Consumer perception of health claims on functional foods

Klaus G. Grunert
MAPP Centre for Research on Customer Relations in the Food Sector
University of Aarhus
Aims

- Provide a conceptual framework for analyzing the effect of health claims on consumer food choice
- Derive major questions to be answered and related them to previous research
- Present results from a Nordic study on consumer reactions to health claims
Before purchase: Formation of quality expectations

- Cost cues
- Extrinsic quality cues
- Intrinsic quality cues

Perceived costs → Expected quality:
- Taste
- Health
- Convenience
- Process

Intention to buy

After purchase: Quality experience

- Experienced quality:
  - Taste
  - Health
  - Convenience
  - Process

Meal preparation
Before purchase: Formation of quality expectations

- Cost cues
- Extrinsic quality cues
- Intrinsic quality cues
  - Expected quality:
    - Taste
    - Health
    - Convenience
    - Process
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After purchase: Quality experience

- Experienced quality:
  - Taste
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  - Convenience
  - Process
- Meal preparation
Major questions

- Are health claims used as extrinsic cues when buying food?
- Which types of health claims are regarded as more convincing?
  - Ingredient/function/disease risk reduction
  - Framing, qualifiers
- Does presence of health claims affect use of other cues?
- What are the inferences from the health claim?
  - To healthiness of product in general (‘magic bullet effect’)
  - To other quality dimensions (‘halo effect’)
- How will health claims affect purchase intention?
- Will the effect of health claims build up or wear off over repeated purchases?
Existing research: Mixed evidence

- Qualitative research shows considerable consumer confusion, frustration, feelings of being lost
- Some effect on purchase intentions
- Effects on use of other nutritional information
- Some evidence on ‘magic-bullet effect’
- No clear evidence of effects of framing, strength of claim
- Familiarity and relevance seem to be relevant
The Nordic study

- Based on web-based instrument
- Random recruitment of respondents aged 15-75, Denmark, Finland, Iceland, Norway, Sweden
- At least 1000 respondents per country (except Iceland)
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Inferences from claim

- Product descriptions – bread, yoghurt, pork chop
- Base product, product with claim
  - 3 types of health benefit
    - Cardiovascular health
    - Dementia
    - Bodyweight
  - 2 ingredients
    - Omega 3
    - Bioactive peptides
  - 3 type of claims
    - Ingredient
    - Ingredient + function
    - Ingredient + function + health outcome
  - 2 framings
    - Positive
    - Negative
Evaluation of risk reduction

Benefit:
- None
- CVD
- Dementia
- Weight

CVD  Dementia  Weight
Inferences about quality in general: Bread

- Attractive
- Healthy
- Natural
- Tasty

- No claim line
- Claim line
Inferences about quality in general: Yoghurt

- Attractive
- Healthy
- Natural
- Tasty

Red line: No claim
Blue line: Claim
Inferences about quality in general: Pork

The diagram shows the inferences about the quality of pork. The x-axis represents the attributes: attractive, healthy, natural, and tasty. The y-axis likely represents the rating or score for each attribute.

- The red line with diamonds (
  - no claim
) indicates the ratings for the attributes without any claim.
- The black line with squares (claim) shows the ratings for the attributes with a claim.

The graph illustrates how the ratings for each attribute change with or without a claim.
Ingredient * Claim type over the products

- None
- Omega-3
- Omega-3 + Function
- Omega-3 + Function + Outcome
- Peptide
- Peptide + Function
- Peptide + Function + Outcome

Attributes: Attractive, Healthy, Natural, Tasty
<table>
<thead>
<tr>
<th></th>
<th>Bread</th>
<th>Yoghurt</th>
<th>Pork chops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very negative (17.2%)</td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
<td><img src="image" alt="Graph" /></td>
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<tr>
<td>Positive (15.7%)</td>
<td><img src="image" alt="Graph" /></td>
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<tr>
<td>Negative (67%)</td>
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Legend:
- Red: Very negative (17.2%)
- Green: Positive (15.7%)
- Yellow: Negative (67%)
Very negative, negative and positive consumers

- Excess weight gain and obesity
- Diabetes
- Cardiovascular diseases
- Hypertension - High blood pressure
- Cancer
- Osteoporosis
- Gastrointestinal disease
- Dementia or Alzheimer's

very negative (17.2%)  positive (15.7%)  negative (67%)
Very negative, negative and positive consumers

- Very negative (17.2%)
- Positive (15.7%)
- Negative (67%)
Summary 1

- For the majority of consumers, a health claim decreases perceptions of attractiveness, healthiness, naturalness and taste – a negative halo effect
- For the majority of consumers, there is no magic bullet effect – on the contrary
- Familiarity of the active ingredient is important
- For a minority of consumers, the health claim makes the product more attractive. These consumers tend to be more concerned about their health
Major questions

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Claim perception task

- Pairwise comparison task
- Which of these two claims
  - Sounds better
  - Is easier to understand
  - Is more convincing in your opinion
Types of claims

Claim architecture:

- Ingredient – function – health outcome
  1. Function only
  2. Health outcome only
  3. Ingredient+function
  4. Ingredient+health outcome
  5. Function+health outcome
  6. Ingredient+function+health outcome

- Positive or negative framing
  1. Positive
  2. Negative

- With/without qualifier
  1. Without ‘may’
  2. With ‘may’
Types of claims

- 3 possible benefits
  - Cardiovascular
  - Memory function
  - Weight management

- 2 possible ingredients
  - Omega 3
  - Bioactive peptides
Claim examples

Helps to keep arteries clean.
May promote cardiovascular health.
Contains omega 3 which may reduce blocking of arteries.
Reduces blocking of arteries and therefore reduces risk of cardiovascular diseases.
Contains omega 3 which may help to keep arteries clean and therefore promote cardiovascular health.
Delays decreasing memory function.
May enhance the memory function.
May delay decreasing memory function.
Increases the likelihood of a good memory.
Contains bioactive peptides which may reduce the risk of dementia.
Delays recurrence of hunger feelings.
Contains omega 3 which lowers the risk of gaining weight.
Prolongs the feeling of satiety and therefore helps to maintain bodyweight.
Contains bioactive peptides which may prolong the feeling of satiety.
Importance of claim characteristics

Graph showing the importance of claim characteristics for different ingredients and framing types. The x-axis represents Ingredient, Claim type, Framing, and Qualifier, while the y-axis ranges from 0 to 0.7. The graph includes lines for Cardiovascular (red), Dementia (yellow), and Weight (green).
Effect of ingredient information

- Cardiovascular
- Dementia
- Weight

No info | Omega-3 | Peptides
Importance of claim vs. ingredient for the very negative, negative and positive
Claim type effects for cardiovascular benefit

Claim type Framing Qualifier

Class 1 56%
Class 2 44%
Claim type effects for dementia benefit

Class 1 38%
Class 2 37%
Claim type effects for weight benefit

Class 1 59%
Class 2 41%
Gender effects

- Male:
  - Know all: [Bar Height]
  - Benefit only: [Bar Height]
- Female:
  - Know all: [Bar Height]
  - Benefit only: [Bar Height]
<table>
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<th>Summary 2</th>
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<tbody>
<tr>
<td>- Familiarity of active ingredient is very important</td>
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<tr>
<td>- Ingredient especially important for those most sceptical about claims</td>
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<td>- Two groups of consumers: those who want to know only the benefit, those who want to know it all</td>
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Choice task

2.10 Euro per package

This bread contains bioactive peptides which delay recurrence of hunger feelings and therefore lower the risk of gaining weight.

2.36 Euro per package

This bread contains omega 3 which delays recurrence of hunger feelings and therefore lowers the risk of gaining weight.

2.15 Euro per package

This bread contains omega 3 which prolongs the feeling of satiety and therefore helps to maintain bodyweight.

2 Euro per package

I choose this bread product:

- [ ] Bread 1
- [ ] Bread 2
- [ ] Bread 3
- [ ] Bread 4
Importance of design factors for choice: Yoghurt

Class 1 (0.45)
Class 2 (0.55)
Effect of claims on choice
Yoghurt

![Graph showing the effect of claims on choice for Yoghurt. The graph plots different variables such as Benefit, Ingredient, Claim Type, Framing, and Colour, with two classes distinguished by different colors. Class 1 (0.45) and Class 2 (0.55).]
Summary 3

- Price is most important factor on choice
- For one group of consumers, the claim has an additional effect on choice
Summary

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- Two groups of consumers: those who want to know only the benefit, those who want to know it all
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Acknowledgements

- Project ‘Consumer acceptance and trust: Recommendations for using health-related claims in marketing’ – funded by NICE and a range of Nordic food producers
- Liisa Lähteenmäki, VTT, Helsinki (project coordinator)
- Yasemin Boztug, MAPP, Aarhus (data analysis)