

Exploring the role of decision support systems in promoting healthier and more sustainable food shopping: a card sorting study

Laura Z.H. Jansen, Marketing and Consumer Behavior Group and Information Technology Group, Wageningen University & Research, Wageningen, the Netherlands, laura1.jansen@wur.nl

Kwabena E. Bennin, Information Technology Group, Wageningen University & Research, Wageningen, the Netherlands, kwabena.bennin@wur.nl

Ellen J. Van Loo, Marketing and Consumer Behaviour Group, Wageningen University & Research, Wageningen, the Netherlands, ellen.vanloo@wur.nl

Ellen van Kleef, Marketing and Consumer Behaviour group, Wageningen University & Research, Wageningen, the Netherlands, ellen.vankleef@wur.nl

Presenter: Laura Jansen, laura1.jansen@wur.nl (in person)

The way in which stores are set up, due to the availability of products and the ease with which products can be found, has been shown to influence consumers' purchasing behavior. In an online choice environment such as a supermarket, digital decision support is commonly used to facilitate consumers' choice process. Such support systems are typically based on insights of consumer preferences, but there are increasingly calls to use support tools to encourage consumers to make healthier and more sustainable food choices. In developing and implementing such support systems, it is important to examine what is valued and needed from a social and technical perspective in an early development stage. The objective of this study is to identify opportunities and barriers in the development and implementation of decision support systems for healthier and more sustainable food shopping.

One-on-one semi-structured expert interviews (n=20) were held online with experts from United States, Hong Kong, and various countries in Europe, in the fields of behavioral sciences, digital marketing, decision aids, software development, persuasive technologies, and public health and sustainability (policy). Focus groups (n=4 groups, n=19 participants) were conducted with consumers who are used to shopping online. A card sorting task was used to understand expert and consumer participants perceptions. Participants got presented 17 cards in 5 different rounds, followed by semi-structured interview questions. Each of the 5 rounds addressed a different topic related to the decision support. Content analysis was carried out on the textual data and key themes for each card set were identified.

Findings show that decision support when shopping for food online is considered useful, particularly when suggestions are personalized, transparent, and justified (using labelling or informative text). Successful implementation was believed to be supported through 1) presenting suggestions early in the shopping trip in an easily visible but non-disruptive manner, 2) allowing autonomy to (not) provide personal data and choosing type of guidance (e.g., show sustainable alternatives but not healthier ones), and 3) educating consumers about healthiness or sustainability of food choices. In discussing support systems, experts focused mostly on effectiveness, while consumer participants emphasized low effort.

Hindering factors for both experts and consumer participants related to digital guidance being disruptive or steering, low perceived credibility and unclarity about what is healthy or sustainable. Consumer participants expressed concerns about too generic recommendations in relation to health and lack of knowledge about labelling. They emphasized that too much support and required effort (such as repeatedly providing data) would be unpleasant and burdensome. Experts also mentioned the risk of not having the required data to provide support (e.g., no up-to-date product information), a lack of consumer motivation to choose healthy or sustainable

(intention-behavior gap), and limited consumer interest in support. Results from this study provide insight into the potential effectiveness of digital interventions to encourage healthier and more sustainable choices and what this means for technical development.