Fuel for Fun: Cooking with Kids Plus Parents and Play

GOALS & OBJECTIVES

Long-term goals of Fuel for Fun (FFF) are to reduce the risk of childhood obesity by promoting healthy food and activity environments, policies, and behaviors through:

1. building and testing the efficacy of a 4th grade comprehensive school- and family-based intervention
2. applying it to an out-of-school setting
3. disseminating both versions through outreach efforts

Research Objectives (Years 1-3)

• Accomplished
  1. Conduct review of Cooking with Kids (CWK) curriculum and assessment tools for alignment with Colorado academic standards & idx.
  2. Revise CWK curriculum (C WK-CO) and research-derived assessment tools.
  3. Develop a family-based companion program to FFF school intervention.

• In Progress
  4. Combine CWK-inspired school lunch recipes with a behavioral economics approach to improve student choices.
  5. Implement school-based intervention: in 8 low-to-moderate-income schools for 2 years.
  6. Test impact of FFF school-based intervention with and without Family FFF and online parent About Eating program against non-treatment groups.

Education Objectives (Years 1-5)

1. Develop, implement, and evaluate effective and sustainable FFF curriculum training sessions for 4th grade teachers, school foodservice staff, and SOPLAY and SPARK Active Recess training for students and community partners.

2. Provide evidence-based childhood obesity prevention training and research experiences to graduate and undergraduate nutrition/dietetics, exercise science, pre-service education and public health students.

Extension Objectives (Years 4-5)

1. Apply research-derived FFF products and processes to an out-of-school setting.

2. Provide Community Readiness training to Colorado communities.

3. Utilize Community Readiness strategies to identify school districts and communities ready to adopt the FFF school- or out-of-school program.

4. Design, disseminate, and evaluate FFF program and training resources for stakeholders at the local, state, and national levels.

INTERVENTION COMPONENTS

1. CWK – Colorado – hands-on cooking and tasting classroom lessons to enhance cooking skills and provide positive experiences with a wide variety of wholesome, healthy foods.

2. Sports, Play, and Active Recreation for Kids (SPARK) Active Recess program – physical activity program designed to encourage maximum participation for every player, regardless of ability.

3. Fuel for Fun Cafeteria – classroom lessons linked to healthful foods in the school cafeteria to encourage students to make more healthful choices.

4. Fuel for Fun Family – program that engages parents and reinforces what students experience through the classroom, recess, and cafeteria components.


PARTICIPANTS

Eight schools (20-70%) of students eligible for free or reduce-priced school meals), from four each district. Approximately 440 4th and 440 5th grade students will participate each year.

District A
15,000 students
- White
- Hispanic
- Asian
- African American

District B
27,000 students

ACCOMPLISHMENTS

Data Collection and Analysis
- Average student participation rate of 73% for cohort 2 (C2, 80% for cohort 1 [C1]).
- 296 C1 students completed follow-up 2 (FU2) surveys and Ht/Wt (73% of cohort at baseline [BL]). 350 C2 students completed BL surveys and Ht/Wt.
- 85 C1 parents completed online BL survey, 32 at FU1, and 22 at FU2; 135 C2 parents completed BL survey.
- Enhanced research design with addition of dietary assessment. Goal to complete 9 24-hour recalls with 100 parent/child dyads over 1 year. 26 C2 student/parent pairs completed BL 24-hour recalls.
- Accelerometry data (ACC) gathered at 3 schools: 126 C1 students and 110 parents at BL, 118 and 97 at FU1, and 103 and 87 at FU2, respectively; 147 C2 students and 115 parents at BL.
- SOPLAY assessment of students’ recess activity completed 12 times for each school.
- Plate waste assessed from 1,081 student lunch trays; 768 in fall 2013 and 313 in spring 2014.
- PWH/CWES completed for all intervention components.
- All outcome data dual-entered, managed and analyzed in SPSS.
- 5 abstracts, based on analyses completed to date, accepted to professional conferences.
- Initial data included in 1 manuscript under review, other manuscripts in preparation.

Intervention Implementation
- Implemented 23 intervention days, 92 tasting and 115 CWK-Colorado cooking lessons, representing 100% of project goal.
- Conducted SPARK during recess average of 4 days/week/school (100% of project goal).
- Implemented FFF cafeteria intervention: FV promotional signs, verbal prompts from staff, and staff clothing (chef coats and T-shirts)
- Implemented FFF family-based component in 4 schools (reaching 264 families). Elements included family nights, take-home action packs, and a weekly parent blog.
- Collected process and outcome data from parents participating in About Eating.

Education
- Conducted trainings for classroom teachers, school cafeteria staff, graduate student Food Educators, and undergraduate students on FFF program implementation.
- Enrolled 24 undergraduate Food Science and Human Nutrition students in FFF practicum, gained experience in implementation, evaluation, and data management.
- Trained 18 Health and Exercise undergraduate students to implement SPARK recess games and conduct SOPLAY observation.
- Completed 5 masters’ student projects; 2 additional student projects to be completed.

Extension
- Began formalative assessment for development of out-of-school/after-school version of FFF.
- 10+ interviews currently in process to determine considerations for best setting and format.
- Newsletter informational update to Advisory Committee.

LESSONS LEARNED

- Families are busy, committed to many activities. Increase focus on parent recruitment/engagement.
- Academic priorities make scheduling CWK-Colorado lessons, Family Nights, and data collection challenging. Build as much flexibility into research procedures as possible.
- Prioritize classroom lesson implementation to ensure most important activities are completed.
- Students are already active; impact of SPARK on recess activity levels could be low.
- Continuous communication and follow-up with school staff and administrators, students, parents and other program collaborators is critical to program success.
- During Year 2 we experienced 33%+ teacher and principal turnover, record flooding, changing school schedules, and the impact of standard tests on program implementation. Flexibility and adaptability are essential for implementing a multi-component program in 2 school districts.

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