Research Brief

Self-Perceived Cooking Skills in Emerging Adulthood Predict Better Dietary Behaviors and Intake 10 Years Later: A Longitudinal Study

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ABSTRACT

Objective: To determine whether perceived cooking skills in emerging adulthood predicts better nutrition a decade later.

Methods: Data were collected as part of the Project Eating and Activity in Teens and Young Adults longitudinal study. Participants reported on adequacy of cooking skills in 2002–2003 (age 18–23 years) and subsequently reported on nutrition-related outcomes in 2015–2016 (age 30–35 years) (n = 1,158). Separate regression models were used to examine associations between cooking skills at age 18–23 years and each subsequent outcome.

Results: One fourth of participants described their cooking skills as very adequate at 18–23 years, with no statistically significant differences by sociodemographic characteristics. Reports of very adequate cooking skills at age 18–23 years predicted better nutrition-related outcomes 10 years later, such as more frequent preparation of meals including vegetables ($P < .001$) and less frequent fast food consumption ($P < .001$).

Conclusions and Implications: Developing adequate cooking skills by emerging adulthood may have long-term benefits for nutrition over a decade later. Ongoing and new interventions to enhance cooking skills during adolescence and emerging adulthood are warranted but require strong evaluation designs that observe young people over a number of years.

Key Words: cooking, eating, longitudinal, nutrition (*J Nutr Educ Behav*. 2018;■■:■■–■■.)

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INTRODUCTION

An emerging body of evidence suggests that developing cooking and food preparation skills is important for nutritional well-being. Involvement in cooking has been associated with healthier diets and eating behaviors among adults[1] and adolescents.[2-5] Moreover, involvement in meal preparation during the adolescent transition to young adulthood has been associated with better nutrition indicators later in life.[6] Yet the practice of home cooking is declining[7] and there are growing concerns that the skill of cooking may be lost in future generations.[8] Previously, these skills were transmitted intergenerationally or through formal school curriculum.[8,9] However, recent surveys found that few adolescents and adults reported that they learned to cook from school.[10,11]

Over the past decade, numerous interventions were designed with the aim of developing cooking skills and confidence among children and adolescents[12] as well as adults.[13] Many of these programs reported short-term benefits, particularly with participant confidence in cooking, knowledge of cooking techniques, and attitudes toward eating new foods, including vegetables.[12,13] Robustly measuring the long-term impact of these types of programs remains challenging. In short, it is unknown whether developing cooking skills and confidence early in life makes a meaningful difference to nutrition and healthy eating throughout adulthood. Thus, by drawing on longitudinal data, the current study aimed to address this gap by determining whether adequate cooking skill perceptions in emerging adulthood were associated with better eating behaviors and weight status a decade later.

METHODS

Study Design and Population

Data were collected as part of the population-based Project Eating and Activity in Teens and Young Adults

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(EAT) longitudinal study of weight-related behaviors, weight status, and factors associated with these outcomes among young people. For the original assessment (EAT-I) in 1998–1999, adolescents enrolled at 31 public middle schools and senior high schools in the Minneapolis–St Paul metropolitan area of Minnesota completed surveys and anthropometric measures in school classrooms.[14,15] Follow-up assessments were conducted using a combination of mailed and online surveys in 2003–2004 (EAT-II) and 2015–2016 (EAT-IV) to examine changes in the weight-related outcomes of the original participants as they progressed through emerging adulthood and entered their third decade of life.[16-18]

Approximately 22.6% of the original study population was lost to follow-up at EAT-II, primarily owing to missing contact information at EAT-I (n = 411) and no address found at follow-up (n = 591). At EAT-IV, survey invitations were sent only to participants who had responded to at least 1 previous follow-up survey (EAT-II or EAT-III) and for whom current contact information was available (n = 2,770). Among those who could be contacted, the response rate at EAT-II was 68.5%, and at EAT-IV the response rate was 66.1%. To capture the unique and dynamic life changes between early and later adulthood, the current analysis includes only the 1,158 participants who responded at both of these waves and were in the emerging adult life stage (age 18–23 years) at EAT-II (2002–2003).

The University of Minnesota's Institutional Review Board Human Subjects Committee approved all protocols used in Project EAT at each time point. Parental consent and written assent from participants was obtained in 1998–1999. For Projects EAT-II and EAT-IV, participants were mailed a consent form with their paper survey or reviewed a consent form as part of the online survey.

Survey Development

The Project EAT survey was tailored at each assessment wave to reflect age-appropriate topics and areas of evolving interest. Perceived adequacy of cooking skills was assessed in emerging adulthood (age 18–23 years) and several other food preparation and meal behaviors were assessed in later adulthood (age 30–35 years). The item on adequacy of cooking skills was adapted from a 10-state survey of young adult food habits[19] and was pretested along with other new survey items in focus groups with 20 young adults before they were added to the Project EAT-II survey. Similarly, for EAT-IV, 2 focus groups were conducted to pretest an initial draft of the survey with a community-based sample of 35 young adults. For pretesting at both waves, young adults individually completed a draft version of the survey and then provided oral feedback as a group on the content of the survey, the wording of items, and the response options provided for each item.[20,21] Psychometric properties of measures are reported when available based on data collected for EAT-IV. Scale psychometric properties were examined in the full sample of responders to the EAT-IV survey and estimates of item test-retest reliability were determined in a subgroup of 103 participants who completed the EAT-IV survey twice within 1–4 weeks. All test-retest correlations had P values < .001.

The independent variable of perceived adequacy of cooking skills was assessed by asking *How adequate are your cooking skills?* Participants could reply with 4 options: *very adequate*, *adequate*, *inadequate*, or *very inadequate*. The *very inadequate* and *inadequate* groups were combined for analyses because of the smaller numbers in those groups.

Frequency of having prepared a meal with vegetables was assessed by asking *During the past month, how often have you prepared a meal that included vegetables?* Participants could select 1 of 6 options ranging in frequency from *never* to *most days of the week* (test-retest r = .84). Based on the distribution, responses were dichotomized to represent *most days of the week* and *a few times a week or less*. Whether participants were usually involved in household food preparation was assessed by asking participants to select who was involved, from a list of their family members. Participants who replied *me* were considered a usual food preparer (test-retest agreement for selecting self = 91%).

Family meals, fast food for family meals, and barriers to food preparation were assessed among participants who reported being a parent to ≥1 children at the time of the EAT-IV survey. Frequency of family meals was assessed by asking *During the past 7 days, how many times did all or most of the people living in your household eat a meal together?* with 6 responses ranging from *never* to *≥7 times* (test-retest r = .64). Responses were dichotomized at *>7 times* or less to create 2 groups of similar sizes. Fast food for family meals was assessed by asking *During the past week, how many times was a family meal purchased from a fast-food restaurant and eaten together at the restaurant or at home?* with 4 responses ranging from *never* to *≥3 times* (test-retest r = .54). Responses were dichotomized at *≥1 time* to capture weekly purchases. Barriers to food preparation were assessed with a 5-item scale asking about having time and energy for meal preparation, meal planning, and feeding children *right*. The scale was adapted from Storfer-Isser and Musher-Eizenman[22] and was found to have good internal consistency and reliability (Cronbach α = .74; test-retest r = .73) in the EAT sample. Possible scores ranged from 5 to 25, with higher scores indicating greater barriers to food preparation.

Fast-food restaurant frequency was assessed with the item *In the past week, how often did you eat something from a fast-food restaurant?* with 6 response options ranging from *never* to *>7 times*. Responses were dichotomized at *1–2 times* or more often to create 2 groups of similar size (test-retest r = .54).

Daily servings of fruit, vegetables, whole grains, and sugar-sweetened beverages were assessed using a semiquantitative food-frequency questionnaire that was administered at the same time as the Project EAT-IV survey.[23] A daily serving was defined as the equivalent of 0.5 cup of fruits and vegetables and 16 g of whole grains. For sugar-sweetened beverages, a serving was defined as the equivalent of 1 glass, bottle, or can. Previous studies examined and reported on the reliability and validity of intake estimates.[24,25] Responses to the food-frequency questionnaire were excluded if participants reported a biologically implausible level of total