Cooking attitudes, behaviors, and self-efficacy in relation to fruit and vegetable intake among young adults

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Introduction

Today in the U.S., one in three adults and one in six children and adolescents are obese (Healthy People 2020, 2015). Obesity and its related diseases are causing severe health consequences and are putting an economic strain on our medical care delivery system (Yang & Zhang, 2014). National nutrition data show that many young adults’ diets are low in fruits and vegetables and this dietary pattern is related to an increased risk of chronic diseases (Larson et al., 2006; Moore & Thompson, 2015). The purpose of this study was to investigate cooking beliefs and practices in relation to diet quality among young adults. Specifically, this study assessed university students’ attitudes towards cooking, frequency of preparing homemade meals, and confidence in cooking as they correlate with fruit and vegetable consumption. The parent-child dyad was also assessed to determine if people’s cooking attitudes, confidence, and frequency relate to their parents’ frequency of cooking.

Hypotheses

H0: There will be no significant relationship between parents’ cooking attitudes and their fruit and vegetable intakes.

H1: There will be a significant relationship between parents’ cooking attitudes and their fruit and vegetable intakes.

Methods

Participants were selected from the population of California State University Long Beach (CSULB) Introductory Nutrition (NUTR 212) students. Fruit and vegetable intakes and cooking-related beliefs and practices were assessed using a survey compiled from two preexisting surveys, the National Cancer Institute’s Fruit and Vegetable Intake Screener and a questionnaire from Clemson University’s Cooking With a Chef program which evaluates psychosocial cooking factors. Subjects completed the survey online through Qualtrics over two weeks. Fruit and vegetable intake scores were calculated and summary statistics were computed from the results to create overall “cooking attitude” and “cooking confidence” scores. Cooking attitude (9 items, α = .846) and cooking confidence scores (10 items, α = .882) were found to be highly reliable. Subjects’ frequency of cooking and their parents’ frequency of cooking were also recorded. Fruit and vegetable intake, cooking attitude, cooking confidence, cooking frequency, and parents’ cooking frequency were then assessed for Pearson correlation using SPSS Version 22 software.

Results

Demographics

The study was comprised of 448 students in 14 CSULB NUTR 132 classes. The sample consisted of 142 males (31.7%) and 306 females (68.3%). Two subjects did not identify their gender. Subjects ranged in age from 18 to 28 years, with a mean of 19.8 years of age. Seventy-nine percent of participants (n=357) reported living in off-campus housing. Fifteen percent (n=67) reported that they live in on-campus dormitories, 16% (n=5) stated they live in sorority or fraternity housing, and 5% (n=21) reported “other” for their living situation. Most participants (86%) reported access to a kitchen at their place of residence. See Table 1 for the average fruit and vegetable intake, cooking attitude scores, cooking confidence scores, cooking frequencies, and parents’ cooking frequencies among male and female study participants.

Study Results

Hypothesis 1 was rejected at p < 0.05. Results showed a significant positive correlation of 0.097 between the summary statistic of cooking attitude and fruit and vegetable intake (p = .040). See Table 2 for results for all hypotheses.

Hypothesis 2 was rejected at p < 0.01. Results showed a significant positive correlation of 0.240 between cooking frequency and fruit and vegetable intake (p = 0.01).

Hypothesis 3 was rejected at p < 0.01. Results showed a significant positive correlation of 0.151 between the summary statistic of cooking confidence and fruit and vegetable intake (p = .001).

Hypothesis 4 was rejected at p < 0.05. Results showed a significant positive correlation of 0.151 between the summary statistic of cooking attitude and subjects’ parents’ cooking frequency during subject rearing (p = .014).

Hypotheses 5 and 6 were not rejected; no significant correlations were found.

Discussion

This study showed a significant positive correlation of .097 between subjects’ fruit and vegetable intake and their cooking confidence (r = 0.150, p = .001). This correlation, though weak, is still significant and indicates that the more positive one’s attitude towards cooking, the better their diet quality. Crawford et al. (2007) also showed that women who dislike cooking are less likely to eat two or more servings of vegetables daily.

A significant positive relationship of .240 was found between subjects’ fruit and vegetable intake and their cooking frequency (p < .001). Previous research has also demonstrated that cooking frequency was associated with higher diet quality (Thorpe et al., 2014 & Larsson et al., 2006). One explanation for this relationship is that those who cook more often become more skilled and able to prepare a wide variety of recipes, including nutritious options, rich in fruits and vegetables.

The study results also showed a significant positive relationship between subjects’ fruit and vegetable intake and their cooking confidence (r = 0.150, p < .001). This may be explained by the fact that one’s cooking confidence determines what foods one is willing to attempt to prepare and thus what food one eats. This finding has been demonstrated in other research with low-income mothers that indicated cooking skill and confidence to make homemade meals were major influences in their food choices and eating practices (Hardcastle & Blake, 2015).

A significant relationship was found between subjects’ cooking attitudes and their parents’ cooking frequency during subject rearing (r = 0.115, p = .014). Studies show that children’s food preferences and intakes are largely based on the familiarity and accessibility of the food (Hean et al., 1998). Parents’ diet and eating behaviors while their children live at home predict their child’s relationship with food once they begin to live independently (Dickens & Ogden, 2014).

Conclusion

This study demonstrated that positive attitudes toward cooking, increased confidence in cooking, and greater cooking frequency are related to increased fruit and vegetable intake among CSULB NUTR 132 students. These results indicate the need for further research that explores how improving cooking attitudes, confidence, and frequencies can impact diet quality. Studies that assess the effect of childhood cooking interventions on diet quality in adulthood may be beneficial in showing that cooking exposure can improve diet.

Results from this study suggest a relationship between parents’ cooking practices and their children’s attitudes towards cooking. Previous research shows that healthy food practices are often cemented in childhood (Dickens & Ogden, 2014). Randomized controlled trials are needed to understand the impact of parents’ cooking frequencies on their children’s attitudes.

Recommendations

Future research could benefit from using random sampling to see if the same results can be demonstrated in other populations, such as students in other universities and people of different ages, ethnicities, and income levels. Additional analyses of the data could be conducted to incorporate multiple variables rather than only bivariate correlations. Randomized clinical trials are needed to show a true cause and effect relationship between cooking beliefs and practices and diet quality. Cooking interventions among adolescents should be evaluated to determine if increased cooking attitudes, behaviors, and self-efficacy lead to improved diet quality.

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For More Information

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