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Study participants — alumni of the Teen Battle Chef program — speak to their self-realized lifestyle improvements, years after participating in the program.

FAMILYCOOK
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KEY TAKEAWAYS

FROM OUR SUSTAINED EFFECT STUDY

Presented by Lynn Fredericks



Can Teaching Kitchens instill behavior change?

Decade-long study around adolescents and cooking suggests 'yes.'

This study conducted by FamilyCook Productions examines the potential for long-term, sustained effects among alumni who participated in a nationally disseminated hands-on nutrition education program, Teen Battle Chef (TBC). TBC develops adolescents' skills in nutrition, cooking, and leadership, based on social cognitive, social ecological and empowerment theories.



BACKGROUND

New England Journal of Medicine research models predicted that a majority of today's children will be obese at age 35.¹

- **The Problem:** Adolescent Obesity (nearly 1/3 of adolescents in the U.S. are overweight; 17% are obese)²
- Given current obesity rates and trends, New England Journal of Medicine research models predicted that a majority of today's children will be obese at the age of 35.
- Yet, adolescents are a perfect target for dietary behavior change. They're:
 - Influenced by and are influential to their peer groups
 - Role models for younger children, including siblings
 - Concerned about their parents' welfare
 - At the crossroads of development, more easily motivated to change,
 - Highly targeted consumers
 - Early adopters of tech
- Obesity is especially prevalent in communities with unsupportive food environments. Those that have a limited access to fresh, healthy foods —and easy access to highly processed and fast foods.
- Thus, over 20 years ago, FamilyCook endeavored to explore the possibility of creating a lifestyle change through skill development with minority adolescents in communities with less healthful food

CASE STUDY

- One FamilyCook program, Teen Battle Chef, has aimed to create change using skill-based learning experiences, since 2003.
- Teen Battle Chef and other FamilyCook programs led FamilyCook to focus on **Delivery & Communication** methods for behavior change.
- In collaboration with Teachers College, Columbia University, Program in Nutrition, **10 Behavior Change Delivery Methods** emerged from FamilyCook studies:

10 TEACHING KITCHEN DELIVERY METHODS That Drive Behavior Change

Challenge participants	Address context/ home environment
Build a range of culinary & soft skills	Ensure success is experienced each session
Team build/engage socially	Reinforce skills over time
Develop palate out of comfort zone	Use enticing & adaptable recipes
Promote peer support	Create a celebratory atmosphere

Result: The need for change becomes self-evident through a shift in key values



- Using these methods, FamilyCook found that change becomes self-evident. However, the pathway to that revelation is dependent on the **quality and type of experiences** a program generates.
- The science behind this emerging strategy is summarized by Elaine Miller-Karas in Building Resilience to Trauma (2016): “Positive experiences can change the actual structure of the brain by increasing the number of connections between neurons.”
- When FamilyCook activated these delivery methods, they observed a **radiating effect**. As part of the Team Battle Chef program, participants were given a public platform to share their new skills with peers and the community. Participants’ public speaking skills developed as their excitement mounted over sharing what they learned.

“Positive experiences can change the actual structure of the brain by increasing the number of connections between neurons.”

Additional Teen Battle Chef Outcomes:

- 87% of participating youth showed improvements in overall dietary changes.³
- Over 50% positively impacted food behaviors of friends and family.⁴
- Participants achieved higher graduation rates, 10% higher attendance rates and improved reading and math SAT scores.⁵
- They became self-directed, community oriented and job ready

SUSTAINED EFFECT STUDY

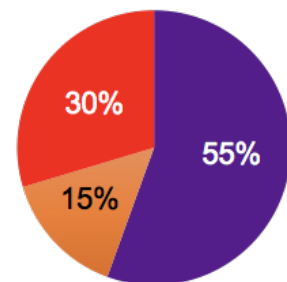
Our Teen Battle Chef alumni study showed healthy behaviors and weight loss sustained for up to 7 years.

- We sought to find out: Can Teaching Kitchen behavior change outcomes be sustained?
- We assessed responses from 30 Teen Battle Chef alumni regarding their food and activity behavior. We also collected self-reported heights & weights.*
- We attribute the significant decrease in BMI to lifestyle change (Teen Battle Chef is not a weight loss program – it's a healthy lifestyle program)
- In the study, we found high percentages of alumni practicing healthy behaviors like drinking water, exercising, and eating fruits & vegetables daily, contributing to their lower BMIs.

*correlations between self-report and actual measurements were .9 in previous research (fairly accurate).

Pre-TBC BMI

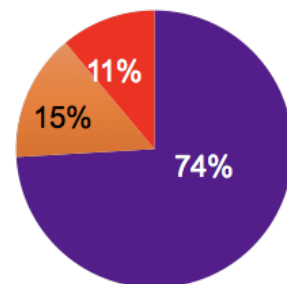
■ Normal ■ Overweight
■ Obese



PRE-PROGRAM MEAN BMI:
26.2 kg/m² (Overweight)

Post-TBC BMI

■ Normal ■ Overweight



POST-PROGRAM MEAN BMI:
24.5 kg/m² (Normal)

Significance: (p=.01)

- Based on programs like Teen Battle Chef, FamilyCook hypothesized that **Skill Development, Social influence and Challenge** are key program drivers in a **self-evident need for behavior change** among participants.
- Yadira, a Teen Battle Chef alumni, re-affirms the skill-building, challenge, and socialization that sustain her behavior change. Those values taught in Teen Battle Chef are still part of her lifestyle 2 years post-program:

“I started to make recipes that we did in Teen Battle Chef, and the snacks that we made. I do make those snacks at home now. I continue doing what I learned in that program on a daily basis. I started drinking more water and I started drinking fruit smoothies, so I have been able to cut down on sugar.... I feel like I have more energy to do things and I exercise more. In Teen Battle Chef, we were supposed to try it. To be a part of the class, you had to be open to try new things [laughs].... I was always the shy kind of person. I didn't even socialize with people. But in Teen Battle Chef, it was all about team work, and making an effort! ...I have a few friends that have kids too. When they do come over and visit, we cook a meal together and I make meals with more vegetables.”

WHAT LIES AHEAD

FOR FAMILYCOOK & BEHAVIOR CHANGE OUTCOMES

“Food as medicine, though ancient knowledge, is the next wave. We aim to re-teach and instill this ancient knowledge.”

— Lynn Fredericks, FamilyCook Founder & President

OUR GOALS

- Activate our tested, proven curriculums to change the perception of food into natural “medicine” for the body
- Find **Clinical Partners** for RCTs
— **Is this you?**
- Explore intergenerational effect for early childhood & adults
- Formalize health certification for HS grads as paraprofessionals while in college, on path to join the workforce in health-related careers

REFERENCES

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3. Wilson, Casey, Masters Thesis, Institute of Human Nutrition 2013
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TEAM + PARTNERS

CORE TEAM

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About FamilyCook Productions

For 20+ years, we've worked in the trenches, fine-tuning program design and building an evidence base.

We power food education programs, spanning the life cycle, operating in over 30 states since 2003. We develop scalable methods and drive demonstrable results from over 15 years of research used to enhance program efficacy. We're supported by National Institutes of Health, among other national and regional partners, like The New York Times, Chipotle and TIME. [Find out more about our organization and program offerings at **FAMILYCOOKPRODUCTIONS.COM**](#)

