

Choose Health: Food, Fun, and Fitness Curriculum Promotes Positive Behaviors in Youth Compared to Control Period



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Overview

- Choose Health: Food, Fun, and Fitness (CHFFF) is an experiential curriculum aimed at 3rd-6th graders that targets behaviors research shows decrease child obesity and chronic disease risk.
- The effect of CHFFF on child diet and other targeted behaviors was evaluated in NY EFNEP^a using a delayed intervention design.
- Youth (n=561) completed a self-reported survey 3 times: at initial enrollment, after a no-intervention control period, and after receiving CHFFF.
- Following CHFFF, youth improved significantly compared to their control period in:
 - Overall diet quality
 - Fruit and vegetable intake
 - Sweetened beverages (SSBs) and fast food intake
 - Intent to make healthier fast food choices
 - Frequency of reading Nutrition Facts labels (NFLs)
 - Frequency of sharing about healthy eating with their family
 - Frequency of trying a new food

Objective

- To evaluate the effect of the Choose Health: Food, Fun, and Fitness (CHFFF) curriculum on child diet and other targeted behaviors, hypothesizing greater change pre- to post- CHFFF education than in the same child during a delayed intervention control period.

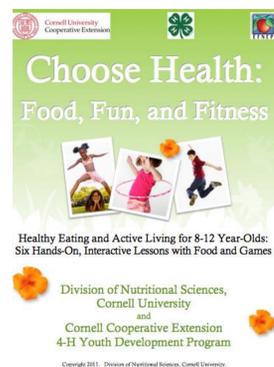
For more information: <http://fnec.cornell.edu>



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Intervention:

Choose Health: Food, Fun, and Fitness



- Engages 3rd-6th grade children (8-12 year olds) in interactive nutrition experiences to promote research-based behaviors to prevent obesity and chronic disease:
 - more vegetables, fruits and whole grains
 - less sugar-sweetened beverages, high-fat and high-sugar foods
 - increased physical activity
- Developed primarily for use in EFNEP^a, SNAP-Ed^b, and 4-H
- Also taught by teens in our companion program Choose Health Action Teens (CHAT)
- 6 lessons, developed collaboratively by researchers and front-line educators in nutrition and youth development, using an iterative process of field testing and revision
- Uses real food packages, fun active games, food prep and/or tasting of low-cost kid-friendly recipes, and goal setting
- Engages families through take-home family newsletters that include the child's goal and the recipes they tried



^a Expanded Food and Nutrition Education Program; ^b Supplemental Nutrition Assistance Program-Education

Methods

- Quasi-experimental design using a delayed-intervention control period prior to CHFFF
- Youth self-reported behaviors using a survey administered 3 times: at initial enrollment, after a 6-week no-intervention control period, and after receiving CHFFF
- Sample: 3rd-6th grade EFNEP participants in 27 after-school and 28 in-school groups in 5 New York counties during the 2014-15 school year
- Results based on 561 youth who completed all 3 surveys and participated in at least 4 of the 6 lessons (out of 946 youth with at least one survey, from any time point)
- Outcome measures included dietary intake scores derived from factor analysis, and dietary precursors such as reading NFLs and trying new foods
- All the dietary scores had strong test-retest reliability (Spearman's rho 0.67 to 0.80, p<.0001), as did 3 of the 5 single-item variables; Internal reliability of the scores was generally good (alphas >0.70).
- Statistical analyses included linear and logistic mixed regression models, with and without controlling for grade level, gender, and the group characteristics site type, mostly Black or Hispanic, average group size, or average lesson length

Results and Conclusions

Sample Characteristics: 54% 3rd graders, 21% 4th graders, 23% 5th graders, 1% 6th graders; 58% White, 25% Black; 16% Hispanic; 70% received all 6 lessons

Tables: Difference between mean change after CHFFF versus after the control period (n=561), based on linear and logistic mixed regression models, controlling for both group and educator as random effects

Ordinal Outcome Variables (response range)	Difference in Differences, CHFFF vs Control
Overall Diet Quality Score (1-13)	.35***
Vegetable Intake Score (1-4)	.13**
Fruit Intake Score (1-4)	.12**
SSBs/Fast Food Intake Score (1-5)	-.09*
Milk Intake (1-5)	.04
Whole Grains Intake (1-5)	-.01
Shared about healthy eating with family (1-3)	.36***
Frequency of reading NFLs (1-5)	.57***
SSBs/Fast Food Choice Score (1-3)	-.28***

Dichotomous Outcome Variables In past 7 days...	Ratio of Odds Ratios, CHFFF vs Control
Tried new food (Y/N)	2.44***
Asked family to buy vegetable or fruit (Y/N)	ns
Nutrition Facts Label - Don't know to "Know" ^a	1.79 (p=.08)
Whole Grains intake - Don't know to "Know" ^a	1.64 (p=.06)

*p<.05, **p<.01, ***p<.001

^a Responded "Don't know" the first time when asked how often they ate these, then reported a frequency the next time, suggesting they learned what Nutrition Facts Labels or Whole Grains were

- No change in results after controlling for covariates
- In addition, after CHFFF, 52% said their family had made the recipes at home, 67% had shared something they learned in CHFFF with their family, and 75% had tried a new food since starting CHFFF
- Results provide evidence for the effectiveness of this user-friendly and readily available curriculum.