Research Article

Adolescent Cooking Abilities and Behaviors: Associations With Nutrition and Emotional Well-Being

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ABSTRACT

Objective: To determine the relationship between cooking and selected indicators of diet quality, mental well-being, and family relationships.

Design: Data were collected as part of *Youth'12*, a nationally representative health and well-being survey.

Setting: Secondary schools in New Zealand.

Participants: A total of 8,500 students.

Main Outcome Measures: Cooking ability and frequency of cooking, nutritional behaviors, mental well-being, depressive symptoms, and family connections.

Analysis: Multiple regression analyses were conducted to examine the relationships between cooking ability/frequency and indicators of health and well-being, controlling for the sociodemographic characteristics of students.

Results: Approximately 80% of students reported that they can cook a meal from basic ingredients either fairly or very easily. Reported cooking ability was positively associated with better nutritional indicators, better mental health indicators, and stronger family connections ($P = .01$). For example, adolescents reporting the greatest cooking abilities were approximately twice as likely to meet the recommendations for fruits and vegetables (odds ratio, 2.1; 95% confidence interval, 1.6–2.8). Likewise, adolescents reporting the greatest cooking abilities also reported lower levels of depressive symptoms ($P < .01$) and greater mental well-being ($P < .01$) than those with less cooking ability. However, greater cooking ability was also associated with higher body mass index ($P < .01$). Overall, similar statistically significant relationships were observed with frequency of cooking, although not for young people who cook most days.

Conclusions and Implications: Learning to cook and having the opportunity to cook may provide a unique means for adolescents to develop life skills and contribute positively to their families. Future research examining the relationships between cooking and health may include measures beyond nutrition, such as social relationships and emotional well-being.

Key Words: cooking, nutrition, mental well-being, adolescent (*J Nutr Educ Behav*. 2016;48:35-41.)

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INTRODUCTION

A growing body of evidence suggests that the home food environment, especially family meal sharing, is important for promoting the healthy development of adolescents. Children and adolescents who share meals with their families are leaner, have healthier dietary patterns, and are less likely to engage in disordered eating behaviors.[1] Family meal sharing also appears to act as a protective factor for adolescents against a number of risk-taking behaviors such as substance use, violent behaviors, and mental health problems.[2] Moreover, adolescents who frequently share meals with their families report greater connection and communication with their families and better emotional well-being.[3]

Numerous hypotheses have been suggested to explain the positive impact family meals may have on healthy youth development. Most obviously, family meals may create opportunities for children and adolescents to eat healthy foods and for parents to role-model healthy eating behaviors. In addition, involvement in food preparation and meal sharing may provide adolescents with opportunities for developing life skills, their

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identity, and social relationships with their families. A qualitative study of children in England found that food was central in the way children expressed love in their families, and some children use foods as a way to reinforce ethnic identity.[4]

It is likely, then, that activities related to family meals, such as involvement in food procurement and preparation, may positively influence the health of adolescents. Recent studies of adolescents,[5] young adults,[6,7] and adults[8] have found that involvement in cooking is associated with better nutrition, including increased consumption of fruits and vegetables and decreased consumption of fast food. In addition, one longitudinal study found that cooking during adolescence was associated with better dietary quality into early adulthood.[7] Numerous interventions to improve child and youth cooking skills have been conducted and evaluated and they appear to be effective at improving dietary outcomes, at least in the short term.[9]

In recent years, concerns have been raised about the lack of opportunity for young people to learn basic cooking skills and the likely impact this will have on the health of the population.[10] These concerns are set within the context of the rapidly changing food environment, which makes it easy for families to eat foods that do not require extensive preparation. In the US, there was a significant decrease in the daily energy consumed from food prepared at home and time spent in food preparation between 1965 and 2007.[11] This is important because it is well established that foods prepared away from home are less healthy than home-prepared foods and contribute to unhealthy weight gain.[12,13]

Opportunities to learn how to cook may be diminishing because these skills have traditionally been passed on intergenerationally or through school curricula. Yet, the teaching of cooking skills in schools has undergone radical changes in the past few decades and focuses less on necessary domestic skills and more on the industrial and commercial contexts of food (eg, food processing, packaging, and marketing).[14,15]

To date, little is known about the prevalence of cooking skills and behaviors of adolescents and how cooking is associated with indicators of health and well-being. The current study aims to extend this area of interest by describing the cooking skills and behaviors of a nationally representative sample of high school students in New Zealand and to determine the relationship between cooking and selected indicators of nutrition, mental well-being, and family relationships. The aims of the current research align with the principles of Positive Youth Development.[16] That is, learning to cook and participating in home cooking may promote family bonding, self-determination, self-efficacy, and positive identity development.

METHODS

Data for the current study were collected as part of *Youth'12*, a nationally representative survey of the health and well-being of secondary school students in New Zealand. In total, 8,500 secondary school students participated, representing 3% of the total population of all secondary school students in New Zealand. There were slightly more females (54%) than males and slightly more younger students (22% aged ≤ 13 years, 22% aged 14 years, and 21% aged 15 years) than older students (19% aged 16 years and 17% aged ≥ 17 years). Full details of the methodology and design of the *Youth'12* survey have been described previously.[17]

The *Youth'12* survey used a 2-stage sampling design. First, 125 schools were randomly selected to participate; of these, 91 took part in the survey. From the participating schools, 12,503 students were randomly selected for participation and 8,500 students consented to take part. Reasons for nonparticipation were largely unknown or owing to students being absent from school on the day of the survey.[17]

The researchers obtained consent for participation from school principals on behalf of the boards of trustees. Students and parents were provided with information sheets about the survey. Parents were encouraged to discuss the survey with their child and could withdraw their child from participation. Parents did not provide written consent. Students themselves consented to participate in the survey. The University of Auckland Human Participants Ethics Committee granted ethical approval for the study.

All data collection took place at school during the school day. On the day of the survey, students were asked to come to a designated room. Upon arrival, students were given an anonymous login code to access the survey. The survey included a 608-item multimedia questionnaire administered on an Internet tablet. Identification of the student's census meshblock number (based on the residential address) was used to determine the geographical location of the small area in which a student lived (approximately 90 households/meshblock). The multimedia nature of the questionnaire meant that all students could read each question and response options themselves while listening to the questions and responses being read aloud through headphones. The average time to complete the survey was 67 minutes.

Measures

The demographic variables of age (13–17 years), sex, and ethnicity (Māori, Pacific Island, Asian, or European/other) were assessed by self-report. Household poverty was assessed by the presence of any 2 of the following 9 indicators: household food insecurity (often or all the time), moving homes frequently (≥ 2 times in past year), not having working car at home, not having a telephone at home, not having a computer at home, overcrowding (> 2 people/bedroom), both parents unemployed, use of rooms other than bedrooms for sleeping (eg, living room, garage), and not going away on a family holiday during the past 12 months.[18]

Cooking ability was assessed with the question *Could you cook a meal from basic ingredients (eg, raw vegetables or foods, not just prepackaged mixes or sauces)?* Response options included *Yes, very easily*, *Yes, fairly easily*, *No, not without help*, and *No, not at all*. This measure was created for use for the *Youth'12* survey because there does not appear to be consensus in the academic literature regarding