



Using a Common Evaluation and Data Management System to Explore Impact across Youth Nutrition Education Programs

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Abstract

Objective: Demonstrate aggregate and funding specific program impact.

Use of Theory/Research: Using common instruments across programs helps show impact on outcomes related to participants' knowledge, skills, attitudes, and behaviors (Payne & McDonald, 2015). A subset of programming used teen teachers and studies indicate teens are better able to connect with younger youth (Ripberger & Blalock, 2011; Smith, 2014).

Target Audience: Youth (3rd grade+) participating in six hours or more of nutrition and physical activity programming.

Program Description: Extension professionals educated youth (83% elementary audiences) across 23 counties. Settings included out-of-school time programs, community sites, schools, and youth organizations.

Evaluation Methods: Program evaluations were included if there was a pre/post matched program activity ID and the National 4-H Common Measures (CM) Healthy Living survey tool was used (14 pre-post items). Four groups were compared: non-grant funded (NGF), teens as teachers (TT), Supplemental Nutrition Assistance Program-Education (SNAP-Ed), and SNAP-Ed and TT (SNAP-Ed/TT). Significant, positive differences are reported (p<0.05) based on two-related samples, Wilcoxon Signed Ranks Test using SPSS.

Results: Overall, youth (n=1544) reported significant differences in 50% of items: planning/awareness around healthy eating and activity habits and confidence in food safety and preparation skills. NGF youth (n=101) reported significant differences in 28% of items: planning around healthy eating and activity habits and recipe preparation confidence. TT youth (n=871) reported significant differences in 43% of items: planning to drink the recommended amount of water, eating breakfast more, awareness of activity and screen time, and food safety practices. SNAP-Ed youth (n=325) reported significant differences in 14% of items: awareness of screen time and recipe preparation confidence. SNAP-Ed/TT youth (n=247) reported significant differences across 100% of items.

Conclusion(s): Using a common evaluation and centralized reporting system helped better document youth impact across funding sources. Further investigation is needed regarding feasibility of incorporating teens as teachers into more programming and how funding influences curriculum fidelity and quality of instruction.

•Twenty-two Extension professionals reported reaching over 7,800 youth across 42 counties through nutrition and physical activity programming.

•Settings included before and after-school programs, community sites, Extension offices, schools (K-12), and youth organizations.

•15 Extension professionals submitted pre/post evaluation data (4-H CM with matched program activity ID), impacting youth in 23 counties (Table 1).

Program Reach



Educational Settings



Program Evaluation



Table 1. Program Data Overview	n (%)
Primary Program Area	
Food, Nutrition and Health (FNH)	972 (63%)
SNAP-Ed	572 (37%)
Teens as Teachers (TT) Designation	
Non-TT	426 (27.6%)
TT	1118 (72.4%)
Primary Curriculum Used	
Choose Health Food, Fun, & Fitness (CHFFF)	472 (30.6%)
Catch Kids Club (CKC)	165 (10.7%)
Kids in the Kitchen (KIK)	674 (43.7%)
KidQuest (KQ)	154 (10.0%)
Teen Cuisine (TC)	31 (2.0%)
Learn, Grow, Eat, & Go (LGEG)	25 (1.6%)
Marathon Kids (MK)	23 (1.5%)
Grade level	
Elementary School (3 rd -5 th)	1229 (83.4%)
Middle School (6 th -8 th)	233 (15.8%)
High School (9 th -12 th)	12 (0.8%)

Table 2. Pre-post, Positive Response Differences by Group: FNH Educator Non-grant funded (NGF); FNH mentor + Teens as Teachers (TT); SNAP-Ed mentor + TT; SNAP-Ed only	NGF (n=101)	TT (n=871)	SNAP-Ed/TT (n=247)	SNAP-Ed (n=325)
I plan to eat the recommended amount of fruits and vegetables.	P=0.602	P=0.217	P<0.001	P=0.814
I plan to drink less sugary drinks.	P=0.048	P=0.117	P<0.001	P=0.835
I plan to drink the recommended amount of water.	P=0.467	P<0.001	P<0.001	P=0.082
I plan to stay physically active.	P=0.039	P=0.271	P<0.001	P=0.063
I plan to prepare healthy foods or snacks with my family.	P=0.001	P=0.423	P<0.001	P=0.362
Do you pay attention to how much fruit you eat each day?	P=0.964	P=0.565	P<0.001	P=0.063
Do you pay attention to how many vegetables you eat each day?	P=0.415	P=0.216	P<0.001	P=0.992
Do you pay attention to how much water you drink each day?	P=0.299	P=0.993	P<0.001	P=0.693
How often do you eat breakfast?	P=0.748	P<0.001	P<0.001	P=0.096
Do you pay attention to how active you are each day?	P=0.345	P=0.016	P<0.001	P=0.638
Do you pay attention to how much time you spend in front of a screen (TV, computer, tablet, or smart phone)?	P=0.628	P=0.002	P<0.001	P=0.029
Do you know how to follow a recipe to make something to eat?	P=0.033	P=0.119	P<0.001	P=0.042
Do you know how to keep your cooking area clean to stop spreading germs?	P=0.071	P<0.001	P<0.001	P=0.112
Do you know activities you can do to help you feel better when you are stressed?	P=0.814	P<0.001	P<0.001	P=0.799

Results: Pre-Post Survey Responses

Across the total sample, youth respondents (n=1544) reported:

- At post, youth said they learned about healthy food choices (71%), gave their family ideas for healthy meals or snacks (39%), felt 4-H helped them identify things they are good at (41%), 4-H is a place where they are encouraged to plan for their future (35%), and 4-H helped them explore future career options (34%).
- Positive, significant (p<0.05*) increases were detected for the following pre-post data, indicating improvements in:
 - Planning to consume the recommended amount of fruits and vegetables (9%) and prepare healthy foods/snacks with family (6%);
 - Paying attention to daily fruit (6%) and vegetable (9.5%) consumption and activity level (8%); and
 - Knowing how to follow a recipe to make something to eat (9%) and keeping a cooking area clean to stop the spread of germs (16%).

Four groups were compared (Table 2): FNH Educator non-grant funded (NGF), FNH mentor plus teens as teachers (TT), SNAP-Ed mentor plus TT (SNAP-Ed/TT), and SNAP-Ed only program evaluation data:

- Across all TT grant supported programming, which incorporated TT under the supervision of an Extension mentor to help implement nutrition and physical activity education to youth, TT showed more significantly different, positive results than non-TT programming.
- NGF youth (n=101) reported significant differences in 28% of items: planning around healthy eating and activity habits and recipe preparation confidence. TT youth (n=871) reported significant differences in 43% of items: planning to drink the recommended amount of water, eating breakfast more, awareness of activity and screen time, and food safety practices. SNAP-Ed/TT youth (n=247) reported significant differences across all items. SNAP-Ed youth (n=325) reported significant differences in 14% of items: awareness of screen time and recipe preparation confidence.
- Programming that showed the most significant, positive results from pre-post was programming that involved SNAP-Ed/TT support.

Conclusions

Using a common evaluation (4-H CM) and centralized reporting system (Program Evaluation and Reporting System [PEARS]) helped better document youth impact across funding sources. Further investigation is needed regarding feasibility of incorporating teens as teachers into more programming and how funding, curriculum used, and educator strategies influence curriculum fidelity and quality of instruction.

References:

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