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Skyr Yogurts: The Future of this Emerging Market

Analysis of consumers' perceptions and brand awareness

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Abstract

Title: Skyr Yogurts: The Future of this Emerging Market.

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The aim of this dissertation is to analyse the possibilities of improving the Skyr yogurts market, by investigating the attitudes towards its consumption and consumers' perceptions of this dairy. Therefore, the reasons why people are changing their concerns for their lifestyle, towards a healthier way of living, focusing mainly on their diets, are evaluated. The Functional Food category is, as such, used as a starting point, to assess the areas of study, namely: attitudes, acceptance and attributes.

This study's methodology consists of qualitative and quantitative research, and data was collected firstly through in-depth interviews with key opinion leaders in this area, Skyr consumers and non-consumers. Then, an online questionnaire was shared, which enabled the collection of 405 answers for further analysis.

Concerning results, it is possible to find that people are concerned with living a healthier lifestyle, with special care for their diet and the practice of physical activities. Additionally, it is feasible to understand which attributes of Skyr yogurts positively influence the overall satisfaction of consumers, and analyse its consumption with the distinction of different socio-demographic characteristics. Therefore, it is possible to discover this emerging market, in particular its consumers and different competitors, considering Portugal.

This research study, focused on Skyr yogurts, is a reasonable source for organizations in the food sector, to understand consumers' preferences and the need for possible innovations in this area.

Keywords: Skyr; Yogurt; Protein; Dairy; Functional Food; Lifestyle.

Resumo

Título: Iogurtes Skyr: O Futuro deste Mercado Emergente.

Análise das perceções dos consumidores e reconhecimento das marcas.

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O objetivo deste estudo é analisar as possibilidades de favorecer o mercado dos Iogurtes Skyr, investigando as atitudes que levam ao seu consumo, e as perceções dos consumidores relativamente a este lacticínio. Assim, as razões que têm levado as pessoas a alterarem o seu estilo de vida, para uma atitude mais saudável, principalmente focada na alimentação, são analisadas. Desta forma, a categoria de alimentos com benefícios funcionais é utilizada como ponto de partida, de forma a determinar as áreas de estudo, nomeadamente: atitudes, aceitação e atributos.

A metodologia deste estudo consiste numa pesquisa qualitativa e quantitativa, em que os dados foram recolhidos primeiramente através de entrevistas com líderes de opinião nesta área, consumidores e não-consumidores de Skyr. Seguidamente, um questionário foi partilhado, onde foi possível recolher 405 respostas para serem analisadas posteriormente.

Considerando os resultados, é possível perceber que as pessoas estão a preocupar-se mais com o seu estilo de vida, especialmente com a alimentação e com a prática de exercício físico. Para além disso, é possível entender quais os atributos dos iogurtes Skyr que influenciam positivamente a satisfação global dos consumidores, e analisar o consumo considerando as diferentes características sociodemográficas. Deste modo, é possível descobrir este mercado emergente, especialmente os seus consumidores e diferentes concorrentes, considerando Portugal.

Este estudo, focado nos iogurtes Skyr, é uma fonte plausível para as organizações que atuam no sector alimentar, de forma a perceberem as preferências e necessidades dos consumidores para possíveis inovações nesta área.

Palavras-Chave: Skyr; Iogurtes; Proteína; Lacticínios; Alimentação Funcional.

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Chapter 1. Introduction

1.1 Background

Nowadays there is an increasing awareness of the need for a healthier lifestyle for the improved well-being of individuals, the major predictor of a healthy lifestyle (Talan & Ansari, 2017). This change in the standards of living of people came for different reasons, such as the obesity epidemic faced in many countries around the world (Shah, 2017), and due to the higher levels of education of people observed in recent years. The shift regarding a better lifestyle is mainly focused on a higher awareness of eating habits and progress in physical activities (Talan & Ansari, 2017).

Companies within the food industry have high expectations of the food products which will meet consumers' demand for a healthier lifestyle (Menrad, 2001), therefore, alongside this modification in the way of living, new food categories, such as Functional Food, have emerged. Functional food is a category with high potential for product innovations since it is essentially based on new scientific findings concerning specific ingredients and their nutritional effects (Sparke & Menrad, 2009).

Diverse definitions have been given to this concept. However, the explanation from the European Commission's Concerted Action on Functional Food Science in Europe (FuFoSE), is able to convey the main idea – “a food product can only be considered functional if, together with the basic nutritional impact, it has beneficial effects on one or more functions of the human organism thus either improving general and physical conditions and/or decreasing the risk of the evolution of diseases” (Kápolna et al, 2008).

Furthermore, there are different products within the diverse food categories that can be considered functional. The category studied in this paper encompasses dairy products. Currently, consumers are demanding dairy products with specific characteristics that are compatible with their health concerns, namely low-fat or fat-free products (Isleten & Karagul-Yuceer, 2007).

This study is focused on the Skyr yogurt, a functional dairy product from Iceland. Even though Skyr is a yogurt, its consistency makes it more similar to a cheese. Moreover, this yogurt

presents good nutritional values, due to its characteristics, namely fat-free, high protein and reduced sugar (Diaries, MS Iceland, n.d.).

1.2 Problem Statement and Research Questions

The problem that this research aims to solve is “How to improve the emerging market of Skyr Yogurts, from a Functional Food perspective”.

Therefore, the following research questions are addressed:

Research Question #1: What is Functional Food? What leads consumers towards the consumption of this food with functional benefits? And how are consumers accepting this food?

The first research question is addressed to understand what has been changing in consumers’ minds, leading them to a healthier lifestyle which incorporates the consumption of food with functional benefits. Consequently, these foods’ attributes are decisive. Hence, the second research question is formulated:

Research Question #2: What are the attributes that will influence consumers the most when taking into consideration the purchase of Functional Food?

The first and second research questions are addressed to analyse the Functional Food category, which is used as starting point, to gather the necessary data to be applied to the market of Skyr yogurts.

Furthermore, to analyse the emerging market of this study, the Skyr yogurts, the third research question is addressed:

Research Question #3: What are consumers’ perceptions of the Skyr yogurt and of the respective competitors in the market?

1.3 Research Methods

The data gathered from qualitative and quantitative research – in-depth interviews and online survey, respectively – was assembled and statistically analysed with the assistance of SPSS

software. Thus, descriptive and inferential statistics were developed, which incorporated both the analysis of the hypotheses formulated from the literature and additional tests that evaluated overall satisfaction of consumers of Skyr yogurts and brand awareness.

1.4 Managerial and Academic Relevance

Currently, the pursuit of a healthier life has been established as a main goal in many people's lives. This recent awareness is mainly due to the manifestation of chronic diseases related to diet and nutrition (which reached global levels of 46% in 2001 and are expected to increase to 57% by 2020) (World Health Organization, n.d.).

In light of the above, the Functional Food concept might be a key factor towards the improvement of people's lives. Being estimated between the range of thirty to sixty billion euros (J. Stein & Rodríguez-Cerezo, 2008), the global market of Functional Food is still expected to increase its market volume throughout the coming years. Moreover, it is a growth opportunity for the food industry, though diverse improvements are needed in the field of ingredients suppliers, food retailers and companies. Plus, this emerging category in the food industry is a sustainable trend since it is in line with current socio-demographic patterns (Menrad, 2001).

Furthermore, this specific case, the Skyr yogurt, has been introduced recently in Portugal and has become a success within the dairy category. Hence, this study brings new perceptions on this innovative product since there are no academic studies concerning Skyr yogurts yet, conveying the areas of improvement. Also, it is a great resource for marketers to understand what consumers' perceptions and preferences are regarding the diverse attributes of this product, and to recognise which attributes require alterations in order to contribute to consumer satisfaction. Moreover, it studies the recognition of the different brands by the participants on this study.

1.5 Dissertation Structure

This dissertation is structured in five different chapters. The first chapter is the Introduction where a brief overview is provided regarding each topic studied, the description of the problem statement and respective research questions. Additionally, there is also an explanation of why

this topic is relevant in an academic and managerial sense. In the second chapter a literature review is presented concerning healthy lifestyle, the Functional Food category, dairy products, protein food and the Skyr yogurt. Successively, chapter number three explains the methodology used to study the problem statement and to provide the appropriate answers to the research questions formulated, as well as to the hypotheses addressed from the literature. The last two chapters, fourth and fifth, argue the results obtained and suggest some future research and limitations arising from this study.

Chapter 2. Literature Review

2.1 Healthy Lifestyle

The awareness that to live longer it is crucial to adopt a healthy lifestyle is present in current society, for example: do not eat above the number of calories designated for a day, drink in moderation, exercise, eat fruits and vegetables and do not smoke (Health, n.d.).

People are becoming more and more conscious of the need to change bad ways of living, turning to a life with physical activity and eating food with rich ingredients and nutrients, prompting their well-being. Moreover, there are other factors behind this shift towards a new way of living, namely: economic growth and financial stability, which enables people to spend more time and money on their health; and common diseases of the 21st century such as obesity, anxiety and depression, and high blood pressure, for example. Another factor which is important to consider is the higher level of education of consumers, who are questioning the trustworthiness of the food that they consume (Talan & Ansari, 2017).

2.1.1 Eating Habits

Shah (2017), in her study concerning eating habits of people, insists that interventions in this regard are needed to discourage people from the consumption of non-healthy food (Shah, 2017). We are living in a world where obesity is considered an epidemic, with obesity rates higher than 35% in 5 states of the US, and where 1 adult in 6 is considered obese in Europe (The State of Obesity, 2017) (Eurostat, 2016).

Consequently, it is vital to change these habits and give more information to consumers regarding the core nutrients that must be integrated in their meals. Thus, some suggestions of policies that are likely to reduce the consumption of non-healthy food are given, such as an unhealthy label advising consumers of the problems that might arise from the consumption of such ingredients, and a surcharge which consists of putting an extra tax on these adverse products. However, these strategies can have the opposite effect. On the one hand, consumers may look at taxed products as “higher quality products” due to the higher prices, and, on the

other hand, it can bring “gender stereotypes” since a preference for healthy food is associated with women, decreasing the consumption of labelled products by men. (Shah, 2017).

2.2 Functional Food

2.2.1 Concept

The Functional Food segment is considered a promising market segment, which has been growing continuously worldwide (Annunziata & Vecchio, 2010). It has become commonplace to hear quotes such as “You are what you eat” and “Let your food be your medicine, and your medicine be your food” by Brillat-Savarin and Hippocrates, respectively, which were not quoted for the first time recently, however have a lot of meaning today. This means that nowadays people are shifting their ways of living towards the consumption of certain food which can bring benefits to their health (Azzurra & Paola, 2009). Being characterized as highly dynamic and innovative (Annunziata, Vecchio, & Kraus, 2016), the Functional Food category has a lot of potential for product innovations such as discoveries of specific ingredients and the respective nutritional positive effects (Sparke & Menrad, 2009).

The concept of Functional Food came to Europe in the mid 1990s (Sparke & Menrad, 2009), where it is already considered one of the most developed consumer markets (V. Dobrenova, Grabner-Kräuter, & Terlutter, 2015). The notion of food with an additional health value is growing in consumers’ minds, however there is still a lot of misunderstanding regarding Functional Food because different definitions have been given to this concept (Annunziata & Vecchio, 2010). Thus, it is important to establish a clear definition, since one of the factors influencing the success of this food category is the level of familiarity with the concept for consumers (Annunziata, Vecchio, & Kraus, 2016), and to disassociate it from other categories such as dietetic and light products (Azzurra & Paola, 2009). Nevertheless, the idea to capture is that Functional Food is the “relation between nutrition, sensory satisfaction and fortification” as it is the foundation of the development of this concept, which took place in Japan (V. Dobrenova, Grabner-Kräuter, & Terlutter, 2015).

2.2.2 Consumer's Attitude to and Acceptance of Functional Food

Consumers' acceptance of Functional Food is one of the key factors for the success of this food category, and there are distinct reasons behind the approval of this distinctive food (Annunziata & Vecchio, 2010).

One of the reasons is associated with the interest that has been demonstrated by consumers regarding the relationship between diet and health, since the consumption of this kind of food is, in general, a pursuit of health benefits (Annunziata & Vecchio, 2010). However, sometimes, this factor of success occurs in the opposite way due to the lack of knowledge of some consumers concerning the health effects of such products and the unfamiliarity with certain ingredients (Sparke & Menrad, 2009). Therefore, it is important that manufacturers choose products' ingredients taking into consideration the level of familiarity of consumers with those ingredients, or choose a carrier product which is already positively recognized by consumers (Annunziata & Vecchio, 2010). To illustrate, participants in a study considered yogurt to be the healthiest product due to this product's positive image, despite the enrichment that would be chosen (Ares & Gámbaro, 2007). Likewise, ingredients such as vitamins and fibre, which are commonly recognized by consumers, are easily accepted when compared to ingredients not so common in consumers' minds (Menrad, 2001).

Consequently, improvements on the health image of Functional Food products must be made to increase the awareness of the health effects of these specific ingredients, by providing more information or doing communication activities to consumers in this regard (Menrad, 2001).

Considering the preceding literature, the following hypothesis will be tested:

Hypothesis 1: The following of a healthy lifestyle predicts the monthly consumption of Skyr yogurts.

The acquisition of Functional Food is habitually a search for well-being improvement, or it can be a consequence of some disease – personal or of relatives (Krystallis, Maglaras, & Mamalis, 2008) (Annunziata & Vecchio, 2010) (Gagliardi, 2015). Several analyses found that one of the central motivations concerning the approval of this food is the occurrence of some illness in the household, for example those related to gastrointestinal function, immune system, and diseases associated with non-appropriate food consumption (Azzurra & Paola, 2009) (Annunziata, Vecchio, & Kraus, 2016). As such, it is possible to characterize some of these consumers as

“benefit believers, who faced illness among relatives” or “individuals who want to control everything they ingest and also the risk of falling ill” (Verbeke, 2004) (Landström, Hursti, & Magnusson, 2009).

Furthermore, the trustworthiness of health claims is a reason that is going to greatly influence consumers’ acceptance of Functional Food. Health claims have been used by the food industry as a response to this trend, informing consumers of the potential health benefits of such products (Annunziata & Vecchio, 2010) (Azzurra & Paola, 2009) (Agriculture and Agri-Food Canada, 2009) (Oliveira et al, 2015) (Verbeke, 2005).

Functional Food might not be easily accepted by every people, though, the acceptance can be related to certain socio-demographic characteristics (Annunziata & Vecchio, 2010).

Different studies discuss these characteristics, and age, gender and education are considered the most significant (Krystallis, Maglaras, & Mamalis, 2008) (Ares & Gámbaro, 2007). On the one hand, taking into consideration gender aspects, females are considered to have a higher probability of positively receiving Functional Food (Ares & Gámbaro, 2007) (Annunziata & Vecchio, 2010) (Verbeke, 2004). On the other hand, with respect to age some controversy exists. Often, studies in this regard state that young consumers have greater knowledge and positive attitude, considered a promising segment regarding this food category (V. Dobrenova, Grabner-Kräuter, & Terlutter, 2015) (Marina, Marija, & Ida, 2014). However, other authors considered “middle-aged” and “elderly” consumers to be those with the most positive approach (Ares & Gámbaro, 2007), and Annunziata and Vecchio (2010) quote further literature which states that “older consumers” are those that demonstrated the higher intention to buy Functional Food (Annunziata & Vecchio, 2010). Likewise, people with higher levels of education have been associated with the consumption of this food (Marina, Marija, & Ida, 2014).

Considering the previous information, the following hypotheses are formulated:

Hypothesis 2.1: The monthly consumption of Skyr yogurts differ based on gender – females are the group gender that is more likely to receive Functional Food, thus with higher levels of Skyr yogurt consumption.

Hypothesis 2.2: The monthly consumption of Skyr yogurts differ based on age – younger consumers vs. older consumers.

Hypothesis 2.3: The monthly consumption of Skyr yogurts differs based on the level of education – people with higher levels of education are those with the most positive attitude to Functional Food, thus with higher levels of Skyr yogurt consumption.

2.2.3 Functional Food Products' attributes

When choosing what to eat, consumers make certain trade-offs between different products and each product's attribute is considered, with the same occurring in Functional Food.

Taste is one of the attributes that can highly affect consumers' choice when buying food (Azzurra & Paola, 2009), plus it is crucial when taking into consideration repurchase (Annunziata, Vecchio, & Kraus, 2016). As one of the most important Functional Food's attributes, taste expectations aligned with bad taste are one of the core reasons for refusal (Sparke & Menrad, 2009) (Marina, Marija, & Ida, 2014). In fact, taste expectations are normally associated with bad taste since healthy food is considered to taste worse or even tasteless than other types of food (Landström, Hursti, & Magnusson, 2009). Thus, many consumers assumed that they would prefer to compromise on the potential health benefits instead of compromising on the expected taste (Annunziata, Vecchio, & Kraus, 2016) (Krystallis, Maglaras, & Mamalis, 2008) (Verbeke, 2005), which could be a problem for food manufacturers that must try to find pleasing taste solutions for their new product launches (Agriculture and Agri-Food Canada, 2009). However, health-orientation equally plays a strong role in decision-making, thus other studies note that consumers are truly willing to compromise on taste. This disposition to compromise on taste can be due to the strength of the health claim or the product itself, and due to the recognition that a trade-off should not be made between health and good taste (Verbeke, 2005) (Annunziata, Vecchio, & Kraus, 2016).

Another factor which influences many consumers' food choices is price (Landström, Hursti, & Magnusson, 2009) (Marina, Marija, & Ida, 2014). Taking into account Functional Food, the high cost of these products is sometimes thought to be a key reason for refusing this kind of products (Marina, Marija, & Ida, 2014) (Annunziata & Vecchio, 2010) (Sparke & Menrad, 2009), as occurs with healthy food in general where the price is perceived to be "premium" (Verbeke, 2004) (Annunziata, Vecchio, & Kraus, 2016).

The brand of the product is another attribute that captures consumers' attention (Azzurra & Paola, 2009). As with bad taste, the same happens concerning unknown brands, since consumers are not willing to risk consuming products with functional characteristics, which are consumed to prompt their well-being, without knowing the brand (Krystallis, Maglaras, & Mamalis, 2008).

It might not be the first factor that people think of when it comes to Functional Food attributes, which will influence consumers' purchases, but, the country of origin is considered to be one of the attributes to which consumers pay a lot of attention (Marina, Marija, & Ida, 2014). Literature mentions that there is a positive relationship between healthiness evaluations and purchase intentions, and the perception of the country of origin. Therefore, if a country is known for its healthy food, the purchasing intention of these products will increase, as occurs in Japan with its Shirota-fortified food¹, for example. Hence, the country of origin positive perception can be used not only in the promotion of these distinct ingredients, but also when the ingredient familiarity is low since, when the two are combined, the healthiness perception of such an ingredient will increase. Additionally, this specific attribute has been classified as a halo effect², because it will positively influence further purchasing intentions of Functional Food that has this country of origin attractiveness (V. Dobrenova, Grabner-Kräuter, & Terlutter, 2015).

Considering the aforementioned literature, the following hypothesis will be tested:

Hypothesis #3: The monthly consumption of Skyr yogurts differs based on the level of impact of the recognition of the country of origin (Presence of a Halo Effect).

As literature shows, information presented on the label and respective nutritional aspects are essential attributes for Functional Food consumers (Annunziata, Vecchio, & Kraus, 2016), as the benefit cannot be directly identified from the product (Annunziata & Vecchio, 2010). With the move from “adequate nutrition” to “optimal nutrition” (British Journal of Nutrition, 1999), consumers' interest in the nutritional information on the labels has increased (Annunziata & Vecchio, 2010) (Azzurra & Paola, 2009), as they can communicate the potential health benefits

¹ Shirota is a bacterium (*Lactobacillus casei Shirota*), used to produce Yakult – a probiotic dairy product – which promotes intestinal health and treats other health conditions (Singleton, 2017).

² Halo Effect: The recognition that if a specific product came from a good country, the product will automatically be good (Fernandes, 2016).

of each product (Oliveira et al, 2015) and raise the probability of its consumption (Krystallis, Maglaras, & Mamalis, 2008). Authors who have been studying this subject suggest that labels must be improved to direct consumers' attention to the supposed health benefits through the introduction of a logo/symbol (Annunziata & Vecchio, 2010) (Azzurra & Paola, 2009), as this will differentiate these products from conventional ones (Oliveira et al, 2015), and because consumers seek more information on Functional Food (Azzurra & Paola, 2009).

2.3 Dairy Products

Dairy products are those which consist mostly of milk and most of these products can be included in a healthy diet, as one of the core components in European consumers' diets (Krystallis & Chrysochou, 2011). Furthermore, this type of food can augment the levels of nutrients ingested by dairy consumers because they are composed of good quantities of calcium, vitamin D and protein (Dairy Council of California, n.d.).

Companies belonging to this category of food have launched new dairy products focusing mainly on low-fat and health claims. A health claim is an important tool which will communicate the healthy benefit of a certain product to consumers, and in the last years there has been a prominence on low-fat health claims. The emphasis on these strategies has been used by companies in the dairy food industry since, typically, brands associated with low-fat claims accomplish better results in the market compared with products with high levels of fat in their composition. Additionally, the significance that is given to these health claims on dairy products is a consequence of the increasing levels of their consumption alongside the rising number of diseases such as cardio-vascular, for example (Krystallis & Chrysochou, 2011).

2.3.1 Yogurts

One of the most consumed products within the dairy food category is yogurt, which is the segment with the largest growth, reaching a 7.4% growth in sales from 2015 to 2016 (Johnson, 2017). Yogurt is a kind of food that is full of nutrients that can also provide a great quantity of protein. As a product that comes from milk, it needs to be soured and thickened until it gains the recognized yogurt consistency (Dairy Council of California, n.d.).

Yogurts are considered healthy food not only due to their components, but also because of their positive results in helping in the reduction of the levels of some diseases (e.g. blood pressure) and even decreasing the probabilities of the manifestation of illnesses like these (Dairy Council of California, n.d.). Despite the nutrients normally found in yogurts, in the current days it is also common to find probiotics³ which augment health effects (Dairy Council of California, n.d.). With the increasing number of dairy products having probiotics entering the market, consumers are more aware of supplements like “*bifidobacte*” and “*lactococcus paracasei*”, since these are frequently found in numerous lines of yogurts (Sanders et al, 2017) (Dairy Council of California, n.d.).

2.4 Protein Food

One of the main groups from the well-known food wheel is protein, which is a very important source that must be included in a balanced nutrition plan and which is an indispensable component in a sustainable diet (Rusu & Popa, 2016) (Henchion et al, 2017). A protein is a macromolecule (Kapoor, Rafiq, & Sharma, 2017), which can be found in food such as meat, eggs or seeds, for example (Havemeier, Erickson, & Slavin, 2017). In 2050, it is expected that the levels of animal protein will increase twice as much as the quantity that is consumed today (Lafarga & Hayes, 2016) (Schraeder, 2016), since the consumption of protein can bring diverse benefits, such as: improving the immune system, helping in muscle fatigue and injury, stimulating satiety and reducing food intake. Plus, the consumption of protein will help in decreasing the consumption of another macronutrient considered undesirable – fat – and it will help in the prevention of some diseases, such as hypertension (Rusu & Popa, 2016) (M.S. Chungchunlam et al, 2017) (Lafarga & Hayes, 2016).

An alternative to conventional protein foods are protein supplements: consumed to augment the levels of protein which stimulate muscle hypertrophy⁴ and strength, and can be a solution when there is no time for rich meals or when access to quality food is limited. Moreover, protein

³ Probiotics: microorganisms (e.g. bacteria) that are included in some food to improve body function such as the digestive system, for example (Robinson, 2017).

⁴ Muscle hypertrophy: increase in size of the muscle cells (Quinn, 2017).

supplements are mostly consumed by athletes, who want to maintain or construct muscle mass, recover after a sports activity, increase energy and/or improve nutrition (Rusu & Popa, 2016).

Furthermore, athletes should maintain a “well-balanced diet”, where the ingestion of protein food should be higher than the recommendation for an ordinary adult⁵, due to athletes’ need for muscle stimulation. Besides physical activity relation, the consumption of protein is also associated with diets for weight loss. Even though the main goal is to lose weight, there is still the need to augment and strengthen muscles, thus protein can be an advantage because of its thermic effect, as it will preserve lean mass (Rusu & Popa, 2016).

There are different kinds of protein, which vary in terms of nutritional composition, digestibility, possible implications for the environment and consumer acceptance (Henchion et al, 2017). A kind of protein that is considered best when contemplating satiety, and one with great positive effects regarding muscle development, is whey. This kind of protein is the result of a combination of different soluble proteins, and it is considered a better source than other notorious proteins as eggs, meat or fish, for example (M.S. Chungchunlam et al, 2017) (Rusu & Popa, 2016). Another type of protein, which is considered inferior to whey, is casein. Casein is a “high-quality supplemental protein”, normally found in mammalian milk, which will also help to improve muscle mass (Rusu & Popa, 2016). Additionally, global protein supply is today controlled by vegetal source (57%), followed by meat and dairy with 18% and 10% of the market, respectively (Henchion et al, 2017).

This growing demand for products with high values of animal protein that has been recorded may be due to the higher levels of income, increased urbanization and the higher percentage of elderly people, since protein has been recognized as a positive contributor to “healthy aging”. In addition, this development of economies with increasing income is a reason for the enlarged demand for dairy proteins. Therefore, with the projections for higher demand of protein in the future (advances already observed, by the increase of 4.8% in food items with protein claims, in 2016), it is important that stakeholders give emphasis to the food system, to deliver “authentic food” that will promote the healthy lifestyles which consumers are searching for (Henchion et al, 2017) (The Nielsen Company, 2016). This emphasis on the food system is also imperative because there are approximately one billion people in the world who do not consume sufficient levels of protein, which brings the need for protein food with excellent quality (Wu et al, 2014).

⁵ Protein recommendation for an adult is 0.8 g/kg body weight/d (Rusu & Popa, 2016).

Hence, the development of this type of food must be made by focusing on convenience (“protein options on the go”), in different choices of protein sources available, and in transparency regarding nutritional components (Schraeder, 2016).

2.5 Skyr

2.5.1 History

Skyr is a yogurt somehow different to others that consumers are used to, mainly due to its thickness and the higher levels of protein (McIndoo, 2017).

This concentrated fermented milk product (Y Tamime, Hickey, & D Muir, 2014), is an innovation in some countries of Europe, Asia and in US, but it is a tradition of many years in the Nordic countries of Europe, as it is from Iceland (Diaries, MS Iceland, n.d.). There is a reason behind the production of this product being based in Iceland: since this country is characterized by its unique (adverse) climate and environment, the production of fresh food is not common. Then, Iceland’s habitants were forced to find a way to consume indispensable nutrients, hence, instead of fresh food, the population found the solution in dairy and seafood (Boyd, 2016). Skyr’s production began to preserve milk’s value through the process of straining the liquid (Reykdal et al, 2011).

The success of Skyr is today a certainty, and one of the reasons behind this accomplishment is Iceland’s recognition as one of the healthiest countries in the world, with no fast food culture, where this special yogurt is a crucial factor regarding the success of this Nordic diet (Boyd, 2016).

2.5.2 About Skyr

Skyr is considered a “superfood”, worth almost eight billion dollars a year (Oliver, 2016). Being associated with the practice of physical activities and nutritional plans towards weight loss (Pingo Doce, n.d.), this innovative product is a wise choice, when the aspiration is to promote a healthy lifestyle (Johnson, 2017), due to its special characteristics (Diaries, MS Iceland, n.d.).

The high levels of protein present in Skyr make this a yogurt equivalent to two and a half portions of dairy, which can substitute meat, fish or eggs, even though it lacks some important vitamins and minerals found in these foods (Pingo Doce, n.d.).

Skyr's production is distinctive from typical yogurts, because two bacteria and an enzyme are added to pasteurized skimmed milk, and it requires four times more milk than the normal quantity. Afterwards, only the solid part is used, becoming a thicker texture with high nutritional components (Guerreiro, 2017), with a soft flavour though slightly sour, as it is described by the nutritionist Ana Rita Lopes (Noronha, n.d.). Therefore, comparing the usual yogurts with Skyr, it is possible to say that the latter has three and a half times more protein, and two and a half times more than Greek yogurt (Guerreiro, 2017).

This yogurt can be consumed by most type of consumers, depending on the protein needs in the different stages of life. Skyr can be an ally to the elderly, because it will help in preserving strength and reinforcing muscle mass. Regarding children, this product might be consumed with caution since those in the early stages of life do not need such high levels of protein in their eating habits (Pingo Doce, n.d.), in contrast with those who practice sports or want to lose weight, since a product with high protein content (and low in fat) will help in achieving their goals of increasing muscle mass or the satiety effect after ingestion (Oliveira, 2017) (Pingo Doce, n.d.) (Guerreiro, 2017).

Those who incorporate Skyr into their diet are increasing the probabilities of taking advantage of the benefits mentioned below. Firstly, as already stated, the high nutritional components (no fat, high protein, reduced sugar) can bring advantages since it might help in decreasing the risk of osteoporosis, due to its high calcium content, and increases the absorption of minerals and vitamins (Guerreiro, 2017). Secondly, it helps in regulating intestinal movement and in reducing the activity of the bacteria *helicobacter pylori*, which may cause stomach infections. Plus, it comprises the probiotic effect, meaning that this yogurt will stimulate the appearance of bifid bacterium which are going to be responsible for destroying the other toxic and dangerous bacterium. Finally, Skyr is also associated with the improvement of the immune system, decreasing levels of cholesterol and diminishing the risk of colon cancer (Guerreiro, 2017) (Noronha, n.d.).

Although there are several benefits, some disadvantages might appear because of one component – aspartame. Aspartame is an artificial sweetener, used as an alternative to sugar, that can be found in some food and beverages (American Cancer Society, 2014), as is the case

in Skyr yogurts with flavour added. This artificial sweetener is not a beneficial component (used to decrease the number of calories and carbohydrates), because it increases the production of insulin (levels of sugar in the blood), which might induce the development of diabetes, as advises the nutritionist Bárbara de Almeida de Araújo (Guerreiro, 2017). This disadvantage found in the flavoured versions of Skyr, brings the awareness that consumers must opt for the natural version, adding dry fruits or honey (for example) if desired, also because of the lower levels of sugar and higher protein when compared to those with flavour added (Guerreiro, 2017).

2.5.3 Market Analysis⁶

Today there are different brands around the world selling yogurts with similar or identical compositions as the original Skyr, for instance: “Siggi’s”, manufactured in USA (Y Tamime, Hickey, & D Muir, 2014) which appeared in 2004, is the largest brand today selling Skyr yogurts; “MS”, which is characterized by using the unique Skyr cultures; “Arla”, which is currently produced in Germany; among others.

When it comes to Portugal, Skyr first appeared on the shelves of “Lidl” but is now available in other supermarkets like “Continente”, “Intermarché”, “Jumbo”, “Supercor”, “Pingo Doce” and “Aldi”. This new product’s launch in Portugal has been a great success, possibly due to the strong consumer demand for dairy products alongside the “nutrition transition” that people have undertaken in recent years (Johnson, 2017) (Boyd, 2016).

When Skyr started to be sold at the stores of “Lidl” in Portugal it was a huge success, with missing stock on shelves almost every day (Arsénio, 2017). With yogurts of the brand “Milbona”, “Lidl” offers six different flavours for about five euros per kilogram for the yogurts with fruit flavours, and around four euros for the natural version. Plus, this food retailer also offers an ice cream version of Skyr from the brand “Gelatelli”, but it contains higher values of sugar and lower values of protein, making it a less healthy option.

⁶ Information extracted from Appendix 1 (collected as primary data, in different national supermarkets and respective websites).

Recently, other brands in the dairy category have started to realize the success of this product and launched new lines similar to Skyr, focused on high protein values. “Danone” was one of those brands, which launched a new line in October 2017 – “Corpos Danone + Proteína” – to cope with the “trend of the year”, offering diverse flavours. This brand provides one of the best solutions on the market (the natural version), with the lowest amounts of lipids and carbohydrates, and the lowest amounts of calories (54kcal per 100 grams). Though the price is not the most accessible, with an average of €6.31 per kilogram (Costa, 2017).

In addition to “Danone”, “Adagio” is another brand that launched a yogurt with the same name – “Adagio Skyr” – which is presented as a reinvention of the traditional recipe from Iceland. This brand suggests diverse recipes with Skyr on its website, which are designed to enhance the natural flavour of this yogurt (e.g. milkshakes or bowls with dried fruits), since this product is considered to have a “special taste” (Adagio, n.d.). Furthermore, “Adagio” also offers two more flavours in this line – “Quinoa, hazelnut and seeds” and “Pomegranate, goji, oat, red quinoa and poppy seeds” – which are sold for approximately two euros per pack of 2x125 grams.

A further three food retailers in Portugal, “Sonae”, “Jerónimo Martins” and “Grupo Os Mosqueteiros”, have their own brands of Skyr. “Pingo Doce” supermarkets have the Skyr yogurt available in two flavours, sold in individual packages. The natural version from “Pingo Doce” is another suitable solution from the market with positive amounts of carbohydrates, lipids and a reasonable price, and because it does not have sweeteners added (as all the natural versions on the market). Regarding “Continente”, the Skyr Equilibrio line has single and family packages with 150 and 500 grams available, respectively, with the family packages being one of the best offers taking price into consideration (€1.59 per package). In addition, it was the first brand to launch a liquid version of Skyr (Monteiro, 2017). Additionally, it sells Skyr yogurts from the well-known “Arla” brand, available in peach, blueberry and natural versions. The other supermarket is “Intermarché”, which now has their own Skyr line available within their dairy brand: “Pâturages”. The “En-K” line is accessible in strawberry, blueberry and passion fruit, for €1.39 per package with four individual portions.

There are further brands offering Skyr which are available in different supermarkets in Portugal. “Ehrmann”, the German brand, has their five different flavours for sale at “Continente”, “Jumbo”, “Supercor” and “Aldi”, and it is one of the few brands which does not have sweeteners added to the fruit flavour versions, making it a healthier choice than those with

aspartame added. Also, “Biedermann” sells a different version, with the biological feature – “Bio JO-PRO Skyr”. This variation of Skyr is sold at “Continente” and “Jumbo”, and it also does not have sweeteners added, though there has a stark difference in the levels of sugar (around thirteen grams per 100 grams) compared to other Skyr yogurts with levels of sugar near four grams. At “Aldi”, consumers can find the “Milsani” Skyr yogurts, with family and individual packages, for around two euros per kilogram. Lastly, it is possible to find other products associated with Skyr origins: the cottage cheese of the brand “Santiago” and Skyr of the brand “San Tonelli” (both products can be found at “Continente”).

Chapter 3. Methodology

3.1 Research Method

A research method is a process used to investigate a subject, answering specific questions and/or problems, that can be done through several methods. In this specific case, qualitative and quantitative research have been conducted to understand consumers' acceptance and attitudes towards Skyr yogurt, as well as their concerns with their lifestyle. As Barnham (2015) implies, on the one hand, a qualitative research is used to better understand the attitudes, incentives and actions of consumers, by recognizing what consumers think and do regarding a specific subject. On the other hand, quantitative research must be performed when the objective is to measure product preferences, by establishing a representation of what has been found in the qualitative research, regarding consumers' opinions (Barnham, 2015).

Particularly, in-depth interviews and an online survey were executed with the purpose of answering the hypotheses formulated from literature, to gather new perceptions of the market of Skyr yogurts, to understand the overall satisfaction of consumers considering the different attributes, in order to analyse which ones must be improved, and to analyse the awareness of the different competitors.

3.2 Research Instruments

3.2.1 In-depth Interviews

Qualitative research has been pursued to generate ideas and to assemble important insights to be used afterwards in the online survey. Hence, some crucial open-questions have been asked to a target-group to find characteristics of people who are concerned with their health and diet, and people who are familiar with Skyr yogurts, consequently exploring their perspectives on the different subjects in this study.

Eleven in-depth interviews were conducted of people with different characteristics. Firstly, in the subject of diet and health, nutritionists and personal trainers are considered key opinion leaders, having a lot of influence on people's habits. Thus, two persons from these different

fields were interviewed. Secondly, the target was Skyr consumers, to apprehend perceptions and patterns of consumption. Lastly, four persons, who had already tried Skyr yogurts but did not become consumers, were interviewed (non-consumers), to understand which characteristics contributed to the non-consumption of this dairy.

The interview has been structured into three main subjects, namely: lifestyle, health and diet concerns, and questions related to Skyr (experience, consumption, attributes). In Appendix 2 it is possible to find the list of questions and respective answers from the interviewed.

However, from the interview's content, there are significant points to highlight for the present study. In general, the interviewed are persons who care for their lifestyle, specifically their diet and the practice of physical activities. Therefore, there is special attention paid to food (non-processed) and other factors, for instance: drinking water and sleeping time. Additionally, it is believed that these aspects can reduce, or even prevent, the appearance of diseases such as diabetes or cancer, for example.

From the key opinions leader's perspective, Skyr yogurts are considered a positive dairy to include in people's diets mainly because of its high protein content combined with the feeling of satiety which lasts longer, when compared to other yogurts. Thus, this product is considered an ally for people who seek to lose weight as well as to athletes, who want to gain muscle mass and achieve better results in their physical activities.

Regarding the consumers' standpoint, the most crucial attribute is taste. On the one hand, there is a consensus, since all the consumers interviewed consider the taste of this yogurt to be "tasteless" or "bitter". On the other hand, several consumers opt for the flavour added versions which are tastier than the natural versions, or opt for the natural version but with an accompaniment (e.g. cinnamon, seeds). Moreover, consistency is also a typical aspect that have an influence on consumers, as this kind of yogurt is even considered a cheese due to its high consistency and low creaminess. Still, it is perceived that the benefits surpass the less pleasant taste, and high consistency. Furthermore, there is a consensus that the main reasons that lead them to the consumption of Skyr are its characteristics of high protein and low fat.

Considering the side of non-consumers, one of the reasons for refusing these yogurts is taste, as it is not considered pleasant to them. In fact, three of the interviewed tried a flavour added version, and one the natural version. Similarly, consistency is also mentioned as a constraint, since it is too dense, and not as creamy as the yogurts that these persons are used to. Moreover,

other reasons are presented, for instance: one interviewed mentioned that usually dairy products are not included in his diet, since milk and yogurts are not considered to be enjoyable, but Skyr was tried because of its special characteristics.

3.2.2 Online survey

The procedure chosen to collect data was an online survey, in this case a questionnaire. A questionnaire is composed of a sequence of questions which have some advantages, for instance: not too expensive, reasonably quick method of collecting answers and can avoid bias that might be incurred during personal interviews when questions are asked “face-to-face”. Conversely, some disadvantages may occur when questions are too simple or the answer is not spontaneous. (White & Rayner, 2014).

The research software Qualtrics (www.qualtrics.com) was used to create the questionnaire and to guarantee data protection.

To ensure that there were no ambiguous questions, problems or that the questions were clear enough for the respondents, a pilot test was conducted with five volunteers (Skyr consumers). Afterwards, the questionnaire was shared throughout social media (Facebook, WhatsApp), sent via e-mail or private messages. Since this is a study concerning health and food, some nutritionists and people focused on a healthy lifestyle have also been contacted to answer the questionnaire. Plus, Facebook research has been done on pages from brands selling versions like Skyr (e.g. Adagio, Corpos Danone, Lidl) to find possible participants for the survey (Skyr consumers), who were contacted by private message afterwards. The layout of this research instrument is presented in Appendix 3.

The questionnaire contained five different groups, namely: lifestyle and health concerns; awareness of Functional Food; perceptions of Skyr yogurt; practice of physical activities and ingestion of food supplements; and personal data.

The questions presented have been updated from the output of the interviews, hence, it was possible to construct the set of reasons presented – reasons to adopt a healthy lifestyle and reasons to consume Skyr yogurts. Likewise, the questionnaire includes variables that allow for the testing of spontaneous and assisted awareness of the brand, as well as the development of a linear regression model to test the overall satisfaction of Skyr taking into consideration different

attributes (price, taste, consistency, ...). Moreover, the list of diseases, types of accompaniments, the different brands of Skyr yogurts, and other significant intuitions (e.g. country of origin relevance) have been obtained from the interviews, previous literature and market analysis.

3.3 Measurement Scales

In this study, Likert scales have been used, allowing respondents to classify their opinion in the different questions, understanding the level of agreement or disagreement with each sentence. Plus, in this research study diverse scales were used which allow for further statistical analysis, for instance: a five-point scale of level of consumption intention (“I am sure that I will not try it, 0% probability” to “I am sure that I will try it, 100% probability), level of satisfaction (“very dissatisfied” to “very satisfied”), and the impact of the awareness of Skyr’s origin (“very negative impact” to “very positive impact”).

Since the target of the questionnaire had no restrictions regarding nationalities, it was formulated in two languages (Portuguese and English), allowing non-Portuguese respondents to be part of the survey.

Chapter 4. Analysis of results

4.1 Data Collection

As mentioned in the previous chapter, an online questionnaire was the chosen method for data collection. The data was collected between the 28th of November and 3rd of December. With the assistance of the Qualtrics software, it was possible to calculate that the questionnaire had been started by 535 people, of which 405 finished it. Taking into consideration the time of collection and the accessibility for reaching participants, an 76% conclusion rate is considered sufficient for this study's purpose. The data collected was analysed through the statistical software SPSS 23.0.

4.2 Sample Characterization

To understand how the sample is characterized, the demographic characteristics of the participants were considered.

Most of the participants of the sample are females (70%), comparing with a lower percentage of males (30%).

Regarding age, the majority are people within the range of 25-34 (25.9%), followed by people aged between 45-54 (23.2%). The remaining respondents are in the ranges of 35-44 (22.2%), 18-24 (18.3%), and over 55 years old (10.4%).

Concerning the education level of the participants, the predominance are people holding an undergraduate degree (44.2%), followed by people who have completed high school (24.7%) and people with a master's degree (23.2%). The percentage of people who did not complete high school is 2.7% and with a PhD is 2.2%. The remaining percentage, 3%, belongs to the respondents that answered "other" to their education level.

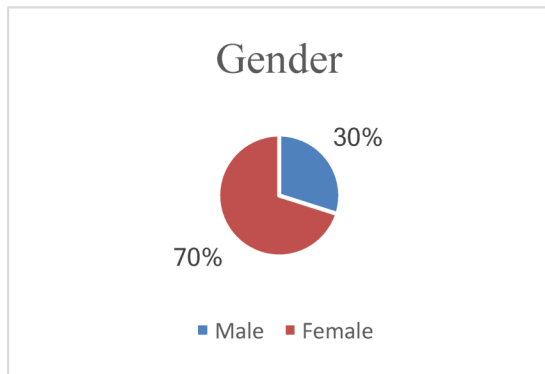


Figure 1 - Gender

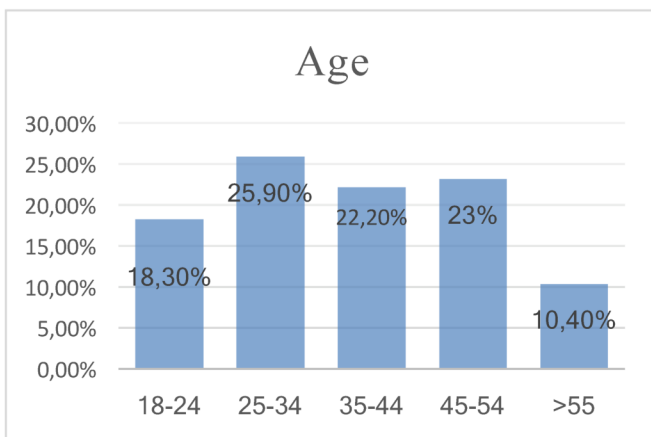


Figure 2 - Age

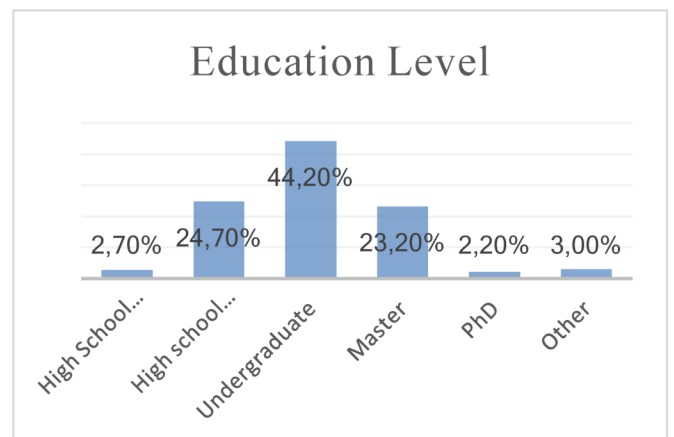


Figure 3 - Education Level

4.3 Explorative Analysis

4.3.1 Descriptive Statistics

With the data collected it is possible to confirm that the pursuit of a healthier lifestyle is important for most people nowadays since, 73.1% of participants “agree/strongly agree” that they are persons who follow a healthy lifestyle. Accordingly, a balanced diet and the practice of physical activities are the two elements that people care about most when considering their lifestyle. Plus, 32.3% of the participants “agree” that one of the factors that motives (or might motivate) them to follow a healthy lifestyle is the existence of a health problem, and 56.8% “strongly agree” that it is because of the necessity to feel mentally and physically well. Moreover, the need to practice physical activities and the need to adopt a low-fat diet were also given by the participants as influencing factors in adopting a healthier way of living.

With regard to Functional Food, around 95% of the participants have already heard about of this food with extra benefits for their health, and 64.6% are consumers.

Furthermore, considering health problems, cancer was considered the disease that worries people the most (in accordance with the answers from the in-depth interviews), since 58.3% of the respondents ranked it in first place, followed by cardiovascular diseases that was ranked by 22.2% of the participants as the disease that worries them most. Also, 51.9% and 34.1% of the participants “agree” or “strongly agree”, respectively, that the health problems which worry them most can be prevented or minimized with the inclusion of Functional Food in their diet.

Regarding Skyr yogurts, 77.8% of respondents had already heard of this type of dairy product, of whom 78.1% had previously tried it. Those who had not heard of Skyr yogurts were asked of the likelihood of trying it in the future, after being aware of its main characteristics, and most of them said that there was a 50% chance.

According to the results, most Skyr yogurt consumers consume it as a snack (64.2%), and at breakfast (34.8%). As an accompaniment, dry and fresh fruit are the most chosen by consumers (46.1% and 43.1%, respectively), but the majority (46.6%) consumes Skyr yogurts without any accompaniment.

With respect to the reasons that lead the respondents towards the consumption of Skyr, around 38% of the 204 participants who are Skyr consumers agree that the consumption is to include at least one healthy food in their diets, and 73% affirms that it is to promote a healthy lifestyle. Approximately 88% of the participants consume Skyr because of its main characteristics, 64% because of the feeling of satiety for a longer time, and 54.9% because it is easy to transport. However, 75% of consumers disagree that their consumption is because of the popularity (trend) of this dairy, and 86.3% disagree that it is because of having a chronic disease. Regarding sports and weight loss, most of the participants, 43% and 47% (respectively), affirm that these are reasons why they consume Skyr yogurts.

Furthermore, 51% of participants who had already heard of Skyr, “agree” that Skyr yogurts are associated with the practice of physical activities and 18% “strongly agree”. Plus, this dairy product is also associated by most participants with persons who follow a balanced diet (49.8% “agree”) and with a trend (40% “agree”).

Finally, regarding the practice of physical activities, 47.26% of the participants practice it at least three times in a week. Plus, only 15.67% affirm that they include a food supplement in their diet. Considering only Skyr consumers, 59.3% practice physical activities at least three times in a week, and 20.6% takes food supplements.

4.3.1.1 Descriptive Statistics of Non-Consumers

From the sample, extra analysis was performed to understand the profile of people who tried Skyr yogurts but are not consumers – 40 participants are considered. Considering socio-demographic characteristics, these non-consumers are mostly females (90%), diverging in ages (“18-24” – 15%; “25-34” – 17.5%; “35-44” – 35%; “45-54” – 27.5%; “>55” – 5%), and typically with an undergraduate (42.5%) or master’s degree (22.5%).

The majority (55%), agree/strongly agree that they follow a healthy lifestyle. Concerning Functional Food, 95% are aware of this food with extra benefits for health, and 71% are consumers.

Regarding Skyr yogurts, results show that 57.5% of non-consumers are not willing to pay more for this type of yogurt, since those disagreed with the statement that affirms the willingness to pay more for a Skyr yogurt (comparing with the price of a natural “normal” yogurt). Moreover, almost 60% confirm that the importance of the brand at the moment of purchase of a Skyr yogurt is “not important at all” or “slightly important”, and only 26.3% affirm that it is “important, but not fundamental”. Considering the level of influence of the description of the nutritional components, 30% believe that this information on Skyr yogurts is important, and 35% says that this information is fundamental, since it will be decisive for the purchase.

Finally, most of these non-consumers agree that Skyr yogurts are associated with the practice of physical activities (65%), with people who follow a balanced diet (62.5%), and that Skyr yogurts are a trend (52.5% agree and 40% strongly agree).

4.3.2 Hypotheses Testing

According to the hypotheses formulated from the above literature, which aim is to give answers to the research questions, the following analysis was conducted.

Hypothesis #1: Test whether following a healthy lifestyle predicts the monthly consumption of Skyr yogurts.

Firstly, a correlation analysis was made to investigate the relationship between the monthly consumption of Skyr yogurts (dependent variable) and the following of a healthy lifestyle (independent variable). The Pearson correlation coefficient indicates a weak positive relation between these two variables ($r = .15$), with a statistically significant level ($p\text{-value} = .028 < .05$) – Table 1.

Correlations		
Pearson Correlation	Sig. (2 - tailed)	N
.154*	.028	204

Table 1 - Pearson Correlation Hypothesis 1

Afterwards, a linear regression analysis was performed. As shown in Table 2, the following of a healthy lifestyle accounts for only 1.9% of the variation in monthly consumption of Skyr yogurts (adjusted R square = .019). However, results show that the following of a healthy lifestyle predicts the monthly consumption of Skyr yogurts positively and significantly well ($F = 4.901$, $\beta = 1.814$, $t = 2.214$, $p\text{-value} = .028 < .05$) – Table 3 and 4.

Thus, the results support Hypothesis 1, meaning that an increase in the following of a healthy lifestyle is associated with an increase in the monthly consumption of Skyr yogurts.

Model	R	R Square	Adjusted R Square	Standard Error
1	.154	.024	.019	8.47

Table 2 - Linear Regression Model 1 Summary

Model 1	Sum of Squares	F	P-value
Regression	351.626	4.901	.028
Residual	14491.369		
Total	14842.995		

Table 3 - Linear Regression Model 1 ANOVA

Model 1	β	Standard Error	t	P-value
Constant	1.961	3.311	.592	.554
Following of a Healthy Lifestyle	1.814	.819	2.214	.028

Table 4 - Coefficients Significance of Model 1

Furthermore, considering the socio-demographic characteristics from the literature of Functional Food, the following three hypotheses were tested to evaluate if these characteristics apply to the profile of Skyr yogurt consumers.

Hypothesis #2.1: Test whether monthly consumption of Skyr yogurts differs based on gender.

An independent sample t-test was conducted to determine if there were differences in the monthly consumption between females and males. As shown in the following tables, on average, females have a higher monthly consumption (M = 9.28) than males (M = 8.77), with a non-statistically significant difference, $t = .349$, $p\text{-value} = .728$. Therefore, Hypothesis 2.1 is rejected.

		T-test for Equality of Means		
Monthly consumption of Skyr yogurts	Equal variances assumed	t	P-value	Mean difference
		.349	.728	.50852

Table 5 - Independent Samples T-test of Hypothesis 2.1

	Gender	N	Mean Consumption
Monthly consumption of Skyr yogurts	Female	160	9.2813
	Male	44	8.7727

Table 6 - Group Statistics of Hypothesis 2.1

Hypothesis #2.2: Test whether the monthly consumption of Skyr yogurts differs based on age – younger consumers vs. older consumers.

To analyse this, a one-way analysis of variance (one-way ANOVA) was performed. The group age of “18-24” (n = 33, M = 8.42, SD = 8.71) and “25-34” (n = 64, M = 9.34, SD = 7.99)

consume more Skyr yogurts in a month than the group age of “45-54” (n = 39, M = 7.18, SD = 8.33), on average. Though, the groups that consume more Skyr yogurts per month are, on average, the group age of “35-44” (n = 55, M = 10.62, SD = 9.36) and the group of people with more than 55 years old (n = 13, M = 10.08, SD = 7.72) – Figure 4 and Appendix 4.

As shown in Table 7, the results show that there is not a statistically significant difference between groups (F = 1.029, p = .393), therefore Hypothesis 2.1 is not supported.

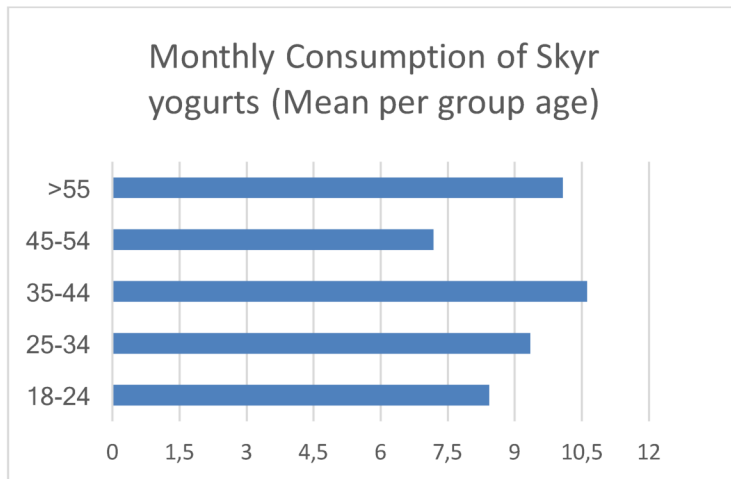


Figure 4 - Monthly Consumption of Skyr Yogurts

	Sum of squares	Mean square Consumption	F	P-value
Between groups	300.849	75.212	1.029	0.393
Within groups	14542.147	73.076		
Total	14842.995			

Table 7 - ANOVA of Hypothesis 2.2

Similarly, a dummy variable was created to test for the differences between younger participants (until 34 years old) and older participants (from 35 years old). Afterwards, an independent sample t-test was performed. However, once again, there is not a statistically significant difference between the two groups (p-value > 5%) – Tables 8 and 9.

		T-test for Equality of Means		
Monthly consumption of Skyr yogurts	Equal variances assumed	t	P-value	Mean difference
		-	.824	-.26814
		.223		

Table 8 – Independence Samples T-test of Hypothesis 2.2

	Younger vs. Older	N	Mean Consumption
Monthly consumption of Skyr yogurts	Younger	97	9.0309
	Older	107	9.2991

Table 9 - Group Statistics of Hypothesis 2.2

Hypothesis #2.3: Test whether the monthly consumption of Skyr yogurts differs based on the level of education.

To examine this, a one-way analysis of variance (one-way ANOVA) was performed. As exhibited in Figure 5 and in Appendix 5, the persons who consume more Skyr yogurts in a month belong to the group of “High School Complete” (n = 44, M = 12.41, SD = 10.52), on average, and “PhD” (n = 1, M = 20), but only one person is considered at this level. Plus, the groups “Master” (n = 52, M = 8.13, SD = 7.55) and “Undergraduate” (n = 97, M = 8.40, SD = 8.12) do not differ much in the level of consumption of Skyr yogurts per month, and the groups “High School Incomplete” (n = 4, M = 6.5, SD = 3.00) and “Other” (n = 6, M = 6.83, SD = 3.60) are the ones that have the lowest levels of consumption. However, the results show that there is not a statistically significant difference between the six groups (F = 2.117, p = .065) – Table 10. Consequently, Hypothesis 2.3 is rejected.

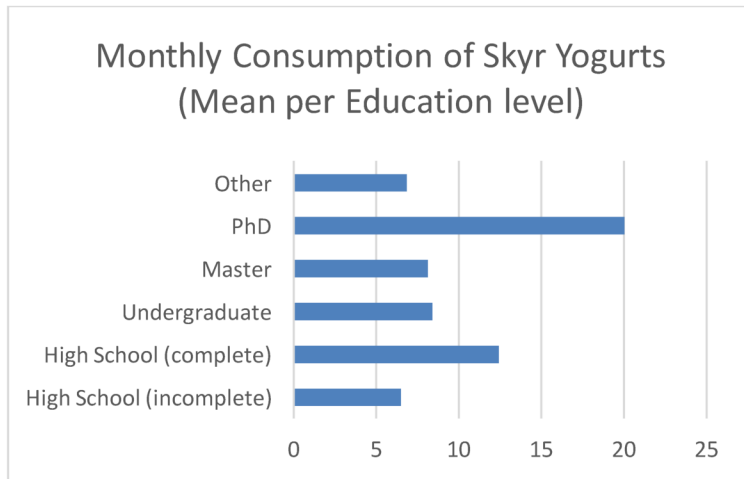


Figure 5 - Monthly Consumption of Skyr Yogurts

	Sum of squares	Mean square Consumption	F	P-value
Between groups	753.148	150.630	2.117	.065
Within groups	14089.847	71.161		
Total	14842.995			

Table 10 – ANOVA of Hypothesis 2.3

Despite the previous results, a dummy variable was created to observe the difference between higher levels of education (Undergraduate, Master’s and PhD) and lower levels (High school completed and incomplete, and Other). As now there are only two groups in the independent variable, an independent t-test was conducted. Consequently, there is a statistically significant difference between the two groups ($p\text{-value} < 5\%$), meaning that the monthly consumption of Skyr yogurts differs based on the level of education – Tables 11 and 12. Thus, considering the two levels it is possible to support Hypothesis 2.3.

		T-test for Equality of Means		
Monthly consumption of Skyr yogurts	Equal variances assumed	t	P-value	Mean difference
		-2.206	.029	-2.96519

Table 11 - Independence Samples T-test of Hypothesis 2.3

	Level of Education	N	Mean Consumption
Monthly consumption of Skyr yogurts	Higher	150	8.3867
	Lower	54	11.3519

Table 12 - Group Statistics of Hypothesis 2.3

Hypothesis #3: Test whether the monthly consumption of Skyr yogurts differs based on the level of impact of the recognition of the country of origin (Presence of a Halo Effect).

In this case, a one-way analysis of variance was performed (one-way ANOVA) to understand if people’s awareness of Iceland as Skyr’s country of origin would have an impact, since this is a country recognized for its healthy lifestyle. As observed in Table 13, people who selected a “very positive impact” are those with the higher consumption of Skyr yogurts per month ($n = 39$, $M = 11.36$, $SD = 8.75$), on average. There are not significant differences among the other three groups, and the level “very negative impact” does not include any observation. Therefore, the results show that there is not a statistically significant difference between groups ($F = 1.817$, $p > .05$) – Table 14. Consequently, Hypothesis 3 is not supported.

Level of Impact	N	Mean Consumption	Standard Deviation
1 – Very negative	0	0	0
2 - Negative	1	10.0000	-
3 – Neither positive nor negative	73	9.7534	9.78630
4 - Positive	91	7.7582	7.18539
5 – Very positive	39	11.3590	8.74639
Total	204	9.1716	8.55092

Table 13 - Descriptive Statistics of Hypothesis 3

	Sum of squares	Mean square Consumption	F	P-value
Between groups	393.778	131.259	1.817	.145
Within groups	14449.217	72.246		
Total	14842.995			

Table 14 - ANOVA of Hypothesis 3

Beyond the hypotheses formulated from the literature, two additional tests were performed to explore important attributes, for instance: the overall satisfaction of Skyr yogurts considering different elements; and recognition of the brand.

Therefore, two additional tests were integrated.

Additional Test #1: Test whether Price, Taste, Consistency, Availability in different supermarkets and Information available on the Label, predict the Overall Satisfaction of Skyr yogurts.

Lastly, considering the third research question, a multiple regression analysis was performed to understand the perceptions of Skyr yogurts' consumers about the main attributes selected from the literature and the in-depth interviews, to analyse which attributes must be improved.

In this case, there is a multiple regression analysis, therefore it is necessary to check for multicollinearity. The existence of multicollinearity means that there is a strong linear relationship among the independent variables which may cause incorrect statistical inferences. Hence, there is multicollinearity when the values of variance inflation factors (VIFs) are higher than 10 and tolerance is less than 0.2 (Rao Chennamaneni et al, 2015) (The Pennsylvania State University, 2017). As shown in Appendix 6 (Table 31), there is no need to remove any variable since the values are within the levels mentioned above.

Observing the results of the regression analysis, it is possible to conclude that this is a model with high quality because the correlation between the outcome variable and the predictor variables is high ($R = .788$) – Table 15. Moreover, the model explains 61.1% of the variability in the Overall Satisfaction of Skyr yogurts (Adjusted R square = .611).

Additionally, it is appropriate to explain the Overall Satisfaction of Skyr yogurts from the five independent variables, because there is at least one predictor that has a significant effect on the dependent variable ($F = 64.795$, $p < .001$) – Table 16. The Overall Satisfaction is influenced by Taste ($\beta = 0.249$, $t = 5.45$, $p < .05$), Consistency ($\beta = 0.220$, $t = 4.88$, $p < .05$), and Information available on the Label ($\beta = 0.326$, $t = 5.91$, $p < .05$), which have a positive and significant effect. The remaining predictors (Price and Availability in different Supermarkets) have a non-significant effect on the Overall Satisfaction of Skyr yogurts ($p\text{-value} > 5\%$).

Model	R	R Square	Adjusted R Square	Standard Error
2	.788	.621	.611	0.471

Table 15 - Multiple Regression Model 2 Summary

Model 2	Sum of Squares	F	P-value
Regression	71.803	64.795	.000
Residual	43.883		
Total	115.686		

Table 16 - Multiple Regression Model 2 ANOVA

Model 2	β	Standard Error	t	P-value
Constant	0.638	0.210	3.035	.003
Price	0.040	0.033	1.217	.225
Taste	0.249	0.046	5.447	.000
Consistency	0.220	0.045	4.875	.000
Availability in the different supermarkets	0.039	0.031	1.263	.208
Information available on the Label	0.326	0.055	5.913	.000

Table 17 - Coefficients Significance Model 2

Nevertheless, to enhance and enrich the preceding analysis, the regression model of overall satisfaction was performed but categorizing the brands of Skyr yogurts independently. However, only those that presented any statistical significance are denoted, namely: “Corpos Danone + Proteína”, “Milbona (Lidl)” and “Pingo Doce Skyr”.

- Overall satisfaction for “Corpos Danone + Proteína” consumers:

Firstly, it is possible to confirm that multicollinearity does not exist (Appendix 6 – Table 32). Afterwards, it is possible to state that this model has a high quality because the correlation between the overall satisfaction and the independent variables is high ($R = .790$), and those variables explain 53.1% of the variability in overall satisfaction for “Corpos Danone +

Proteína” consumers. Moreover, this satisfaction is largely influenced by Taste ($\beta = 0.592$, $t = 2.256$, $p < .05$), meaning that as taste increases by 1 scale-point in the satisfaction scale, the overall satisfaction increases by 0.592 points.

Model	R	R Square	Adjusted R Square	Standard Error
3	.790	.625	.531	0.592

Table 18 – Multiple Regression Model 3 Summary

Model 3	Sum of Squares	F	P-value
Regression	11.651	6.655	.001
Residual	7.003		
Total	18.654		

Table 19 - Multiple Regression Model 3 ANOVA

Model 3	β	Standard Error	t	P-value
Constant	-0.181	0.949	-0.191	.850
Price	-0.044	0.099	-0.450	.658
Taste	0.592	0.263	2.256	.035
Consistency	0.149	0.196	0.760	.456
Availability in the different supermarkets	0.176	0.148	1.188	.249
Information available on the Label	0.170	0.302	0.564	.579

Table 20 - Coefficients Significance Model 3

- Overall satisfaction for “Milbona (Lidl)” consumers:

Regarding the model of Skyr yogurts from “Lidl”, there is no multicollinearity (Appendix 6 – Table 33), and the model has a high quality ($R = .849$), which is explained by the correlation between the dependent and independent variables, and the predictors explain 70.7% of the overall satisfaction. Furthermore, the attributes that satisfy these consumers the most are: Price ($\beta = 0.123$, $t = 2.375$, $p < .05$), Taste ($\beta = 0.237$, $t = 3.770$, $p < .001$), Consistency ($\beta = 0.145$, $t = 2.300$, $p < .05$), and Information available on the label ($\beta = 0.436$, $t = 6.336$, $p < .001$). Consequently, as the level of satisfaction of price, taste, consistency or information available

on the label increases by 1 scale-point, the overall satisfaction increases by 0.123, 0.237, 0.145 and 0.436 points, respectively.

Model	R	R Square	Adjusted R Square	Standard Error
4	.849	.720	.707	0.423

Table 21 - Multiple Regression Model 4 Summary

Model 4	Sum of Squares	F	P-value
Regression	46.084	51.554	.000
Residual	17.878		
Total	63.962		

Table 22 - Multiple Regression Model 4 ANOVA

Model 4	β	Standard Error	t	P-value
Constant	0.476	0.246	1.938	.055
Price	0.123	0.052	2.375	.019
Taste	0.237	0.063	3.770	.000
Consistency	0.145	0.063	2.300	.024
Availability in the different supermarkets	-0.053	0.038	-1.383	.170
Information available on the Label	0.436	0.069	6.336	.000

Table 23 - Coefficients Significance Model 4

- Overall satisfaction for “Pingo Doce Skyr” consumers:

This model does not present multicollinearity (Appendix 6 – Table 33). Observing the following model’s results, it is possible to conclude that it has high quality ($R = .852$) and explains 62.0% of the variability in the overall satisfaction for consumers of Skyr yogurts from “Pingo Doce”. Plus, Consistency is the attribute with the higher statistical significance and is most valued by consumers as assessed by the results in Table 23: $\beta = 0.443$, $t = 2.435$, $p < .05$. Hence, as Consistency increases by 1 scale-point, the overall satisfaction of consumers increases by 0.443 points.

Model	R	R Square	Adjusted R Square	Standard Error
5	.852	.725	.620	0.383

Table 24 - Multiple Regression Model 5 Summary

Model 5	Sum of Squares	F	P-value
Regression	5.040	6.869	.002
Residual	1.908		
Total	6.947		

Table 25 - Multiple Regression Model 5 ANOVA

Model 5	β	Standard Error	t	P-value
Constant	0.473	0.768	0.616	.549
Price	0.029	0.109	0.263	.797
Taste	-0.157	0.206	-0.760	.461
Consistency	0.443	0.182	2.435	.030
Availability in the different supermarkets	0.193	0.109	1.777	.099
Information available on the Label	0.390	0.190	2.048	.061

Table 26 - Coefficients Significance Model 5

Additional Test #2: To understand the awareness of the brand in this specific case, spontaneous and assisted awareness of the most recognized brands were assessed.

Hence, participants of the questionnaire were posed two different types of questions: firstly, an open question, asking to mention the brands of Skyr yogurts that they had already heard of – spontaneous awareness; and secondly, a multiple-choice question, requesting the selection of all the brands that were recognized – assisted awareness.

Observing Table 24 and Figure 6, the Skyr yogurts from “Milbona (Lidl)” are those with the higher *top-of-mind*, meaning that, from the 320 people who participated in this part of the questionnaire, 45% indicated this brand in first place spontaneously. Additionally, regarding the total of spontaneous references, this reaches approximately 55%, and 74.69% of the assisted awareness. In second place, is the “Adagio Skyr” line, with a huge difference comparing the

top-of-mind – only 11.25% – but with 66.26% of the assisted awareness. Moreover, the Skyr yogurts from “Continente”, reach a spontaneous awareness of approximately 25%, and more than twice of that value in the assisted awareness (53.75%). Finally, from “Danone” and “Pingo Doce”, it is possible to observe that both have the same percentage in the assisted awareness (42.82%), though the Skyr yogurts from “Danone” have a higher *top-of-mind* (9.06%), compared to the 2.81% from “Pingo Doce”.

Skyr Yogurts			
	Top-of-Mind	Spontaneous Awareness	Assisted Awareness
Milbona (Lidl)	45,00%	55,31%	74,69%
Adagio Skyr	11,25%	28,13%	66,26%
Continente - Skyr Equilíbrio	6,25%	25,31%	53,75%
Corpos Danone + Proteína	9,06%	17,19%	42,82%
Pingo Doce Skyr	2,81%	18,13%	42,82%

Table 27 - Brand's Awareness of Skyr Yogurts

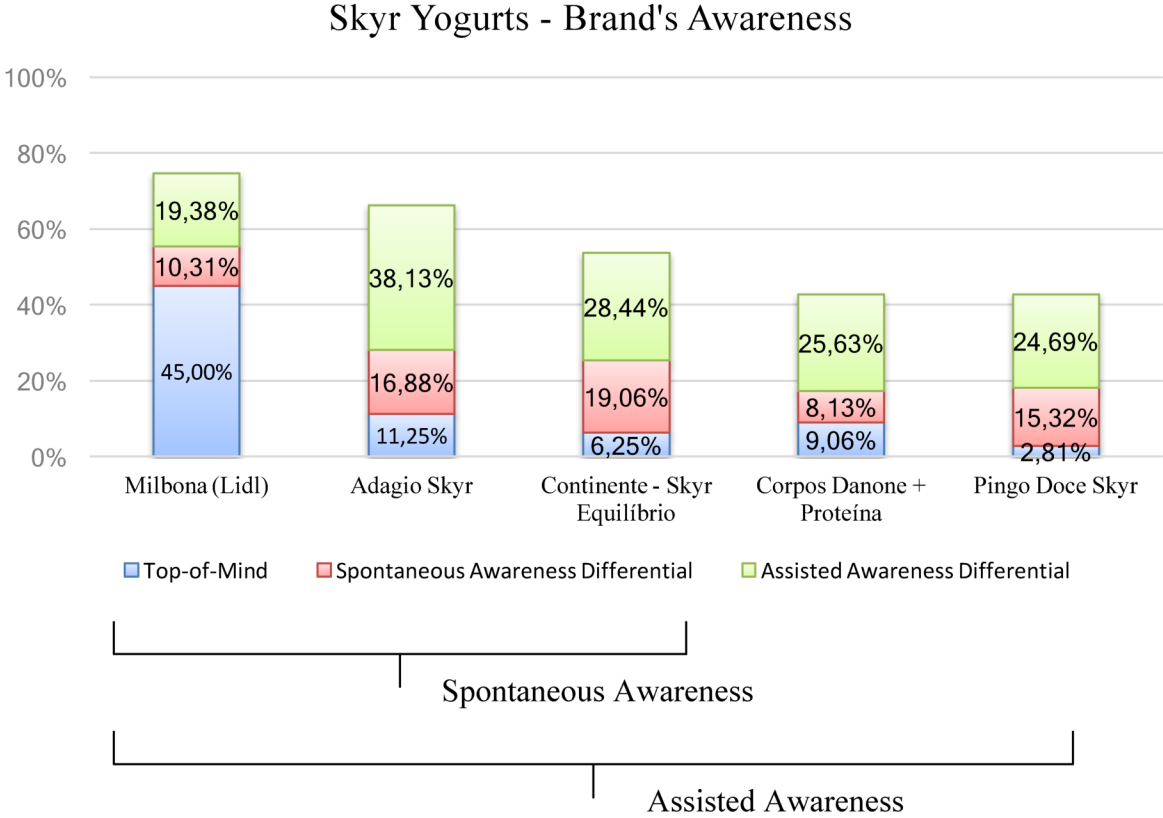


Figure 6 – Brand Awareness of Skyr Yogurts

Chapter 5. Discussion and Conclusion

The conclusions of this dissertation are aligned with the findings from the literature, qualitative and quantitative research. Since the case study of this dissertation is an innovation in Portugal, this research study, which is focused on Skyr yogurts, will make meaningful improvements to the existing literature, especially a great resource for marketers in the dairy food industry.

From the literature, it was possible to gather the necessary information to answer the first and second research questions, whose intention was to understand the concept of Functional Food, associated with the motivations of consumers towards its consumption and respective acceptance, and the different attributes. Thus, it was possible to gather the necessary data for the third research question – “What are consumers’ perceptions of the Skyr yogurt and of the respective competitors in the market?”. Therefore, the main conclusions of this dissertation are centred on the Skyr yogurt case, which is the market of improvement.

The results show that almost the entire sample is aware of the concept of Functional Food, meaning food with extra benefits for health, and more than 70% had already heard of Skyr yogurts. Moreover, most of Skyr consumers affirm that the consumption of Skyr is done because of its special characteristics and because it gives the feeling of satiety. Also, the majority disagrees that this yogurt is a tendency, and affirm that the consumption is to promote a healthy lifestyle.

From the hypotheses testing, it is feasible to conclude that people are following a healthy lifestyle and consequently consuming Skyr yogurts, which is aligned with the findings in the literature which states that people are switching their living standards to healthier ones and, therefore, searching for Functional Food. Additionally, considering those who had only tried Skyr yogurts once or those who had not heard of this type of dairy, and after being aware of its special characteristics, it is possible to acknowledge that there is at least a 50% chance that they will try it in the future.

Moreover, to understand the profile of Skyr consumers and to analyse which groups need more consideration from companies, hypotheses testing considering socio-demographic characteristics was performed. It was not possible to support most of the hypotheses formulated with statistical significance, though it is possible to state that females consume more Skyr yogurts than males, in line with Functional Food studies.

Plus, concerning the different group ages, results show that there is not a significant statistical difference between the monthly consumption of Skyr yogurts in different ages. However, aligned with previous studies in this regard, there was no consensus regarding which consumers (younger or older) consume more Functional Food. In this specific case, older consumers have a higher monthly consumption of Skyr yogurts, thus in line with two studies mentioned in the literature (Ares & Gámbaro, 2007) (Annunziata & Vecchio, 2010). Furthermore, people with lower levels of education are those with the higher consumption of Skyr yogurts, in contrast to previous studies on Functional Food.

The previous hypotheses were not supported which might be for a number of reasons, namely, the sample and the method of data collection – limitations which are encompassed in the subsequent chapter.

Furthermore, a test was performed to analyse if the recognition of Iceland (recognized as a healthy country) as country of origin of Skyr yogurts would make an impact, and relating it with the consumption of this yogurt. The results indicate that this awareness does not present significant differences to consumption, however it is possible to conclude that the mean monthly consumption is higher for people who state that the awareness would make a “very positive impact”, thus in line with the literature which notes that the recognition of a country as a healthy one would have a positive impact on the consumption of products from that country. Therefore, it would be interesting for companies in this market to highlight the country of origin of the Skyr yogurt recipe.

Although the focus of this study are consumers of Skyr yogurts, is it essential to analyse the perspective of non-consumers. Qualitative research, with people who had already tried Skyr once but did not become consumers, demonstrated that the reasons behind the rejection of this yogurt are mostly concerned with its taste and dense consistency. From the quantitative research, it is possible to examine that these group is mostly composed by people between 35 and 54 years old. Also, it enables to evaluate that this group is not willing to pay more for this type of yogurts (when compared with other yogurts), possibly due to the dissatisfaction with the product; that the brand is not important when taking into consideration its purchase; and that the description of the nutritional components is significant to them. Thus, contemplating this group, improvements must be made, taking these results into consideration, in order to appeal to their interest again.

Likewise, the analysis of this dissertation aimed to understand which attributes of Skyr yogurts most satisfy its consumers, and which must be improved. Consequently, it is possible to contend that Taste, Consistency and the Information Available on the Label are, in general, the attributes that satisfy the majority of Skyr consumers, since those have statistical significance, and have positive and higher coefficients than the other attributes (Price and Availability in the different supermarkets). Actually, the Information on the Label influences consumers positively, hence, in contrast to the arguments in the literature, which affirm that improvements must be made in this regard to appeal consumers' attention. In fact, this positive influence of the information on the label might be related to the fat-free and high protein claim present in Skyr yogurts package.

Additionally, it is possible to state which attributes influence overall satisfaction but when considering the brands independently. Thus, three brands were tested to see which attributes have a positive influence on overall satisfaction, and the results show that: for consumers of "Corpos Danone + Proteína" it is the Taste which satisfies them most; for consumers of "Milbona (Lidl)" Skyr yogurts the attributes that give the highest satisfaction are Price, Taste, Consistency and the Information Available on the Label; and for those who consume Skyr yogurts from "Pingo Doce" the attribute that satisfies them most is Consistency. Thus, improvements on the remaining attributes (the ones that are not contributing to consumers' satisfaction) must be evaluated again.

All in all, it is possible to conclude that, in fact, Taste is the attribute which contributes towards overall satisfaction most of the times, in contrast with literature which states that healthy food is normally considered tasteless and consumers tend to refuse it, and with the qualitative research since the interviewed considered the taste of Skyr yogurt to be "bitter". Also, in contrast with qualitative research Consistency is, in general, satisfying consumers. On the other hand, it is significant for marketers in this area, to make modifications and give special attention to Price as this factor, in general, do not satisfy consumers. Regarding availability in different supermarkets, improvements in this factor are impossible for some brands since several are private labels from supermarkets, such as "Lidl" or "Pingo Doce".

Moreover, to test for the awareness of the brands of Skyr yogurts, the top five brands were selected. Accordingly, it is possible to conclude that the yogurts from "Milbona (Lidl)" are those which people recognize the most, followed by "Adagio", "Continente", "Corpos Danone" and "Pingo Doce", respectively. As a matter of fact, Skyr yogurts from "Lidl" have four different attributes that satisfy consumers the most (Price, Taste, Consistency and Information

available on the label), in contrast with the Skyr yogurts from “Danone” and “Pingo Doce”, for which only Taste and Consistency, respectively, positively influences overall satisfaction.

Finally, the findings from this dissertation will help marketers and brand managers in the dairy food category, to analyse the perceptions of consumers concerning this innovative product in Portugal, by recognizing the attributes that are not satisfying consumers, improving them, and to acknowledge the attributes that are satisfying consumers and, if possible, enhance them even more. Likewise, it also enables analysis of the awareness of the main different competitors in this emerging market, allowing these companies to understand if improvements are needed in order to capture consumers’ attention.

Chapter 6. Limitations and Future Research

This research study is an additional analysis to the wide range of studies that exists concerning Functional Food and healthy lifestyle, and a surplus to the studies concerning Skyr yogurts, since there is no academic research concerning this innovative product. Nonetheless, there are some limitations accompanying this dissertation.

The first point to consider is that the sample is a non-probabilistic one since it is not random and it has sources of bias, because it assumes that Skyr consumers are social network users and have access to the internet (as these were the methods to share the questionnaire). Plus, the research made on Facebook pages to find possible participants (consumers of Skyr yogurts) makes this a suitability sample, making it not representative of the population in general. Additionally, the validation of information with key opinion leaders (nutritionist and personal trainer) also interfere on this regard.

Another limitation to consider, is that as the questionnaire was mostly addressed to Portuguese people, it is not possible to draw conclusions on the perceptions of Skyr yogurts in other countries. Also, there is little diversification of the sample, with a huge difference between females and males, in the levels of education, and people under 18 years old were not considered in this study.

Concerning future research, the development of this study with a more balanced sample might be an improvement, since a wider variety of participants would enhance the conclusions of this study, as one of the limitations that inhibits justification of the hypotheses formulated with statistical significance is related to the diversification of the sample. In fact, this inhibition might be related to other factors, for instance: people with higher levels of education may not have availability to spend time on social networks and, therefore, are not able to answer the questionnaire.

Moreover, as the Skyr yogurts are still a novelty in Portugal, and developments are being made (e.g. recent launch of the liquid version), future research of this subject should include these improvements, since it will make significant differences as a liquid version would facilitate consumption, because it would be a lighter and convenient version. Also, this new version overcomes the concern of consistency, allowing more sceptical persons to possibly accept this type of yogurt. Finally, it would be interesting to do a research study with panel data, to analyse the perceptions of people before and after trying Skyr yogurts, since it would provide a

perspective of the expectations of this dairy and then the real judgements, which would allow for distinctive conclusions to be drawn.

Appendices

Appendix 1.

<u>Brand</u>	<u>Name</u>	<u>Supermarkets</u>	<u>Price/uni</u>	<u>Flavour</u>	<u>Quantity</u>	<u>Kcal/100g</u>	<u>Protein/100g</u>	<u>Carbohydrates (sugar)/100g</u>	<u>Lipids (saturated)/100g</u>	<u>Sweeteners (Yes/No)</u>
Danone	Corpos Danone + Proteína	Continente, Jumbo, Intermarkete, Pingo Doce	Average = 0,86 €	Natural	145g	54kcal	9.8g	3.4g(3.4)	0.1g(0.1)	No
Danone	Corpos Danone + Proteína	Continente, Jumbo, Intermarkete	Average = 0,86 €	Raspberry	145g	59kcal	8.2g	6g(5.5)	0.1g(0.1)	Yes
Danone	Corpos Danone + Proteína	Continente, Jumbo, Intermarkete	Average = 0,86 €	Strawberry	145g	57kcal	8.2g	5.5g(4.9)	0.2g(0.1)	Yes
Continente	Skyr Equilíbrio	Continente	1,59 €	Natural	500g	55kcal	9g	4g(4)	0.3g(0.2)	No
Continente	Skyr Equilíbrio	Continente	1,69 €	Strawberry	500g	63?kcal	8.2g	6.7g(6.3)	0.4g(0.1)	Yes
Continente	Skyr Equilíbrio	Continente	0,79 €	Peach and Passion Fruit	150g	61kcal	7.3g	7.1g(6.3)	0.4g(0.1)	Yes
Continente	Skyr Equilíbrio	Continente	0,79 €	Strawberry	150g	60kcal	7.3g	6.8g(5.9)	0.4g(0.1)	Yes
Continente	Skyr Equilíbrio	Continente	0,59 €	Natural	150g	55kcal	9g	4g(4)	0.3g(0.2)	No
Continente	Skyr Equilíbrio	Continente	0,79 €	Blueberry	150g	60kcal	7.3g	6.9g(6.1)	0.4g(0.1)	Yes

Adagio	Skyr	Contiente, Jumbo, Pingo Doce	Average = 1,95 €	Quinoa, hazelnut, seeds	125g x 2	101kcal	9.1g	13g(11)	1g(0.3)	No
Adagio	Skyr	Contiente, Supercor, Jumbo, Pingo Doce	Average = 1,95 €	Natural	125g x 2	63kcal	11g	3.1g(2.7)	0.2g(0.1)	No
Adagio	Skyr	Supercor, Jumbo, Pingo Doce	Average = 1,95 €	Pomegranate, goji, oat, red quinoa, poppy seeds	125g x 2	95kcal	9.3g	13g(11)	0.4g(0.2)	No
Ehrmann	Skyr	Contiente, Supercor, Aldi	Average = 0,94 €	Cherry	150g	80kcal	8g	11.5g(10.5)	0.2g(0.1)	No
Ehrmann	Skyr	Contiente, Supercor, Aldi	Average = 0,94 €	Blueberry	150g	78kcal	8g	11g(10)	0.2g(0.1)	No
Ehrmann	Skyr	Contiente, Jumbo	Average = 0,59 €	Natural	150g	53kcal	9.3g	3.6g(3.6)	0.1g(0.07)	No
Ehrmann	Skyr	Contiente, Supercor, Aldi	Average = 0,94 €	Passion Fruit	150g	DNF	DNF	DNF	DNF	DNF
Ehrmann	Skyr	Contiente, Supercor, Aldi	Average = 0,94 €	Strawberry	150g	78kcal	8g	11g(10)	0.2g(0.1)	DNF
Pingo Doce	Skyr	Pingo Doce	0,59 €	Natural	150g	59kcal	10g	3.8g(3.8)	0.1g(0.1)	No
Pingo Doce	Skyr	Pingo Doce	DNF	Passion Fruit	150g	53kcal	8.6g	3.8g(3.8)	0.2g(0.1)	Yes
Biedermann	Bio JO-	Jumbo	1,49 €	Vanilla	135g	86kcal	6.4g	13.3g(12.5)	0.8g(0.5)	No

	PRO Skyr									
Bieder mann	Bio JO- PRO Skyr	Jumbo, Contine nte	1,49 €	Mango	135g	87kca l	6.3g	13.4g(1 2.6)	0.9g(0.5)	No
Bieder mann	Bio JO- PRO Skyr	Jumbo, Contine nte	1,49 €	Blueber ry	135g	87kca l	6.2g	13.8g(1 3.4)	0.8g(0.5)	No
Bieder mann	Bio JO- PRO Skyr	Jumbo	1,49 €	Natural	135g	60kca l	7.8g	4.8g(3.7)	1g(0.6)	No
Milbo na	Skyr	Lidl	0,79 €	Peach and Passion Fruit	150g	55kca l	8.9g	4.5g(3.9)	0.2g(0.1)	Yes
Milbo na	Skyr	Lidl	0,79 €	Raspbe rry	150g	56kca l	8.9g	4.6g(3.9)	0.2g(0.1)	Yes
Milbo na	Skyr	Lidl	0,79 €	Strawb erry	150g	55kca l	8.9g	4.5g(3.8)	0.2g(0.1)	Yes
Milbo na	Skyr	Lidl	0,79 €	Blueber ry	150g	56kca l	8.9g	4.6g(4)	0.2g(0.1)	Yes
Milbo na	Skyr	Lidl	0,59 €	Natural	150g	62kca l	11g	4g(4)	0.2g(0.1)	No
Gelate lli	Froze n Skyr	Lidl	1,99 €	Natural	75g x 2	144kca l	6.7g	27.8g(2 1.9)	0.5g(0.4)	No
Gelate lli	Froze n Skyr	Lidl	DNF	Blueber ry	DNF	DNF	DNF	DNF	DNF	DNF
Milsan i	Skyr	Aldi	0,99 €	Natural	500g	62kca l	11g	4g(4)	0.2g(0.1)	DNF
DNF	Skyr	Aldi	0,99 €	Passion Fruit, blackbe rry, strawbe rry, cherry	150g	DNF	DNF	DNF	DNF	DNF
Pátura ges	En-K	Interma rche	1,39 €	Strawb erry	100g x 4	DNF	DNF	DNF	DNF	DNF
Pátura ges	En-K	Interma rche	1,39 €	Blueber ry	100g x 4	77kca l	8g	11g(10)	0.5g(0.1)	DNF
Pátura ges	En-K	Interma rche	1,39 €	Passion Fruit	100g x 4	78kca l	8g	11g(10)	0.5g(0.1)	DNF
Arla	Skyr	Contine nte	0,89 €	Natural	150g	63kca l	11g	4g(4)	0.3g()	DNF

Arla	Skyr	DNF	DNF	Peach	DNF	76kcal	8.9g	8.7g(8)	0.3g(0.1)	DNF
Arla	Skyr	Conteinte	0,99 €	Blueberry	150g	83kcal	8.9g	11g(9.8)	0.2g(0.1)	DNF
San Tonelli	Skyr com Aveia	Conteinte	0,99 €	Oat	130g	DNF	DNF	DNF	DNF	Yes
Santiago	Queijo Fresco Skyr	Conteinte	1,49 €	-	80g x 2	DNF	DNF	DNF	DNF	No

Table 28 - Portuguese Market Analysis of Skyr Yogurts, information collected during November 2017

Appendix 2.

In-depth Interview Questions (questions were adapted depending on the respondent)

Topic 1: Lifestyle (diet and health concerns)

Questions:

- Do you consider yourself a person who follows a healthy lifestyle?
- Which factors lead you to a healthy lifestyle?
- What are the main characteristics of your diet? (Main food, and food to avoid)
- Do you practice physical activities? How often?
- Is the appearance of diseases a factor that worries you? Which diseases?
 - o Do you believe that these diseases can be prevented with a healthy diet?

Topic 2: Functional Food

Questions:

- Are you aware of new launches in the field of healthy food? Do you try these innovations? Why?
- What do you know about food with extra benefits for your health? (E.g. yogurts that help in reducing levels of cholesterol)
 - o Do you consume any of these foods? Why?
- Do you take any food supplements? Why?

Topic 3: Skyr Yogurts

Questions:

- Have you ever heard of Skyr yogurts?
- Have you ever tried it?
- How was the experience? (Taste, consistency)
- What are the difference that you find in Skyr, compared to other yogurts?
- Do you consume it regularly?
- Which factors lead you to the consumption of Skyr?
- At what time of the day do you eat Skyr?
- Do you eat Skyr with any accompaniment?
- Beyond Skyr, do you consume other dairy products?
- Is the “protein” factor important for you? Why?

Topic 4: Demographic

- Name, age, level of education, occupation

In-depth interviews answers summary

- Key Opinion Leaders
 - Performance Specialist (Personal Trainer):

As a person, whose work is strongly related to physical activities, the pursuit of a healthy lifestyle is crucial. A lot of care is taken with diet and the body, and there is therefore no processed food, no smoking and no alcoholic or carbonated beverages. Furthermore, diet is mostly based on fruits, vegetables, lean beef, and a lot of water. Plus, physical activity is practiced at least five times a week, since a healthy diet is not considered sufficient for his well-being.

Health concerns are respected a lot, mostly high blood pressure, obesity, diabetes and osteoporosis. Plus, he believes that the pursuit of a healthy diet and practice of physical activities can prevent the appearance of these diseases.

Regarding functional food, there is no focus on new trends, since the core is non-processed food (e.g. fruits and vegetables).

A point that was reinforced sometimes is that to follow a healthy lifestyle more than just a balanced diet is required, thus it is crucial to align a balanced diet with the practice of physical activities.

Considering food supplements, as a person who does a lot of physical activities, it is important to include protein as a supplement, for example.

Regarding Skyr, there is a positive opinion, for instance: good consistency and creaminess, adequate price, the higher sensation of satiety, and the facility to consume (easy to transport and to consume during the day out of home). However, the diverse flavours and taste are not considered as pleasant as other attributes. Plus, the main reason for consuming Skyr yogurts is the longer sensation of satiety.

- Nutritionist:

A nutritionist is a person who gives advice on food and nutrition influences on health, and as such they are seen as influencers in this regard. For this nutritionist, Skyr yogurts are a valuable product due to their high level of protein and the higher level of satiety. However, the high protein content might complicate the body's digestion, so it is not endorsed for persons who do not digest easily. The easiness of consumption is a positive aspect, since it can be consumed as a snack, being easy to transport. Skyr yogurts might be consumed by athletes as well as persons in a weight-loss diet. The opinion concerning this type of yogurt is that, in general, it has a good consistency, but the taste is not the most appreciated. Therefore, only the natural flavour is consumed (as they are the only versions without sweeteners) and some fruit or cinnamon is added, to give a better taste.

Regarding functional food in general, there are some products that are not praised, due to their components (e.g. plant sterols). Concerning the prevention of diseases by the inclusion of this food with extra benefits, it is advised that prevention or minimisation is only possible if the consumption of these products is aligned with a healthy diet.

- Skyr Consumers:

Interviews have been made with Skyr consumers, diverging in age, level of education and gender. Consensus exists regarding lifestyle, since all admitted that special care was taken with their diet and that they tried to practice physical activities at least three times per week. Beyond that, sleeping time was also mentioned by three of the interviewed as an important factor. Moreover, 3 out of 5 said that one of the characteristics of their lifestyle is that they do not smoke.

In general, diets are diversified with the inclusion of vegetables, fruits and fish, and the exclusion of processed food and food with high quantities of fat. Additionally, functional food is seen as an ally to promote a healthy lifestyle, but most of the interviewed highlighted that more than just a balanced diet is required. Therefore, it is believed that the following of a balanced diet can reduce the probabilities of diseases, and perhaps prevent them. In addition, cancer was the disease mentioned by all participants as the health problem which worries them most.

Regarding Skyr's perceptions, the natural version is perceived as tasteless and bitter. Some consumers said that they add seeds, cinnamon or honey to the natural version, and others opt for the flavour-added versions (e.g. Adagio Skyr – quinoa, hazelnut and seeds). Plus, there is unanimity regarding consistency (a lot), and creamier yogurts would be preferred. The factors that lead them towards the consumption of Skyr are its characteristics of high protein, low sugar and no fat. In fact, one of the interviewed noted that the consumption of Skyr is medical advice, since this dairy product will help in her diet of gaining weight (consequence of the high protein content).

- Non-consumers:

In order to have a perspective from the non-consumers' side, four interviews were conducted with persons who had already tried Skyr, but did not become consumers.

These people, diverging in age and gender, noted that were concerned in following a healthy lifestyle (predominantly), however for two of them it was not a focus. Also, the practice of physical activities is also predominant in the standards of living of two of the interviewed.

The intention of these in-depth interviews was to understand which characteristics of the Skyr yogurts contributed to the non-consumption of this dairy, since these people had only tried it once.

One of the reasons presented is concerned with the taste of this type of yogurt, affirming that it is not pleasant to them. Similarly, the consistency is also mentioned as a constraint, since it is too dense, and not as creamy as the yogurts that these persons are used to.

Furthermore, there are different reasons for refusing Skyr yogurts. To illustrate, for a man with fifty years of age, dairy products are not usually included in his diet, since milk and yogurts are not considered to be enjoyable. However, a Skyr yogurt (natural version) was tried, due to its special characteristics of high protein and low fat, but the taste and consistency were not approved. For the others interviewed, the core reason that is preventing the regular consumption is related to the taste and dense consistency, which were not approved after trying a flavour-added version.

Appendix 3.

Online Survey (Questionnaire)

Thank you for contributing with your time by answering the following questions. This study is part of my Master's Thesis being undertaken at Católica Lisbon School of Business and Economics, in the area of product innovation. There are no right or wrong answers. Your responses are confidential and will be used only in this study. The completion of this survey takes around 7 minutes.

Thank you in advance for your help.

1. This section aims to understand your lifestyle and your concerns with your health and well-being.

Q1.1 Do you consider yourself a person who follows a healthy lifestyle?

With the scale indicated below, where 1 corresponds to strongly disagree and 5 strongly agree, classify your level of agreement with the previous question.

- 1 – Strongly disagree
- 2 – Disagree
- 3 – Neither agree nor disagree
- 4 – Agree
- 5 – Strongly agree

Display this question:

If “Do you consider yourself a person who follows a healthy lifestyle?” = “Agree”

Or “Do you consider yourself a person who follows a healthy lifestyle?” = “Strongly Agree”

Q1.2 What do you do to follow a healthy lifestyle? You can select more than one option.

- Balanced diet
- Physical activity
- Other (what)
- Nothing definitive

Q1.3 Which of the following factors motivate (or might motivate) you to adopt a healthy lifestyle?

With the scale indicated below, where 1 corresponds to strongly disagree and 5 strongly agree, classify your level of agreement with the previous question.

	1 - Strongly disagree (1)	2 - Disagree (2)	3 – Neither agree nor disagree (3)	4 - Agree (4)	5 - Strongly agree (5)
The existence of a health problem (e.g. intolerances, allergies, diabetes) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The need to practice physical activities (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The need to adopt a low-fat diet (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The need to feel mentally and physically well (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- This section aims to understand your knowledge of functional food ("Food that together with the basic nutritional impact has beneficial effects on one or more functions of the human organism, thus either improving the general and physical conditions and/or decreasing the risk of the development of diseases")

Q2.1 Were you aware of this food with extra health benefits? (e.g. yogurts that help to reduce levels of cholesterol)

- Yes
- No

Display this question:

If “Were you aware of this food with extra health benefits? (e.g. yogurts that help in reducing the levels of cholesterol)” = “Yes”

Q2.2 Do you eat any of these functional food products?

- Yes
- No

Q2.3 Which of the following health problems worries you the most? Please order, where in the first place is the problem that worries you the most and in the last place is the problem that worries you the least. [Rank scale]

- _____ Cardiovascular diseases
- _____ Respiratory illnesses
- _____ Diabetes
- _____ Cancer
- _____ Hypertension
- _____ Osteoporosis
- _____ Immune system
- _____ Depression
- _____ Gastrointestinal diseases

Q2.4 Do you believe that these health problems which worry you most, can be prevented or minimised with the inclusion of functional food in your diet?

- 1 – Strongly disagree
- 2 – Disagree
- 3 – Neither agree nor disagree
- 4 – Agree
- 5 – Strongly agree

Q2.5 Taking into consideration your household, is there anyone who suffers from one of the diseases mentioned previously? (cardiovascular diseases, diabetes, cancer, hypertension, among others)

- Yes
- No

3. This section is related to a new dairy product - Skyr yogurt - which is characterized by high protein content, no fat and reduced sugar.

Q3.1 Have you ever heard of Skyr yogurts (high protein content)?

- Yes
- No

Display this question:

If “Have you ever heard of Skyr yogurts (high protein content)?” = “Yes”

Q3.2 Have you ever tried Skyr yogurts (high protein content)?

- Yes

- No

Display this question:

If “Have you ever tried Skyr yogurts (high protein content)?” = “Yes”

Q3.3 How often do you consume Skyr yogurts? Please indicate the number of times in a month.

Display this question:

If “Have you ever tried Skyr yogurts (high protein content)?” = “No”

Q3.4 How likely is it that you would be willing to consume Skyr yogurts, taking into consideration its main characteristics?

- 1 – I am sure that I will not try it (0% probability)
- 2 – Unlikely that I am going to try it (25% probability)
- 3 – Maybe I will try it (50% probability)
- 4 – Very likely I will try it (75% probability)
- 5 – I am sure that I will try it (100% probability)

Display this question:

If “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is greater or equal to 1

Q3.5 At what time of the day do you eat Skyr? (You can select more than one option)

- Between meals, as a snack
- At breakfast
- Before doing physical activities
- After doing physical activities
- To replace a main meal
- Other (what)

Display this question:

If “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is greater or equal to 1

Q3.6 Which of the following reasons lead you to the consumption of Skyr yogurts?

With the scale indicated below, where 1 corresponds to strongly disagree and 5 strongly agree, classify your level of agreement with the previous question.

	1 - Strongly disagree (1)	2 - Disagree (2)	3 – Neither agree nor disagree (3)	4 - Agree (4)	5 - Strongly agree (5)
To include at least one healthy food in my diet (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To promote a healthy lifestyle (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Due to its high protein content and no fat (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because it is a trend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help in my sports goal (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help in my plan of losing weight (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because I have a chronic disease (e.g. diabetes) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because it gives me the feeling of satiety during more time (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of transportation (snack) (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display this question:

If “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is greater or equal to 1

Q3.7 How do you eat Skyr? (You can select more than one option)

- Dry fruit
- Fresh fruit
- Cereal
- Seeds
- Honey
- Cinnamon
- As a milkshake

- Other (what)
- Without any accompaniment

Display this question:

If “Have you ever heard of Skyr yogurts (high protein content)?” = “Yes”

Q3.8 Please indicate which brand(s) of Skyr yogurts you know or already heard about:

Display this question:

If “Have you ever heard of Skyr yogurts (high protein content)?” = “Yes”

Q3.9 Of the following brands of Skyr yogurts, please indicate the ones you know or have already heard of? (Please select also the brand(s) that you mentioned in the previous question)

- | | |
|--|---------------------------------------|
| <input type="radio"/> Adagio Skyr | <input type="radio"/> Milbona (Lidl) |
| <input type="radio"/> Arla | <input type="radio"/> Milsani |
| <input type="radio"/> Biedermann | <input type="radio"/> Páturages En-K |
| <input type="radio"/> Continente Skyr Equilíbrio | <input type="radio"/> Pingo Doce Skyr |
| <input type="radio"/> Corpos Danone + Proteína | <input type="radio"/> Other (what) |
| <input type="radio"/> Ehrmann | |

Display this question:

If “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is greater or equal to 1

Q3.10 Which brand of Skyr yogurts (high protein content) do you consume the most? Please select only one option

- | | |
|--|---------------------------------------|
| <input type="radio"/> Adagio Skyr | <input type="radio"/> Milbona (Lidl) |
| <input type="radio"/> Arla | <input type="radio"/> Milsani |
| <input type="radio"/> Biedermann | <input type="radio"/> Páturages En-K |
| <input type="radio"/> Continente Skyr Equilíbrio | <input type="radio"/> Pingo Doce Skyr |
| <input type="radio"/> Corpos Danone + Proteína | <input type="radio"/> Other (what) |
| <input type="radio"/> Ehrmann | |

Display this question:

If “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is greater or equal to 1

Q3.11 Considering the brand of Skyr yogurts that you chose in the previous question, what is the level of satisfaction considering the following attributes?

	1 – Very dissatisfied (1)	2 - Dissatisfied (2)	3 – Neither dissatisfied nor satisfied (3)	4 - Satisfied (4)	5 – Very satisfied (5)
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consistency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability in different supermarkets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information available on the label	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display this question:

If “Have you ever heard of Skyr yogurts (high protein content)?” = “No”

Or “Have you ever tried Skyr yogurts (high protein content)?” = “No”

Or “How often do you consume Skyr yogurts? Please indicate the number of times in a month” Text response is less than 1

Q3.12 A natural version of a common yogurt costs approximately €0.20/unit while a natural version of a Skyr yogurt costs approximately €0.60/unit. Taking this into consideration, please indicate your level of agreement with the following statement: “I am willing to pay more for a Skyr yogurt, characterized by a high protein content”.

- 1 – Strongly disagree
- 2 – Disagree
- 3 – Neither agree nor disagree

- 4 – Agree
- 5 – Strongly agree

Q3.13 For you, what is the importance of the brand at the moment of purchase of a Skyr yogurt?
(or if you had intentions to buy this product)

- 1 – Not important at all
- 2 – Slightly important
- 3 – Moderately important
- 4 – Important
- 5 – Fundamental

Q3.14 To what extent is your purchasing decision influenced (or might be influenced) by the level of description of the nutritional components of the Skyr yogurts? For example: “zero fat”.

- 1 – Information is not important
- 2 – Information is slightly important
- 3 – Information is moderately important
- 4 – Information is important
- 5 – Information is very important (I only buy it after information validation)

Q3.15 What would be the impact if you knew that Skyr's original recipe is from Iceland, a country recognized for its healthy lifestyle?

- 1 – Very negative impact
- 2 – Negative impact
- 3 – Neither positive nor negative
- 4 – Positive impact
- 5 – Very positive impact

Display this question:

If “Have you ever heard of Skyr yogurts (high protein content)?” = “Yes”

Q4.1 Please indicate your level of agreement with the following sentences:

	1 - Strongly disagree (1)	2 - Disagree (2)	3 – Neither agree nor disagree (3)	4 - Agree (4)	5 - Strongly agree (5)
Skyr is associated with the practice of physical activities due to its high protein content (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate Skyr yogurts with people who follow a balanced diet (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate Skyr yogurts with a trend (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4.2 How often, in a week, do you practice physical activities? Please indicate the number of times in a week (if you do not practice insert 0)

Q4.3 At the moment, do you take any food supplement?

- Yes (what)
- No

5. To conclude, I will ask you to indicate some personal details. Please remember that all information is confidential.

Q5.1 Please indicate your gender:

- Female
- Male

Q5.2 Please indicate your age:

- 18-24
- 25-34
- 35-44
- 45-54
- >55

Q5.3 What is your education level?

- High School (incomplete)
- High School (complete)
- Undergraduate
- Master's
- PhD
- Other

Q5.5 Is any member from your household less than 18 years old?

- Yes
- No

Appendix 4.

Age	N	Mean	Standard Deviation
18-24	33	8.4242	8.71432
25-34	64	9.3438	7.99845
35-44	55	10.6182	9.35808
45-54	39	7.1795	8.33152
>55	13	10.0769	7.71861
Total	204	9.1716	8.55092

Table 29 – Descriptive Statistics of Hypothesis 2.2

Appendix 5.

Level of Education	N	Mean	Standard Deviation
High School (incomplete)	4	6.5000	3.00
High School (completed)	44	12.4091	10.52
Undergraduate	97	8.4021	8.12
Master's	52	8.1346	7.55
PhD	1	20.0000	-
Other	6	6.8333	3.60
Total	204	9.1716	8.55

Table 30 - Descriptive Statistics of Hypothesis 2.3

Appendix 6.

Model 2	Tolerance	VIF
Price	.908	1.102
Taste	.522	1.917
Consistency	.566	1.768
Availability in the different supermarkets	.892	1.121
Information available on the label	.691	1.446

Table 31 - Multicollinearity Analysis 1

Model 3	Tolerance	VIF
Price	.885	1.130
Taste	.297	3.369
Consistency	.353	2.829
Availability in the different supermarkets	.569	1.757
Information available on the label	.489	2.045

Table 32 - Multicollinearity Analysis 2

Model 4	Tolerance	VIF
Price	.810	1.234
Taste	.410	2.440
Consistency	.443	2.255
Availability in the different supermarkets	.820	1.219
Information available on the label	.567	1.765

Table 33 - Multicollinearity Analysis 3

Model 5	Tolerance	VIF
Price	.879	1.138
Taste	.252	3.971
Consistency	.275	3.632
Availability in the different supermarkets	.906	1.104
Information available on the label	.699	1.430

Table 34 - Multicollinearity Analysis 4

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