Exploring Restrictive Eating Patterns and Food Decision-Making

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Abstract

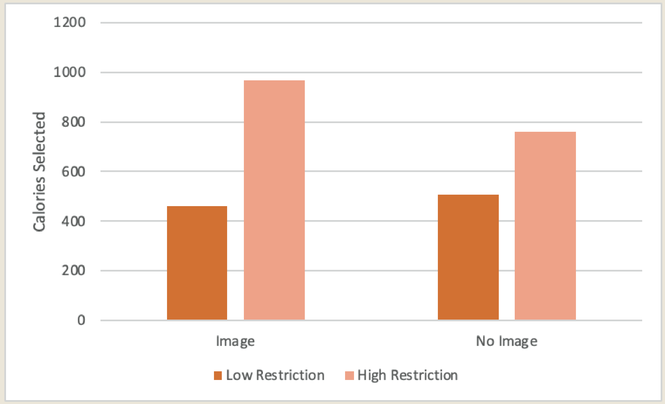
- This study examines **how food cues and calorie labels influence the choices of individuals with restrictive eating patterns.** Existing research highlights the role of sensory food availability, stress, and calorie labeling in decision-making. Understanding these effects is valuable, as food presentation shapes consumer behavior.
- **Participants wore 15 sensors tracking physiological responses**—heart rate, skin conductivity, facial electromyography, and eye tracking—while selecting a meal from a survey of fast-food items displayed in different formats. The total calories chosen will be analyzed.
- We anticipate that **individuals with restrictive eating habits will focus more on calorie labels and prefer lower-calorie foods**. However, visually appealing presentations of higher-calorie options may increase selection likelihood. Findings could inform food marketing strategies and improve public awareness of nutrition.

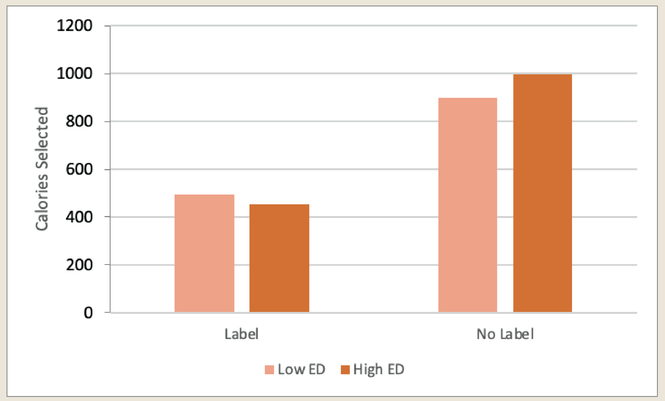
Introduction

- Previous research has explored the relationship between stress and food selection, highlighting the influence of calorie labels and food cues. A key finding is that sensory availability of food moderates calorie labels in decision making in certain contexts.
- This study aims to analyze food choices through a restrictive eating lens, investigating the reasoning behind selections and the impact of food imagery on decision-making.
- **Research Questions:**
  - Do individuals with restrictive eating habits pay more attention to calorie labels?
  - Does the presence of food images influence their calorie selection?
  - Do restrictive eaters consume fewer calories overall?

Methodology

- **Participants:** N=115 young (M=21.2, SD=4.8), mostly female (71.4%), mostly white (57.1%) followed by Hispanic (17.6%) and African American (10.9%).
- **Restricted Eating:** normally distributed across the sample M=2.95, SD=1.08.
- **Analysis:** A 2 (image vs. no image) × 2 (lower vs. higher energy density) repeated measures ANOVA was conducted to examine the effects on calorie selection.





Preliminary Results

- **Image vs. No Image Effect:**
  - Participants selected more calories when images were present.
  - This effect was not influenced by eating restriction.
  - Restrictive eaters were more affected by visual cues, particularly when choosing between high and low energy-dense foods.
- **Calorie Label vs. No Calorie Label Effect:**
  - Participants selected fewer calories when calorie labels were displayed.
  - This effect was not significantly influenced by eating restriction.
  - Calorie labels interacted with energy density, influencing food selection but not significantly moderated by eating restriction.
- **Key Takeaways:**
  - Images increase calorie selection, while calorie labels decrease it.
  - Restrictive eaters are more responsive to visual cues than non-restrictive eaters.

Discussion & Next Steps

Findings highlight the impact of food images and calorie labels on food selection, particularly among individuals with restrictive eating habits. The role of visual cues in decision-making suggests that presentation may override nutritional awareness, influencing choices beyond just caloric content. Further analysis will help clarify the cognitive and emotional mechanisms behind these effects.

- **Next Steps:**
  - Complete data collection
  - Analyze eye-tracking data to assess whether restrictive eaters focus more on calorie labels or food images.
  - Explore additional factors (e.g., stress, prior exposure to calorie labels) that may influence food selection.
  - Further investigation will improve understanding of how food presentation affects consumer choices, with potential implications for nutrition education and food marketing.

References

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