Agricultural Production and Food Systems

P1 A Qualitative Approach to Young Adults' Perceptions of Local Food Based on a Multi-Theory Model

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Background: Local food consumption has the potential to improve the sustainability of current food systems.

Objective: To identify college students' perceptions of local food based on a multi-theory model.

Study Design, Settings, Participants: In this qualitative study, semi-structured individual interviews were conducted. The theory of planned behavior extended with self-identity and the health belief model were used as the framework for interview questions. This study took place at a university in the southeast region of the United States. Purposive sampling was employed to recruit a diverse sample totaling 30 participants, including in-state, out-of-state, and international students.

Measurable Outcome/Analysis: Behavioral beliefs (advantages and disadvantages), normative beliefs, control beliefs (barriers and facilitators), perceived threats, self-identity and cues to action regarding local food consumption were measured. Interviews were audio recorded and transcribed verbatim. A hybrid inductive and deductive content analysis was used to analyze interview transcriptions.

Results: Major themes related to behavioral beliefs, normative beliefs, control beliefs, perceived threats, self-identity, and cues to action were identified. Trustworthiness, supporting the local community and economy, freshness, and health benefits were identified as advantages of consuming local food. Perceived disadvantages included the higher price of local food, limited variety, and inconvenience. Major themes related to normative beliefs included approval of family members and friends. Perceived barriers included cost, lack of availability, and lack of information regarding local food, while perceived facilitators included availability and clear advertisement. Poor dietary quality was a major threat. Local food consumers were typically viewed positively, often described as health conscious individuals. Major themes related to cues to action included presentation of information in a variety of forms. In addition, emotion emerged as a new theme that may potentially influence local food consumption.

Conclusion: The identified themes should be further explored and described when promoting local food consumption among this population.

Funding: The University of Alabama.

P2 Alphabet Soup - One School's Effort to Reduce Food Waste

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Objective: To determine the amount of food saved within two food waste reduction programs at an elementary school.

Use of Theory or Research: Food waste has many contributors: individuals, industry, grocery stores, restaurants and schools. A 2018, USDA study estimated the average person wastes 300 pounds of food a year in the US alone, equating to 150,000 tons of food, enough to feed two billion people. Schools waste 270,000 metric tons of food annually. Changes to the National School Nutrition Program has brought more fruits and vegetables into schools making it imperative to manage the waste from preparation and leftovers.

Target Audience: Food Service Managers

Program Description: A rural Ohio community of 7,212 people with a school district feeding 720 students daily in grades kindergarten through 12th grade with a 25% participation rate in free and reduced lunch. The kitchen, providing lunch for three school buildings, currently runs two food waste programs. Program one focuses on food scraps given to a local pig farmer; waste that cannot be served including the ends of vegetables and fruits. Program two focuses on leftover vegetables and grains from the school lunch service. Leftovers collected over the week are made into a vegetable soup that is served with the lunch on Fridays. The soup is offered to students and members of the school community including teachers, staff and visitors at no cost.

Evaluation Methods: Leftover vegetables and grains were collected and weight recorded daily for four school days for the vegetable soup. Food scraps were collected and weighed daily for five school days. Amounts were totaled.

Results: Food waste collection yielded 221.5 pounds or an average of 55.4 pounds a day of leftover vegetables and grains used in the vegetable soup. Food scraps program provided a total of 90.2 pounds or 18 pounds of feed daily for local pigs.

Conclusions: Food scraps and food saving programs work to reduce food waste. Utilizing leftover food may be a way to turn food waste back into edible food for people and/or animals. School kitchen was able to save over 250 pounds of food from the trash in one week.

Funding: None.

P3 College-Aged Students Compared Preferences of Prepared Sorghum to Rice in a Ready-Made Dish

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Background: Sorghum is a versatile, gluten-free, whole grain, yet overall human consumption of sorghum is minimal. Whole grains, such as sorghum, substituted for refined grains can enhance the nutrition content of a dish.

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Objective: This research study was to determine the sensory perception and overall food preference of college-aged students when comparing sorghum to rice in a ready-made dish.

Study Design, Settings, Participants: A quasi-experimental study was conducted in a campus foodservice setting at the University of North Florida. The participants ($n = 596$) were randomly recruited, using convenience sampling, to blindly taste test two food samples then complete an associated sensory and perception survey. The food samples consisted of recipes identically prepared, with the substitution of sorghum for rice.

Measurable Outcome/Analysis: Paper and electronic sensory analysis (using hybrid hedonic scales) and food preference surveys were available after sampling.

Results: A majority of the participants (71.9%) were ages 18-20 years old, with 42.3% selecting their educational classification as a freshman. Participants rated their overall feeling about each dish as to how often they would consume it, the response yielded a significant difference in overall mean (3.66 vs. 3.42, $P = .000$), with preference given to rice over sorghum. In comparing the two grain based dishes, participants indicated they would eat this every now and then to every opportunity they had with rice (55.2%) to sorghum (48.4%). Yet in response to overall acceptance of sorghum to rice, there was no significant difference.

Conclusion: This study provides feedback on the perception of college students on substituting a refined grain for whole grains in ready-made dishes. This preliminary study implies that acceptability for alternative grains is feasible in college-age populations and more research needs to be conducted on overall perception of alternative grains in ready-made dishes.

Funding: United Sorghum Checkoff Program.

Basic Food and Nutrition Knowledge

P4 A Comparative Study on Nutritional Knowledge, Dietary Habits and Attitude Between Korean and Chinese Postpartum Women

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Background: An adequate diet is important for both the mother and newborn during the postpartum period. Cultural differences should be considered when providing nutrition education for postpartum women in East Asian countries. Even though there are cultural differences and similarities between Korea and China, there is lack of evidence on nutritional knowledge, dietary habits and attitude among postpartum women in both countries.

Objective: To assess nutritional knowledge, dietary habits and dietary attitude among postpartum women in Korea and China and examine differences between two countries.

Study Design, Settings, Participants: A cross-sectional survey study was conducted with 221 Korean and 221 Chinese postpartum women in outpatient facilities of Gyeonggi, South Korea and Jinhua, China.

Measurable Outcome/Analysis: A self-report survey was administered. Nutritional knowledge was assessed with 15 items, and dietary habits and dietary attitude were measured with 10 items each, using a five-point Likert scale. The data were analyzed by using SPSS 25.0 with descriptive statistics, t-test, Chi-square, and Pearson's correlation.

Results: Korean postpartum women had significantly higher nutritional knowledge (12.36 ± 1.58) and dietary attitude scores (3.38 ± 0.47), compared to Chinese postpartum women (10.61 ± 1.75 and 3.10 ± 0.33 , respectively; $P < .001$), while Chinese women had a significantly higher mean score in dietary habits than Korean women (3.40 ± 0.45 vs. 2.96 ± 0.63 ; $P < .001$). Dietary habits had a positive correlation with nutritional knowledge ($P < .01$) and dietary attitude ($P < .001$) in Korean women, but there was no statistically significant correlation among dietary habits, attitude and nutritional knowledge in Chinese women.

Conclusion: Nutrition education might be beneficial for both Korean and Chinese postpartum women to improve their dietary behaviors. Korean postpartum women had higher nutritional knowledge and dietary attitude than Chinese postpartum women. Otherwise, Chinese postpartum women had higher dietary habits than Korean postpartum women. Improving skills for healthy dietary habits might be more effective for Korean postpartum women, while improving nutritional knowledge and attitude might be effective in Chinese postpartum women. Nutrition education programs and policy should address these cultural specific needs.

Funding: None.

P5 A Mediterranean Diet Toolkit for Extension Educators: A Pilot Test

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Objective: Educate consumers on the Mediterranean diet (MD) and associated health benefits and encourage personal consumption of more healthy foods from the MD and fewer less healthy/processed foods. Package/organize the educational materials to meet educators' needs for consistent and feasible delivery.

Use of Theory or Research: The MD is a well-researched and popular topic in nutrition. Long-term population studies indicate health benefits such as reduced risk of diabetes, cancer, cardiovascular disease, and meta-

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