EXPLORING THE CONSUMPTION CONTEXT AND THE RELATION BETWEEN FOOD CHOICES AND EMOTIONS

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CENTRO DE INVESTIGACIÓN Y TECNOLOGÍA AGROALIMENTARIA DE ARAGÓN

Introduction

- In the attempt to combine healthy eating with pleasure, we normally seek products that offer both hedonic and utilitarian benefits.

- Hedonic foods (snacks) are usually associated with emotions of fun & pleasure, and utilitarian food (fruits & vegetables) with satisfying hunger.

- Yet, besides intrinsic aspect, other factors affect choice behaviour:
  - goals and emotions
  - extrinsic information
  - consumption contexts

Introduction

Goal theories:

- Consumers consider fruits & vegetables nutritious hence consuming them will aim in achieving the long-term goal of healthfulness.

- Conversely, consuming an ice cream is considered as vice because it serves the short-term goal of indulgence and contradicts with the long-term goal of staying heathy.

- What happens and what are the emotions generated if we combine vice vs. healthy food options with healthy information (NCs)?

Objective

Explore the impact that **two different consumption contexts** have on the **subsequent emotions** (positive vs. negative) conveyed from **yoghurt extrinsic attributes** in the **choice behaviour**.

- Consumptions contexts:
  - ✓ Healthy
  - ✓ Indulgent

- Yoghurt extrinsic attributes:
  - ✓ Fat content NCs (Full-fat, low fat, fat-free)
  - ✓ Sensory (Plain, with berries, with double chocolate chunk).

Methodology

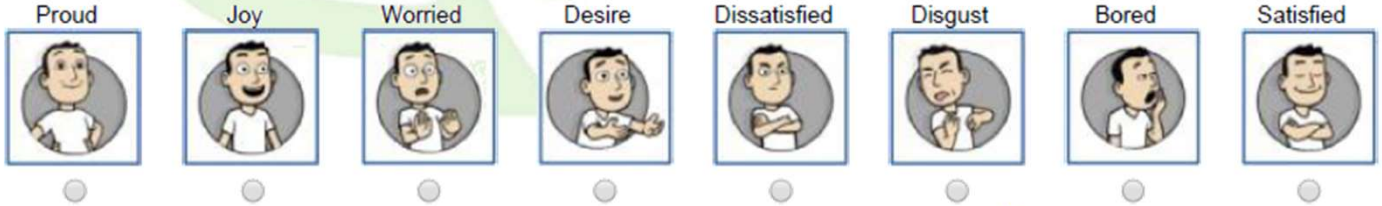
- **The study** was conducted in Wageningen (the Netherlands) in 2019.
- **Online survey:** Qualtrix
- **Participants** (n=209): older than 18 years, who consumed yoghurts as desert and as a healthy food.
- **The experiment** had two treatments (health and treat) and a control group.

Methodology: procedure

Treatment 1: Health

- The participants **first** perform a **choice experiment task.**

- **Second**, they were asked to **select one emotion** (the one that corresponds with their current experience).

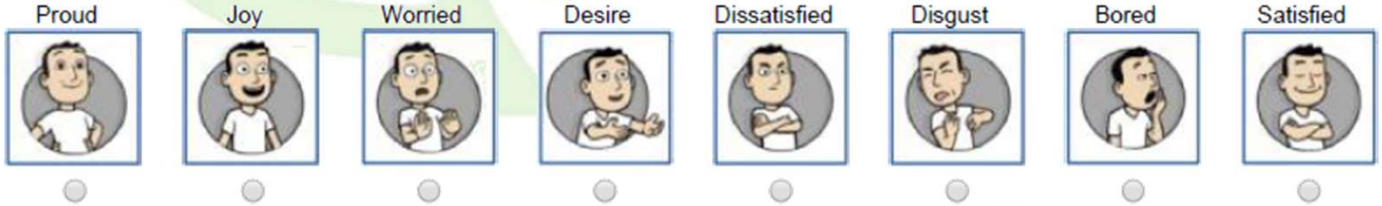


Methodology: procedure

Treatment 2: Treat

- The participants **first** perform a **choice experiment task.**

- **Second**, they were asked to **select one emotion** (the one that corresponds with their current experience).



Methodology: choice experiment

Table 1 – Yoghurt attributes and levels (market research).

Attribute	Level
Quantity	500 grams
NC (fat content)	Full fat
	Low fat (2%)
	Fat-free (0%)
Sensory characteristics	Plain
	Berries
	Double chocolate chunk

- **The choice sets design: Burgess and Street** (2007).
- **Three alternatives:** two designed + nobuy
- **Main effects**: 9 choice tasks.

Specification and estimation

$$U_{njt} = Nobuy + \beta 1 LFat_{njt} + \beta 2 FFree_{njt} + \beta 3 Berries_{njt} + \beta 4 Choco_{njt} + \varepsilon_{njt}$$

- n = number of respondents
- j = available choosing options (A, B or none)
- t = number of choice sets
- Nobuy= Alternative Specific Constant: 1 for non-buy, 0 otherwise
- NCs: Low-fat (LFat), fat-free (Ffree); Sensory: Berries, chocolate = dummy variables
- ε_{njt} = an observed random term distributed following an extreme value type (Gumbel) distribution

Random Parameter Logit model (RPL) (NLOGIT 5.0 Software)

Results

Table 2 - Estimates for the RPL model

Attributes	Control		Health		Treat	
	Coefficient	Z-ratio	Coefficient	Z-ratio	Coefficient	Z-ratio
Mean estimation						
Nobuy	-2,49***	-8,52	-0,68**	-2.27	-1.32***	-5.03
Low-fat	0.77***	3.50	2.80***	8.86	0.43*	1.83
Free-fat	0.67**	2.50	3.73****	7.73	0.13	0.52
Berries	0.81**	2.34	0.71***	2.62	2.42***	5.13
Choco	-0.71	-1.49	-0.01	-0.04	2.40***	4.33
Standard deviation of parameters						
Low-fat	0.95***	2.64	0.85**	2.30	0.91***	2.64
Free-fat	1.48***	4.66	2.04***	5.06	1.43***	4.34
Berries	2.13***	5.77	1.58***	5.01	3.13***	4.61
Choco	3.29***	6.52	2.18***	5.84	4.65***	6.00
N	1809		1890		1944	
Log-likelihood	-406.62		-351.23		-373.96	
$\chi 2$	511.69		681.78		577.00	
Pseudo-R^2	0.39		0.49		0.44	

Note: *, ** and *** indicate significance at 10%, 5% and 1%.

Results

Table 3 – Relationship between utility and evoked (*positive vs. negative*) emotions (%).

Attributes	Control (n=67)		Health (n=70)		Treat (n=72)	
	Choices + emotion	Choices - emotions	Choices + emotion	Choices - emotions	Choices + emotion	Choices - emotions
Full fat	25.4	1.5	5.7	0.0	8.3	1.4
Full fat Berries	29.9	**4.5**	14.3	1.4	43.1	1.4
Full fat Chocolate	23.9	3.0	1.4	0.0	43.1	**2.8**
Low fat	31.3	0.0	21.4	7.1	13.9	**2.8**
Low fat Berries	**41.8**	1.5	32.9	2.9	**45.8**	1.4
Low fat Chocolate	31.3	0.0	30.0	2.9	38.9	0.0
Free fat	31.3	0.0	37.1	**8.6**	13.9	0.0
Free fat Berries	38.8	1.5	**67.1**	1.4	36.1	1.4
Free fat Chocolate	25.4	1.5	54.3	0.0	37.5	1.4

Concluding remarks

- ✓ The degree to which consumers' anticipated emotions and choices vary depending on consumption contexts and the presence/absence of quality attributes.
- ✓ Participants who chose the same type of yoghurt in all choice task selected mostly positive than negative emotions.
- ✓ Overall, positive emotional rating were higher when choosing low-fat yoghurts with berries and negative ratings when choosing full-fat plain and double chocolate chunk.

Concluding remarks

- ✓ Consumption context should be integrated in DCE
- ✓ There was a relationship between the positive anticipated evoked emotions and final choices.

Thank you for your attention!