

Assessing and promoting “food agency,” a construct for helping individuals navigate the food environment

2015 NERA Planning Grant

1. Mission and Goals

The proposed team—comprising researchers the University of Vermont (UVM), University of New Hampshire, Cornell University, University of Maryland, Drexel University and Johns Hopkins University—possesses varied backgrounds and expertise in nutrition, food science, public health, culinary arts and social sciences. UVM and Drexel research team members launched a project in January 2014 to develop the concept of “food agency” – a measure of an individual’s ability to set and achieve food-related goals in life – and the hypothesis that a UVM experiential, cooking-based pedagogy currently promotes the development of this type of agency. The first phase of the project has been to develop reliable and replicable methods for assessing food agency [the Food Agency Scale] and to develop and verify the cooking based pedagogy. The second phase of the project will be to apply these assessment methods and validate them in multiple places and with different populations. This second phase requires a larger and more diverse group of research collaborators, and will be organized around the following hypotheses:

Hypotheses:

1. The Food Agency Scale (FAS) as a measurement tool to understand individuals’ ability to navigate the food environment is (a) reliable, (b) generalizable, and (c) valid.
2. Pre- and post-intervention scores on the FAS can be used to evaluate the effectiveness of cooking-based nutritional intervention programs.

The NERA planning grant will enable the food agency research team to reach our next goal: to grow this project beyond the seed phase and to expand the scope of researchers involved in the project. The next phase of the project also includes the development of a portable, pedagogy-based intervention to promote food-agency development in diverse populations. Thus, the specific goals that this planning grant will accomplish are:

- a. The preparation of a USDA AFRI Foundational Program grant application to support development of a full, portable pedagogy and to test in multiple locations and also to organize control groups.
- b. Coordination for validity, reliability, and generalizability studies for the FAS.

A NERA planning grant will enable an inter-institutional, regional approach to this complex problem. The team-members involved have the ability to test and validate the FAS and the pedagogy in diverse regions of the Northeast (involving rural and urban locales, racially and ethnically diverse populations, and a broad swathe of socioeconomic variables). Face-to-face meetings enabled by the proposed planning grant will provide researchers with a firsthand understanding of the pedagogical needs and challenges involved in different regions and situations. This will lead to research tools (the FAS), interventions (the pedagogy) and proposals that are stronger, more contextually appropriate, and ultimately more defensible and fundable.

Justification

As in all areas of their lives, humans act with agency in regards to food; that is, they have “the ability to comprehend, predict, and alter the course” of their encounters with foods. However, some individuals act with more agency than others: they confidently and actively identify, pursue, and accomplish food-related goals, whereas others passively participate in the food system, taking the path of least-resistance – often to their nutritional detriment. Because food encounters and decisions do not happen in a vacuum, an individual’s “food agency” can be defined as an inventory of their individual cooking skills, self-efficacy beliefs, and social supports and constraints. The goals of this project are to develop a set of mixed-methods tools to identify and assess food agency, to develop a “portable,” experiential pedagogy that

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demonstrably increases food agency, and to investigate the relationship between food agency and other, observable behavioral and demographic characteristics. This portable pedagogy could then become part of nutrition outreach programs throughout the Northeast, and our research will help figure out how to tailor programs to diverse population of youth in rural and urban areas.

The idea that *food agency* is worth increasing is implicit in a large body of popular and academic literature linking individual and public health with increased cooking skill and “food literacy”. For example, researchers connect the decrease in cooking and increase in eating outside the home with both a decrease in healthful ingredient and food consumption and an increase in the consumption of foods high in unhealthy components like sodium, saturated fats, and refined sugars. On the other hand, the scholarly literature suggests that individuals in control of their own food decisions seem to have better food and nutrition outcomes. Researchers in populations from Switzerland to Australia to the United States have found that that individuals with cooking skills and involved in daily meal preparation reported eating more vegetables and lower amounts of convenience foods, even when the results were controlled for health consciousness. Further, literature reviews have shown that family meals not only lead to healthier food choices, but also to healthier and more consistent meal patterns, as well as a wide range of psychosocial benefits.

Since the launch of the research project in July 2014 we have accomplished the following:

(1) Run three focus groups to explore elements of food agency as articulated by competent home cooks of all ages and income levels; (2) Developed initial scale items for a proposed quantitative food agency scale (FAS) based on focus group results; (3) Run a qualitative inquiry into food agency in on-going foods labs at UVM, including interviews, observations and videos of 8 students and a similar comparison study at Drexel University; (4) Used large-scale ($N = 450$) survey methodologies to propose an initial FAS of 30 items to be further tested for validity, generalizability, and reliability. These initial activities have produced an empirically derived definition and both qualitative and quantitative tools for accessing and measuring food agency.

The next phase of the project will comprise the development and validation of the portable, experiential pedagogy in several places and populations, as well as more fundamental research into the relationship between food involvement and demographic and behavioral measures. These research activities will necessarily be more ambitious, both in scale and in projected impact; because the project fulfills AFRI Priority Area “Improve nutrition and end child obesity”, the team will be applying for a NIFA Foundational Grant as a research/extension project to support this research. This regional, multi-institution transdisciplinary approach has the potential to integrate pressing concerns about the public health due to constraints related to food knowledge, food access and food security.

3. Proposed activities

We propose two (2) 3-day meeting sessions to plan for (1) the development of a portable pedagogy to promote the development of food agency in individuals, (2) an AFRI foundational grant from USDA NIFA to support the deployment and validation of this pedagogy in a multi-site study, and (3) to finalize the FAS and develop further research to identify the relationship between food agency, food-related behaviors, and demographic, economic, and geographic variables.

The first meeting is planned for February, 2016 at Drexel University in Philadelphia, PA. This meeting will focus on sharing and then finalizing the basic elements of the experiential pedagogy and developing plans for the launch and assessment of parallel implementations of the pedagogy at new study sites at Drexel University and West Philadelphia Community Centers and

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University of New Hampshire and affiliated community nutrition programs. The second meeting is planned for May, 2016 and will be dedicated to completing and submitting an AFRI Foundational Grant proposal to support the assessment activities planned at the first meeting in February.

4. Team-member roles

Amy Trubek, PhD: Food Systems, Team Leader (University of Vermont)

Jacob Lahne, PhD: Food Science, Food Agency Scale (Drexel University)

Cynthia Belliveau, DEd: Education, Portable Pedagogy (University of Vermont)

Joanne Celentano, PhD: Nutrition sciences (University of New Hampshire)

Joanne Burke, PhD: Nutrition and sustainable food systems (University of New Hampshire)

Semra Aytur, PhD: Health Management and Public Health (University of New Hampshire)

Jonathan Deutsch, PhD: Culinary Arts (Drexel University)

Julia Wolfson, MPP, ABD: Public health (Johns Hopkins University)

Stephanie Bostic, ABD: Nutrition (Cornell University)

Amy Davidson: EFNEP Specialist (University of Vermont Extension)

Shauna Henley, PhD: Nutrition Specialist (University of Maryland Extension)

Linda Berlin, PhD: Nutrition Specialist (University of Vermont Extension)

Caitlin Morgan: Graduate Research Assistant (University of Vermont)

6. Budget

Activity	Time and Date	Costs	Personnel Involved	Cost
Meeting One in Philadelphia	February 15-17, 2016, Drexel University	Roundtrip Airfare: BTV-PHL x 3: \$1500 BTN-PHL x 3: \$1000 Hotel Room 2 nights x 6: \$1200 Ground Transportation: \$350 (Baltimore-PHL, Ithaca-PHL train and taxis, etc.) Meals: \$500	Amy Trubek, Cynthia Belliveau, Jacob Lahne, Julia Wolfson, Jonathan Deutsch, Joanne Celentano, Shauna Henley, Joanne Burke, Semra Aytur, Caitlin Morgan, Stephanie Bostic	TOTAL: \$4,550
Meeting Two in Burlington, VT	May 21-25, 2016, University of Vermont	Roundtrip Airfare: PHL-BTVx : \$500 Roundtrip Airfare: Baltimore-BTV x 2: \$1000 Concord, NH- BTV (car): \$200 Hotel room 3 nights x5 : \$1250 Meals: \$500	Amy Trubek, Cynthia Belliveau, Jacob Lahne, Julia Wolfson, Caitlin Morgan, Amy Davidson, Linda Berlin, Shauna Henley, Joanne Celentano, Joanne Burke, Stephanie Bostic, Semra Aytur	TOTAL: \$3,450
Office and Tech Support for meetings	All meetings	Refreshments x3: \$300 Projector rental x3: \$150		TOTAL: \$450
TOTAL				\$8,450

7. Leveraging resources

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Conference rooms will be provided for free by Drexel and UVM; Kitchen-classroom space and kitchen equipment for testing pedagogies at both Drexel and UVM. Relationships with other, related food-skills initiatives include the Urban Nutrition Initiative at University of Pennsylvania and the Center for a Livable Future at Johns Hopkins University