new staff.
 - 30% centers said they had not thought about it but that it was a good idea to do a re-evaluation.
- What is one suggestion to improve KEY 2 a Healthy Start? Would you change anything? Why?
 - 43.5% wouldn't change a thing. 57% would have liked for the trainings to be closer, or for the KEYS team to come to the centers to speak to their staff, or wished there were more trainings/ more online resources.

Workshop Evaluations compared with Interviews

- All the workshop evaluations results were overall positive with 97.73%-100% of participants stating they were overall very satisfied with each workshop training.
- These results are consistent with the positive ratings the intervention received in the interviews.
- When asked the following, all center rated the intervention as with a score of '5':

“Overall, please rate your experience with KEY 2 a Healthy Start as positive or negative with 5 being the most positive and 1 being the most negative.”

Percent Improvement in Best Practices Met Original NAP SACC PA Training vs. Choosy



*Results from Chi Square analysis are statistically significant with a p-value at <0.001

Discussion of Results

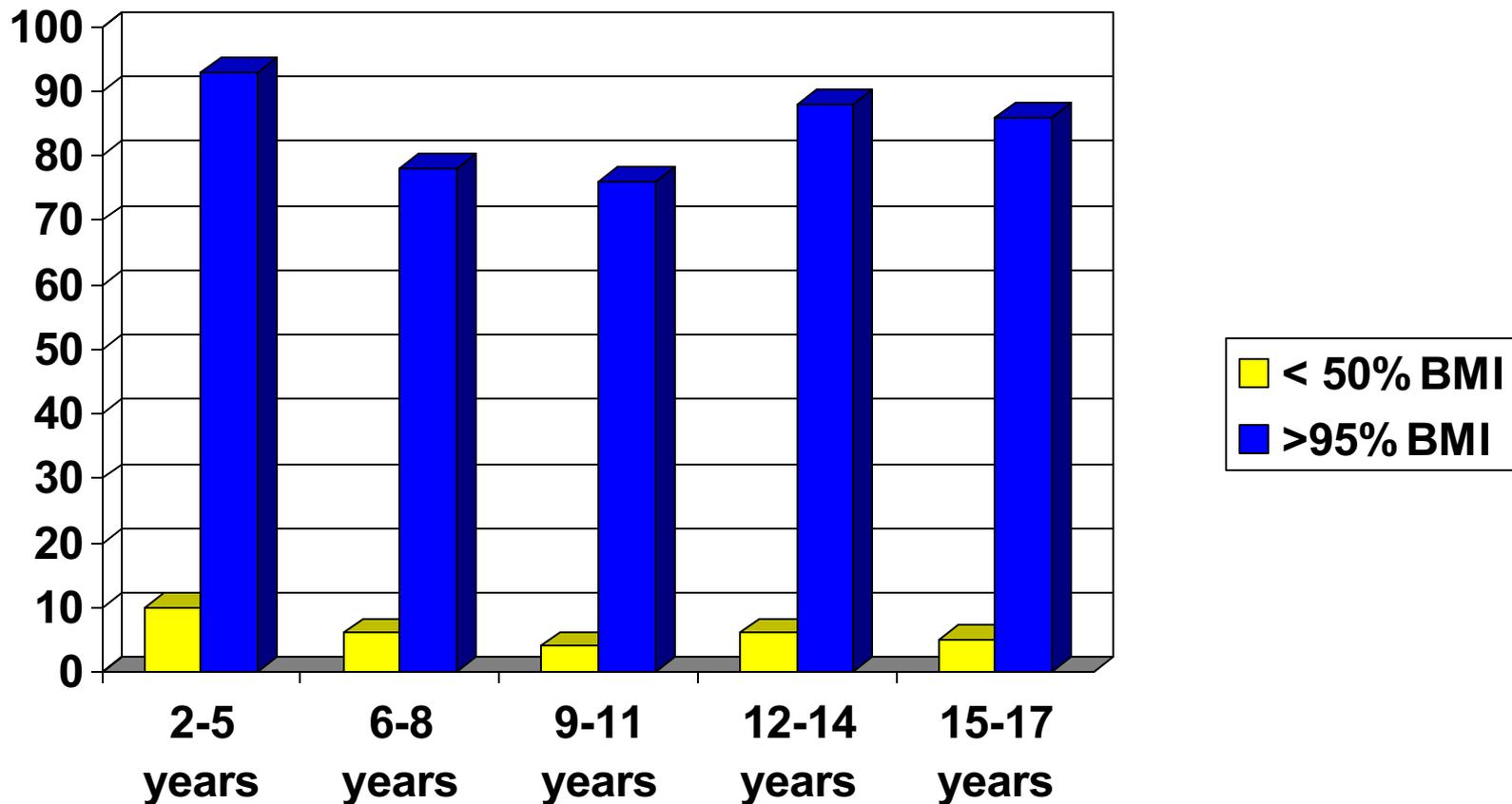
- The % improvement in the nutrition, physical activity and overall categories validates that the KEY 2 a Healthy Start intervention was successful in creating healthy nutrition and physical activity practices, policies and environment.
 - Physical Activity had the higher potential for improvement and this was reflected in the percent improvement.
- The interviews and workshop evaluations also reflect this positive impact; everyone was pleased with the program and happy to have been involved, and enthusiastic about recommending the program to other centers.
- Choosy Physical Activity training was more successful in increasing the percent of best practices met compared to the original NAP SACC Physical Activity training.

Discussion of Results

Nutrition and physical activity randomized control trial in child care centers improves knowledge, policies, and children's body mass index (Alkon et al, BMC Public Health 2012).

- Showed a statistically significant difference in mean zBMI in the NAP SACC intervention center vs Control centers
- At the child-level, decrease zBMI by 0.14
- At the center-level, decrease zBMI by 0.26

Bogalusa Heart Study: Proportion of Children Who Become Obese Adults



Discussion of Results

- Therefore, using KEY 2 a Healthy Start to set a healthy Nutrition and Physical Activity environment, we can keep our 2-5 year olds at a healthy BMI.
- This should translate to lower adult obesity and associated chronic disease burden.

Recommendations

- Since 25 centers throughout West Virginia found this intervention successful, it is likely that centers other centers throughout the state will also benefit from participation in KEY 2 a Healthy Start.
- The program should continue as it was being implemented with added access to centers who are farther from workshop trainings and with online resources training available to centers.
 - A network of online resources is already in the works!
- This was a very successful program and could eventually be modified for use in other states that have high rates of childhood and/or adult obesity.

REMEMBER: Children need adults to teach them healthy habits and how to live a healthy lifestyle!



Acknowledgements

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Thank you! 😊

SUPPLEMENTAL SLIDES

Key Informant Interview Examples of Scoring:

What were the main accomplishments in the past 6 months?

For each center I allotted 1 total point that could be spilt up among the following categories where major improvements were possible: Nutrition, Physical Activity, Parental Involvement, and Gardening. For Nutrition the total score is 15.08 Or 66% for PA the total score is 3.583 or 16%, Parental Involvement was 3.25 or 14% and Garden was 1.083 or 5%. Common parings were: Nutrition and Physical Activity, Nutrition and Gardening, Nutrition and Parental Involvement, Physical Activity and Parental Involment

SUPPLEMENTAL SLIDES

Sampling of Quotes:

"Changed our menu—we took juice off the menu and replaced it with fresh fruit. We served a cracker and juice at snack time and not we have a fresh fruit. The fruit is more filling than juice is. After the training we learned that the fruit is much more nutritious for children. We always had guidelines to eat junk for celebrations and we adjusted our special party guidelines for health and nutrition and we listed other things that can be done. When you asked children more kids chose play over candy and cupcakes. So we had a dance party for Valentine's day. No more junk and cookies and cupcakes. More fruit. More healthy snacks. Birthdays the parents bring a old picture or favorite book or surprise box. A nice change."

SUPPLEMENTAL SLIDES

"Well, most really accepting. One or two were worried about time. With Choosy we would do that. They realized it doesn't take that much time. Kids will ask for Choosy tape after snack. They've learned to implement it without it being more work. They initially thought "It is more for us" but the kids were so excited that it is not work it's fun."

"Absolutely. I have recommended it to everyone who listens to me. I think it was nothing but positive. I was impressed with the fact that they didn't forget you. If I had a question they would get back to me right away with information and referrals."

SUPPLEMENTAL SLIDES

Workshop 1- North

Training Content	
I gained knowledge and/or skills.	97.73% strongly agree
The training met my expectations.	97.73% strongly agree
The materials distributed were useful.	97.73% strongly agree
I plan to change or enhance my work style/program in response to this training.	97.73% strongly agree
Trainer	
Trainer was engaging and friendly.	97.73% strongly agree
Trainer was professional.	97.73% strongly agree
Participation and interaction were encouraged.	97.73% strongly agree
Overall rating of trainer.	97.73% strongly agree

Overall, I was satisfied with the training.	97.73% strongly agree
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Workshop 1- Western

Training Content	
I gained knowledge and/or skills.	98.33% strongly agree
The training met my expectations.	98.33% strongly agree
The materials distributed were useful.	98.33% strongly agree
I plan to change or enhance my work style/program in response to this training.	98.33% strongly agree
Trainer	
Trainer was engaging and friendly.	100% strongly agree
Trainer was professional.	100% strongly agree
Participation and interaction were encouraged.	100% strongly agree
Overall rating of trainer.	100% strongly agree

Overall, I was satisfied with the training.	100% strongly agree
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