Do Television Chefs Food Handling Practices Impact Consumer Attitudes and Behavior?

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What influences consumer behavior?

- Consumers do thing by habit
- The popularity of television cooking shows has increased
- Do consumers see chefs practicing recommended food handling behavior?
- Does what consumers see influence their own practices?
### Previously Reported Chef Handling Practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>2002 $N=60$</th>
<th>20003 $(N=56)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor personal hygiene</td>
<td>75%</td>
<td>96%</td>
</tr>
<tr>
<td>Cross contamination</td>
<td>72%</td>
<td>86%</td>
</tr>
<tr>
<td>Failure to cook food adequately</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Failure to avoid unsafe foods</td>
<td>15%</td>
<td>14%</td>
</tr>
</tbody>
</table>

**Mathiasen et al, 2004**
Previously Reported Chef Handling Practices

Evaluation of 100 cooking shows hosted by 24 different chefs
- Chefs did not demonstrate proper food safety behaviors
- Behaviors would lead to cross-contamination

Most common errors:
- Handling raw meat without hand washing
- Sampling ready to eat foods with hands not utensils
- Not giving adequate indicators for meat doneness

Maughan, Chambers, and Godwin, J Public Health, 2016
## Content of 60 Celebrity Chef Cooking Programs

<table>
<thead>
<tr>
<th></th>
<th>Chef 1 Female (%)</th>
<th>Chef 2 Female (%)</th>
<th>Chef 3 Male (%)</th>
<th>Chef 4 Male (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hand washing before cooking</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>94</td>
</tr>
<tr>
<td>Licked fingers</td>
<td>0</td>
<td>8</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>No hand washing after handling raw meat</td>
<td>32</td>
<td>38</td>
<td>44</td>
<td>6</td>
</tr>
<tr>
<td>Tested for doneness without thermometer</td>
<td>42</td>
<td>38</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>*Separated raw and ready to eat food</td>
<td>32</td>
<td>54</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>*Mentioned correct temperature</td>
<td>5</td>
<td>38</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td><strong>Average error/show (count)</strong></td>
<td><strong>5.7</strong></td>
<td><strong>5.4</strong></td>
<td><strong>6.4</strong></td>
<td><strong>5.8</strong></td>
</tr>
</tbody>
</table>

*Woods and Bruhn, Food Protection Trends, 2016*
Do chefs influence consumers?

- Used focus groups to assess consumer response
  - Must prepare meals in the home
  - Must watch cooking shows
  - Must have seen at least 3 of the 4 chefs
- Showed clips from each chef
- Asked consumer reaction to the specific behavior
  - Did they notice?
  - Do they handle food in the same way?
  - Given what they saw, would they like to dine with the chef?
- Developed a survey delivered on the internet to quantify consumer response
Chef 1 – Cross contamination and temperature

Activity: Cooking meatballs

- **Violation**: mixed raw meat with hands, then touched many kitchen items without washing hands

- 35% admitted that they touched raw meat or chicken without washing their hands

- **Violation**: said it was OK to leave cooked meatballs out all night

- 46% said the meatballs should only be left out for 2 hours
Chef 2, Failure to wash hands and use a thermometer

Activity. Barbecue whole chicken

- **Violation:** Tested chicken doneness by wiggling leg.
- 49% would also use this method
- 30% said they use a thermometer most often

- **Violation:** Licked fingers. Held leg with fingers, served, licking fingers several times

- 20% acknowledged that they used hands and utensils and 6% used fingers exclusively
- 61% admitted that they sometimes like their fingers to taste test a dish
Chef 3- cross contamination

Activity. Barbecued squid and prepared salad

- **Violation**: Placed cooked food on the same serving platter that had contained the raw item. Chopped herbs on the same cutting board as raw fish without washing

- 29% used the same plate for raw and cooked meat or chicken
Chef 4 cooking to a safe end point temperature

- **Activity.** Prepared stuffed burgers.

- **Violation:** Did not indicate how he knew the meat was done.

- 89% would like to know how the chef knew the meat was done

- 63% said they would consider using a thermometer if the chef used one

- 52% thought a thermometer was not necessary if the chef didn’t use one
Participants’ Involvement with TV Cooking Shows

• Watched one of the Chef’s cooking show
  • At least once a week 21% - 43%
  • Every 2-3 weeks 17% - 26%

• Considered preparing a recipe shown on the show
  • At least once a week 10% - 22%
  • Every 2-3 weeks 19% - 24%

• Actually prepared a recipe
  • At least once a week 7% - 12%
  • Every 2-3 weeks 14% - 18%
  • Once a month 20% - 29%
  • Every few months 24% - 31%
Participants Expectations of chefs’ Food Handling Practices

- 25% Believe chefs don’t have time to wash their hands or cutting boards on TV
- 61% Believe chefs cook differently at home or in their restaurant
- 74% Expect chefs to follow safe handling recommendations when they cook on television
- 44% Agree that chefs sometimes fail to give viewers the information they need to safely prepare the dish
Participants’ Attitudes toward chefs’ Food Handling Practices

Thought less of the chef when the chef –

- Licked their fingers instead of washing them  74%
- Used the safe cutting board for raw and ready to eat food  68%
- Tasted a dish with a used utensil  58%
- Tasted with their fingers  47%
- Used their fingers instead of utensils  39%
Next Step: Collaborate with food celebrity chefs to model safe handling

Work with food safety educators and the food industry to reach celebrity chefs.

Share findings and encourage formation of a collaborative team to develop a safety handling pledge

- Chefs involved in developing the program
- Model safe handling following Fight BAC principles
  - Cook - verify thorough cooking by use of thermometer
  - Chill - appropriate temperature control
  - Clean - hand, produce washing, no meat washing
  - Separate - use of utensils rather than hands
  - Plus - Chose safe food
Television Chefs As Models

- Chefs don’t always follow cleaning and cooking recommendations
- Consumers believe the chef’s practices are acceptable
- Consumers admit they follow the same behaviors at home
- Modeling inappropriate behavior could increase the risk of illness from home-prepared food
- We have a plan to change behavior

Woods and Bruhn, FPT, 2016
Thank You

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