Food-related Behaviour: Is it a Question of Health?

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Moira Dean
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Overview of presentation

• What is food-related behaviour?
• What is the relationship between health and food?
• Lay themes with regard to health
• Functions of food
• Influencing food choice
• One example – Nutritional labelling
• Discussion and Conclusions
What is food-related behaviour?

- food beliefs and practices linked to choosing, preparing, cooking and consuming food
- encompasses both nutrition and food safety
- majority of research on consumer food-related behaviour is in the areas of food choice, food hygiene and food consumption
Food and health relationship

Food-related health often framed in terms of:

- morbidity and mortality statistics
- absence of disease and the restoration of the body to a normal state of functioning
- interventions which can restore the body to normality

FOOD CHOICE ➔ MEAL PATTERNS & EATING HABITS
- Preparation
- Unstructured eating occasions - snacks
- Structured eating occasions – meals
- Amount eaten/ serving sizes ➔ NUTRIENT INTAKE ➔ HEALTH OUTCOME

See: Jensen et al. (2012) Appetite
Lay themes with regard to health

- Definitions of health
- Explanations for health/how health is maintained
- External and uncontrollable factors that affect health
- The place health occupies in people’s lives

Lay themes with regard to health

- Definitions of health
  - Health is the absence of illness
  - Health is being able to carry out daily functions
  - Health is equilibrium
  - Health is freedom, the capacity to ‘do’
  - Health is constraint
  - Explanations for health/how health is maintained

- Explanations for health/how health is maintained
- External and uncontrollable factors that affect health
- The place health occupies in people’s lives

Lay themes with regard to health

- Definitions of health
- Explanations for health/how health is maintained
  - Health through meditation and/or prayer
  - Health is dependent upon mental attitude
  - Health through working
  - Religious and supernatural explanations
  - Health maintained through rituals
  - Health is maintained through internal monitoring
  - Poor health is one’s own fault
- External and uncontrollable factors that affect health
- The place health occupies in people’s lives

Lay themes with regard to health

• Definitions of health

• Explanations for health/how health is maintained

• External and uncontrollable factors that affect health
  – Health is a result of policies and institutions
  – Health is affected by the environment
  – Health is genetics

• The place health occupies in people’s lives

Lay themes with regard to health

- Definitions of health
- Explanations for health/how health is maintained
- External and uncontrollable factors that affect health
- The place health occupies in people’s lives
  - The priority placed on health
  - The contradictory nature of lay health beliefs

## Functions of food

<table>
<thead>
<tr>
<th>physiological</th>
<th>e.g. biology, nutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>gastronomic</td>
<td>e.g. anthropology, nutrition, sensory science, sociology, marketing</td>
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<tr>
<td>communication</td>
<td>e.g. anthropology, sociology</td>
</tr>
<tr>
<td>status</td>
<td>e.g. economics, marketing, psychology, sociology</td>
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<tr>
<td>power</td>
<td>e.g. psychology, sociology</td>
</tr>
<tr>
<td>safety and security</td>
<td>e.g. anthropology, economics, sociology</td>
</tr>
<tr>
<td>magic</td>
<td>e.g. anthropology</td>
</tr>
<tr>
<td>religious</td>
<td>e.g. anthropology, theology</td>
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## Characterizing product decisions (%)

<table>
<thead>
<tr>
<th>Code</th>
<th>All N=3216</th>
<th>Accompanied shop n=2424</th>
<th>In-store task</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Healthy meal n=416</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Price</td>
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<td>35.5</td>
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<tr>
<td>Preference</td>
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<tr>
<td>Appearance</td>
<td>24.0</td>
<td>22.8</td>
<td>24.8</td>
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<tr>
<td>Placement</td>
<td>22.3</td>
<td>20.0</td>
<td>34.6</td>
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<tr>
<td>Who eats</td>
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<td>19.0</td>
<td>9.1</td>
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<tr>
<td>Familiarity</td>
<td>15.8</td>
<td>19.7</td>
<td>5.0</td>
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<tr>
<td>Availability</td>
<td>13.3</td>
<td>8.9</td>
<td>28.8</td>
</tr>
<tr>
<td>Packaging preference</td>
<td>9.8</td>
<td>8.2</td>
<td>14.2</td>
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<tr>
<td>Plans and inspiration</td>
<td>9.6</td>
<td>9.3</td>
<td>7.5</td>
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<tr>
<td>Reference to pantry</td>
<td>9.5</td>
<td>11.2</td>
<td>5.5</td>
</tr>
<tr>
<td>Quality</td>
<td>7.3</td>
<td>8.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Health</td>
<td>6.9</td>
<td>6.6</td>
<td>13.5</td>
</tr>
<tr>
<td>Convenience</td>
<td>6.2</td>
<td>5.9</td>
<td>7.2</td>
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## Characterizing product decisions (%)

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<tr>
<td></td>
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<td>Healthy meal n=416</td>
<td>Meal n=376</td>
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<tr>
<td>Conscious decision-making</td>
<td>5.7</td>
<td>4.8</td>
<td>7.9</td>
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<tr>
<td>Nutrients</td>
<td>4.9</td>
<td>4.3</td>
<td>9.4</td>
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<tr>
<td>Shopping experience</td>
<td>4.7</td>
<td>4.2</td>
<td>5.5</td>
</tr>
<tr>
<td>How it will be used</td>
<td>4.3</td>
<td>3.0</td>
<td>7.5</td>
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<tr>
<td>Unavailability</td>
<td>3.8</td>
<td>3.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Boring/interesting</td>
<td>3.1</td>
<td>3.1</td>
<td>3.6</td>
</tr>
<tr>
<td>Cooking time</td>
<td>3.0</td>
<td>1.6</td>
<td>7.9</td>
</tr>
<tr>
<td>Speciality e.g. artisan</td>
<td>2.9</td>
<td>2.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Ingredients</td>
<td>2.4</td>
<td>2.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Stated barriers</td>
<td>2.3</td>
<td>2.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Treat - people</td>
<td>1.8</td>
<td>1.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Cooking method</td>
<td>1.8</td>
<td>1.5</td>
<td>3.6</td>
</tr>
</tbody>
</table>
Influencing food choice

- Given complexity of behaviours and the multiple determinants, identifying the routes to achieving desired behaviour change is one of the key challenges.

- Wide use of traditional methods (e.g. social marketing, education) aimed at individuals with little emphasis on the environmental prerequisites that promote behaviour change.

- Consensus that more sophisticated interventions are needed for behaviours related to health, which are complex.

- Need to understand the mechanisms that underpin the various interventions.
Mechanisms of behaviour change in the context of food

Mechanisms affecting belief formation - cognitive mechanisms

Mechanisms of intention formation
- Decisional balance
- Social influences
- Control mechanisms

Mechanisms related to adopting and maintaining behaviour
- Self-efficacy
- Planning and goal setting

Habits and routines
- Accumulated experience with behaviour
- Strength of habit
- Change in context factors affecting habits

See: Jensen et al. (2012) Appetite
COM-B Behavioural system

- physical
- psychological (the capacity to engage in the necessary thought processes - comprehension, reasoning)
- reflective processes (involving evaluations and plans)
- automatic processes (involving emotions and impulses that arise from associative learning and/or innate dispositions)
- physical (afforded by the environment)
- social (afforded by the cultural milieu that dictates the way that we think about things (e.g., the words and concepts that make up our language))

Mitchie et al (2011) Implementation Science
• Physical

• Psychological
  the capacity to engage in the necessary thought processes - comprehension, reasoning

• Reflective processes
  involving evaluations and plans

• Automatic processes
  involving emotions and impulses that arise from associative learning and/or innate dispositions

• Physical
  afforded by the environment

• Social
  afforded by the cultural milieu that dictates the way that we think about things (e.g., the words and concepts that make up our language)

**Education**
Increasing knowledge or understanding
*e.g. providing information to promote healthy eating*

**Environmental restructuring**
Changing the physical or social context
*e.g. providing prompts to use labels via mobile phones upon entry into supermarkets*
Physical
• Psychological
  the capacity to engage in the necessary thought processes - comprehension, reasoning

Reflective processes
involving evaluations and plans

Automatic processes
involving emotions and impulses that arise from associative learning and/or innate dispositions

Physical
afforded by the environment

Social
afforded by the cultural milieu that dictates the way that we think about things (e.g., the words and concepts that make up our language)

Training
Imparting skills
e.g. training how to read nutrition labels

Modelling
Providing an example for people to aspire to or imitate
e.g. using TV drama scenes involving nutrition label usage

Restriction
Using rules to reduce opportunity to engage in the target behaviour (or to increase the target behaviour by reducing opportunity to engage in competing behaviours)
e.g. prohibiting sales of products without nutrition labelling
**Persuasion**
Using communication to induce positive or negative feelings or stimulate action
*e.g. using imagery to motivate increases in healthful foods*

**Coercion**
Creating expectation of punishment or cost
*e.g. raising the financial cost to reduce excessive fat consumption*

**Incentivisation**
Creating expectation of reward
*e.g. using prize draws to induce label use, e.g. QR code scanning*

- Physical
- Psychological: the capacity to engage in the necessary thought processes - comprehension, reasoning
- Reflective processes: involving evaluations and plans
- Automatic processes: involving emotions and impulses that arise from associative learning and/or innate dispositions
- Physical: afforded by the environment
- Social: afforded by the cultural milieu that dictates the way that we think about things (e.g., the words and concepts that make up our language)
What is nutritional labelling?

- enables individuals to make healthier choices about what foods they purchase and how they consume them
- addressed at a population level implemented to try and change eating behaviour
- refers to a list of nutrients on a food label along with some means of quantification
- come in three forms:
  - back of pack information
  - front of pack label
  - nutrition/health claims i.e., promotes certain nutritional or health-related properties
Nutritional labelling in Europe

<table>
<thead>
<tr>
<th>Nutrition information</th>
<th>Per 100g</th>
<th>Per pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical values (Cooked as per instructions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy (610 kcal, 146 kcal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>4.8g</td>
<td>20.3g</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which sugars</td>
<td>12.8g</td>
<td>54.1g</td>
</tr>
<tr>
<td>of which starch</td>
<td>2.7g</td>
<td>11.4g</td>
</tr>
<tr>
<td>Fat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which saturates</td>
<td>8.4g</td>
<td>35.5g</td>
</tr>
<tr>
<td>mono-unsaturates</td>
<td>3.8g</td>
<td>16.1g</td>
</tr>
<tr>
<td>polyunsaturates</td>
<td>3.5g</td>
<td>14.8g</td>
</tr>
<tr>
<td>Fibre</td>
<td>1.1g</td>
<td>4.7g</td>
</tr>
<tr>
<td>Salt</td>
<td>2.0g</td>
<td>8.5g</td>
</tr>
<tr>
<td>of which sodium</td>
<td>0.5g</td>
<td>1.9g</td>
</tr>
</tbody>
</table>

Each serving contains:

- Calories: 618 kcal
- Sugar: 45.4g (51%)
- Fat: 11.6g (17%)
- Saturates: 2.8g (14%)
- Salt: 2.8g (47%)

% GDA:

- 31%: 618kcal
- 25%: 11.5g
- 50%: 35.5g
- 12%: 11.4g
- 32%: 1.9g

Nutri-pass:

- Sugar: 12.7%
- Fat: 60.7%
- Salt: 31.6%
- Significant:
  - Calcium: 14%
  - Vitamin D: 13.4%
  - kcal: 30.9%

Plaisir Nutrition Plaisir Classique Plaisir Gourmand

- Calories: 212 kcal
- Low Fat: 1.9g
- Low Saturates: 0.2g
- Low Sugars: 6.0g
- Low Salt: 1.60g
- Calories: 275 kcal

24g:
Consumer derived labelling typology

**Directive**

- e.g. Simple and graduated
- Health logos

**Semi-directive**

- contain nutrient-based information, provide evaluation of healthiness at nutrient level
- e.g. Traffic light labels

**Non-directive**

- contain nutrient-based information, leave evaluation of healthiness to the consumer,
  e.g. % GDA

Hierarchy of effects model of nutrition labelling

Adapted from Grunert and Wills (2007), Grunert, Bolton and Raats (2012) and Kroonenberg-Vyth (2012)
Future nutrition labelling research

• **Why is the current level of usage of nutrition labelling information not higher than it is?**
  May require a shift from a focus on information processing to an approach that emphasizes motivational issues, goal setting and self-regulation.

• **When nutrition labelling information indeed is used, does it have a positive effect on healthy product choice and dietary intake?**
  May require a shift from the study of individual product choice to an approach that emphasizes actual consumption and, in the aggregate, dietary intake.

*See Grunert, Bolton and Raats (2012)*
Discussion

• Food choice behaviour is habitual so harder to change through information provision

• Whether habitual or carried out consciously, food choice is not related to health when health is conceptualised as disease prevention unless it is personally relevant

• How do we make food-related behaviour personally relevant to the majority?
Conclusions

• Take account of consumers’ relationship with food: social, economic issues, food literacy, emotional knowledge as well as physical and psychological traits – food wellbeing

• Increase relevance by addressing broader range of meanings of health when designing intervention programmes

• Incorporate the emotional, spiritual, the more positive aspects of health as part of wellbeing which may then trigger more individuals into readiness to change their food-related behaviour