

## **BUILDING A FOOD ENVIRONMENT COMMUNITY OF PRACTICE**

### **WORKSHOP SUMMARY and OUTCOMES**

November 16<sup>th</sup> and 17<sup>th</sup> 2016

University of Hawai'i and Montana State University

Workshop organized by Jinan Banna at University of Hawaii and Carmen Byker Shanks, Selena Ahmed, and Justin Shanks at Montana State University with contributions from workshop presenters listed below.

#foodenviro16

#### **Opening Statement // Justin Shanks**

Facilitator Justin Shanks kicked off the morning with an opening statement introducing the goals of the workshop and posed the following questions:

- (1) Is there a need for a Food Environment CoP? What should such a CoP look like in terms of structure and function?
- (2) Is there a need to modify the working definition of food environment to more comprehensively assess how socio-ecological factors influence diets and health?
- (3) How can we come together to share approaches to support each other's work and goal for creating healthy food environments?

#### **Overview of Food Environment + Health Relationship and Metrics // Anna Herforth**

Herforth gave the keynote talk of the workshop with an overview of the food environment and links to health. She focused on the food environment framework presented in the paper she led, "The food environment, its effects on dietary consumption, and potential for measurement within agriculture-nutrition interventions," (Herforth and Ahmed 2015 in *Food Security*). Herforth went on to present a case study applying part of this framework in her work on the IANDA project in Ghana and Tanzania on food prices. Following are the take home points from this talk.

- (1) At a global policy level, what is *measured* is what is *managed*. Global evidence suggests that food environments don't support nutrition. It is thus essential to develop and implement metrics that provide evidence to support aspects of healthy food environments including what needs to be managed.
- (2) The four key variables of the food environment in Herforth and Ahmed's (2015) framework are: availability, affordability, convenience, and desirability.
- (3) There are concrete steps being taken to develop indicators of affordability of nutritious diets – specifically, using food price data collection systems already in place. Herforth and colleagues at Tufts, University of Ghana and Sokoine University

in Tanzania are researching ways of leveraging these monitoring systems to capture objective prices of nutritious food.

- (4) In addition to objective food environment measures, it is important to take into account subjective measures. For example, perceived availability and affordability of food has been linked to influence food choices comparably to objective measures.
- (5) In addition to the built environment, the wild and cultivated food environment is important to understand in order to more comprehensively evaluate the totality of the food environment.

### **Hawai'i Food Environment + Health Overview // Treena Delormier**

Delormier led a talk on the Hawai'i food environment. Following are the take home points from this talk.

- (1) Place, history, and culture and crucial to take into account in understanding the context specificity of the food environment and address the *why* of food availability and affordability as well as food choices.
- (2) Decisions made in the face of particular governance, economic, and socio-cultural influences have lasting and notable impacts on food environments and peoples in these food environments.
- (3) The book "Food and Power in Hawai'i" by Hirata et al. was highlighted to illustrate how governance, economic, and socio-cultural factors influence the food environment in Hawai'i.
- (4) In Hawai'i, the wild and cultivated food and environment plays a notable role in addition to the built environment and should be taken into account in food environment research.

### **Montana Food Environment + Health Overview // Selena Ahmed + Carmen Byker Shanks**

Byker Shanks and Ahmed led a talk on the Montana food environment with a focus on rural and tribal communities in the state. This work is based on their three-years of food environment research in Montana in collaboration with the Salish and Kootenai College on the Flathead Indian Reservation and funded by the NIH INBRE program. Byker Shanks and Ahmed highlighted results from the following papers:

- Byker Shanks, C.; Ahmed, S.; Smith, T.; Houghtaling, B.; Jenkins, M.; Margetts, M.; Schultz, D.; Stephen, L. 2015. Quality of Fruits and Vegetables using the Nutrition Environment Measurement Survey (NEMS) is Lower in More Rural Counties of Montana. *Preventing Chronic Disease* 12:150158
- Byker Shanks, C.; Smith, T.; Ahmed, S.; Hunts, H. 2015. Assessing Foods Offered in the Food Distribution Program on Indian Reservations (FDPIR) Using Healthy Eating Index-2010. *Public Health Nutrition* doi:10.1017/S1368980015002359

- Ahmed, S.; Byker Shanks, C.; Smith, T.; Shanks, J. Desirability of Grocery Store Fruits and Vegetables is Lower in More Rural Counties of Montana using the Produce Desirability Tool (ProDes). *In Review*
- Ahmed, S.; Byker Shanks, C. Quality of Vegetables based on Total Phenolic Scores is Lower in More Rural Built Food Environments in a Frontier American State. *In Review*

Following are the take home points from this talk.

- (1)** Agriculture and food linkages involve the influence of production on crop yields, diversity, and quality. It is not only important to characterize what we grow, but *how* we grow it.
- (2)** Food and health linkages involve the influence of food environments on food choices that impact diet quality, nutrition, and health status, including diet-related chronic disease and deficiencies.
- (3)** Access, affordability, convenience, desirability, *and* quality are key variables of the food environment in Montana. Ahmed and Byker Shanks are using an expanded framework of food environment variables for research in Montana that includes quality. Their working definition of quality focuses on crop / food quality and includes the following parameters: nutrients, minerals, phytonutrients, phytochemicals, shelf life, nutrient claims, and food safety parameters.
- (4)** Level of rurality is significantly associated with multiple food environment characteristics in Montana. On the basis of multiple food environment measures, more rural and tribal communities in Montana have the following characteristics compared to more urban counties in the state: (i) lower quality produce on the basis of appearance surveying through NEMS-S; (ii) less desirable produce on the basis of consumer sensory surveys and; (iii) lower quality produce on the basis of total phenolic concentrations.
- (5)** Evaluation of food baskets from the FDPIR (Federal Distribution Program on Indian Reservations) found this program has a notably lower Healthy Eating Index (HEI) compared to more the foods recommended by the Dietary Guidelines for Americans while having a higher HEI compared to the Supplemental Nutrition Assistance Program (SNAP).
- (6)** Byker Shanks and Ahmed are applying baseline findings on the food environment to collaborate with partners at Salish Kootenai College on the Flathead Indian Reservation to implement food and nutrition educational interventions that seek to limit barriers of access to fruits and vegetables.

### **Presentation #1 // Claudio Nigg**

Nigg presented a case study assessing the relationship between geographic availability of food based on distance from home and food intake. Following are the take home points from this talk.

- (1) The literature shows mixed results regarding if and how the availability of foods based on geographic distance of vendors from one's home influence food intake.
- (2) Nigg's case study in Hawai'i indicates that there is not a statistically significant relationship between geographic availability of food based on distance from home and food intake.
- (3) Nigg emphasizes that other variables need to be explored in future food environment work including assessing geographic availability of food based on distance from work as well as level of rurality.

### **Presentation #2 // Treena Delormier**

- (1) Delormier highlighted the work of the 1<sup>st</sup> Native American Nutrition Conference, Seeds of Native Health: A Campaign for Indigenous Nutrition, and opportunities for the future. Information about this conference can be found here: <http://seedsofnativehealth.org/conference/>

### **Presentation #3 // Elise Dela Cruz-Talbert**

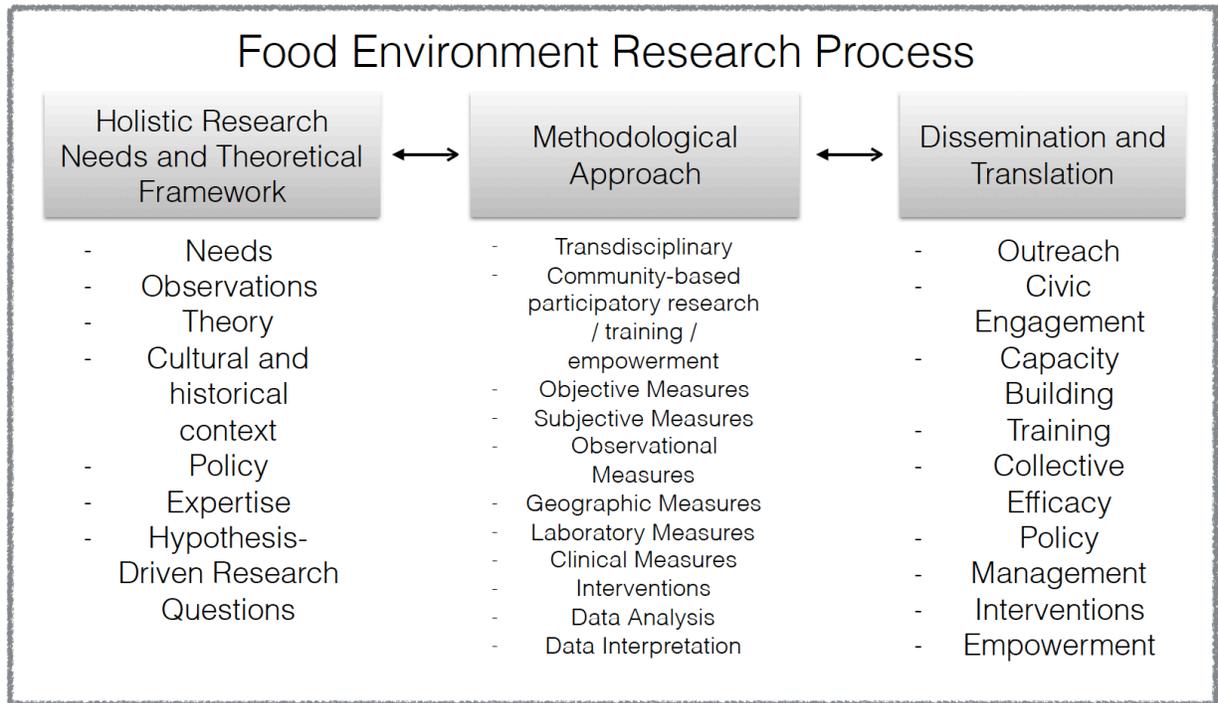
- (1) Cruz-Talbert applied GIS to examine relationships of the relative density of food environment vendors to various diet and health parameters towards evaluating socio-spatial disparities and retail food access in Hawai'i.
- (2) She emphasized the importance of assessing the relative density of food environment vendors (ratio of healthy food environment vendors to unhealthy vendors) rather than either alone.
- (3) Cruz-Talbert further highlighted that food environment research often fails to incorporate the totality of the food environment including stores whose main purpose is not to sell food but offer food such as candy. She supports that further research should take into account the totality of vendors that shape the food environment.

### **Presentation #4 // Jeannie Butel**

- (1) Butel highlighted a culturally-based program involving growing traditional food.
- (2) She emphasized that it is essential to carry out food environment projects that are place-based and context specific.
- (3) One of the foundations of a successful place-based food environment project are land rights – the rights of the land itself.
- (4) Butel shared that implementation of collective efficacy framework is beneficial for carrying out sustainable food environment interventions.



- (2) Discussed a holistic food systems by Selena Ahmed that can inform methods, approaches, and management



**Science Communication // Justin Shanks**

- (1) Shanks highlighted the need to effectively translate and share data with communities.
- (2) Choose communication strategy based upon consideration of how audiences obtain media.
- (3) Social media and infographics are key strategies to connect with audiences that use digital based communications.

**Brainstorming // Facilitated by Justin Shanks**

**Questions posed**

- (1) Is there a need for a Food Environment CoP?
- (2) Is there a need to modify the working definition of food environment?
- (3) How can we come together to share approaches to support each other's work and goal for creating healthy food environments?

## Needs and Next Steps for Food Environment Research and Practice

- (1) **Need:** There is a need to strengthen **community-scholar partnerships** in identifying and measuring the food environment. All kinds of communities are considered, including the policy-making/government communities. For example, the IANDA project in Africa presented on day 1 connects in-country policymakers with scholars to better use the data they already have a mandate and desire to collect.

**Moving forward:** Identify strategies for connecting communities and organizations with researchers carrying out food environment work.
- (2) **Need:** We need to learn from **place-based food environment projects** and compare and contrast their outcomes for **global food environment lessons and principles**.

**Moving forward:** Bring together food environment researchers and community partners to share place-based outcomes and identify strategies to compare and contrast outcomes across communities. This should involve transdisciplinary collaboration among stakeholders and across regions globally.
- (3) **Need:** There is a need for food environment measures to take into account the following: **(a) place** and other aspects of **context specificity**, **(b) social theory**, **(c) subjectivity** (i.e. perceptions of food availability versus geographic food availability).

**Moving forward:** Develop and share approaches through a digital toolbox with resources on food environment measures that take into account context specificity, social theory, and subjectivity.
- (4) **Need:** There is a need to more clearly communicate what a food environment is.

**Moving forward:** Using **science communication** strategies and learning pedagogies to more effectively communicate regarding food environments and engage other researchers and other stakeholders.
- (5) **Need:** There is a need to broaden the variables captured in characterizing the food environment in a more holistic way including access to wild and cultivated foods that ultimately influence food choice and health.

**Moving forward:** Bringing together researchers that work on access to wild and cultivated food resources with those that focus on the built food environments to integrate data collection towards a more comprehensive characterization of the food environment. Examine how interactions with the wild and cultivated food environments shift with changes in access to built food environments.