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Consumers' willingness to pay for nutritional claims fighting the obesity epidemic: the case of reduced-fat and low salt cheese in Spain

T. de-Magistris^{a,b,*}, B. López-Galán^{a,b}^a Unidad de Economía Agroalimentaria. Centro de Investigación y Tecnología Agroalimentaria de Aragón, Zaragoza, Spain^b Instituto Agroalimentario de Aragón-IA2 (CITA-Universidad de Zaragoza), Zaragoza, Spain

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ABSTRACT

Objectives: The aim of this study was to investigate consumers' willingness to pay (WTP) for cheeses bearing reduced-fat and low salt claims in Spain.

Study design: An experiment with 219 cheese consumers was conducted in the period March–May 2015. We used different versions of cheese bearing reduced-fat and low salt claims.

Methods: A choice experiment was used to estimate WTP for reduced-fat and/or low salt cheeses. Participants faced eight choice sets, each consisting of two packages of cheese with different combinations of two claims. Individuals chose one of the two packages of cheese in each choice set, or decided not to choose either. Moreover, to consider possible heterogeneity in WTP across consumers, a random parameters logit model (RPL), a Chi-squared test, and analysis of variance tests were used.

Results: Spanish cheese consumers were willing to pay a positive premium for packages of cheese with reduced-fat claims (€0.538/100 g), and for cheese with reduced-fat and low salt claims (€1.15/100 g). Conversely, consumers valued low-salt content claims negatively. They preferred to pay €0.38/100 g for a conventional cheese rather than one low in salt content. As there was heterogeneity in consumers' WTP, two different consumer segments were identified. Segment 1 consisted of normal weight and younger consumers with higher incomes and levels of education, who valued low salt cheese more negatively than those individuals in Segment 2, predominantly comprising overweight and older consumers with low income and educational level. This means that individuals in Segment 1 would pay more for conventional cheese (€1/100 g) than those in Segment 2 (€0.50/100 g). However, no difference between the two segments was found in WTP for reduced-fat cheese.

Conclusions: The findings suggest that consumers are willing to pay a price premium for a package of cheese with a reduced-fat claim or cheese with reduced-fat and low salt claims appearing together; however, they are not willing to pay for a package of cheese with only a low salt claim. In comparison with overweight people, normal weight consumers would prefer to pay more for conventional cheese than low salt cheese. Finally, the results of this

* Corresponding author. Unidad de Economía Agroalimentaria, CITA, Avda Montañana 930, 50059, Zaragoza, Spain.

E-mail address: tmagistris@aragon.es (T. de-Magistris).

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study contribute to insights in the promotion of healthier food choices among consumers. In this regard, outreach activities promoted by food companies could drive consumers to increase their knowledge of the benefits of eating reduced-fat and low salt food products in relation to their health status.

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Introduction

The incidence of obesity has increased dramatically in the past decade and the consequences for society are highly significant.^{1,2} In the last two decades, the prevalence of obesity among adults has tripled in Europe and the overweight and obese population levels are rapidly approaching those of the United States. According to the International Association for the Study of Obesity,³ the prevalence of obesity (BMI > 30 kg/m²) in many European countries has exceeded 20% in recent years. In the EU-27, it is estimated that around 36% of adults are overweight (BMI 25–29.9 kg/m²), with a further 17.2% obese, resulting in over 53% of the EU population being either overweight or obese.³ Spain is one of the European countries with the highest rates of overweight and obesity as more than 30% of adults older than 18 years of age are overweight and 17% are obese.³

In general, nutrition and diet are the main determinants underlying obesity and its related non-communicable diseases (NCDs).^{4,5} In particular, the excessive consumption of salt and saturated fat increases the risk of cardiovascular diseases, hypertension and type 2 diabetes.^{6–9} In this context, consumers are increasingly concerned about their cheese consumption because of its contribution to the intake of dietary sodium and saturated fat. Some studies have reported that the high intake of dairy products causes a high level of obesity.^{10,11} For example, Moreno et al.¹⁰ examined nutrition transition in Spain to explore the relationship between obesity and diet-related NCDs. The authors found that the prevalence of obesity was associated with a high level of dairy intake. This result is in line with Beydoun et al.,¹¹ who conducted a study on the relationship between the consumption of dairy products and metabolic disorders. They pointed out a significant positive association between the intake of cheese and a high body mass index (BMI).

As well as its negative effects on health status, obesity has a considerable impact on health care expenditure.^{12,13} Given the costs of obesity, policymakers have sought ways to encourage healthier eating habits and thus fight the obesity epidemic. To illustrate, in 2004 the World Health Organization (WHO) adopted the 'WHO Global Strategy on Diet, Physical Activity and Health', to tackle obesity by promoting the reduction of energy intake from fats, sugar and salt. In relation to this, the elimination of trans fatty acids and saturated fats, limited salt consumption and shifting towards iodized salt were strongly recommended. In particular, WHO recommended not exceeding a 5 g/day consumption of salt.¹⁴ This strategy also involved the importance of accurate, standardized and comprehensible nutritional information (according to the Codex Guidelines in Nutritional Labelling) to enable consumers to make healthy food choices.

One of the most recent efforts to 'fight obesity' in Europe is labelling policy intervention, which recommends the use of three different types of nutritional and health information on food products: the nutritional facts panel¹⁵ and nutritional and health claims.¹⁶ In particular, Regulation (EEC) n. 1924/2006 was adopted in 2007. This regulation laid down harmonized rules in the EU for the use of nutritional claims, such as 'low fat' or 'low salt', to ensure that any claim made on food labelling was clear, accurate and based on scientific evidence. Hence, this information about food products was intended to have a great impact on dietary behaviour and to be a valid tool in fighting the obesity epidemic in Europe.

In this context, the objective of this study is to contribute to the debate concerning consumers' preferences for nutritional claims by investigating consumer preferences with regard to the two nutritional claims most closely related to the fight against the obesity epidemic and consequently to reducing the risk of NCDs. In particular, we assess willingness to pay (WTP) for cheeses bearing reduced-fat and low salt claims among Spanish consumers. To achieve the objective of this study, a real choice experiment (RCE) was used to elicit truthful preferences.

This study expands the literature on preferences for products bearing nutritional claims and – to the best of our knowledge – is the first study to measure consumer preferences for cheese products making two nutritional claims more closely related to the obesity issue in Spain. Indeed, our research is important given that understanding consumer preferences for these claims is critical in light of the negative consequences associated with unhealthy food choices in terms of physical health.

Methods

Data gathering

The experiment was conducted in Spain, and the participants were primary food buyers in households that consumed cheese products, aged at least 18 years old. The sample was set at 219 individuals, resulting in a sampling error of +/- 7% and a confidence level of 95.5% (K = 2) when estimating proportions (p = q = 0.5). As the sampling method, the participants were randomly selected and stratified using a proportional allocation strategy according to gender, age and BMI. The sample was recruited by an external agency.

Summary statistics showing the sociodemographic characteristics of the sample are in Table 1. Most of the participants were female (58.6%) and around 28% had studied at university level. Some 19% of the participants had a net

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