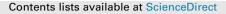
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Ready-made meal packaging – A survey of needs and wants among Finnish and Dutch 'current' and 'future' seniors



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ABSTRACT

For older populations, improved ready-made meal packaging may potentially contribute to adequate nutritional intakes, and in turn facilitate maintenance of independent living. Consequently, a deeper understanding of the features of ready-made meal packages important for older people is a step towards this goal.

Features of ready-made meal packaging appreciated by 'current' (aged $65 \ge$ years) and 'future' (aged 55-64 years) seniors were studied as an internet survey in Finland (n = 764) and in the Netherlands (n = 457). Only minor significant differences were found between these two senior groups. The four packaging features most valued by both the Finnish and Dutch consumers were: easy readability, easy disposability and recyclability, visibility of the contents, and easy opening. These features were basically the same regardless of age group, gender or country. Older people did not show interest either in multipackages or in eating meals directly from the package. Future senior men frequently using ready-made meals were identified as a promising target segment for the development and marketing of novel ready-made meals. More generally, special attention should be paid in package design to age-relevant features, such as easy opening and easy-to-read information, and the impact of culture-specific translation of the features into packaging design.

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1. Introduction

The proportion of older people in Europe has increased dramatically over the last 30 years and continues to increase at a high rate (OECD Factbook, 2014). In Europe, the percentage of the population aged over 65 is estimated to grow from 16% to 29% between 2010 and 2060 (WHO, 2015). In Finland, the current estimate is that this increasing segment will comprise 28% of the population by 2060 (Official Statistics of Finland, 2012), and in the Netherlands it is projected to increase to 21% (up to 3.62 million) by 2025 (RIVM, 2013).

At the moment, two distinctly different generations contribute to the ageing population. Firstly, there are seniors belonging to the so-called silent generation, consisting of people born between 1925 and 1945 who grew up in the austerity of the post-war years and display a general tendency to conform. Secondly, there is the cohort

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belonging to the so-called baby boomer generation – consisting of people born between 1946 and 1964. The latter are thought to form a unique cohort from both a cultural and a marketing perspective (Quine & Carter, 2006). In this paper, we refer to seniors belonging to the silent generation as 'current' seniors, and to seniors belonging to the baby boomer generation as 'future' seniors.

On one hand, senior consumers are known to consider foods convenient if they need minimal preparation (Wu, 2007). On the other hand, members of both the baby boomer generation and the silent generation may have enough time for food preparation and are thus generally more inclined than younger generations to put a meal on the table with minimal use of convenience foods (Wu, 2007). In a qualitative German study on biographical factors influencing eating behaviour, Brombach (2002) concluded that older persons generally prefer home-made dishes. In general, current ready-made meals are not appreciated by seniors and do not fulfil the requirements for a good meal (Heiniö, Pentikäinen, Rusko, & Peura-Kapanen, 2014). A study across eight European countries of older people's intentions to eat convenience foods found that intentions to eat convenience foods were very low among seniors



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(Saba, Messina, Turrini, Lumbers, & Raats, 2008). However, the current societal changes are expected to lead to more and more older consumers staying home longer with increasing degrees of (pre)frailness, and consequently the availability of convenient, healthy ready-made meals that require minimal preparation may become more and more important for them.

Old people aspire nowadays to live independently as long as possible. These older consumers are not frail but may still experience some difficulties in their everyday life due to their advancing age. Retaining the ability and right to choose is closely linked to notions of agency and autonomy, which have been shown to have a powerful influence on an older person's dignity, integrity, freedom and independence (WHO, 2015). In order to enable older people to stay independent as long as possible, their food consumption, nutritional needs, food perception and preferences need to be understood (Giacalone et al., 2016) – all the more so as early prevention of malnutrition in older people is a challenging task and requires various means (Ziylan, Haveman-Nies, van Dongen, Kremer, & de Groot, 2015). To this end, the availability of suitable, easy-to-prepare ready-made meals might enable (pre)frail or sick older consumers to consume a hot meal in situations where they would otherwise skip a meal due to fatigue (Ziylan et al., 2015). Developing packages which are easy to open and handle would help older people to maintain a sense of autonomy and control in their lives (Laguna et al., 2016).

During the shopping process, consumers pay most attention to visual aspects of the product packaging (Fenko, Schifferstein, & Hekkert, 2009). Lifestyles and values differ not only between age cohorts but also within the segment of senior consumers. It is generally known that ageing consumers are a very heterogeneous target group for food marketing, covering a range of physical and mental capabilities, health, lifestyles and socioeconomic situations (Doets & Kremer, 2016; Mumel & Prodnik, 2005; Pak & Kambil, 2006). In older age, declines in physiological (e.g. declines in vision, hearing and hand strength), social (e.g. loss of social network) and psychological (e.g. cognitive impairment) abilities cooccur (Corwin, Loury, & Gilbert, 1995, pp. P179-P186; Moschis, 2003; Murphy et al., 2002). Limited hand strength and dexterity can lead to opening difficulties (Sormunen, Nevala, & Sipilä, 2014). A decrease in vision (Chavalkul, Saxon, & Jerrard, 2011; Sudbury-Riley, 2014) has an impact on the usability of packages, especially on reading information.

This study aimed to identify the salient features of ready-made meal packaging appreciated by older consumers from two European countries, Finland and the Netherlands. The interest was to identify possible differences between the preferences of the two senior groups – current (\geq 65 years) and future (55–64 years) seniors – on ready-made meal packages.

2. Material and methods

2.1. Respondents

The data were collected via internet surveys in Finland and in the Netherlands. A total of 1221 persons took part in the study (Table 1). Only participants who were at least partially responsible for the grocery shopping in their household were included in the study. The respondents' basic features are described in Table 1. The majority of the respondents (60%) were female. Roughly half of the respondents were 65 years old or older and half were 55–64 years old.

In Finland, the survey was completed by 764 participants (n = 303 male, n = 461 female). 53% belonged to the group of future seniors, and 47% to the group of current seniors. In the Netherlands, 457 (n = 185 male, n = 272 female) completed surveys were

received. 41% of these respondents were future seniors, and 59% current seniors.

The respondents' educational background was similarly divided for the Finnish and the Dutch consumers.

2.2. Procedure

2.2.1. Questionnaire

The questionnaire template was developed by the Finnish researchers in Finnish but the final questionnaire was formulated in cooperation with the Dutch research partners. The questions were translated back and forth from English into Finnish and Dutch in close cooperation with the researchers from both countries, and the questionnaire was pre-tested in both countries. For the respondents, the questions were naturally presented in their own national language, i.e. in Finnish or Dutch.

A short definition of ready-made meals and ready-made meal packaging was included as an introduction before the questions. The questionnaire started with demographic questions concerning age, education, health and household matters. Further questions inquired about shopping behaviour, preferences for ready-made meal package features and use of ready-made meals. The respondents' preferences and wishes for ready-made meal package features, which is the main topic of this paper, were ascertained through a list of statements. Answers were given on 5-point scales (ranging from 1 strongly disagree to 5 strongly agree). The statements concerned perceived importance of usability of packaging, ease of opening, readability of packaging information, the visual design of the packaging, recyclability of the packaging, as well as willingness to warm the meal in the packaging and eat warmed food directly from the packaging.

2.2.2. Data collection and analysis

The questionnaire was filled in online as an internet survey in both countries. In both countries, PC usage among older consumers is currently estimated to be above 70%. Research agency Taloustutkimus Ltd collected the data in Finland recruiting the participants from their own consumer panel. In the Netherlands, the data were gathered by Wageningen University and Research using their SenTo (Seniors of the Future) consumer panel. An email containing a link to the online survey was sent out to these groups. The online survey was programmed by EyeQuestion software (Logic8 bv.).

The data analysis was performed with the software SPSS Statistics (IBM, Ver. 22.0). Analyses of variances (ANOVA) were used to test whether the means of preferred packaging features differed statistically significantly in various respondent groups. Firstly, oneway analyses of variances were performed using each of the statement regarding the preferred packaging features as dependent variables. The age group (two levels), country, gender and use frequency of ready-made meals (three levels) were used as independent variables, each in turn. Results of one-way analyses are presented in Table 2. In addition to one-way analyses, two-way interactions were also separately tested.

Because of the large difference in sample sizes in Finland and the Netherlands, there was a risk for violation of homogeneity of variance assumption of variance analyses. In a factorial design, this means that the results for main and interaction effects are not independent of each other (Tabachnick & Fidell, 1989, p. 339). The homogeneity of variance was tested using the Levene statistics. In most cases, the hypotheses of equal variances were indeed rejected. Thus, the results on interactions including country as an independent variable, are insecure. In the case of one-way anovas comparing the statement means between the countries, more robust tests (Brown-Forsythe and Welch) as well as non-parametric test (Krus-kall-Wallis) were used to ensure correctness of the conclusions.

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