Front-of-Package labels

Understanding the role of consumer self-confidence as a moderating influence on Front-of-Package nutrition label use

by

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**Abstract**

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1 Introduction

In this chapter, we provide the background of our research and we describe Front-of-Package nutrition labeling systems. This is followed by the presentation of our aim and objectives, research purpose and delimitations for our study. Lastly, we conclude this chapter with the outline of the thesis.

"We all have an intimate and intricate relationship with food" (Shewfelt, 2017).

On a daily basis, consumers are confronted with numerous choices. When walking into a grocery store, consumers face large displays of various food products and, sometimes, might feel the pressure of making the right choice for themselves. Moreover, consumers are looking for more options for ready on-the-go food products. The Swedish retail food environment now has a wide array of composite foods which are offered to customers as a quick and easy solution, not just for eating 'on the move', but also for meals prepared at home (IPSOS, 2015), leading to an increase in the demand for prepackaged or processed food products. The Food and Agriculture Organization (FAO) and the World Health Organization (WHO) define prepackaged foods as foods that have been packaged or cooked in advance and stored in a container, ready for offering to the consumer or for catering purposes. Prepackaged foods must specify and include a list of all ingredients used; also, prepackaged foods should be labeled with the following information: the food product's name or brand, the manufacturer's name and address, the product's country of origin, lot identification, production date, storage and consumption instructions (FAO & WHO, 2007).

According to Sanjari, Jahn & Boztug (2017), consumers process nutritional information in different ways, including an active search for information or accidental exposure, potentially resulting in the use of the nutrition label according to their needs. Also, consumers tend to not take much time for everyday tasks, such as grocery shopping. Therefore, manufacturers and retailers must acknowledge this attitude and develop food labels that are easy to read, understandable and catch the consumer's attention at first glance (Singh & Cole, 1993).


1 In the introductory section, some parts of the text were reproduced from our research proposal: Contreras, M. & Paladines, C. (2020). Front-of-Package color coded labels on packaged food products [Unpublished manuscript], BUSP37 Research Strategy, Lund University School of Economics and Management.
influence consumer decision-making. However, reading them depends on the needs and goals of the consumer, which can be of functional, symbolic, or hedonic nature (Bublitz, Peracchio, Andreasen, Kees, Kidwell, Miller, Motley, Peter, Rajagopal, Scott & Vallen, 2013). Besides food labels, packaging and its elements, color and price might be influential factors in the consumer decision-making process of food products. Also, emotions might play a role when consumers have to make decisions between which products to buy.

1.1 Background

The Swedish Food Agency, following the Nordic Nutrition Recommendations, encourages Swedish consumers to make healthier food choices in their everyday life (Livsmedelsverket, 2018). According to the World Health Organization, by 2020 adulthood obesity prevalence forecasts predict that 19% of men and 17% of women will be obese in Sweden, by 2030 it predicts that 26% of men and 22% of women will be obese (WHO, 2013). Furthermore, the Swedish Food Agency recommends that consumers reduce their intake of salt, sugar and switch to healthier fat sources (Livsmedelsverket, 2015). A parallel argument is that there is a growing trend of consumer awareness towards leading a more active and healthier lifestyle through exercise, cooking and dieting (Ekström, Ottosson & Parment, 2019). According to the Swedish National Society Opinion Media (SOM) survey, which began in 1986, it showed that, within the most important aspects for Swedes regarding well-being, healthcare has always ranked first (SOM Institute, 2018). In addition, "food law establishes the rights of consumers to safe food and to accurate and honest information" (European Commission, n.d. a). In 2014, the European Commission proposed regulations for food labeling and nutrition information. Among these measures, it was established mandatory allergen information for prepackaged foods and nutrition information requirements for processed food products (European Commission, n.d. b). Regarding labeling and information displayed on packaging, transparency from manufacturers is of high importance for Swedish consumers in order to know more about the product, its ingredients and its origin, all of which are key for building trust towards the product or brand, and the manufacturer as well (IPSOS, 2015).

Front-of-Package nutrition labels (FOPL) serve as guidance for consumers by giving them information regarding the nutritional content of processed food products. These are placed on the frontal side of the packaging so consumers can have an overview or evaluation of the product at first glance to make an informed decision before purchase. Currently, "fifteen countries in the WHO European Region were identified as having a government-endorsed policy on interpretive FOPL" (Kelly & Jewell, 2019, p.1126). Several models are currently used for Front-of-Package nutrition labeling. Four major types of systems include symbol-based brands or health logos, summary indicator systems, nutrient-specific warning labels and nutrient-specific interpretive labels to provide more detailed information for consumers (Kelly & Jewel, 2018). Some examples of Front-of-Package nutrition labels used in the European Region are Nutri-score, The Food Federation Germany pie chart, the Scandinavian Keyhole symbol and the Finnish heart symbol.
1.1.1 Front-of-Package nutrition labeling systems

The Guideline Daily Amounts system, initially called Daily Guideline Intakes by the British Food Standards Agency, was first introduced in 1996 (Rayner, Scarborough & Williams, 2003). In 2009, the Guideline Daily Amounts system was adopted by the European Union. This label format only includes numeric information regarding the nutritional content in a portion size (Hawley, 2013). Also, the Guideline Daily Amounts label shows product-specific information detailing serving size in grams, amount of calories, the recommended percentages for macronutrients per portion based on the daily amounts for a 2000 calorie diet (Deliza, De Alcantara, Pereira & Ares, 2019).

![Guideline Daily Amounts Label](EUFIC, 2007)

The Traffic-light label system is a Front-of-Package nutrition label that aims at giving consumers an overview of the nutritional content of processed food. This label uses the colors red, yellow and green as visual elements in a similar way to a traffic light. So, consumers are able to have a visual expression of the nutritional facts for sugar, fat and salt contents of processed foods. This label format has been adopted as mandatory labeling for foods in countries like Ecuador, and as a complementary measure for certain processed food products in Great Britain and South Korea (Kanter, Vanderlee & Vande Vijvere, 2018).

![Traffic-light Label](British Nutrition Foundation, 2018)
Health Logos are considered a type of Endorsement Logo that does not contain numerical values for nutritional facts content. In this case, the logo and the brand themselves represent a set of nutritional criteria established by an endorsing organization responsible for the brand. These criteria have to be met in order for food products to have the logo on its packaging (Koen, Blaauw & Wentzel-Viljoen, 2016). For example, the Scandinavian Keyhole symbol is a Health Logo developed by the Swedish Food Agency in 1989 (Livsmedelsverket, 2019). This brand endorses foods that "contain less sugars and salt, more fibre and wholegrain and healthier or less fat than food products of the same type not carrying the symbol" (Livsmedelsverket, 2019), and the use of this symbol has become widespread as a Nordic label for products in Denmark, Norway and Iceland (Livsmedelsverket, 2019). The Keyhole symbol has an overall positive brand image and is perceived as a quality stamp for healthy and nutritious products (IPSOS, 2015).

On the other hand, some consumers lack a deeper understanding of the keyhole symbol's meaning, leading to incorrect assumptions of what the brand stands for (IPSOS, 2015). Furthermore, the brand faces challenges from keeping up with the times and demands of the market (IPSOS, 2015), to a decreasing uptake from manufacturers to include the logo on the packaging of their food products (Food Navigator, 2018). Additionally, the Keyhole symbol limits itself to products that comply with all necessary content requirements previously mentioned, "this focus on identifying the healthiest options without flagging less healthy products is a limitation of endorsement logos that potentially undermines their potential to meet population nutrition aims" (Kelly & Jewell, 2019, p.1126).

Figure 1.3 Scandinavian Keyhole Symbol (Livsmedelsverket, 2018)

1.2 Aim and Objectives

In recent years, consumers have shown an increasing interest in the transparency of information among the entire food supply chain. Consumers expect safety guarantees and trustable information from which they can confirm the credibility of the manufacturers (Beulens, Broens, Folstar & Hofstede, 2005). Currently, the European Commission has not standardized a Front-of-Package labeling code system for food manufacturers from member countries to implement in order to deliver supplementary information on nutritional contents. Given that consumers
nowadays have more access to information from different sources and are also demanding more transparency from food manufacturers, alternative and comprehensible measures should be considered. Moreover, leading a healthier lifestyle is a major consumer trend that is prevailing and not only food manufacturers but also retail firms are compelled to deliver. The Swedish retail environment has grown more extensive in its offer of composite and prepackaged foods in recent years, looking to supply consumers with easy, quick and healthy food choices. Current models of Health Logos as Front-of-Package nutrition labels might struggle to provide information on the healthfulness of food products for consumers to make informed choices; also, these formats seem to fall behind in the market to its complexity of having to comply with all the requirements.

According to Ramya and Mohamed Ali (2016), consumer buying behavior is influenced by internal and psychological factors, among other factors, and also by the knowledge consumers use and the emotions they feel when making decisions. Consumers use their knowledge to make decisions and these depend on emotional and cognitive calibrations (Kidwell, Hardesty & Childers, 2008a). According to Lichtenstein, Fishhoff and Phillips (1981), calibration refers to the knowledge people have that is required to achieve some level of competency in combination with the belief that they possess the knowledge to make unbiased judgments that are relevant to make high-quality decisions. Moreover, emotions tend to influence decisions and emotionally-calibrated individuals tend to be more motivated and confident in their decision-making because of their objective emotional ability (Kidwell, Hardesty & Childers, 2008b). Some consumers make decisions based on their consumer self-confidence, which is defined as a marketplace behavior by which an individual feels sure of his knowledge and capability to make decisions (Adelmann, 1987). According to Mossman and Ziller (1968), individuals with low consumer self-confidence tend to make decisions based on contextual circumstances and are inconsistent with their decision making while individuals with high consumer self-confidence base their decision-making in what they already know and think is the right choice according to the situation.

1.3 Research Purpose

Previous research conducted has looked at the effects of Front-of-Package nutrition labels using quantitative and experimental research designs (Rebollar, Lidón, Serrano, Martín & Fernández, 2012; Scarborough, Matthews, Eyles, Kaur, Hodgkins, Raats & Rayner, 2015; Sanchez-Garcia, Rodriguez-Insuasti, Martí-Parreno, & Sanchez-Mena, 2019; Schuld, 2013; Hieke & Wilczynski, 2011; Hoyer & Brown, 1990). Still, there is a gap in marketing research on consumer perceptions of these labeling systems and how these might influence consumer decision-making (Sanjari, Jahn & Boztug, 2017; Rohr, Kamn, Koenigstorfer, Groeppel-Klein & Wentura, 2015). Although the literature indicates that most food product purchases are of low involvement nature and made by inertia (Ekström, Ottsson & Parment, 2019), it is also stated that "a long-term interest in food, dietary restrictions and allergies may result in a long-term involvement in relation with food" (Ekström, Ottsson & Parment, 2019, p.94).
Furthermore, given that consumer self-confidence and emotional calibration might have an important influence on consumer decision-making, these might also influence the use of Front-of-Package labels when purchasing food products. From an academic standpoint, the lack of research on the potential role of consumer self-confidence in food product decision-making has driven us to seek an understanding of consumer perceptions when using Front-of-Package nutrition labels. Therefore, we formulate the following research question:

- How does consumer self-confidence influence Front-of-Package nutrition labeling use in the decision-making of food products?

Our aim is to understand how consumers perceive these labeling systems and whether the role of consumer self-confidence influences their behavior at the stages of evaluation of alternatives and purchase decisions when purchasing food products. Even though literature suggests that food product purchases are of low involvement nature or made by inertia, the increase of consumer awareness in health, food and dietary restrictions might suggest different outcomes when facing these sorts of interpretive information. Furthermore, our study seeks to contribute to the marketing and consumer research fields on the subject of food choices by addressing consumer perceptions derived from food product purchase contexts.

1.4 Delimitations

This study takes into consideration the following delimitations. Firstly, this study takes into account processed food product purchases. In other words, manufactured products that require to be prepacked and display ingredients and nutritional content information according to food regulations (European Commission, 2011). Hence, no fresh or unprocessed food products have been considered for this study, given that for these, it is not mandatory to display nutritional content information (European Commission, 2011). Secondly, we have looked into two types of Front-of-Package nutrition labeling systems currently in use in the Swedish retail environment; (i) the Guideline Daily Amounts label format and the (ii) Scandinavian Keyhole Symbol label. Both labels relate to the nutritional characteristics of food products and their purpose is to inform consumers of the healthfulness of food products. Therefore, other sorts of labels or symbols placed at the front of the package of products have not been considered for this study. Lastly, we have looked into food product purchasing inside the context of the Swedish retail environment.

1.5 Outline of the Thesis

This thesis is divided into seven main sections. In the previous introductory chapter, we have described the background of our study, what are Front-of-Package nutrition labels and their characteristics, and presented the research question and purpose of our study. Further, Chapter
2 focuses on the literature review carried out to identify previous research on consumer use of nutritional labels, on Front-of-Package nutrition labels more specifically, and food product decision-making. Followed by Chapter 3, which presents the theoretical framework, including a selection of theories and concepts that will be the basis of our thesis. Chapter 4 will address the methodological approach to our study, including the research approach and design, data collection method, limitations and validity of our study, and the techniques used for analyzing the data. Subsequently, Chapter 5 will present the results and analysis obtained from our research and Chapter 6 will focus on the discussion of the results. Finally, in Chapter 7, we will conclude with a summary of the main findings from our research, including practical implications and recommendations for future research on the topic.
2 Literature Review

This section provides a summary of key findings from the review of the literature on academic research previously conducted on the topics related to Front-of-Package labels. Beginning with research on consumer use of nutritional label information, followed by research on Front-of-Package nutrition labeling and its effects on consumer behavior. It is concluding with research on the variables linked to consumers' food choices.

2.1 Consumer use of nutritional label information

According to Sanjari, Jahn and Boztug (2017, p. 872), "consumers process nutrition information deliberately through a sequence of steps that include active search or accidental exposure, perception, liking, understanding, and, ultimately, use of the nutrition label". During food product purchase situations, variables like context might influence consumers' processing of nutrition label information (Sanjari, Jahn & Boztug, 2017). Additionally, Sanjari, Jahn and Boztug (2017) state that, by use of a dual-process theory analysis, research shows consumers base food product purchase decisions using system one processing: heuristics or rules of thumb, relying on visual elements when it comes to processing nutrition information displayed on food products. However, there might be a perception of risk that influences the willingness of people to review food labels depending on the consumers' previous food experiences: if consumers have prior knowledge about ingredients and derivations, they will pay more attention to food labels (Tsiros & Heilman, 2005).

In the European Union, each country follows its legislation related to food labeling. According to Cheftel (2005), a common ground on food labeling is the way food labels are presented: (i) horizontally placed labels are for food products that go directly to the final consumer, these labels must include information on the safety and quality of the product, ingredients, shelf life of the product and conditions of storage; (ii) vertically placed labels are designed for including particular information such as food names and composition, registration of origin, grading quality as well as supporting information on agricultural producers. Besides this, each manufacturer can decide on the information they might voluntarily want to include on their label, such as health claims, commercial data, production information, quality certificates, the designation of origin, among others (Cheftel, 2005). However, some consumers are reluctant to believe in what food labels declare; they tend to believe that such claims sometimes are incomplete and misleading (Silverglade, 1991). Also, some consumers might feel overwhelmed by the amount of information on food labels, while others might feel confused when labels do not have enough information (Jacoby, Speller & Kohn, 1974). Manufacturers should take into
consideration the amount of information and ease of understanding of food labels and if the information provided is relevant for consumers, considering the limited time for purchase and short-term memory capability of consumers when doing grocery shopping (Singh & Cole, 1993).

There are three basic food-related attributes: (i) search attributes, the aspects consumers evaluate before purchase and consumption such as price and color of the product; (ii) experience attributes, such as taste or flavor, are product aspects that cannot be evaluated before purchase and consumption; and (iii) credence attributes, which are aspects that require empirical data or the help of an expert (Wansink, Van Ittersum & Painter, 2004). Experience attributes are the ones most influenced by food labels because labels give consumers an idea of the product's taste (Bowen, 1992). Wansink, Van Ittersum and Painter (2004) state that food labels had a more positive impact on the hedonic type of foods, like desserts than on the utilitarian type of foods, like entrées, because consumers pay more attention to food labels on products they enjoy and do not consume frequently. Also, George and Edward (2009) explain how impulsive product selection grants the realization of hedonic motives by making impulsive purchases that lead to lowered levels of cognitive dissonance in consumers.

2.2 Front-of-Package nutrition label schemes

When it comes to food choice and consumption, individuals have different types of food-related goals that influence their well-being (Bublitz et al. 2013). These goals can be classified into three categories: functional goals, which relate to consumption of foods for health improvement including diet tracking to reach preferred health outcomes; symbolic goals, which relate to the consumption of foods in social settings aimed at building and maintaining relationships; and hedonic goals, which relate to the consumption of foods for enjoyment and pleasure as a result from the experience of eating these sorts of foods (Bublitz et al. 2013). Moreover, food-related goals guide consumer decision-making for food products and might exert positive or negative associations in consumers, and even though these goals may have a collectivistic dimension, functional and hedonic goals mainly focus on the self (Bublitz et al. 2013).

Research conducted on how packaging and colors affect consumers highlights a significant influence of colors on their behavior and their thoughts and feelings; also, colors have been used as an instinctual tool to support consumer thought processes before deciding what to purchase (Hoseini, 2019). Red-colored labels are directly related to negative feelings, such as being unfavorable and sharp, while green-colored labels represent positive utility (Hoseini, 2019). Moreover, the packaging is considered a way to advertise and promote products and is considered necessary for creating shelf impact (Onel & Ozcan, 2018). The packaging is also crucial to a brand's image because it enhances brand equity (Onel & Ozcan, 2018). Creating an attractive product boosts the concept of user experience and increases the perception of the pragmatic and hedonic aspects of the product (Joutsela, Latvala & Roto, 2016). Furthermore, Rebollar et al. (2012) state that people are more willing to buy food products when they
associate packaging attributes to experiences described as fun, dynamic, innovative and sophisticated. They also state that even though a more profound interaction with the product package before a purchase is not possible most of the time, having an interaction with the package affects user experience and thus, influences the possibility of repeating a purchase.

2.3 Variables that influence food product decision-making

When it comes to purchase decision-making, emotions play an important role, precisely, the emotions of fear and guilt, which have been associated with the many emotions triggered in purchase contexts (Sanchez-Garcia et al. 2019). Additionally, nutrition labeling studies demonstrate the effects of displaying interpretive nutritional information on consumer perceptions, including an avoidance attitude from consumers to food products, which are predominant in the red color category (Scarborough et al. 2015; Rohr et al. 2015). Furthermore, these findings indicate implicit meanings of colors that consumers attribute and associate to food products during decision-making (Rohr et al. 2015).

Previous research also considers sociodemographic variables that might influence food product decision-making and purchase intention when facing Front-of-Package nutrition labeling. According to Campos, Doxey and Hammond (2011), consumer use of labels is more prevalent among the female population, young adults and middle-aged people. Additionally, other variables that should be considered are time constraints, cognitive depletion and nutrition knowledge and how these variables might influence consumer decision-making when facing Front-of-Package nutrition labeling formats (Sanjari, Jahn & Boztug, 2017).

Furthermore, price is a variable that plays a crucial role in influencing consumers’ purchase decisions. In a grocery shopping context, consumer price sensitivity is highly influenced by economic factors, such as the average income of a country, and cultural factors, such as the dimensions of national culture, when it comes to low involvement category products (Kubler, Pauwels, Yildirim & Fand rich, 2018). At the country level, the price has an even stronger influence in cultures with traditionally masculine values than traditional feminine values (Kubler et al. 2018). Nevertheless, nutrition information displayed on Front-of-Package labels enhances consumer awareness of healthy food products (Campos, Doxey & Hammond, 2011).

According to Dierks (2005), consumers tend to view information coming from federal institutions and consumer organizations as more trustworthy than information from the supply side or manufacturers. He also states that consumers not only rely on microeconomic aspects such as income and price but also on determinant factors such as information and trust. Moreover, Aprile and Gallina (2008) explain that consumers view quality seals or brands as salient aspects compared to other food-related aspects, such as the designation of origin, traditional production method and region of production.
2.4 Chapter Summary

In this chapter, we have presented a literature review of previous research on Front-of-Package nutrition labels and its effects on consumers. Some authors state that nutritional information can be processed in multiple ways and that many variables can influence consumer decision-making. Consumers also tend to rely on cognitive mechanisms like heuristics for processing nutritional label information. Based on the previous research, it is safe to assume that prior knowledge primes consumers to be more attentive to processed food labels. Furthermore, some consumers might question the information displayed on the nutritional labels and be reluctant about the claims made by manufacturers, describing these labels and the claims stated as misleading. Nevertheless, manufacturers must take these aspects into account to provide information that is relevant to consumers in a comprehensible way. Moreover, research shows that food labels had a positive impact on hedonic type foods, which are associated with taste. Also, impulse purchases of food led to lower levels of cognitive dissonance while pursuing hedonic aims. There are different types of Front-of-Package nutrition labels. In the European Union, food manufacturers use the Guideline Daily Amounts label, the Traffic Light label and Health Logos as visual cues for displaying an overview of nutritional information. When it comes to Health Logos, previous research attests to positive evaluations from the consumer side as an attractive element when placed on the product's package. Furthermore, the literature review on food product decision-making establishes many variables that influence consumers when deciding between which products to buy. Among these, the packaging of a product and its price were two variables that multiple authors recognized to be of significant influence during this process. Furthermore, consumers have food-related goals that influence their well-being and will influence consumer decision-making when choosing between products. Lastly, emotions can also exert an influence in the stage of evaluation of alternatives.
This chapter presents a selection of theories from relevant fields of study that we have identified to support our analysis and the interpretation of the empirical data. Our starting point is the theory of bounded rational behavior to understand consumer decision-making. Moreover, we continue with theories on emotional calibration and consumer self-confidence. Followed by a review of the concepts of branding and brand familiarity.

### 3.1 Bounded Rationality

Bounded rationality refers to an individual's behavior that allows them to make a rational choice, taking into account potential cognitive limitations that may arise during the decision-making process (Simon, 1990). The rationality of decision-making should be viewed from the context in which the decision is made, the aim of the behavior and the accessible mechanisms that make it possible to reach that aim (Simon, 1986). Hence, the individual will evaluate, either objectively or subjectively, the outcome of decision-making as the best possible outcome, taking into consideration the accessible mechanisms to reach a decision (Simon, 1986).

According to Simon (1955), rational behavior is comprised of: (i) a set of choice alternatives which the individual can choose from, (ii) a subset of perceived alternatives more limited than the initial set, (iii) the potential outcomes of choice, (iv) a pay-off derived from said outcomes of choice, (v) information on the probability of outcomes that could result from choosing between alternatives, and (vi) information on the probability of a particular outcome derived from the chosen alternative. On account of this, human decision-making can be studied as a dynamic and sequential process aimed towards satisfactory alternatives that align with a determined aspiration level (Simon, 1955).

Furthermore, the individual's task is to select an alternative that brings maximum value as a pay-off from the outcome (Simon, 1972; Simon, 1990). As a result, the individual can reach what is called an optimal decision; however, when the selected alternative does not maximize the pay-off function and only exceeds some of its requirements, the individual can reach what is called a satisficing decision (Simon, 1955). A satisficing strategy is one that guides decision-making through evaluating the alternatives that are available in order to choose the one that fits best for the desired outcome (Simon, 1990). Consequently, the use of a satisficing strategy in decision-making might not necessarily mean that individuals make optimal decisions: "people have reasons for what they do. They have motivations, and they use reason (well or badly) to respond to these motivations and reach their goals" (Simon, 1986, p. S209).
When looking into decision-making, individuals go through the process of generating the set of choice alternatives from the perceived alternatives available. Bettman, Luce and Payne (1998) state that research on consumer decision-making determines that choices among alternatives depend critically on the objectives of the decision-maker. The selected alternative will be based on one that reduces the cognitive effort the most, minimizes the experience of negative emotions and justifies the rationale behind selecting said alternative. Additionally, Simon (1990) explains that the processes for generating the set of choice alternatives can become lengthy and effortful for individuals and, because of the complexity of the task, they rely on mechanisms such as heuristics in order to find a satisfactory alternative. Tversky and Kahneman (1974) describe heuristics as principles or rules that aim at reducing the complexity of cognitive tasks performed by the decision-maker, such as evaluation of alternatives and outcome predictions, in order to simplify the process.

Furthermore, Kahneman (2003) states that the individual's perceptual system develops impressions from the attributes of objects; these impressions become much more accessible to the individual during the decision-making process. When these impressions are performed routinely, they are called natural assessments and respond to stimuli that individuals can evaluate as either good or bad (Kahneman, 2003). However, the individual perceives an object's attributes depending on the reference point stimulus and the context in which the stimulus takes place (Kahneman, 2003). Hence, to better understand how individuals make decisions, it is essential to analyze what determines how highly accessible a judgment is (Kahneman, 2003).

Additionally, Thaler (1980) describes the complexity of decision-making as a determinant for consumers to simplify the process and restrict the choice set. The burden of decision-making translates into costs for individuals, which they might prefer to avoid. He also states that these costs can be categorized as regret. Whenever consumers expect to feel regret after making a choice, they are motivated to eliminate a choice beforehand; under these circumstances, individuals will engage in this behavior when the probability of outcome does not align to the expectations of the individual in contrast with the incremental costs derived from decision-making (Thaler, 1980). Moreover, according to Gigerenzer (2001), bounded rational behavior uses emotions as tools to solve problems and limit the choices available in the choice set. That being so, "Utility cannot be divorced from emotion, and emotion is triggered by changes" (Kahneman, 2003, p.706).

### 3.2 Emotional Calibration

According to Richins (1997), emotions are a valenced affective reaction to perceptions of situations. Damasio (1999) states that emotions are a neurological object, part of an internal emotional state, and as such, an unconscious neurological reaction occurs when receiving an input from a specific stimulus. Additionally, emotions can be categorized at four different
levels: (i) emotions that are created at the biological level, (ii) emotions that act on a cognitive level, (iii) emotions that act on rational control and (iv) emotions that are expressed at a social level (Larue, West, Rosenbloom, Dancy, Samsonovich, Petters & Juvina, 2018). How an emotion develops depends on its characteristics and under which circumstances the emotion is triggered (Larue et al. 2018). Furthermore, emotions can be a powerful heuristic tool in bounded rationality when we have a limited capacity of information processing; therefore, emotions are helpful to prioritize information (Larue et al. 2018).

Additionally, people tend to have mood-biasing effects, which means that depending on their mood and how they feel, they will perceive things differently. For example, Mayer and Salovey (1997) describe that someone who feels happy and positive might pay more attention to their surroundings, enjoy the present and be more optimistic; meanwhile, a person who is in a negative mood might feel sick, angry and annoyed by their surroundings. Also, Agrawal, Han and Duhachek (2013) explain that when consumers feel angry, they do not feel persuaded by new information, concurrently when consumers feel shame, they tend to accept new information with greater disposition.

Furthermore, it is important that individuals know how to identify and discriminate their feelings and emotions. In this case, the role emotional intelligence has on the consumer generates an effect on the information that individuals use to process their thoughts leading to action (Cortés, Barragán & Vásquez, 2002), and as a result, producing beneficial outcomes for themselves and others (Kidwell, Hardesty, Murtha & Sheng, 2011). Kidwell, Hardesty and Childers (2008a) state that the desired consumer outcome involves a set of first-order emotional abilities that allow individuals to distinguish emotional patterns that guide decision-making and solve problems based on these abilities. People who have balanced emotional abilities will choose healthier food options and better quality food products than people who are more knowledgeable about nutrition information and specific product attributes (Kidwell, Hardesty & Childers, 2008b). In other words, although not having sufficient knowledge of nutritional information, emotionally stable people are more predisposed to make healthier decisions than consumers who have nutritional knowledge and understanding, but their emotions are not properly calibrated. Moreover, consumers tend to believe that they own high levels of emotional ability. However, for the most part, they tend to mistake their perceptions resulting in a greater disadvantage for them when making practical consumer-related decisions; this is because emotions generate an important power that influences daily decision-making (Clore, Schwarz, Golisano, Rabe & Wölk, 1996).

Decisions made by consumers can vary due to cognitive and emotional miscalibration as an outcome of the evaluation of their knowledge. Product attributes and nutrition information can develop biased estimations (Alba & Hutchinson, 2000). A consumer must have emotional abilities to perform well but also, the consumer must believe in having these abilities in order to make accurate decisions; consumers can understand and manage emotions, but if they lack confidence when making a decision, the result will be poor quality and inconsistent decisions (Kidwell, 2004). During decision-making, consumers might feel negative emotions due to the perceived uncertainty of choosing the best option in combination with the potential outcomes.
of choice (Luce, 1998). According to Dahl (2003), people experiencing guilt are related to action or inaction according to events. Guilt is a negative emotion that people experience triggered by negative results derived from their actions (Sanchez-Garcia et al. 2019).

Consumers need to have calibration between their emotions and knowledge; however, this may not always be the case even though calibration is necessary for consumer decision-making because it guides consumers towards better coping mechanisms to deal with incomplete and errorful information (Alba & Hutchinson, 2000). Additionally, Luce (1998) indicates that consumers tend to have an avoidance reaction as a coping mechanism when facing triggers of negative emotions. The task becomes difficult because sometimes consumers tend to be overconfident about their knowledge and believe that they are accurate.

3.3 Consumer Self-confidence in Decision-making

Consumer self-confidence represents the measure of assurance that consumers have of being capable of making decisions and how they behave when in the marketplace (Bearden, Hardesty & Rose, 2001). Even though consumer self-confidence relates to self-esteem, the concept goes beyond the value of the self and also considers consumer expertise, as in the capacity of individuals to conduct product-related tasks (Bearden, Hardesty & Rose, 2001). The dimensions of consumer self-confidence are construed around (i) effective decision-making, this includes the individual’s ability to gather and use information; and (ii) self-protective mechanisms in order to avoid negative outcomes, such as being misled, deceived or mistreated during purchase settings (Bearden, Hardesty & Rose, 2001).

Furthermore, the dimension of effective decision-making can also be categorized into (i) information acquisition—the confidence the individual has on the ability to gather information, (ii) information processing—the ability the individual recognizes to have to be able to process a certain amount of information necessary before decision-making, (iii) consideration set-formation—the confidence the individual has on being able to identify an adequate choice of alternatives that can satisfy consumption goals, and (iv) personal and social outcomes—the capability of the outcomes from decision-making to meet personal goals that might evoke feelings of satisfaction (Bearden, Hardesty & Rose, 2001). Additionally, George and Edward (2009) describe that individuals who are highly involved when deciding on a purchase are more likely to be stable in their preconceived cognitions that lead to said purchase and will demonstrate higher subjective knowledge (Sangwan & Agarwal, 2018).

3.4 Branding and Brand Familiarity

Branding is so much more than just having a brand with a name and that a product or service has been stamped with the mark of the organization. The company must commit in the long
term with useful resource management and valuable human talent to become a referent in its industry (Kapferer, 2012). Further, a brand is a name that exercises a high power in the market; the power of a brand increases as more people know about it, trust it, are persuaded by it and become its advocates. When more people share and understand the values and ideas behind a brand, the more reach and power the brand has (Kapferer, 2012).

Furthermore, people who have a high involvement towards a brand are the ones who will focus even on the small differences and will make an exhaustive comparison between them to know which one they will choose (Kapferer, 2012). From a consumer perspective, people tend to judge themselves and know they judge others based on their decisions; therefore, social identity is important, since it is created based on the brands they choose to consume (Kapferer, 2012). In a consumer-based approach, brand associations are central because building robust, unique and favorable associations in the consumer's minds are a valuable way to create brand awareness and brand familiarity afterward (Keller, 1993). A brand can create associations in three ways: (i) by having a direct experience with the product or service, (ii) by receiving relevant information about the company's products or services through different channels and (iii) by use of Word-of-Mouth, which is extremely valuable because it means that a consumer is already familiar with a brand and wants to recommend it to someone else (Keller, 1993).

Brands should develop a trustworthy relationship with their customers. Trust is not the only important factor; brands should also bring excitement, joy, empathy and stimulation to consumers. A brand has to establish a relationship with the consumer based on reliability, honesty and altruism so that consumers associate brands with these values (Hess, 1995). The construction of this trustworthy relationship has cognitive and affective elements (Delgado-Ballester, Munuera-Aleman & Yagué-Guillén, 2003). The cognitive dimension refers to the perceptions that consumers have formed that the brand will accomplish their expectations and will follow their obligations (Chaudhuri & Holbrook, 2001). On the other hand, the affective dimension refers to the perceptions of consumers towards the feelings of honesty and altruism (Delgado-Ballester, Munuera-Aleman & Yagué-Guillén, 2003).

As reported by D'Souza, Taghian and Brouwer (2019), the use of certified labels might serve as a competitive advantage when devising marketing strategies that seek to differentiate products from the competitors. In the case of endorsement logos, these are often intended to encourage more significant considerations of a brand by ensuring that a particular brand meets with health and ethical concerns as well as quality allegations (Konopka, Wright, Avis & Feetham, 2019). Health endorsement logos are considered a vital labeling scheme that shows the different approaches to nutrient profiling (Koen, Blaauw & Wentzel-Viljoen, 2016). Endorsement logos are a connection between the manufacturer brand with the extensive scope of positive associations related to the endorsing organization (Konopka, Wright, Avis & Feetham, 2019). For example, in the particular case of the brand Fairtrade, the meaning behind the logo relates to an underlying sense of altruism from the consumer who is interested in buying certified Fairtrade products (Brecard, Lucas, Pichot & Salladarre, 2012). For other consumers, this might relate to their concerns about labor conditions in developing countries (Reinstein & Song, 2012).
According to Rhee and Jung (2018), when a consumer is familiar with a brand, the relationship between the consumer and its attributes is strengthened. Brand familiarity can be categorized into familiar and unfamiliar brands based on the memories in a consumer's mind (Campbell & Keller, 2013). The outcome of a consumer having a strong connection and having memories with a brand is that familiar brands will have an advantage over unfamiliar brands (Campbell & Keller, 2013). Also, Coates, Butler and Berry (2004) found that when consumers had previous exposure to a brand name, this increased the likelihood of this particular brand to be part of the consumer's consideration set. Moreover, Hoyer and Brown (1990) state that individuals tend to choose products with brands that they are familiar with despite the product's quality being superior in unbranded or unfamiliar brand products—further suggesting the strength of brand familiarity in consumer perceptions.

When an individual is familiar with a brand, he or she creates an attachment and considers a brand as an ally by establishing a connection with it. The most important aspects considered in brand attachment are brand-self connection and brand prominence (Shabani, Hanzaei & Mansourian, 2017). Consumers develop loyalty towards a brand by having a feeling of closeness to it and participating actively in a brand community (Bergkvist & BechLarsen, 2010). People relate with certain brands because it helps them create a sense of identity by constructing themselves and how they present themselves and achieve their identity goals (Escalas & Bettman, 2003).

### 3.5 Chapter Summary

In this chapter, we have presented the selection of theories that are the four fundamental pillars of our theoretical framework. With this framework, we were able to make sense of the analysis of results made from our empirical material. Firstly, we review the theory of bounded rational behavior, also called bounded rationality, and describe the decision-making process and its elements. Also, we looked into consumer research and consumer decision-making to have an understanding of how individuals make decisions as part of their marketplace behaviors. These processes tend to become effortful; hence, consumers rely on cognitive mechanisms that simplify the process and help consumers achieve the desired outcome. These cognitive mechanisms depend on the individual's perceptual systems that are activated by stimuli.

Secondly, we review theories on emotions and emotional calibration. Emotions act at a cognitive level and individuals can use their emotions as powerful heuristic tools when they sense that information processing is limited, resulting in cognitive mechanisms that prioritize information processing. Furthermore, emotions have a role in the quality of decision-making. Emotional calibration influences decision-making by executing sacrificing strategies that help achieve the desired outcome, whether this is optimal or not, and minimizing the risk of negative emotions experienced during purchase.
Thirdly, we review the theory of consumer self-confidence and how its role might influence decision-making. This concept relates to the measure of self-confidence consumers have when in the marketplace. This self-confidence allows them to engage in effective decision-making. Also, it prompts self-protective mechanisms in order for consumers not to feel negative emotions as an outcome for purchase.

Lastly, we review the concepts of branding and brand familiarity. From a management perspective, brands are valuable assets of a company that requires strategic management to build a brand and maintain over time. Well executed brand strategies aim at building trustworthy relationships between the consumer and the brand. This is possible by establishing positive brand associations that are relevant to consumers. Consumer research helps us understand how to tap into the cognitive and affective dimensions consumers have that support brand building. Moreover, an example of positive brand associations can be seen in certified labels. This form of Endorsement Logos gives manufacturers an alternative to associate the product brand with the higher value dimensions that are related to the endorsing brand. Consumers tend to perceive Endorsement Logos as a positive way of guaranteeing the quality and standards that the product went through.
4 Methodology

In this chapter, we describe the research approach, design and methodology used for conducting this study, followed by how the empirical data was analyzed. Additionally, we discuss the quality of the research and the limitations of our research design. We used a qualitative method with semi-structured interviews in order to gain insight into consumer perceptions of Front-of-Package nutrition labeling on food products.

4.1 Research Approach

In order to have an understanding of phenomena, researchers must comprehend the philosophical basis of the research to be conducted (Easterby-Smith, Thorpe, Jackson & Jaspersen, 2018). According to Bryman and Bell (2011), the way research questions are posed and how research is conducted are both guided by the ontological and epistemological assumptions the researchers make. According to Easterby-Smith et al. (2018), ontology refers to the nature of reality and epistemology refers to the ways we gain knowledge about the nature of the world. Thus, the questions we ask ourselves are essential to establish the philosophical underpinnings for designing the research and how it will be conducted (Easterby-Smith et al. 2018; Saunders, Lewis & Thornhill, 2007).

Given that our aim is to understand how consumers perceive Front-of-Package nutrition labeling systems and whether the role of consumer self-confidence influences behavior, we must first understand how consumers make sense of these labeling systems. For the basis of our research, we assume from a nominalist ontological perspective that the nature of reality is dependent on the many perspectives of social actors (Easterby-Smith et al. 2018). From an epistemological perspective, we assume a social constructionist position to grasp how individuals ascribe meanings to their experiences when purchasing food products (Easterby-Smith et al. 2018).

Our research strategy has a basis on grounded theory. Saunders, Lewis and Thornhill (2007) state that by using a grounded theory strategy, researchers can carry out observations before building their theoretical framework, resulting in theory development from data that will test the observations made by the researchers. Furthermore, this study uses an inductive approach as the selected form of inquiry for research. Bryman and Bell (2011) state that through the process of induction, researchers can make sense of the findings and establish new concepts that can become generalizations from the interpretations made by researchers. With an inductive strategy, the starting point of research is at empirical data collection (Alvesson &
Therefore, by initially gathering and analyzing the empirical data, we can identify the perceptions of consumers and look into the theories that could explain the views of the participants, further enriching our analysis.

### 4.2 Research Design

According to Easterby-Smith et al. (2018), a constructionist research design aims to bring light to individuals' truths and how these truths are constructed. As stated in our Introduction chapter, our research question is: (i) how does consumer self-confidence influence Front-of-Package nutrition labeling use in the decision-making of food products? In order to answer our research question, this study uses a qualitative methodology to gain a more profound knowledge of consumer perceptions; more specifically, our aim is to understand the role of consumer self-confidence when using Front-of-package labeling and whether this influences food product decision-making at the evaluation and purchase decision stages. According to Alvesson and Sköldberg (2018), the study participants' perspectives are the foundations for qualitative research. This method of inquiry allows individuals to describe how they perceive and construct their views on specific issues (Prasad, 2005).

From our social constructionist stance, we adopt an interpretivist perspective to understand the different views of the social actors. According to Saunders, Lewis and Thornill (2007), from an interpretive position, researchers can delve into the meanings and motives of social actors to have a better understanding and knowledge of their viewpoints. For this reason, it is essential to have a grasp of the consumers' interpretations of food product purchase situations. Moreover, we take into account that food product decision-making occurs inside the context of grocery shopping. Thus, it is crucial to understand how consumers interpret and make sense of the grocery shopping task.

Easterby-Smith et al. (2018) state that researchers' task lies in designing research that coherently connects with data collection methods. They also state that beyond gathering data and identifying behavioral patterns, researchers should appreciate how people make sense of their experiences. During the research process, the reality of social actors becomes reconstructed and interpreted by researchers (Alvesson & Sköldberg, 2018). Moreover, Alvesson and Sköldberg (2018) state that reflective research is characterized by how researchers interpret empirical data and how they reflect on the interpretations made. For our research procedure, we use a qualitative methodology and conduct in-depth interviews. The empirical data will be analyzed through data analysis techniques. This analysis entails the interpretations made by the researchers upon conducting the interviews, studying the participants' language and how they respond during the topic discussion. Also, the character of our research topic does not aim at stimulating conflict of political or ideological nature. Our aim is to understand the role of consumer self-confidence when using Front-of-package labeling and whether this influences food product decision-making. Thus, we are looking into how consumers perceive grocery
shopping, which might be considered a commonplace activity, to understand food product decision-making and its context.

### 4.3 Data Collection Method

Methods are the tools used by researchers that connect the different perspectives about the nature of reality and how it should be studied (Bryman & Bell, 2011). For our research, we use in-depth interviews as the method to collect empirical data and gather information on consumer perceptions, as these are our identified units of analysis. Furthermore, in-depth interviews allow researchers to have access to information in context, and to understand phenomena that are otherwise difficult or impossible to observe (Easterby-Smith et al. 2018). As part of a research strategy, interviews focus on individual experiences and lifestyles rather than culture and history as a whole; also, interviews are based upon individual statements and require empathy as a way of knowing about the perspectives of individuals (Kvale, 1994).

The structure level of the interviews follows a semi-structured design with a guided open interview. By using this technique, researchers have a pre-selection of topics or issues that want to be covered, but depending on the responses received, the interview can be extended or shortened given the case (Easterby-Smith et al. 2018). For the design of the interview questions guide (see Appendix A), the following variables were identified according to the literature review on previous Front-of-Package nutrition labeling studies: time constraints when doing grocery shopping, emotions surged from shopping, the influence of packaging and its elements, and price of food products. Furthermore, the interview guide is divided into the following sections: the first section is designed to frame the relationship the participants have with the task of grocery shopping. The second section seeks to identify potential decision mediators that could influence food product decision-making. The third section addresses different Front-of-Package label formats, specifically the Guideline Daily Amounts label and the Scandinavian Keyhole symbol, in order to gain more insight into consumer perceptions of both label formats, as well as understand what the Keyhole symbol brand means to them.

For sample selection, we take into consideration young Swedish adults between the ages of 20 to 30 to understand how they do grocery shopping and which are their primary motivators when buying food products. According to Campos, Doxey and Hammond (2011), women and young adults are more frequent users of labels when selecting food products. Given that we were to conduct the study in Lund, Sweden, young adults of Swedish nationality were selected to participate in the research as they are more familiar with the Swedish food retail environment and it is part of their daily context. The sampling strategy used was Ad-hoc sampling in which people are selected based on availability; this type of strategy is convenient in situations where the priority is the pace of data collection and reducing costs (Easterby-Smith et al. 2018).
4.3.1 Conducting the Interviews

For this study, 11 participants were interviewed. Each semi-structured interview lasted approximately 20 to 25 minutes, totaling to 220 interview minutes of collected data and 43 pages of transcripts. These interviews were conducted during April 2020. The following table details the demographic information of the study participants, including age and gender.

Table 4.1 Interview participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Age</th>
<th>Gender</th>
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<tbody>
<tr>
<td>#1</td>
<td>27</td>
<td>Woman</td>
</tr>
<tr>
<td>#2</td>
<td>27</td>
<td>Woman</td>
</tr>
<tr>
<td>#3</td>
<td>29</td>
<td>Woman</td>
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<tr>
<td>#4</td>
<td>25</td>
<td>Woman</td>
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<tr>
<td>#5</td>
<td>25</td>
<td>Woman</td>
</tr>
<tr>
<td>#6</td>
<td>22</td>
<td>Man</td>
</tr>
<tr>
<td>#7</td>
<td>26</td>
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<tr>
<td>#8</td>
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<tr>
<td>#10</td>
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<td>Man</td>
</tr>
<tr>
<td>#11</td>
<td>21</td>
<td>Man</td>
</tr>
</tbody>
</table>

Furthermore, each interview was performed digitally using the Zoom platform and conducted in the English language. Also, all interviews were audio-recorded for transcribing afterward. The transcriptions were done directly after the interviews in order to capture the details and meanings of the participants' statements. Both researchers were present during the video conference interviews and were able to take contextual notes during the conversations as well.

The interviews began with a brief introduction and overview of the research topic and also outlined the sections of the interview. Participants were encouraged to engage in the conversation and ask questions freely if, at any moment, they had any doubts regarding the topics discussed or the interview questions. Moreover, while conducting the interviews, we followed the previously designed interview guide, but whenever participants discussed ideas or views that were of particular interest, we used a laddering up technique, which allows researchers to understand the reasons why behind the participant's view or statement (Bryman & Bell, 2011).

With the third section of our interview questions guide, we looked to address two types of Front-of-Package nutrition labels used currently in the Swedish retail environment: the Guideline
Daily Amounts label and the Scandinavian Keyhole symbol. In order to introduce this section, a brief explanation of the definition of Front-of-Package nutrition labels was made to the interviewees. Subsequently, stimulus materials in the form of images were shown to the participants during the interview in order to spark conversation on their perceptions of these labels. Participants spoke about their opinions on these label formats and whether they look at them or not. The following images were used during the interviews:

*Figure 4.1 Sample Product with a Guideline Daily Amounts Label, Source: Own creation*

*Figure 4.2 Sample Product with a Keyhole Symbol Label, Source: Own creation*
4.4 Data Analysis

Firstly, researchers must understand the framing approach for analyzing empirical material. Framing of data allows researchers to systematically reduce the complexity of the gathered material (Easterby-Smith et al. 2018). We approached our empirical data using content analysis techniques for interpreting the statements made by the interviewees. According to Easterby-Smith et al. (2018), content analysis is an interpretative method in qualitative research that allows for the analysis of textual data. For our research, we used textual data in the form of interview transcripts. This empirical material was collected from the selected method of research and analyzed using thematic analysis techniques.

All data was sorted through the continuous review of the transcripts. We carefully read the interviewees' statements to understand underlying meanings and establish initial codes for our analysis. According to Rennstman and Wästerfors (2018), sorting data means familiarizing oneself with the material and spending time with it to identify compelling details and recognize possible connections between these and develop categories. The data processing technique that we used was cutting and sorting; this technique involves identifying statements from interviewees and writing the most relevant ones on small index cards, including the reference or name of the person who said it (Ryan & Bernard, 2003). Hence, the quotes we recognized that were similar or related to one another were grouped and categorized (Ryan & Bernard, 2003). Furthermore, Rennstman and Wästerfors (2018) explain that sorting data gives researchers different alternatives for continuing the analysis. Thus, reducing is a way to establish criteria and condense the collected data. For our study, we were able to identify concepts that might contribute to answering the previously stated research question through the process of reduction. We followed a categorical reduction process described by Rennstman and Wästerfors (2018), this reduction method prioritizes specific categories from the sorted material resulting in a more manageable assortment of data. Using this reduction method we were able to establish categories or themes from the singled-out patterns recognized while reviewing our empirical material.

According to Ryan and Bernard (2003), a theme is an expression of something that connects to abstract constructs or concepts. Several scrutiny techniques help researchers identify themes derived from qualitative analysis. Among these, we based our analysis on the repetitions technique and the similarities and differences technique. Ryan and Bernard (2003) explain that the use of repetitions technique allows researchers to identify recurrent expressions among the empirical material. They also explain that the similarities and differences technique allows researchers to make systematic evaluations across units of data, usually with a line-by-line analysis. Using these techniques, we were able to determine the themes resulting from our empirical research. The following table details the themes we have identified:
Table 4.2 Themes identified from empirical data analysis

<table>
<thead>
<tr>
<th>Themes</th>
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<tbody>
<tr>
<td>Active search of information on packaging</td>
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<tr>
<td>Use of nutritional information depending on the perceived healthfulness of the product</td>
</tr>
<tr>
<td>Front-of-Package nutrition labels as a potential trigger of emotional reactions</td>
</tr>
<tr>
<td>Misinterpretation of Endorsement Logos and the Keyhole Symbol</td>
</tr>
</tbody>
</table>

These themes relate to concepts that were identified from the literature review on previously conducted research on consumer use and the potential effects of Front-of-Package nutrition labeling. Also, upon identifying these themes, we were able to study the theories that helped us make sense of consumers’ perceptions of these labeling systems. As a result, our data analysis process has directed us towards an understanding of how young-adult consumers perceive Front-of-Package nutrition labeling systems and whether the role of consumer self-confidence influences their behavior, especially at the stages of evaluation of alternatives and purchase decision of food products.

4.5 Validity and Reliability

Saunders, Lewis and Thornhill (2007) highlight the importance of a good research design for the credibility of the research. In the previous sections, we give an account of our research approach and design. Given that we look to gain knowledge of consumer perceptions, our research approach considers the philosophical assumptions and mode of inquiry necessary for understanding the many different viewpoints of the research participants. Moreover, through our research design, we look to collect relevant textual data to gain profound knowledge of our topic of research. Through the description of the method, the data analysis process and techniques used, as well as through the presentation of results, we strive to demonstrate the transparency of our research on how the data was collected and interpreted, how we arrived at the inferences made and the conclusions of our research.

As stated by Easterby-Smith et al. (2018), the approach taken by researchers will determine the quality of qualitative research. The validity of our research lies in the approach we take to access the participants' viewpoints. As researchers, we reflected on the possibility of affecting the participants, what they say, or not say during the interview. Hence, our task was to encourage participants to engage in conversation by setting a comfortable environment where they could talk openly about their views and opinions on the topics discussed. Saunders, Lewis and Thornhill (2007) explain that researchers must be mindful of the potential threats that can impact the quality of the research. That being so, for conducting the study, we took into account the nature of our topic and the context in time when we are studying it, the instrumentation of the method and the willingness of participants to be a part of the study and share their perceptions on the subject. We also reflected on the causal direction in order to be fully aware of potential cause and effect relations we were to make while analyzing across units of research.
Furthermore, the reliability of our research lies in the transparency of our data collection process. We have described the methodology used for our study as well as how the interviews were conducted. In a similar manner as for validity, Saunders, Lewis and Thornhill (2007) recognize potential threats to the reliability of a research project. As researchers, we also reflected on these potential errors that could risk the reliability of our research. In order to avoid participant error, we chose neutral circumstances to conduct our research in order to not lead the results of the interviewees; similarly, to avoid observer error or bias, both of us participated during the interviews and took contextual notes that were used to analyze the interviewees’ statements. Also, we analyzed all the empirical data jointly and made evaluations of our inferences and relations made between the units of research. Regarding potential participant bias, the methodology we used allowed interviewees to be very open and vocal on the topics. However, Ryan and Bernard (2003) state that thematic analysis involves the judgment of the researcher. Thus, our interpretation of the empirical material is related to the concepts identified from the literature review on previous research on Front-of-Package nutrition labels and also related to the theoretical framework developed for analyzing and making sense of our findings.

Accordingly, the steps taken throughout the research process and the results and analysis presented in the following chapters aim to demonstrate the consistency of our findings. The concepts that will be presented in the Theoretical Contributions section might have relevance in other settings (Easterby-Smith et al. 2018). However, according to Saunders, Lewis and Thornhill (2007), the interpretive nature of qualitative research raises questions regarding the generalizability of research projects that use this approach. Therefore, by presenting the systematic approach we have taken for our study, we can argue for the concepts presented as a theoretical contribution. As stated by Bryman and Bell (2011), qualitative research results can be generalizable to theory.

4.6 Limitations

The research process was susceptible to certain limitations. One of these was conducting the digital interviews while having the researchers and participants in separate settings, which presented particular difficulties in making the interviews more difficult for both parties to engage and for researchers to pick up on the nuances of the conversations. However, this technique of interviewing proved to be much more flexible for the participants (Easterby-Smith et al. 2018), as they could set up the meetings around the availability of the schedules and most of the participants mentioned to be at their own home while the interview was progressing, establishing a comfortable environment for the interview.

Similarly, a significant limitation for this study is one characteristic of qualitative research that this methodology focuses on insights from the participants' knowledge and experience (Bryman & Bell, 2011; Alvesson, 2003), these insights represent the participants speaking their minds and expressing themselves when discussing topics related to research. Hence, this study relied on a small sample that allowed us to have an extensive amount of data and information shared.
by the interviewees for analysis. This is an aspect that needs to be taken into consideration when it comes to the applicability of the findings within other research settings.

4.7 Chapter Summary

In this chapter, we have presented the methodological approach that we have undertaken for conducting our study. We have discussed the philosophical assumptions that are the basis of our research, followed by the presentation of our research strategy and research design. We also consider the reflexivity of our research process. Our study leverages a qualitative methodology with the use of in-depth interviews of semi-structured level as a data collection method. We conducted the interviews using a sample selection of 11 participants of Swedish nationality and have also given details on the process of conducting these interviews. Moreover, we have argued for the quality of our research, discussing aspects of validity and reliability of research, addressing more specific concerns related to qualitative research methodology. The data analysis techniques used for this research have been presented along with a table that includes the identified themes that have categorized our findings. We conclude this chapter on methodology with the limitations that surged during our research process.
5 Results and Analysis

In this chapter, we present the analysis of the empirical data gathered from the semi-structured interviews conducted for this research. The analysis seeks to address our research question: How does consumer self-confidence influence Front-of-Package nutrition labeling use in the decision-making of food products? On account of this, we have identified four themes from the analysis of data including, “active search of information on packaging”, “use of nutritional information depending on the perceived healthfulness of the product”, “Front-of-Package nutrition labels as a potential trigger of emotional reactions” and “misinterpretation of Endorsement Logos and the Keyhole Symbol”. These themes will be presented, along with quotes, to illustrate the topics discussed. Firstly, we will introduce the aspects that allowed us to identify food product evaluation before purchase decision and which variables influence these. Secondly, we will present the themes previously mentioned. Lastly, we will present the views of participants on the potential influence of Front-of-Package nutrition labels on purchase intention.

5.1 Food Product Evaluation and Purchase Decision

In order to gain an understanding of how Swedish young-adult consumers perceive Front-of-Package nutrition labels, we first considered necessary to pinpoint the relationship between the interviewees and the task of grocery shopping, more specifically shopping for processed food products. For this reason, participants were asked to comment on how they perform the task, how much time do the participants assign to this task, as well as how do they perceive the task of grocery shopping. These considerations allowed us to understand and identify the variables that might influence the decisions that young-adult consumers make when purchasing food products. Among these, participants highlighted the importance of time availability for grocery shopping. When considering which alternatives to buy, participants stated that price and packaging are product attributes that help them decide between products.

When asked about looking for nutritional information and Front-of-Package labeling, interviewees had different opinions on these sorts of labels. For instance, the following participants described how they use nutritional labels for deciding between which products to buy:

“If I’m weighing in between two different options and one of them is slightly healthier then I’ll pick that ... It’s more for comparing between the two and the one with the lower number is the one I’m gonna pick” - Woman, 27
“Actually more for when I need to make a decision on a new product that I wanna try” - Woman, 27

“Yes, sometimes I do, often when it is a new product, especially when it is a processed product” - Woman, 25

In this sense, when consumers evaluate alternatives during a purchase scenario, Front-of-Package nutrition labels may act as decision mediators. Thus, consumers might be selective in processing information depending on their predisposition to such, as suggested by the following participant when asked if Front-of-Package nutrition labels aided in decision-making:

“Not really, they are kind of small, so probably I won’t pay attention to them if I’m not looking for them” - Man, 23

“I don’t really look at the nutrition labels unless it’s for snacks” - Woman, 27

Overall, participants had positive evaluations from the display of Front-of-Package nutrition labels that had an overview of nutritional contents of food products, more specifically the Guideline Daily Amounts label format, as indicated by the following respondents:

“I think it’s structured in a very easy way to show what people really care about, like calories and sugar. What it tells me is that it’s really easy to get an overview of what the contents are and it’s structured in a nice way, it’s quite large but not too large, you don’t have to look at the text up close so I think it’s pretty good” - Man, 22

“The more information the better and just present it in a way that anyone can understand without having to look up something” - Woman, 27

“I think it’s good because some people do care about what’s in there, the nutritional values of each product. So I think it should stay there” - Man, 26

5.1.1 Active Search of Information on Packaging

From analyzing the data, a theme was identified from participants’ statements on following certain lifestyle choices, like being vegetarian or vegan, or having dietary restrictions; these have prompted interviewees to be more involved when selecting which food products to buy, further enhancing their attention during the evaluation of alternatives process.
“I do pay attention to packaging depending on the type of product it is. I am a vegetarian, so for example I pay attention to make sure products don’t contain meat” - Woman, 29

“I look for low sugar ... I usually go for pretty packaging, what looks healthy, low sugar and not so much additional bad stuff” - Woman, 25

Food allergies are an example of a type of dietary restriction consumers have to be mindful of when purchasing food products.

“I’m very allergic to peanuts, and I have to be very careful when I buy things. So, when it’s something like a sauce that might have peanuts in it, I usually have a good look when I pick a product, but when I see something that I suspect might have peanuts in it then I’m really careful and look through it” - Man, 22

“I have quite a few food allergies, I can’t eat lactose and I can’t eat gluten. So I kind of know which products I can eat. But if I’m gonna cook something new, then probably I would have to find some kind of alternative for some ingredients so I actually tend to look at the ingredients in the food products” - Man, 23

This entails that consumers have previously established goals or objectives and the decisions they make must fall in line with these objectives. However, this awareness might project itself more on product ingredients rather than actively looking for nutritional content information on food products.

5.1.2 Use of Nutritional Information Depending on the Perceived Healthfulness of the Product

Reflecting upon the use of nutritional information displayed on food products, participants expressed being selective towards the sorts of products they would evaluate its nutritional contents. For those products that were perceived as unhealthy, the role of selectivity in information processing comes into play, given that participants choose to overlook this information.

“I look for some information to make a decision of how healthy it is and I can decide based on that, for example for bread, if there’s a lot of sugar in it or that kind of information. And for candy, I know that it is unhealthy so I don’t need to look for it” - Woman, 27
“It depends on what kind of product it is. If it’s candy or ice cream, then I’m obviously looking for ice cream so I know it’s going to be unhealthy, then I’m not going to look” - Woman, 25

Male participants seemed to be more inclined towards looking at nutritional labels to evaluate food products that would meet their daily nutritional requirements.

“[I look] for some products, for the majority of the time I don’t think I really do. Maybe when you are buying something like protein shakes or bars, I look at those, because I want a certain amount of protein and I prefer with no added sugar, or very little sugar if I can choose that. Those are the typical products for which I look for nutritional information” - Man, 22

“Because if I’m going to have a drink and I know it’s really bad then I don’t need to know more about it. Mostly ‘cause I’m not interested. If it’s a product that I really want to get some kind of nutritional value out of it that I feel like I need, like more protein, then I would look at it” - Man, 22

“I used to when I was training a lot. Not anymore. I’m familiar more or less with nutritional value. But if I have a craving I’m just gonna go for it. For example, if it’s chocolate and I’m gonna like it I’m gonna buy it. If I have a craving I don’t care how many calories or whatever there is I don’t think about that stuff” - Man, 26

5.1.3 Front-of-Package Labels as a Potential Trigger of Emotional Reactions

A particular theme came from comments made by female participants regarding the emotions they dealt with during some purchase scenarios. When discussing the Guideline Daily Amounts label format, participants highlighted that this type of label displayed information about the percentages of macronutrients that the product contained as previously presented. Followed suit, some participants shared their perception of emotions from having that sort of information displayed at the front of the product package:

“It tells me how much it is and for me it’s like if I’ve decided I’m gonna buy something, then I don’t want this on the front of [the package] because then it’s like ‘oh great! so now I have to feel bad as well’ ... I know this is not gonna be good, please don’t tell me how bad it actually is [laughs]”
- Woman, 27

“Yeah, that gives me anxiety. It’s good to have it in the front, but yeah”
- Woman, 25
Moreover, these scenarios described by the participants illustrate feelings of shame and guilt triggered by looking at Front-of-Package nutrition labels on the food products they choose to buy.

5.1.4 Misinterpretation of Endorsement Logos and the Keyhole Symbol

When looking into Front-of-Package nutrition label formats, participants were asked to discuss the Scandinavian Keyhole Symbol format. As previously mentioned, this symbol-based brand endorses foods that have lower contents of sugar and salt, higher contents of fiber and whole grain, and healthier or lower fat content. The Keyhole Symbol gives consumers a positive evaluation of healthy food products that carry this brand on their packaging.

However, most of the participants had different interpretations of the health logo. Some of which aligned with sustainability and environmental purposes, as the interviewees were not clear of what the Keyhole stood for and spoke about their perceptions of the brand.

“I should know this but no, I don’t think I do. It’s something that’s ecological I think, right? Maybe Ecological, that it’s something that’s good for the environment. But I can’t say I know what’s called, Nyckelhålet maybe? Because it looks like a keyhole.” - Man, 22

“I mean it’s green so I guess it has to do with the environment”
- Man, 26

Moreover, even though participants were not clear about what the Keyhole symbol brand represents, they highlighted positive associations they perceived the brand has as a certified label on food products.

“When I see that I start to think positive things. Because it is more green and more natural maybe ... it does make you think about positive things, because you need to meet different kinds of criteria in order to get that symbol” - Woman, 27

“I mean it’s a keyhole. But I don’t know the name of it. Because I know there’s another one called the swan that I know. But yeah I’ve seen it I didn’t know it was called that as well” - Woman, 27

The last quote refers to the Nordic Swan Ecolabel, a type of endorsement logo that is related to sustainability and uses the color green in its design, similarly to the Keyhole Symbol. This brand has become known as a helpful tool for companies that support sustainable development and provide solutions for the environment (Nordic Ecolabelling, n.d.). The Nordic Swan Ecolabel encourages consumers to prefer environmentally conscious alternatives when purchasing goods and services (Nordic Ecolabelling, n.d.).
Moreover, some interviewed participants perceived that the products that carried the symbol on the package meant that said product had passed specific criteria to be certified and have the logo on the package. This awareness of certifications makes consumers perceive the Keyhole symbol brand positively, even if some of them felt unsure of what is the brand's purpose.

“Yeah, I think that’s good. Maybe to promote, if I knew what this keyhole really meant it would be better. But I think it’s always good to have a certification of some kind” - Woman, 25

“It’s certified. And it’s a certification for products to achieve, I guess”
- Man, 23

“I am not sure, but I think they have to pass some kind of criteria. Maybe it stands for sustainability or maybe it is just for a healthy product. I am not sure. If I see this symbol I know that it is good in some way”
- Man, 26

Upon seeing the Keyhole symbol logo, most of the participants assured they recognized seeing the brand on the packages of the products they buy at the supermarket. Although not all of them were not able to explain the concept of the brand, some of them mentioned the word Nyckelhållet, which is the translation of the word keyhole in the Swedish language. Also, some of the interviewees recollected seeing the symbol growing up, back in school, as part of their education.

“Nyckelhållet. I don’t really know what it means, I just know that it’s supposed to be healthy or something I think about it as something I always saw growing up. Because that symbol was always on all of our products, so when we got milk in school it got this little symbol and we learnt that it was healthy. But I don’t really know what it means”
- Woman, 25

“I can’t remember what it stands for. I know the logo and the name of it, but [I] can’t remember the meaning of this symbol” - Woman, 25

When asked if participants considered Health Logos to be a criterion for selecting between which products to buy, contrasting opinions surged on whether Swedish young adults would base their decisions on these kinds of Front-of-Package labels, more specifically the Keyhole Symbol.

“I don’t really know what it stands for. And I feel like it was a long time ago it was considered healthy that I don’t know what changes have been done. Before they had it on milk and now milk is not considered healthy by some. So I don’t think I would look for that [symbol]” - Woman, 25
One of the participants was able to pinpoint with certainty the name of the brand, its concept and what it stands for:

“I think it has to do with nutritional values and what’s in the products is good for your health, I would be more attracted by the Keyhole mark, because I know that those products are supposed to be healthier”
- Man, 23

An interesting evaluation made by one of the participants related to the strength of the Keyhole Symbol brand and how it might be perceived by other groups of people that are not aware of the brand.

“If you don’t know what the green one means [Keyhole symbol] then you can look at it however many times you want but it’s not gonna change anything. The symbol is probably good but retailers or whoever manages the brand needs to explain what it is to the general people” - Man, 26

5.2 Potential Influence on Purchase Intention

Regarding the possible influence Front-of-Package nutrition labels may have on purchase intention, we faced some contrasting views on the strength these visual cues might have on consumer decision-making.

“If I’m choosing between two different products and let’s say on the same price segment then I could be influenced by one of those labels”
- Woman, 27

“Maybe, but I look at it very quickly so it’s not something I would think about. It doesn’t affect my purchasing decision” - Man, 22

“I don’t think that those measurements on the front of the package would influence my decision that much” - Man, 23

Overall, young-adults stated they did not perceive the Front-of-Package nutrition labels as a determinant factor that influences them when deciding between which products to buy.
5.3 Chapter Summary

In this chapter, we presented our most relevant findings from our analysis, which were categorized into themes according to the data collected from our interviewees' statements. First, we looked to understand the relationship young adult consumers had with the task of grocery shopping and presented these findings as Food Product Evaluation and Purchase Decision, by which we determined whether consumers used and how they used Front-of-Pack nutrition labels. Subsequently, we presented the four themes that we identified from our analysis of the empirical material. The first theme presented was: Active Search of Information on Packaging, by which we identified that participants that followed certain dietary restrictions invested more time to fully assess the package of a product, demonstrating a higher involvement in food product purchasing. The second presented was: Use of Nutritional Information Depending on the Perceived Healthfulness of the Product, by which we recognize that participants use nutritional label information depending on whether they perceived certain food products as healthy or unhealthy. The third theme presented was: Front-of-Pack Nutrition Labels as a Potential Trigger of Emotional Reactions, we describe how Front-of-Pack nutrition labels might provoke negative emotions in some participants upon seeing the labels on the products they will buy. The final theme presented was: Misinterpretation of Endorsement Logos and Keyhole Symbol, we determine that the level of awareness that our participants had concerning the Keyhole symbol is low, and the brand associations they had, even though considered positive, do not represent the brand concept. Lastly, we looked to identify the potential influence that Front-of-Pack labels might have on purchase intention, and, as stated by the participants, other factors might influence consumer decision-making.
6 Discussion

In this chapter, we present a discussion of the empirical findings described in Chapter 5. This chapter aims at answering our research question and explores how consumers perceive these labeling systems and whether the role of consumer self-confidence influences their behavior at the stages of evaluation of alternatives and purchase decisions when purchasing food products. The discussion will follow the theme presentation outline from Chapter 5 and link the empirical findings with the theories and concepts presented in Chapter 3 to interpret and explain these findings.

6.1 Food Product Evaluation and Decision-making

Consumers undergo a rational decision-making process when evaluating food product alternatives for purchase. They design their choice set of alternatives for product categories and select the alternative they think would be the best choice for the desired outcome. Given that this decision-making process occurs inside the context of retail, consumers need to optimize their time in order to decide which products to buy. As stated by the participants, time is a very influential variable in grocery shopping and they feel the need to make quick choices during shopping. As suggested by Thaler (1980), consumers look to simplify the complexity of decision-making and the retail context is an environment that is favorable to do so, this simplification aids consumers in choosing which products are best for achieving the desired outcome.

Furthermore, Simon (1990) stated that individuals tend to rely on mechanisms that allow them to reach a satisfactory alternative in order to avoid effortful and complex tasks. Our interviewees stated that they rely on specific visual cues, such as the packaging of the product, for choosing between alternatives. Front-of-Package nutrition labels might serve as a visual cue that aids consumers in their food product decision-making (Sanjari, Jahn & Boztug, 2017). Also, and given that food product decision-making follows an aim that might resolve in consumption of foods, consumers have food-related goals of functional, symbolic and hedonic nature that guide them in deciding which products to buy (Bublitz et al. 2013). Our findings demonstrate that Swedish young-adult consumers tend to ascribe their food consumption to either functional goals, related to diet and lifestyle requirements, and hedonic goals, related to eating pleasurable foods, going beyond health or fitness considerations. On account of this, we find a direct correlation between the food-related goals that young adult consumers have established for themselves and the use of the information displayed on Front-of-Package nutrition labels. The use of the labels will depend on the consumer’s aim to achieve the desired
outcome. Kahneman (2003) suggested that consumers use their perceptual systems to develop impressions of objects during rational decision-making; in this sense, young adult consumers do not engage in perceptual mechanisms unless they prime themselves to look for this information, further denoting a simplification of decision-making. This also suggests a conditional use of Front-of-Package nutrition labels that is dependent on the aims of the consumers.

Even though young adult consumers recognize that they do not actively consume the Front-of-Pack nutrition label information unless they are looking for it, they do recognize that the nutritional information in the packaging is a positive aspect of food products have for consumers that do engage in a functional behavior mindset. Young adult consumers note that food products must display this information. They also recognized that it is useful for the people that use nutritional information.

6.2 Active Search of Information on Packaging

Young-adult consumers engage in active search of information on the package of the product with the aim of looking for food products that might be able to satisfy their needs. Active search demonstrates a higher involvement from consumers towards evaluating alternatives when choosing which food products to buy. As suggested by Ekström, Ottosson and Parment (2019), long-term involvement in food might result from consumers leading health and lifestyle changes such as being vegetarian or vegan or having other kinds of dietary restrictions. This suggests an attitude in young adult consumers of being more open to evaluating different sorts of alternatives that fall in line with their lifestyle of choice.

For example, dietary restrictions like food allergies or food intolerances, prompt consumers to increase their awareness of the contents of food products. Not doing so could have severe repercussions on the health and well-being of individuals. Also, leading a vegetarian or vegan lifestyle drives consumers to read and verify the claims that are stated on the packages of the products and if they go in line with vegetarianism or veganism. These sorts of consumption behaviors align with food-related goals of functional nature that aim to increase or sustain the health and wellness of the individuals (Bublitz et al. 2013), which stimulate the perceptual systems of consumers during the decision-making process as explained by Kahneman (2003). However, this awareness might project itself more when looking into product ingredients rather than actively seeking nutritional content, as implied by the interviewees, given that these sorts of dietary restrictions tend to focus on specific ingredients that consumers want to avoid. Young adult consumers might be more inclined to be on the lookout for certain ingredients instead of tracking macronutrients using the nutritional facts information. It cannot be assumed that consumers look for standardized Front-of-Pack nutrition labels such as Guideline Daily Amounts or Health Logos. Nonetheless, consumers tend to familiarize themselves with the product package information in order to reach a satisfactory alternative.
6.3 Use of Nutritional Information Depending on the Perceived Healthfulness of the Product

Young adult consumers tend to evaluate food products on their perceived healthfulness. In other words, they deem food products to be either healthy or unhealthy, depending on the category they belong to. Some examples brought up by the interviewees used comparisons between bread and yogurt, which they characterized as healthy products, and chocolate and ice cream, which they characterized as unhealthy products. This rationale follows qualities of natural assessments (Kahneman, 2003), that consumers perform in response to the impressions they have from the products found in their retail context and as part of their daily lives.

Bettman, Luce and Payne (1998) state that decision-makers have sets of goals or objectives that are to be met when deciding which products to buy. Our empirical findings show that young adult consumers make decisions that aim at reaching food-related goals, even if this might not be considered the optimal choice. Simon (1955) indicates that the use of a satisficing strategy aims at simplifying the decision behavior and reach a pay-off depending on the potential outcomes of choice. By simplifying the behavior, consumers are more inclined to be selective of the information they decide to process.

Interestingly, interviewees stated that they look for nutritional information on food products that they perceive to be healthy to make a full assessment of the product's healthfulness. If consumers perceived a product was unhealthy, they thought it was unnecessary to look at the nutritional information of the said product. Thus, we can see selectivity in information processing during decision-making when it comes to using Front-of-Package nutrition label information. Rational decision-making, as explained by Simon (1986), requires consumers to be more selective on the information they choose to process. This information will be critical in reaching a decision that might result in the desired outcome. Moreover, this selectivity in information processing: consumers thinking it is unnecessary to look for the nutritional information of unhealthy products, also illustrates consumers prioritizing information. In this case, we can see that rational behavior is bounded by the potential cognitive limitations consumers may have (Simon, 1990) and the tools consumers use for decision-making, further suggesting that consumers are setting these cognitive limitations themselves. Also, Larue et al. (2018) state that emotions are a powerful heuristic tool that acts at a cognitive level and prioritizes information. Thus, we can see that this selectivity in information processing aims at prioritizing information and suggests that emotions might have an influential role in decision-making (Larue et al. 2018).

Additionally, choosing not to look for nutritional information in food products that were presumed to be unhealthy by the interviewees implies that they engage in self-protective mechanisms. As suggested by Bearden, Hardesty and Rose (2001), consumers tend to protect themselves from triggers of emotional reactions that can result in negative outcomes or negative emotions, such as guilt or fear triggered by purchase scenarios (Sanchez-Garcia et al. 2019). This also aligns with Luce's (1998) perspective on avoidance reactions of consumers in order
to ward off negative emotions. Young adult consumers would avoid reading the information in the Front-of-Package nutrition label because they perceived it as unnecessary. That being so, the use of Front-of-Package nutrition labels is not only conditional to the consumer's food-related goals, as stated in the previous section, but it is also conditional to the consumer's perceptual construct of product healthfulness developed when deciding between which products to buy.

Under these circumstances, the choice of food products that are deemed unhealthy by young adult consumers could be categorized as a hedonic goal that they aim at reaching for having pleasurable food experiences. This consumption behavior follows a satisficing strategy, as explained by Simon (1955), and denotes a great influence of consumer self-confidence when it comes to decision-making. Young adult consumers stated that they are aware of the potential consequences of reaching for unhealthy food products, still, their hedonic behavior mindset rationalizes the decision-making process by restricting the use of the nutritional label information, as part of the satisficing strategy (Simon, 1955), in order to avoid experiencing the feeling of regret, as indicated by Thaler (1980), resulting from the purchase setting.

6.4 Front-of-Package Labels as a Potential Trigger of Emotional Reactions

Our analysis of the empirical data determines a strong connection between the role of human emotions and decision-making, as described by multiple authors, human emotion is a key influence in rational decision-making (Thaler, 1980; Simon, 1986; Kidwell, 2004; Larue et al. 2018; Sanchez-Garcia et al. 2019). In the case of nutritional information processing, consumers tend to set cognitive limitations themselves as part of bounded rational behavior, in order to minimize the feeling of negative emotions, the latter outcome as indicated by Bettman, Luce and Payne (1998) might justify the rationale behind the satisfactory pay-offs from the decisions they have made. Thus, consumer emotional calibration influences the outcome of decision-making by restricting the choice set (Kidwell, Hardesty & Childers, 2008a; Thaler, 1980), and further moderating consumer behavior to avoid using Front-of-Package nutrition labels. This suggests Front-of-Package nutrition labels might enhance this self-awareness in consumers and, in order to avoid this consequence, consumers might choose to entirely block the perceptual process of nutritional facts information cues during decision-making. This avoidance attitude responds to a need to suppress negative emotions that might result from negative decision-making outcomes and might also affect the individual's well-being (Luce, 1998).

Similarly, we also assume that consumer self-confidence has a strong influence on moderating consumer behavior during this stage of decision-making. Our empirical findings demonstrate that young adult consumers feel sure about the decisions they make when it comes to purchasing food, which denotes a high degree of self-confidence in marketplace behaviors, according to Bearden, Hardesty and Rose (2001). Hence, consumer self-confidence is a moderating
influence on emotional calibration and guides food product decision-making towards reaching food-related goals.

Following the notion of emotions triggered in purchase contexts, endorsement logos related to food product healthfulness, also called Health Logos, might reduce or even not generate feelings of negative emotions. On the other hand, the Guideline Daily Amounts label format might be triggering negative emotions in consumers during the purchase context. Rather, Health Logos might trigger positive associations among consumers depending on the brand's concept and how consumers perceive it.

6.5 Misinterpretation of Endorsement Logos and the Keyhole Symbol

From our empirical data analysis, Swedish young adult consumers seem not to be very familiar with the Keyhole symbol brand and its brand concept. Consumer perceptions of the brand tend to align with concepts of sustainability or environmental impact; therefore, interviewees related the products that had this logo on the front of the package as sustainable or environmentally positive products. This could relate to the design of the Keyhole symbol logo and its predominant use of the color green, which might suggest this association with other sorts of certified brands currently in the market. The characteristics of the visual elements might spur positive image associations in young adult consumers (De la Cruz et al. 2017). Also, as Hoseini (2019) stated, the color green can have positive connotations in consumers when applied to Front-of-Package nutrition labels. It is worth recognizing that one of the participants related the Keyhole symbol with the Nordic Swan Ecolabel. From a managerial perspective, this could represent a potential threat for the brand, taking into consideration that it seems to be competing with other Endorsement or Certified Brands in the market. However, these are not in the same category.

Furthermore, Swedish young adult consumers stated that a product brand with an Endorsement Logo is perceived to have a positive image. Some of the interviewees were able to recollect the name from memory; they remembered that growing up, they used to see the logo on product packaging. Even though they were not able to identify the brand concept, they recognized that the symbol had positive associations with it. This can be considered a favorable brand association, the Keyhole Symbol has on its behalf, according to Keller (1993). The affective dimension of brands contributes to building a positive image in the consumer mindset (Delgado-Ballester, Munuera-Aleman & Yaguë-Guillén, 2003). Consumers tend to believe that having a brand that endorses the product is a valuable and beneficial aspect because it means that the manufacturers comply with the requirements to obtain the endorsement, further connecting the manufacturer with brand values of the endorsement brand (Konopka et al. 2019). Therefore, consumers felt sure in making the assumption that the Keyhole symbol, when viewed as an Endorsement Logo, is beneficial for the product brand and potentially for the
consumer themself. For this reason, endorsement logos could promote positive perceptions for products that carry this symbol on the frontal side of its package. However, given that the Keyhole symbol needs to comply with different levels of criteria regarding macronutrient content in food products, manufacturers might find it hard to comply with these. Thus, manufacturers might not choose to give up this strategy, further decreasing the uptake to include the logo on the packaging of food products.

6.6 Chapter Summary

In this chapter, we presented a discussion of the inferences that we made from the analysis of our empirical findings and the use of our theoretical framework. We categorized our discussion by using the themes identified in previous sections. Through this process, we were able to explain particular views and attitudes our participants had from the topics discussed during the interviews. By relating these with the concepts and theories identified in our framework, we have a deeper understanding of how consumers perceive these labeling systems and whether consumer self-confidence influences their behavior when purchasing food products.

From our analysis, we can see that consumers tend to rely on cognitive mechanisms that aid in decision-making. Especially when other variables such as price and time influence the food product purchase context. That being so, consumers tend to rely on visual cues for this purpose. Hence, Front-of-Package nutrition labels might influence consumers’ food product decision-making. However, our findings also demonstrate that Swedish young adult consumers tend to ascribe their food consumption to the functional and hedonic nature of food-related goals. Also, the use of Front-of-Package nutrition labels will be conditional to the previously established food-related goal to achieve the desired outcome. Certain dietary restrictions prime consumers into being more perceptive of the information on the package of the product; this also relates to consumers trying to achieve a food-related goal to secure their well-being.

Furthermore, young adult consumers tend to assess how healthful a product is depending on its category. Under the circumstances, consumers will be selective of the information they choose to process, stating that it is unnecessary to look at the Front-of-Package nutrition label when a product is deemed unhealthy. This relates to the notion of consumers trying to suppress potential negative emotions derived from purchase scenarios. Further denoting a high degree of self-confidence when engaging in hedonic food product purchasing.

Lastly, from our analysis of the empirical data, we can see that consumers tend to confuse Endorsement Logos and the Keyhole Symbol. Consumers perceived to be related to environmental aspects instead of associating it with their brand concept of healthfulness. Nonetheless, Swedish young adult consumers tend to develop positive associations when looking at Endorsement Logos placed on the frontal side of product packaging. This can be considered a favorable brand association the Keyhole Symbol has on its behalf that needs to work on to reposition itself in the market.
7 Conclusion

In this chapter, we conclude with the main findings from our research and reflect on the research process. It includes a review of the research aim and objective, theoretical contributions and practical implications. Finally, we provide recommendations for future research.

7.1 Research Aims

The aim of this research was to understand how consumers perceive Front-of-Package nutrition labeling systems and whether the role of consumer self-confidence influences their behavior at the stages of evaluation of alternatives and purchase decision when purchasing food products. From the analysis of our empirical data, we recognize that young adult consumers do not find Front-of-Package nutrition labels as a determinant factor that influences food product purchase intention. Nevertheless, when analyzed separately, the Guideline Daily Amounts label might influence consumers when they weigh in between different food products from the alternatives in their choice set and, only if consumers aim to achieve a food-related goal of functional nature.

On the other hand, the Keyhole Symbol, as an Endorsement Logo for healthy food products, garners positive evaluations from consumers that serve as a market opportunity to rebuild brand awareness in the Swedish young adult consumers market segment.

In short, to answer the question: How does consumer self-confidence influence Front-of-Package nutrition labeling use in the decision-making of food products? Our findings demonstrate that consumer self-confidence has a moderating influence in the use of Front-of-Package nutrition label information during food product decision-making, depending on the food-related goals consumers may have established for themselves prior to purchase. In other words, the degree of self-confidence consumers have will influence their perception of Front-of-Package nutrition label information. Moreover, the use of nutritional information will be conditional to a functional behavior mindset in the sense that consumers will use these sorts of information if, and only if, they perceive that this information will lead them towards their functional goal. Under these circumstances, this form of satisficing strategy might result in a satisfactory pay-off. However, when viewed from the perspective of a hedonic behavior mindset, consumer self-confidence has an even more influential role in rationalizing food product decision-making given that consumers choose not to use Front-of-Package nutrition labels, but rather restrict the use of these, in order to execute the satisficing strategy to achieve their food-related goal of hedonic nature. Under these circumstances, this form of satisficing strategy will result in a satisfactory pay-off, even without triggering negative emotions due to the consumers’ self-protective mechanisms during purchase, heightened by the high degree of
self-confidence they have, in order to reduce potential self-awareness triggered by Front-of-Package nutrition labeling.

7.2 Theoretical Contribution

Our analysis of the empirical findings has driven us to establish a model that can explain consumer self-confidence in food product decision-making. As previously stated, we have identified that consumer self-confidence has a moderating role in behavior. During food product purchase scenarios, consumers decide in between the choice set of alternatives available at the retail context. Furthermore, during the evaluation of the alternatives stage, consumer self-confidence exerts an influence when consumers are weighing in their choices. After this, an alternative is selected aiming to reach a satisfactory outcome, in this case, a food-related goal of functional or hedonic nature. At this point, we notice a linear progression of the decision-making process. However, our findings demonstrate a correlation between the previously established food-related goals and the consumer's self-confidence that acts as feedback influencing the stage of evaluation of alternatives, in order to select an alternative that aligns with the consumer's food-related goal.

![Figure 7.1 Model of Consumer Self-confidence influence on Food Product Decision-making, Source: Own Creation](image)

In this case, upon evaluating the desired outcome, the feedback acts as a satisficing strategy that consumers execute to achieve their aim of functional or hedonic nature. It is important to recognize that during the evaluation of alternatives stage, consumers will engage in the perceptual systems that will allow them to use the Front-of-Package nutrition label information. To illustrate, if a consumer has a food-related goal of functional nature, he or she will use self-confidence for effective decision-making and evaluate the food product alternatives in the choice set using the Front-of-Package nutrition label as a decision mediator that might potentially influence which product he or she chooses. On the other hand, if a consumer has a food-related goal of hedonic nature, he or she will use self-confidence as a self-protective mechanism to ward off negative emotions that could arise from the purchase setting while executing the satisficing strategy in order to achieve the food-related goal.
By presenting this model, we aim at illustrating our analysis of the empirical findings and also demonstrate how we developed the concepts presented in the discussion of Chapter 6. Our level of involvement in the research has allowed us to have a profound understanding of how consumers perceive Front-of-Package nutrition labeling systems and how consumer self-confidence influences their behavior when it comes to food product decision-making. However, we aim at depicting the inferences made for the reader to have a visual expression of our main findings.

7.3 Practical Implications

With our study, we intend to contribute to the marketing discipline by demonstrating the level of influence specific cognitive processes have on rational decision-making, specifically, food product decision-making. The degree of self-confidence has a significant influence when consumers are evaluating alternatives. At this stage, brand familiarity might also influence consumers towards choosing certain products over others. Therefore, from a brand management perspective, food product manufacturers can build the strength of their brands by building a trustworthy relationship with the consumer, one that addresses their cognitive and affective elements. Moreover, our findings demonstrate that Swedish young adult consumers highlight the importance of displaying nutritional information in a comprehensible way for consumers to use and be able to make right and informed decisions. This stimulates the perception of transparency consumers have from the brand that could translate to transparency towards the manufacturer and its practices; this can also help build a trustworthy relationship between the consumer and the brand.

Furthermore, our analysis of the Keyhole symbol as a Health Logo has helped us understand the influence of certified labels on the packages of the products. Consumers have positive associations of Endorsement Logos, which are favorable for strategic brand management. Thus, food product manufacturers can leverage their marketing strategies by using Health Logos and potentially garner positive brand associations from the endorsing organization, further enhancing their brand positioning. Also, it is important to recognize that these findings can also help policymakers address potential brand associations consumers may have to build a strong and unique brand that is recognized by consumers in the marketplace.

7.4 Future Research

Our study contributes to the field of consumer research by addressing cognitive processes that consumers engage in during rational decision-making. Our focus on Front-of-Package nutrition labels gives us insights into consumer perceptions of food product purchasing. However, we must emphasize that qualitative studies are framed in a way towards being able to answer the
research question and pursue the research aim. Thus, our research findings are limited to the participants of our study. Even so, further research is needed in order to have a deeper understanding of consumer behavior. The research design and methodology adopted for this study can guide future researchers in designing and conducting similar studies with alternative samples to focus on other more specific aspects of the food product decision-making process.

7.5 Chapter Summary

Finally, we conclude this chapter with a summary of the main findings from our research. We also aim at establishing final assessments that look to answer our research question based on the analysis of our empirical findings and the inferences made based on our theoretical framework. Our research concludes that consumer self-confidence has a moderating influence on the use of Front-of-Package nutrition labels depending on the previously established food-related goals that consumers have set out to achieve. We designed a model of consumer self-confidence in food product decision-making in order to illustrate our findings. We also present the practical implications that our research has within the marketing field and the potential use of these concepts in managerial settings. Lastly, we state the considerations other researchers must consider for future studies.
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Appendix A

Interview guide

Introduction: Thank you for participating in this interview. This is part of our study for our master thesis project on Front-of-package labels on food products. All the empirical data gathered from this interview will be collected for the purpose of research. We would like for this to be an on-going conversation, so if at any moment you have questions or comments, please let us know.

Section 1 - On how they do grocery shopping
- Do you do grocery shopping for your household?
- Where do you do your grocery shopping? Do you shop in-store or online?
- How frequently do you go grocery shopping?
- How much time would you say it takes you to do your grocery shopping? Do you plan it ahead?
- When you decide you are going grocery shopping, how do you prepare yourself?
- Do you follow a budget for grocery shopping? What kinds of products are considered in this budget?
- Can you describe what a normal grocery shopping trip is like for you?
- If you could describe grocery shopping with one word, what word would it be?

Section 2 - On food product decision-making
- When you are at the shop, what do you look for in the products you buy?
- What makes you decide between one product or the other? Do you follow other people’s recommendations? Do you follow marketing or advertising information?
- Do you look at the packages of products? What do you look for in the packaging information?
- Do you look for nutritional information in food products? What kind of information? If not, why?
- If you look for nutritional information in food products, would you say you understand them or do you think they are incomprehensible?

Section 3 - On Front-of-Package labels and the Keyhole symbol
In this section, we are going to talk about Front-of-package labels (Guideline Daily Amounts–GDA, Health Logos). These are labels that are placed in the frontal side of food products. Participants will be shown the different FOPL formats to encourage discussion.
- Have you seen these Front-of-package labels on the food products you buy?
- When choosing which products to buy, do you look for these labels?
- Would you say these labels help you decide which products to buy? How so?
- If you were to find this label on a product, what can you tell about this product?
Participants will be shown the Keyhole symbol logo to encourage discussion

- Have you seen this symbol before?
- What comes to your mind when seeing this logo?
- Do you know what it stands for? Can you please tell us more about what it stands for?
- When choosing which products to buy, do you look for this symbol? Why?

**Final section - Closing remarks**

- Would you like to see these kinds of labels on the products you buy? Why?
- Which of these labels do you think is useful?