Kids in the Kitchen Teaches Youth and Families Nutrition, Food Safety, and Cooking Skills to Improve Kitchen Self-Efficacy

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Summary
During the COVID-19 pandemic, three Extension agents/educators pivoted a successful youth cooking club to a virtual format to continue providing impactful programming while reaching new audiences. Since April 2020, Kids in the Kitchen Virtual Cooking Club (KKVCC) has reached nearly 1,200 youth and adults across six states and 30 counties. Participants gained cooking skills, nutrition and food safety knowledge, as well as cooking-related self-efficacy from the comfort and safety of their home. The virtual program reduced several barriers to participation and nearly tripled previous in-person participation while serving multiple family members. This reimagined nutrition education program is a replicable model that will remain useful even beyond the pandemic.

Objective
To increase comfort and confidence in youth and families in the kitchen by teaching nutrition, food safety, and cooking skills, all while encouraging positive family interactions.

Program Description
Cobb County (GA) Extension collaborated with Rockdale County (GA) Extension and Twin Falls County (ID) Extension to offer 31 KKVCC sessions have been held between April 2020 through December 2021. Kids in the Kitchen Virtual Cooking Club is a youth program comprised of live cook-along sessions. Throughout each session, nutrition and food safety principles were taught through hands-on meal preparation, safe food handling, and balanced meal choices. Each session consisted of two recipes structured over two hours in the evenings. Youth (with their guardians) attended scheduled Zoom sessions and cooked together with the instructors from their home kitchens. The instructor showed a step while each participant followed along. Participants could ask questions in real time via Zoom chat. Each monthly session was designed to be a stand-alone but also work in a series.

Each class emphasized balanced nutrition, healthy recipe modifications, and trying of new foods. Youth of all ages were invited to participate with adult supervision. Session objectives include making participants more comfortable and confident in the kitchen through practicing cooking techniques, knife skills, and following recipes.

Post-evaluations were conducted using Zoom polls and the University of Georgia Family and Consumer Sciences (FACS) Common Measures tool to gauge changes in knowledge, attitude, and self-efficacy. Participant photos and testimonials were also used to document impact.

Evaluation Methods
Anonymous surveys were shared through Zoom polls during the class to assess skills, knowledge, and self-efficacy in the kitchen. Survey questions were adapted from the iCook 4-H program and based on a 5-point Likert scale (1 - strongly disagree to 5 - strongly agree) with some examples below.

<table>
<thead>
<tr>
<th>Survey Statement</th>
<th>Mean Score Reported</th>
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<tbody>
<tr>
<td>I wash my hands before preparing meals and after handling raw meat, eggs, and flour.</td>
<td>4.92</td>
</tr>
<tr>
<td>I feel more comfortable using a knife safely after this class.</td>
<td>4.33</td>
</tr>
<tr>
<td>I am sure that I can make the recipes that we made today on my own/with my family.</td>
<td>4.59</td>
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Cooking skills learned: knife skills, measuring and mixing liquid and dry ingredients, use of oven through baking, use of stove top through sautéing, frying, boiling, simmering, no-cook methods

Food safety skills learned: handwashing, produce washing, safe handling of raw ingredients, safe internal cooking temperatures, safe cooling, and handling of leftovers

Skills built through preparation of 25 recipes including pasta Bolognese, berry poppers, spicy turkey tacos, sweet potato fries, baked chicken nuggets, and other “kid-friendly” recipes

From April 2020 through December 2021, 31 virtual cooking sessions were offered throughout Idaho and Georgia, leading nearly 1,200 youth and adults from 30 counties across six states to receive this hands-on educational program. Average attendance was 40 participants.

Testimonials
Increased cooking skills
- “This program showed my children how to prepare a full healthy dinner. I REALY appreciate the knife skill demo because that is always a concern of mine!”
- “Will you be giving out credit for this class? I’m just saying: it should count as a home economics class!”
- “My 10-year-old daughter is learning a very important skill in cooking and is also being prepared, organized, and careful with cooking tools and the stove. All while having fun!”

Increased food safety & nutrition knowledge
- “[It was beneficial] learning to cook more naturally like with the peppers, fresh veggies, and fresh garlic. We discovered how tasty brown rice was!”
- “Separating foods can prevent foodborne illness like meat juice dripping in the fridge...erewww.”
- “Flour is a raw ingredient and should be cooked before consuming.”
- “I have to cook poultry to 165°F on the inside, even though it may look cooked [before that].”

Quality family time
- “It has brought my 8-year-old and I closer as this is ‘our’ thing we do together. [This] is a very worthwhile project that we have taken very seriously during quarantine!”
- “I love the time I get to spend with my daughter and the tasty food we eat. She eats a wider range of food now.”

Increased interest & confidence in cooking
- “[My 5-year-old] felt such a huge sense of accomplishment being able to make dinner and treats for our family and it’s been so fun to see how proud she is and listen to her tell dad all about it over the dinner she made.”
- “My children love to bake and this class utilized far fewer and less costly ingredients that will allow them to bake even more!”
- “My son now wants to cook more and I’m letting him 😃”
- “Ari was so proud of herself. She called all of our family members to talk about the experience.”

Conclusion
This interactive nutrition and cooking program showed impactful outcomes while reaching new audiences during the COVID-19 pandemic. The virtual format allowed more youth to participate with their guardians from the comfort and safety of their homes, while encouraging positive child/parent interaction by cooking together. This innovative youth program can be replicated by health and nutrition educators across the nation even after the pandemic subsides.