

# Development of an Assessment Tool to Evaluate Food Safety Communication Adequacy in Food Media Sources

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## INTRODUCTION

All food handling practices can contribute to the risk of foodborne illness, therefore, there is a global need within both the food industry and domestic environment to identify, control and reduce these risks (Wilcock et al., 2004). Unlike the majority of the food industry, domestic meal preparation and cooking is unregulated and relies heavily on the consumers own knowledge and skills to ensure food safety practices are implemented. Any resources that could influence consumer awareness and food preparation behaviour should be considered as a valuable educational tool (Borda et al., 2014).

Many consumers seek inspiration for domestic meal preparations from food-media sources, such as television, recipe books and the internet, as a result, these resources could influence consumer food preparation behaviour and should be considered as valuable educational tools. Research has shown that TV cookery shows have an influence in the way we prepare and cook foods (Malene, 2011; Jackson, 2014), however few studies have focused on their influences of food safety behaviours (Shapiro et al., 2011). Consequently, there is a need to determine whether appropriate food safety messages are being presented during food and cookery programmes, and if not, where does this fall short and what advice could be given to television producers to make improvements.

In order to determine food safety communication within food television programmes, there is a need to develop an assessment tool to assess adequacy.

## AIM

This study aims to develop an assessment tool to evaluate the adequacy of food safety communication within television food and cooking programmes.



## METHOD

A triangulation of research methods was used for data collection, analysis and development of the assessment tool, comprising of three phases.

### PHASE 1 – Literature Review

An in depth literature review was conducted to establish key domestic food safety practices considered important in preventing foodborne illness.

38 domestic food safety practices were identified and categorised according to – clean, cross-contaminate, cook, chill. This generated the preliminary data for the assessment tool.

### PHASE 2 - Online Research Survey

The domestic food safety practices identified in phase 1 were presented in an online survey. Food safety experts ( $n=118$ ) from across the globe rated each food safety practice according to perceived importance for domestic food safety using a five-point Likert scale. Table 1 highlights the perceived practices of greatest importance for domestic food safety.

To establish whether the list of food safety practices was thorough, the participants were asked to comment upon whether any additional practices should be included.

### PHASE 3 - Focus Groups

Two focus groups were conducted, each using food safety experts within Cardiff Metropolitan University.

The food safety practices, both those that were established from phase 1 and additional practices established by phase 2 were presented.

a) The first focus group ( $n=5$ ) developed the key food safety practices that could be presented on a food and cooking programme. Figure 1 presents those that should be presented within the “clean” category.

b) The second focus group ( $n=7$ ) reviewed the key food safety practices established from the first focus group, and from this, developed a range of results to assess adequacy, as shown in figure 2.

## RESULTS

### PHASE 1: CATEGORIES USED FOR GROUPING FOOD SAFETY PRACTICES

The following four categories have been established as the most popular food safety practices for minimising foodborne illness.



CLEAN



CROSS-CONTAMINATE



COOK



CHILL

### PHASE 2: PARTICIPANT COMMENTS

The comments, shown below, were extracted from the online survey question: “Do you believe that the inclusion of adequate food safety communication in food and cooking programmes could inform and influence consumers to reduce the risks associated with foodborne illness in the home?”

“...the inclusion of food safety communication represents an “informal” and direct way to learn simple rules”  
Online Survey Participant

“The presenters are sending out a strong message which is being picked up by the observer, therefore, I do believe, if more emphasis was to be placed on food safety by the presenters, people would be influenced and put into practice what they hear and see”  
Online Survey Participant

“Adequate messages would be conveyed by relevant influencers.”  
Online Survey Participant

“The right information would empower people to adopt correct and therefore safe practice.”  
Online Survey Participant

### PHASE 2: KEY FOOD SAFETY PRACTICES

Practice	%
Wash hands after handling raw meats, poultry and fish	92
Clean all food contact surfaces after preparing raw meats, poultry and fish	88
Wash hands thoroughly using soap and hot water prior to food preparation (include between fingers, nails and backs of hands)	76
Wash hands after handling raw meats, poultry and fish packaging material	72
Cook poultry, pork, and foods made from minced meat thoroughly - visually check no red/pink in centre of meat	68
Clean all food contact surfaces prior to food preparation	65
Segregate raw meats/ poultry/ fish with produce and ready to eat foods in the refrigerator	64
Use of separate chopping boards for raw meats and ready-to-eat foods	63

Table 1: Percentage of food safety experts that viewed above key food safety practices as being “extremely important” for domestic food safety



### PHASE 3: FOCUS GROUP DEVELOPMENT OF FOOD SAFETY PRACTICES

- Wash hands thoroughly using soap and hot water prior to food preparation (include between fingers, nails and backs of hands)
- Wash hands after handling raw meats, poultry and fish
- Clean or change food contact surfaces after preparing raw meats, poultry and fish
- Not to wash raw poultry prior to preparation
- Cleaning cloth must be disinfected after cleaning surfaces/utensils that have been in contact with raw meats, poultry, fish and raw unwashed vegetables
- Wash vegetables and fruit prior to preparation (unless pre-washed) - Recipe dependant, i.e. making ready to eat salad

Figure 1: Focus group results of appropriate “clean” food safety practices that should be presented on a television food and cookery programme

### PHASE 3: FOCUS GROUP RESULTS TO ASSESS ADEQUACY OF FOOD SAFETY PRACTICES

DETAIL OF PRACTICE	PRESENT & EXPLAINED	PRESENT & APPROPRIATE	PRESENT HOWEVER INAPPROPRIATE	NOT PRESENT HOWEVER IMPLIED	NOT PRESENT/ MALPRACTICE	NOT APPLICABLE	COMMENTS/ RECOMMENDATIONS
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Figure 2: Headings developed by focus group for the assessment tool to evaluate food safety communication adequacy on television food and cookery programmes

## PHASE 4 – OPERATOR RELIABILITY

Inter- and intra-operator reliability will be carried out using the assessment tool. This will involve the researcher using the tool to evaluate food safety communication within a cookery programme. The cookery programme will be watched and evaluated by the researcher three times. The results will be checked for consistency between each assessment. The tool and same cookery programme will be given to another member of the research team for assessment. The results of each assessment will be analysed using Paired sample T-Test and ANOVA ( $P<0.05$ ) to ensure consistency of results within the researcher and application of the tool. Following assessment of reliability, the tool will be used to evaluate a range of food and cookery programmes for communication adequacy of food safety messages.

## SIGNIFICANCE OF STUDY

Through a triangulation of research methods involving food safety experts from across the globe, the project has successfully designed, developed and evaluated a food safety communication assessment tool. The tool will be utilised to evaluate the adequacy of food safety communication in food television programmes frequently viewed by consumers.

Communication of food safety malpractices or failings to communicate safe practices may impact consumer health, therefore an assessment tool developed by food safety experts will be vital within this area of research.

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