



# Applying mealtime functionality to tailor protein-enriched meals to older consumer segments



Louise C. den Uijl<sup>a,\*</sup>, Gerry Jager<sup>b</sup>, Elizabeth H. Zandstra<sup>c</sup>, Cees de Graaf<sup>b</sup>, Stefanie Kremer<sup>a</sup>

<sup>a</sup> Wageningen Food & Biobased Research, Consumer Science & Health, Bornse Weiland 9, 6708 WG Wageningen, The Netherlands

<sup>b</sup> Wageningen University and Research, Department of Human Nutrition, Stippeneng 4, 6708 WE Wageningen, The Netherlands

<sup>c</sup> Consumer Science, Unilever R&D Vlaardingen, Olivier van Noortlaan 120, 3133 AT Vlaardingen, The Netherlands

## ARTICLE INFO

### Article history:

Received 25 May 2016

Received in revised form 23 August 2016

Accepted 24 September 2016

Available online 26 September 2016

### Keywords:

Senior consumer clusters

Product tailoring

Protein-enriched meals

Mealtime functionality

Congruency

Satisfaction

## ABSTRACT

The older adults group is highly heterogeneous, and its members do not always meet their recommended protein intake. We explored mealtime functionality as a basis for tailoring protein-enriched (PE) meal concepts to two senior consumer segments: 1) *cosy socialisers*, who eat mainly for cosiness and social interaction, and 2) *physical nutritioners*, who eat mainly for nutrients and physical needs. We hypothesised an increased 'product-cluster fit' when the functional meal associations are congruent to the clusters' functional mealtime expectations. In a home-use test, participants ( $N = 91$ , mean age  $68.1 (y) \pm 5.3$  (SD), 42 *cosy socialisers*) prepared and consumed three kale mash meal concepts once over three weeks: (1) a basic meal concept (without PE/tailoring), (2) a cosy meal concept (PE/tailored to mealtime expectations of *cosy socialisers*), and (3) a physical meal concept (PE/tailored to mealtime expectations of *physical nutritioners*). The participants reported their expectations and experiences with the recipes and dishes (e.g. expected liking; attractiveness recipe; actual liking; taste; smell; satisfaction). The results showed that the cosy meal concept was experienced as 'traditional' ( $p < 0.05$ ), whereas the physical meal concept was perceived as 'healthy' ( $p < 0.05$ ), 'trendy' ( $p < 0.05$ ), and 'energising' ( $p < 0.09$ ). Nonetheless, the cluster\*meal concept effect did not reach statistical significance for any of the outcome variables, indicating a similar actual experience of the congruent and incongruent meal concepts. This study highlights for the first time both the potency and challenges of tailoring PE dishes to specific older consumers and underlines that an increased 'product-cluster fit' is not straightforwardly achieved.

© 2016 Elsevier Ltd. All rights reserved.

## 1. Introduction

As people grow older, they become highly experienced consumers. Because of their varying experiences, the diverse ageing process, and the memories that build up over the years, this group is highly heterogeneous (Giacalone et al., 2014; Moschis, 2003). In addition, the consumption of protein is of special interest for older adults, as they often encounter a gradual loss of muscle mass and muscle strength as they age, known as sarcopenia. The combination of an adequate protein intake and physical activity is thought to postpone the onset of sarcopenia, slow down its progression, and attenuate its functional consequences, such as frailty, disability, physical dependence, and even mortality (Bauer et al., 2013; Deer & Volpi, 2015; Deutz et al., 2014; Paddon-Jones et al., 2015). However, about 10% of the Dutch community-dwelling and 35% of the Dutch institutionalised seniors has a dietary protein

intake below the estimated average requirement of 0.66 g/kg/day (Tieland, Borgonjen-van den Berg, van Loon, & de Groot, 2012). Hence, tailoring protein-enriched (PE) dishes to subgroups of senior consumers could be a first step to optimise dietary protein intake of this large consumer group.

Mealtime functionality (i.e. the functional expectations with regard to mealtimes/their motives for consuming meals, such as: 'combatting hunger', 'having a cosy moment', and so on) might provide a good starting point for tailoring PE meals to senior subgroups. Blake, Bisogni, Sobal, Devine, and Jastran (2007) and Köster (2003, 2009) stressed the relevance of situation-oriented research for better understanding consumer behaviour, because – depending on intention – food can mean different things to people in different situations. Mealtime (e.g. breakfast, dinner) may be such a situation where different people can have different motivations for consumption. Also Thomson, Crocker, and Marketo (2010) emphasised the relevance of conceptualisations (e.g. functional associations such as 'will refresh me', and 'is energising') to better understand consumer behaviour.

\* Corresponding author.

E-mail address: [louise.denuijl@wur.nl](mailto:louise.denuijl@wur.nl) (L.C. den Uijl).

Following up on this relevance of mealtime functionality and the heterogenic nature of the senior population, we recently defined subgroups of older consumers on the basis of their functional expectations regarding breakfast, lunch, dinner, desert, and snack times (den Uijl, Jager, de Graaf, & Kremer, 2016). We observed three subgroups of senior consumers; *cosy sociables*, *physical nutritioners*, and *thoughtless rewarders*. The *cosy sociables* reported associating their mealtimes with cosiness and social interactions, whereas the *physical nutritioners* were more focused on the nutrient and energy/hunger aspects of their mealtimes. The *thoughtless* group linked their mealtimes more strongly to thoughtless eating.

These older consumer segments may serve as an actionable basis for functionality-focused tailoring of PE meals. We hypothesised that such tailoring can be successful when the functional associations as inferred by the meal are congruent with the consumers' functional mealtime expectations. This hypothesis builds on the theories of Grunert and van Trijp (2014) and Thomson et al. (2010). Both theories support the idea that congruency between consumer expectations and their actual experience can positively impact on product perception. Thomson et al. (2010) propose that consumers evaluate products by integrating product expectations (mainly based on the packaging) and actual product experiences. Congruency between the two is thought to positively impact on product and brand perception. Grunert and van Trijp (2014) also follow this congruency philosophy, but focus on inferred product benefits (i.e. actual experiences with the product) and desired product benefits (i.e. product expectations). They state that congruency between inferred product benefits and desired product benefits can positively impact on product experience, product preference, and even – repeated – product choice (Fig. 1). According to the model, the desired product benefits are influenced by personal values and situations, whereas the inferred product benefits result from the product characteristics (e.g. ingredients, sensory characteristics), the marketing features (e.g. product information, brand image), and the technology features (e.g. processing techniques). Interestingly, so far, little is known on whether these theoretical frameworks can be applied to seniors' mealtimes and tailored PE meals.

In the current study, we therefore explored the extent to which we can apply mealtime functionality to tailor PE dishes to subgroups of older adults: in this case *cosy sociables* and *physical nutritioners*. Inspired by the above theories, we focussed on the congruency between functional mealtime expectations (anticipated/desired mealtime experiences) and inferred functional meal associations (actual meal experiences). We developed two PE meal concepts, one tailored to the functional mealtime expectations of *cosy sociables* and one tailored to those of *physical nutritioners*. Subsequently, we compared the actual PE meal concept experiences between the two senior clusters. Following Grunert and van Trijp's (2014) model, we hypothesised an increased 'product-cluster fit' (i.e. a more positive meal experience and more satisfied consumers) when the clusters' functional mealtime expectations are congruent to the inferred functional meal associations.

## 2. Materials and methods

### 2.1. Participants

Ninety-one older participants (35 males, mean age 68.1 (y)  $\pm$  5.3 (SD), age range 59–82 y) participated in a home-use test. Among these participants, 42 seniors were previously described as *cosy socialisers* and 49 seniors were previously described as *physical nutritioners* (for cluster details see Section 2.1.1 and den Uijl et al., 2016). All participants were regular consumers ( $\geq$  once per month) of kale mash, i.e. a traditional Dutch dish of potato mashed with kale (in Dutch: *boerenkoolstamppot*). They scored kale mash with at least a 7 on a 9-point hedonic scale. Table 1 provides the participants' characteristics for each of the clusters. The participants were all member of Wageningen UR's SenTo panel (Dutch abbreviation of *Senioren van de Toekomst*: Seniors of the Future). This consumer panel consists of around 800 healthy community-dwelling Dutch seniors. Seniors can become a member of the SenTo panel if they are at least 55 years of age, are able to go out independently (for example for grocery shopping), are capable of working online with a computer, and are fluent in Dutch. The participants received a financial compensation for participation and

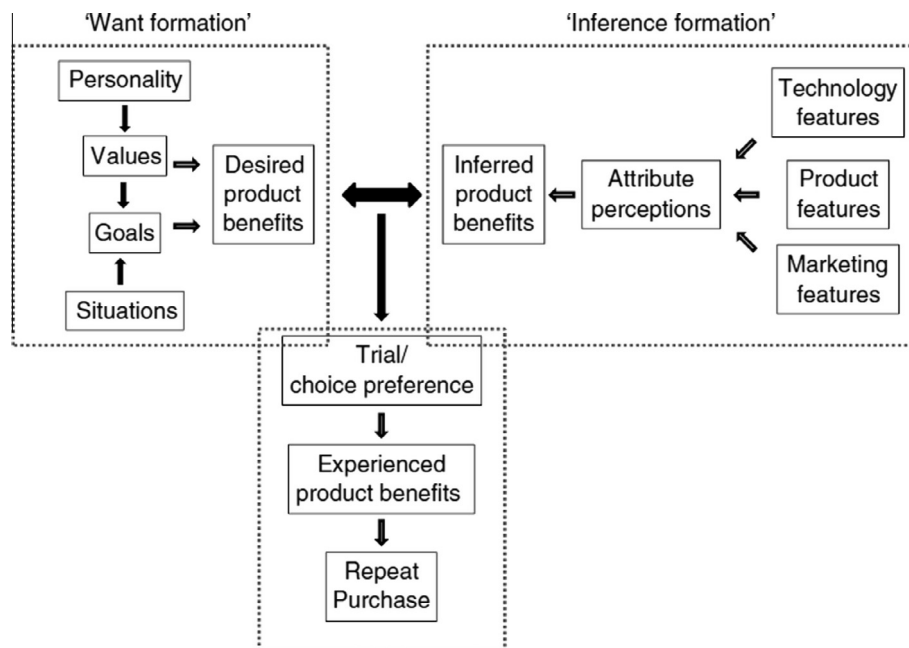


Fig. 1. A framework of how consumers decide on new products (Grunert & van Trijp, 2014).

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات