

# **Integrating perspectives on consumer perceptions for food safety, nutrition and waste**

Dr Gülbanu Kaptan



# Food security



“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996).”



# Why do we need to secure sufficient, safe, and nutritious food?

- Demand for food will increase by 38% by 2030 and 60% by 2050
- must use the same or less land, produce less waste and have a lower environmental impact
- Other challenges: global climate and demographic changes
- an environmentally, socially and economically sustainable food system
  - an acceptable, safe and nutritious diet for all

# Improvement needed



- foodborne illnesses amount to 17 million cases/year, including 20,000 hospitalizations and 500 deaths (Tam et al., 2011)
- consumers are increasingly making unhealthy food choices, contributing to 62% of adults being overweight or obese (DOH, 2013),
- domestic food waste is 7 million tons/year, of which 4.2 million tons is deemed preventable (WRAP, 2013)





# Food security: Consumer perspective

- Framework of food security (UK DEFRA, 2010)
  - Consumer perspective
- having access to food that is nutritious and safe, with minimum waste
- better understanding of consumer decision making about food safety, nutrition, and food waste

## Research seminar series on food options, opinions, and decisions (FOOD)

- aims to understand and improve UK consumers' decisions about nutrition, food safety, and domestic food waste
  - Interactions between these domains
- brings together academics and practitioners from across the UK and overseas in 9 seminars from 2015 to 2017
- builds lasting networks that lead to joint efforts

<http://lubswww.leeds.ac.uk/cdr/food>

# **Eliciting expert opinion on consumers' understanding of the interactions between nutrition, food safety, and food waste: implications for communications**

Gülbanu Kaptan<sup>1</sup>, Nick Piper<sup>1</sup>, Nicola Bown<sup>1</sup>, and  
Wändi Bruine de Bruin<sup>1,2</sup>

<sup>1</sup>Centre for Decision Research, University of Leeds

<sup>2</sup>Engineering and Public Policy, Carnegie Mellon University



# Aim of the study

- summarizing experts' perspectives of the interactions between the domains of food safety, nutrition and food waste, and their relevance for informing consumers' decisions
- grounded in the 'mental models approach' (Bruine de Bruin & Bostrom, 2013; Morgan et al, 2001)



# The four steps of the mental models approach to developing communications

(Bruine de Bruin & Bostrom, 2013)

1. **Identify what people need to know to make more informed decisions (expert decision model)**
2. Identify what people already know and how they make their decisions (lay decision model)
  - Semi-structured interviews
  - Follow-up surveys
3. Design communication content
  - addressing gaps and misconceptions
4. Test effectiveness of communication content

# Method

## *Participants (N=24)*

- recruited from the ESRC FOOD seminar series distribution list through email invitation
  - 7-10 experts from each area of expertise
  - Academia (18), food industry (4), and government agency (2)

## *Procedure*

- Semi-structured interviews over phone
  - 5 group interviews consisting of 2-4 experts, 5 individual interviews

# Interview protocol – nutrition

1. What are the difficulties consumers face when making decisions about healthy eating?
2. Can consumers' decisions about healthy eating have an influence on their food waste?
3. Can consumers' decisions about healthy eating have an influence on their food safety practices?

Follow-up questions:

What can nutrition experts do to help consumers?

What barriers they face to help consumers?

Demographic/background questions



# Results: Interaction between healthy eating and food waste



- ***Lack of cooking/preserving skills***
  - how to cook simple meals, how to preserve food, what to do with leftovers
- ***Believing that frozen (processed) vegetables are not healthy***
- ***Not effective shopping***
  - No planning, buying more than needed (e.g., special offers)



# What can nutrition and food waste experts do to help consumers?



- ***Communications***
  - focusing on effective shopping and healthiness of frozen vegetables
- ***Interventions to improve cooking skills***
- ***Collaboration between domain experts, policy makers, and food industry/retailers***
  - Changing the amount/quantity at which food is made available at point of purchase ( e.g., smaller size bagged salads)



# Results: Interaction between healthy eating and food safety



- preparing food at home but not following proper food safety practices
- people are advised to prepare food in advance but they may not know for how long they can keep it



# What can nutrition and food safety experts do to help consumers?



- ***Collaboration between domain experts and media*** for communicating messages
  - e.g., preventing incorrect information and oversimplification
- ***Removing risks earlier in the supply chain***
  - e.g., improving the production line, transportation, proper storage in stores
- ***Participatory approach to risk communication***





## Results: Interaction between food safety and food waste



- *being over/under cautious about date labels*
- *how long to keep leftovers*
  - e.g., throwing leftovers away because of safety reasons
- *how long frozen food can be kept safely*



# What can food safety and waste experts do to help consumers?



- ***Communications***
  - providing clear information about date labelling, how long to keep leftovers and frozen food
- **Collaborating with the industry**
  - e.g., fridges that might enable safer storage and less wastage
  - smart packaging

## Conclusion: What people need to know

***To eat healthily with min food waste:*** how to effectively shop; how to cook/preserve; frozen vegetables are healthy to eat

***To eat healthily and safely:*** how to safely prepare food at home; how long the food could be kept safely if it is prepared in advance

***To eat safely with min food waste:*** date labels, how long to keep leftovers and food frozen

# Conclusion: What experts can do to help consumers

- ***Communicating what consumers need to know***
  - Participatory communication
- ***Collaborating with the media*** to prevent incorrect and oversimplified information
- ***Collaborating with the industry and policy makers***
  - Shifting responsibility to the industry (e.g., producing sophisticated kitchen appliances)
  - Having a role from farm to fork

# Next...

1. Identify what people need to know to make more informed decisions (expert decision model)
2. **Identify what people already know and how they make their decisions (lay decision model)**
  - **Semi-structured interviews**
  - **Follow-up surveys**
3. Design communication content
  - reflecting gaps and misconceptions
4. Test effectiveness of communication content

*Thank you*  
*Questions or comments?*

**ESRC FOOD seminar website:** <http://lubswww.leeds.ac.uk/cdr/food>

**Centre for Decision Research website:** [www.leeds.ac.uk/decision-research/](http://www.leeds.ac.uk/decision-research/)