The Impact of Food Label Shapes on Perceived Healthiness of Food and Purchase Intentions

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APPENDIX A. Summary of measurement items.

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| **Construct** | **Measurement items (seven-point scales)** | **Reliability** |
| Shape (Jiang et al., 2016) | •I think the shape of the food label is angular. | α = .75 (Experiment 1)α = .80 (Experiment 2)α = .79 (Experiment 3) |
| Purchase Intentions (Sweeney et al., 1999) | •I will consider buying this whole wheat bread.•I am very likely to buy this whole wheat bread.•I will buy this whole wheat bread. | α = .79 (Experiment 1) |
| Purchase Intentions (Chen & Kim, 2013; Huang et al., 2014; Teresa et al., 2006) | •I would give priority consideration to this product.•This product is my top choice for purchases in its category.•The likelihood of my purchasing this product is very high.•I am willing to pay a higher price for this product. | α = .79 (Experiment 3) |
| Product Evaluation (Förster, 2004) | •I am satisfied with this chocolate.•This chocolate is appealing to me.•I rate this chocolate highly. | α = .83 (Experiment 2) |
| Perceived Healthiness of Food (Roininen et al., 1999; Steptoe et al., 1995) | •I believe this product helps me stay healthy.•I consider the healthiness of this product to be very important. | α = .70 (Experiment 2)α = .79 (Experiment 3) |
| Product Familiarity (Mead & Richerson, 2018) | •I am very familiar with this product.•I often eat this product.•I frequently see this product when shopping. | α = .87 (Experiment 1) |
| Warmth Perception (Bennett & Hill, 2012) | •This label shape gives me a feeling of warmth. | α = .94 (Experiment 3) |
| The self-construal manipulation measure (Kühnen & Hannover, 2000)  | •The previous thoughts made me think of myself.•The previous thoughts made me think of my friends/family. | α = .78 (Experiment 3) |

APPENDIX B. Overview of experiments.

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| Experiment | Sample | Design | Manipulation | DV | Main purposes |
| 1 | 258participants | 2 (label shapes: angular group vs. circular group) between-subjects design | • shapes: rectangular label for the angular shape group and a circular label for the angular shape group• product intentions(3 items) | Whole wheat bread in clear bags | • Individuals exhibit a higher willingness to purchase products with angular food labels(H1). |
| 2 | 231participants | 2 (label shapes: angular group vs. circular group) between-subjects design | • shapes: rectangular label for the angular shape group and a circular label for the angular shape group• product evaluation | Non-transparent box chocolates | • Perceived healthiness of food mediate the relationship between the shape of food labels and the willingness to purchase（H2). |
| 3 | 402participants | 2 (label shapes: angular group vs. circular group) ×2 (self-construal: independent vs. interdependent) two-factor between-subjects design | • shapes: rectangular label for the angular shape group and a circular label for the angular shape group• Self-construal: measured• product intentions(4items) | Canned juice | •Self-construal moderates the impact of food label shape on individual purchase intentions. Specifically, for individuals with independent self-construal, angular (vs. circular) label shapes enhance purchase intentions; for individuals with interdependent self-construal, circular (vs. angular) label shapes enhance purchase intentions. |

APPENDIX C. Experimental Stimulus Selection and Experimental Progression.

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| **Experiment** | **1** | **2** | **3** |
| Sample | 258 participants on Credamo, with an average age of 32.72 years (SD = 10.768), and 64.7% were female. | 231 participants on Credamo, with an average age of 32.59 years (SD = 9.543), and 51.1% were female. | 402 participants on Credamo, with an average age of 31.87 years (SD = 8.379), and 47.8% were female. |
| Experimental design | Label shape: angular vs. circular | Label shape: angular vs. circular | 2 (Label shape: angular vs. circular) x 2 (Self-construal: independent vs. interdependent) |
| Independent variable manipulation | Entire food label, healthy food | Food label itself, unhealthy food | Food label itself, healthy food |
| Dependent variable | Purchase intention for healthy foods and necessities | Purchase intention for unhealthy foods and non-necessities | Purchase intention for healthy foods and non-necessities |
| Stimulus | Whole wheat bread | Chocolate | Blueberry juice |
| Food brand | Real brand | Real brand | Virtual brand |
| Package transparency | Transparent | Opaque | Opaque |
| Product information richness | More | Less | More |
| Packaging material | Plastic | Paper | Can |
| Food type | healthy foods, necessities | unhealthy foods and non-necessities | healthy foods and non-necessities |
| Food state | Solid | Solid | Liquid |
| Experimental progression | In this experiment, the wholegrain bread was a healthy food from a real brand, using transparent packaging with more food information display, and the experiment excluded product familiarity. This was conducted to test H1. | The chocolate in this experiment was an unhealthy food from a real brand, using opaque packaging with less food information display, and the experiment excluded perceived product innovation. Additionally, a product evaluation scale was used to measure the dependent variable. This was conducted to test H1 and H2. | The juice in this experiment was a healthy food from a virtual brand, using opaque packaging with more food information display, and the experiment excluded warmth perception. Also, a purchase intention scale different from that used in Experiment 1 was used to measure the dependent variable. This was conducted to test H3. |

APPENDIX D. Research on the Shape of Food Labels

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| **Literatures** | **Food types** | **Forms of food label shapes**  | **Independent Variables** | **Independent Variable Manipulations** | **Dependent Variables** | **Main Conclusions** |
| Salgado-Montejo et al. (2015) | None  | Shapeofpackagingdesignelements | Shape of packaging design elements, symmetry, number of elements |  | Taste (sour, sweet) | Circular, symmetrical, and fewer-element label shapes may be categorized by consumers as sweet (and more pleasant tastes), whereas angular, asymmetrical, and more-element label shapes may be categorized as sour (and less pleasant tastes).  |
| Gil-Pérez et al. (2019)  | Nuts (snacks) | Shapeofpackagingicons | Internal label shape (angular vs. circular) |  | Taste (spicy, roasted) | Angular label shapes with fire icons increase spiciness expectation, while circular label shapes with fire icons increase roasted expectation. |
| Heatherly et al. (2019) | Wine (drinks) | Package label shape  | Background label shape (angular vs. circular)  |  | Wine odor（Buttery, Smoky, Citrus, Floral, Vegetable） | Wine odor does not elicit stronger cross-modal associations with background image shape (angular vs. circular). |
| Sousa et al. (2020) | Coffee (drinks) | Shape of design elements on packaging labels | Background label shape (angular vs. circular) and label color (green vs. red) |  | Purchase intention, preference | Pairing angular label shapes with green to represent sourness, and circular label shapes with red to represent sweetness, can enhance consumers’ purchase intention and liking. |
| This paper | Whole wheat bread (healthy food) | Food label shape | Outer shape of the text on labels (angular vs. circular) |  | Purchase intention | Angular (vs. circular) label shapes increase purchase intention. |
| Chocolate (unhealthy food) |
| Juice(drinks) |

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