DO YOU LIKE IT BETTER PRESENTED AS 'ACTIVITY' OR 'CALORIE'?

IT DEPENDS ON THE FOOD.

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ABSTRACT

Activity-equivalent food labels depart from traditional calorie labels in two ways: using a picture instead of words, and representing food energy as 'activity time'. Two experiments (N = 96) found that vary label format (picture vs. word) and energy representation (activity vs. calories) affected processing ease, judgements of liking and healthiness, and choice of products differed across foods. Experiment 1 found that picture and activity labels were rated higher than word and calorie labels in some foods but other foods had the opposite effect. Experiment 2 (N = 96) found that people chose to purchase calorie-labelled products more than activity-labelled ones and this preference was greater among unhealthy foods.

INTRODUCTION

- Food labels guide consumers to healthier food choices[1]. Food energy information reminds that overconsumption can lead to weight gain.
- Food energy values can be presented as 'calories' (current system), or activity time to burn the energy (e.g. no. of minutes of walking)[2].
- 'Activity-equivalent' labelling also uses pictures (vs. words).
- Pictures are posited to be more easily understood than words[3] and physical activity is believed to be more intuitive than calories[4].
- Increased liking for fluent (more easily processed) stimuli has previously been demonstrated[5].

Research Question:

- **Does increased fluency of picture-activity labels influence consumers to like the labels and products better, perceive them as healthier, and choose them more often?**

METHODS

- Data collected from participants (N = 96) using online vignette-based surveys.

Liking & Health Judgements (Exp 1)

- 4 label conditions
- Judgements repeated over 5 products
  - *How much do you like this product?*
  - *How healthy is this product?*
  - *How easy was it to judge?*

Perceptions of Labels

-How much do you like the label?

- Rank labels in terms of ease of understanding

Product Choice (Exp 2)

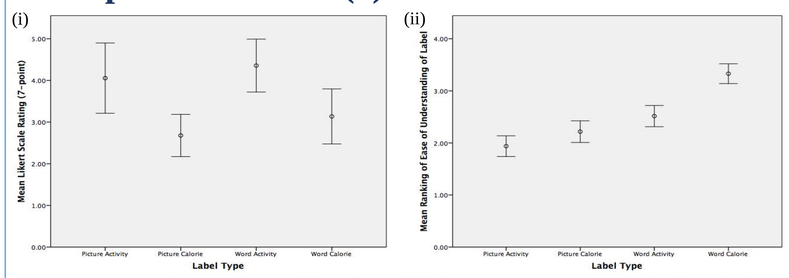
Healthy Foods

Unhealthy Foods

- 4 label types, participants assigned to 1 of 4 comparison conditions
- 4 products per choice decision (higher/lower value x 2 label types)
  - *Choose the healthier product.*
  - *Choose which product you would like to buy.*
  - *How easy was it to decide?*

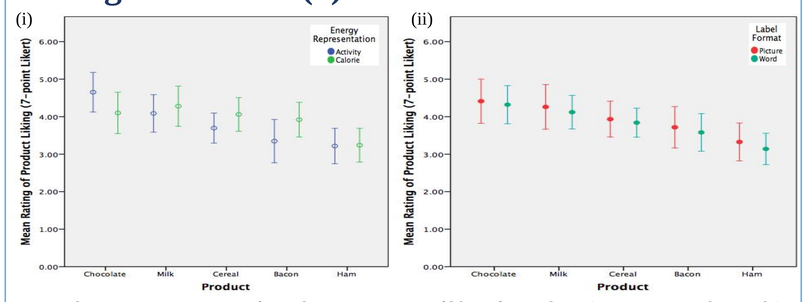
RESULTS

Perceptions of Label (*)



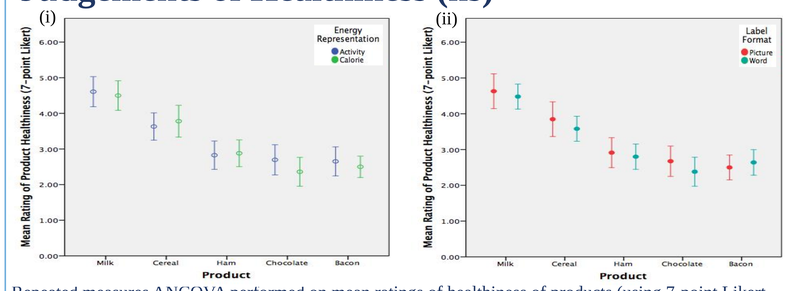
One-way ANOVA on (i) mean ratings of liking for each label (exp 1, using 7-point Likert scale) and (ii) mean ranking of labels (reverse-scored) in terms of ease of understanding (exp 2, labels ranked from 1-4). All error bars reflect 95% confidence intervals.

Liking of Product (*)



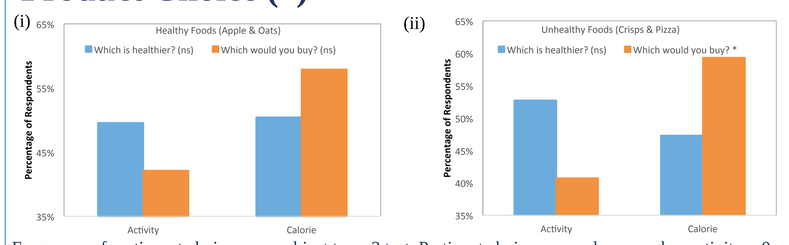
Repeated measures ANCOVA performed on mean ratings of liking for products (using 7-point Likert scale) with product as within-subject factors and between-subjects factors of (i) energy representation and (ii) label format. Covariates used in the model (attitudes towards health & BMI) are held constant in graph. All error bars reflect 95% confidence intervals.

Judgements of Healthiness (ns)



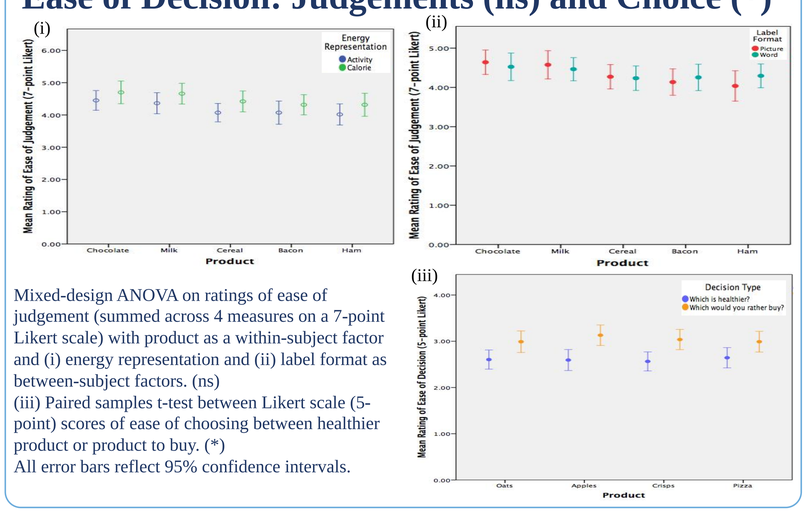
Repeated measures ANCOVA performed on mean ratings of healthiness of products (using 7-point Likert scale) with product as within-subject factors and between-subjects factors of (i) energy representation and (ii) label format. Covariates used in the model (attitudes towards health & BMI) are held constant in graph. All error bars reflect 95% confidence intervals.

Product Choice (*)



Frequency of particpant choices was subject to a $\chi 2$ test. Partipant choices were also scored as activity = 0, calorie = 1 and summed across products; the choice score was analysed with a one-sample t-test.

Ease of Decision: Judgements (ns) and Choice (*)



Mixed-design ANOVA on ratings of ease of judgement (summed across 4 measures on a 7-point Likert scale) with product as a within-subject factor and (i) energy representation and (ii) label format as between-subject factors. (ns)
(iii) Paired samples t-test between Likert scale (5-point) scores of ease of choosing between healthier product or product to buy. (*)
All error bars reflect 95% confidence intervals.

DISCUSSION

- Word labels were better liked and better understood than picture labels (high literacy of sample may have influenced)
- Activity labels might be more intuitive, but calorie labels may be more familiar for food selection.
- Context familiarity increases fluency of calorie labels.
- Label effects vary: different foods evoke different judgements.
- Some evidence that liking judgements do not extend to healthiness judgements.
- Decisions about healthiness were more effortful than purchase decisions.
- Purchase decisions may be more susceptible to fluency effects (more fluent products preferred).
- Sources of fluency: intuitiveness of label, familiarity with label, existing impressions food.
- People prefer to buy products labelled with calories: they automatically pick what is familiar
- Familiarity may play influence decision heuristics more than elements of presentation.

Future questions:

- What type of heuristics affect people most when they buy food?
- Which label design nudges towards healthier food choices?
- Varying presentation for other aspects of food healthiness (e.g. fat and sugar).
- Examining fluency of words vs. pictures in lower literacy sample (higher risk for obesity[6]).

KEY TAKEAWAYS

- Food energy can be presented as (i) pictures vs. words (format); (ii) activity time vs. calories (energy representation).
- Activity labels are better liked but calorie labels are more understood.
- Food type affects whether format and energy representation cause products to be better liked or judged more healthily.
- People find decisions about healthiness harder than purchase decisions.
- People would buy calorie-labelled products more than activity-labelled ones.

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