



# Generation Z's perception of food healthiness: The case of Kellogg's cereals – A qualitative study in Germany and Ireland

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## ABSTRACT

One way to prevent diseases caused by unhealthy diets is to help consumers make better dietary choices. Knowledge about the consumer perception of food healthiness can help to understand which indicators are important for consumers to make healthy food choices.

Generation Z members are young consumers who can influence the market supply in the next few years. To better understand Generation Z's perception of healthy food, sample products from Kellogg's brand were used to conduct focus group discussions in Germany and Ireland. Eight young consumers, aged between 18 and 25 years, participated in each focus group discussion. Both focus group discussions were summarized and analyzed according to Mayring.

Essentially, what emerged was that both focus groups use the same indicators to evaluate the health value of a product. The indicators included the ingredient list, nutritional value table, packaging design, and additional information on the package. Noticeable differences in the subtopics were that young German consumers discussed the ingredient list in general and discussed the understanding and order of ingredients, whereas young Irish consumers discussed specific ingredients in more detail. In addition, German participants perceived the colours green, blue, and purple of product packaging as indicators of product healthiness, whereas Irish participants generally perceived darker colours as indicators. German participants generally perceived the ingredients of a product as the most important indicator, whereas Irish participants also considered the nutritional value information to be very important. Furthermore, a variety of foods was generally important in the German focus group, and origin and price were indicators in the Irish focus group. The study also shows that Generation Z consumers in Germany and Ireland are uncertain when evaluating a product, and thus, better consumer education is desired to improve the level of knowledge.

## 1. Introduction

In 2017, an estimated 11 million people worldwide died from unhealthy diets, including high intake of salt, low intake of whole grains, and low intake of fruits, which did not include deaths due to malnutrition, starvation, or heavy alcohol consumption. From a regional perspective, the causes are weighted differently, and certain regions have specific causes that pose health problems (Afshin et al., 2019). Obesity is one of the biggest public health problems worldwide and is one of the most significant lifestyle diseases, which in turn can lead to other diseases, including cancer and diabetes. Studies have shown a link between obesity and eating behaviors, and that eating behaviors are one of the main reasons for obesity (Safaei et al., 2021).

In 2019, overweight and obesity in adults in various countries were

determined; a Body Mass Index (BMI) of over 25 is considered overweight, and a BMI of >30 is considered obese. In 2019, the average adult overweight and obesity rates were 61 percent in Ireland and 60 percent in Germany. In Germany, the prevalence of overweight and obesity has doubled compared to that in the millennium (OECD, 2019). Further recent surveys related to age groups indicated that participants in Ireland were 22 percent overweight and 8 percent obese in the 15–24 age group in 2022 (Statista, 2022). In Germany, 5.5 percent of respondents aged 18–20 years were obese, 14.7 percent were overweight in 2021, 6.3 percent were obese, and 22 percent were overweight in the 20–25 age group (Destatis, 2023). In Germany, the trend for obesity increased in all age groups of 18 years and older from 1999 to 2017 (German Federal Statistical Office, n.d.). There is a significant trend of overweight and obesity among adolescents in Ireland, with the number

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increasing since 1990. Particularly striking is the increase in the prevalence of obesity in 2020 compared to the year 1990, from 0.5 percent in 1990 to 8 percent in 2020 (Heslin et al., 2022). The already collected identification numbers in Germany and Ireland differ; therefore, it cannot be excluded that there is also a difference in the reasons for these numbers. Different regions can provide different reasons for the occurrence of health problems. Besides cultural differences due to the development of countries, socioeconomic factors as well as lifestyle and future trends in health behavior can play a role. This makes it more important to better understand different regions by understanding consumers. For this purpose, consumers' subjective perceptions of food healthiness can be informative and thus offer approaches to implement measures that educate consumers.

Extensive work already exists on the perception of health values in relation to food. A systematic literature search was conducted using the ScienceDirect and Wiley databases. Additionally, a literature review addressed the factors that reveal the perceived health benefits of foods. A product has many attributes and, therefore, many options for perceiving food as healthy. The review by Plasek, Lakner, and Temesi identifies factors that consumers consider important in their perceptions of food health. It was found that the communicated information on the packaging, the shape and colour of the packaging, ingredients, product category, organic, country of origin, and the taste and other sensory characteristics of the product are factors that consumers use to guide their decision making (Plasek et al., 2020). A health-related statement on product packaging has a positive influence on the perception of food healthiness. With a total of 120 participants, it was found that text with additional graphics and information led to a product being perceived as healthier (Miraballes and Gámbaro, 2017). The shape and colour of the product also play a significant role but are perceived and evaluated differently in different regions. For example, in Denmark, paler colours are associated with a healthy product, whereas in the United States, balanced colours are associated with a healthy product (Festila and Chrysochou, 2018). Besides the design of a product, it was found that consumers particularly look for the ingredients in the packaging that nutrition experts recommend in terms of healthy eating. However, there are different indicators that various studies have outlined. For example, with 263 participants in a conjoint analysis and two focus groups with 8 participants each, it was found that a food healthiness is associated with low sodium and fat (Pires et al., 2019). Another study showed that foods are more likely to be perceived as healthy if they have added omega-3 fatty acids compared to products without additives (Shan et al., 2017). The category name that the product carries can also contribute to how the consumer perceives the product, so the term muesli bar is automatically perceived as healthier than the term chocolate bar (Fenko et al., 2016). The organic origin with which a product is advertised also leads consumers to perceive it positively in terms of food healthiness (Prada et al., 2017). In addition to the attributes that can be judged by packaging, there is also an attribute that is related to sensory perception. For this purpose, four consecutive experiments were conducted to test the four hypotheses. Through an implicit association test, a taste test with a mixed analysis of variance, questions to rate a product, and a choice experiment, it was found that products perceived as less healthy were also associated with tasting less good (Raghunathan et al., 2006). Consumers seem to agree with some attributes, and there are differences in others, which may be influenced by several factors. It is therefore even more interesting to determine which attributes German and Irish consumers refer to and how they use them in the context of the product selected for this study.

In summary, the perceived healthiness of food is influenced by a complex interplay of factors, including on the product side: communicated information, product category, packaging attributes, ingredients, organic origin, and sensory features, and on the consumer side: cognitive factors, socioeconomic status, and cultural influences. The information conveyed through food packaging, particularly front-of-package (FoP) labels and health claims, significantly affects consumer

perceptions. Such information can sway consumer choices more than the actual nutritional content of the food (Plasek et al., 2020). The categories of food products also influenced perceptions. Organic or natural categorizations often lead consumers to perceive products as healthier regardless of their actual nutritional content (Cena and Calder, 2020). Packaging design elements, including shape and colour, can convey healthiness. Bright colours and specific shapes are associated with vitality and can influence consumer choices (Plasek et al., 2020). Ingredients listed on food products are direct indicators of healthiness. The inclusion of components like whole grains or superfoods can enhance the perceived healthiness (Cena and Calder, 2020). The organic origin of food products is a significant factor in consumer perception. Many associate organic foods with health benefits, influencing purchasing decisions (McClements and Grossmann, 2021). Taste and other sensory features can also impact the perceived healthiness. There is often a trade-off between taste and healthiness in consumer perceptions, with flavorful products sometimes seen as less healthy (Zsarnoczky et al., 2019). In the context of tourism, food safety becomes a critical aspect of perceived healthiness. Consumers consider the safety measures and hygiene practices of food providers as indicators of healthiness (Zsarnoczky et al., 2019). Cognitive factors, such as brand and type of product, have an effect on the perceived healthiness of food, but these features do not influence the choice and intake of food consistently (Plasek et al., 2020). Socioeconomic status is perceived to influence healthy eating, with factors across individual, social, lived, and food environments playing a role in dietary choices (Contento et al., 2006). Cultural background and traditions can significantly affect what is considered healthy, with diverse cultures having varying definitions and standards for healthiness in food (Airhihenbuwa et al., 1996).

Generation Z is represented by people born between 1997 and 2012 (Pew Research Center, 2019), a young generation that has grown up differently than all previous generations, due to technological progress, which brings changes in lifestyle (Dimock, 2019). This makes it important to address where changes may lead to different perceptions. For example, another study dealt with the intentions to eat healthy among Generation Z, people of Generation Z can be classified as rational decision-makers, which can help to better understand Generation Z and make important decisions for the future market (Savelli and Murrura, 2023).

The present study aimed to investigate the perception of food healthiness among Generation Z in Germany and Ireland. For this purpose, Kellogg's brand, with products in the cereal segment, served as sample products. Kellogg's brand and sample products were chosen because they are marketed in both the countries. The purpose of this study was to determine whether Generation Z has a different opinion on the perception of food healthiness in the two countries. The second aim is to investigate what Generation Z would like to see in Germany and Ireland to make better decisions and thus improve their knowledge. For these objectives, focus group discussions were conducted in Germany and Ireland, with eight consumers in each country.

## 2. Method

### 2.1. Study design

Germany and Ireland present a compelling comparative framework for investigating Generation Z's perception of food healthiness, particularly in the context of a globally recognized brand like Kellogg's cereals. The choice of these two countries is underpinned by their distinct cultural, demographic, and dietary characteristics, which can significantly influence consumer behavior and perceptions of food healthiness. Germany is known for its strong cultural emphasis on organic products, with a well-established market for health-oriented foods. German consumers generally have a higher awareness of food quality, sustainability, and nutritional content, often prioritizing these factors in their purchasing decisions (Plasek et al., 2020). This cultural predisposition

towards health-conscious choices is reflected in the German market's demand for products that emphasize natural ingredients and minimal processing, which aligns with Generation Z's growing interest in health and wellness. In contrast, Ireland, while increasingly influenced by global dietary trends, still retains elements of traditional food culture. The Irish food market has undergone significant transformation in recent decades, with a noticeable shift towards more convenient, processed foods, which is particularly evident among younger generations (Fitzgerald et al., 2010). This shift has contributed to changing perceptions of what constitutes healthy food, with younger consumers, including Generation Z, navigating between traditional dietary practices and modern, convenience-driven food choices. Ireland, with a smaller and more homogenous population, offers a contrasting setting. The country has experienced rapid economic growth, leading to increased urbanization and exposure to global food brands, including Kellogg's. However, the smaller scale of the Irish market allows for a more focused study of how cultural and economic changes impact consumer behavior among younger generations (Heslin et al., 2022). The rising rates of obesity among Irish adolescents highlight the growing public health concern related to dietary behaviors, making Ireland an important case for understanding how Generation Z perceives food healthiness in a rapidly changing food landscape.

This study deals with the perception of food healthiness in Germany and Ireland using the example of Kellogg's brand. The focus of this work is to understand the subjective meaning of human action (Döring and Bortz, 2016, p. 14) using qualitative research. Qualitative research focuses on the whole individual rather than on individual variables; thus, it is possible to describe social facts comprehensively (Döring and Bortz, 2016, p. 14). A qualitative study design was chosen because it can provide a better understanding of consumer perceptions; for example, in a focus group discussion, the researcher has the opportunity to pick up attitudes and perceptions that come from a large amount of information. Additionally, qualitative research has gained importance in the field of exploratory food research (Ares and Varela, 2018). On the one hand, a self-progression in the focus group discussion is aimed for, but on the other hand, fixed guiding questions are followed with the help of a moderator (Döring and Bortz, 2016, p. 380), among other things, this forms the basis for obtaining statements about food as well as the reasons for the individual's subjective way of thinking.

Focus group discussions were conducted in Germany, Buchholz in der Nordheide in February 2023, and Ireland, Tullamore in March 2023. Both focus group discussions were conducted.

## 2.2. Study sample

For the focus group discussions, participants were invited between the ages of 18 and 25. This age range represents Generation Z, those born between 1997 and 2012 (Pew Research Center, 2019). Only consumers older than 18 years were selected. Generation Z served as participants because this young generation has grown up differently from previous generations in terms of technological interaction, and Generation Z has grown up with technological advancements and this shows "dramatic shifts in youth behaviours, attitudes and lifestyles" (Dimock, 2019). The purpose of this study is to show how Generation Z in Germany and Ireland think about food healthiness, and also to compare the countries to show whether Generation Z has developed differently in two different countries regarding perceptions of food healthiness.

From the focus group discussions, participants who had a high knowledge of food healthiness or had studied this topic area, only participants who were interested in the topic and a discussion were selected. In addition to age and gender, the educational background and current job were queried. It is important to note that detailed information regarding territorial origin (urban versus rural) was not collected. This represents a limitation of the study, as the environmental context may influence consumer perceptions of food healthiness, particularly among younger individuals, who may be more shaped by their

immediate surroundings (Sobal, 2001; Popkin, 2010).

## 2.3. Procedure

Consumers were acquired through advertising the discussion on social media, asking people in the socioeconomic environment of the second author and after asking in person on public streets. It was informed in advance that the discussion would be recorded with an audio device, that participants had to agree to the use of their data, and that the discussion would take about an hour. In addition, the participants were informed of the location and time of the discussion. Before the start of the discussion, participants had to personally consent in writing to data processing on the one hand, and on the other hand, they had to provide their age, gender, education level, and current job. All participants agreed that their data could be used for this study, in publications related to this study, as well as for audio recording on site. A moderation plan was made in advance to guide the structure of the focus group discussion, which was a semi-structured discussion, meaning that a moderation plan was given to have a guideline of questions and product examples; however, participants were also able to respond to each other's comments, and the moderator was able to ask specific questions about each statement. The moderation plan is presented in the Appendix (Table 5).

Before the focus group discussion began, all participants briefly introduced themselves so that they could get to know each other; there were also name tags at the respective places of the participants. After that, the moderator explained the rules and process of the discussion, and the discussions started by showing the sample products from Kellogg's brand. For this purpose, five products of Kellogg's were selected, which are available in Germany and Ireland. The sample products consisted of five different cereals with different attribute values. Each example product was presented in the discussion and the participants could take the products in hand, and there was still information on how expensive the example products were in the respective country. The example products for Germany and Ireland are summarized in Tables 1 and 2, respectively. The five Kellogg products differ in both countries, mainly in terms of size, price, and additional information on packaging and labels. There are also differences in the naming of Product Example 5 and the ingredient list of Product Example 4.

Focus group discussions were structured using a moderation guideline, as outlined in Table 5 in the Appendix. This semi-structured approach allowed for flexible discussion while ensuring that key topics were consistently covered across sessions. As stated above, the moderation guideline began with an introduction to familiarize participants with the sample products, which were five different Kellogg's cereals (as described in Tables 1 and 2). The following key questions were asked:











**Introduction to Products:** Participants were first asked to familiarize themselves with sample products. This was crucial to establish a common baseline for the discussion and to ensure that participants could make informed comparisons between products.

**Definition of Healthy Food:** Participants were asked, "What are healthy food products for you?" and "How can you tell if a food product is healthy?" These questions were intended to elicit the participants' subjective definitions of food healthiness, and the criteria used to judge the healthiness of foods.

**Comparison of Products:** Participants were then asked to compare the sample products in pairs, with the question, "Which product is healthier?" This question was repeated for different pairs of products to ensure a thorough comparison and discussion of the attributes considered important by participants. The five example products were compared in pairs, a total of five times, and this was accompanied by the question of which of the two example products was healthier and why. The pairwise comparison ensured that the participants looked at one example product in detail and talked about all attributes. The facilitator addressed the statements made by the participants and asked specific

**Table 1**

Example products from the brand Kellogg's in Germany used in the group discussion (translated from German).

Attributes	Example 1	Example 2	Example 3	Example 4	Example 5
Name	All-Bran Flakes	Crunchy Oat Granola Mixed Berries	Crunchy Nut	Cornflakes	Toppas Classic
Product size	500g	320g	375g	375g	330g
Product design					
Product material	Cardboard and plastic	Plastic	Cardboard and plastic	Cardboard and plastic	Cardboard and plastic
Nutrition table (per 100g)	Energy 358 kcal Fat 2.2g Saturates 0.4g Carbohydrate 65g  of which sugars 14g	Energy 451 kcal Fat 14g Saturates 1.9g Carbohydrate 67g  of which sugars 11g	Energy 398 kcal Fat 4.5g Saturates 0.7g Carbohydrate 82g  of which sugars 35g	Energy 378 kcal Fat 0.9g Saturates 0.2g Carbohydrate 84g of which sugars 8.0g Fibre 3.0g Protein 7.0g Salt 1.1g	Energy 364 kcal Fat 2.0g Saturates 0.6g Carbohydrate 72g of which sugars 17g Fibre 9.0g Protein 10g Salt 0.03g
Ingredient list	Wholewheat(59%), wheat bran(18%), wholewheat flour, sugar, barley malt extract, glucose syrup, salt, natural flavouring.	Whole oats(71%), sugar, sunflower oil, wheat flour(6.5%), corn fibre, glucose syrup, puffed barley(2.5%), freeze dried fruits(2.5%) (blackcurrant, cranberry), emulsifier (soy lecithin), natural spice flavouring, natural flavouring, barley malt extract.	Maize, sugar, peanuts(6%), barley malt extract, molasses, honey(1%), salt, niacin, iron, vitamin B6, riboflavin, thiamin, folic acid, vitamin D, vitamin B12.	Maize, barley malt extract, sugar, salt.	Wholewheat(84%), sugar, humectant (sorbitol), beef gelatin.
Recommended portion size	30g	45g	30g	30g	40g
Nutrition values for recommended portion size					
Price in €/product size <sup>a</sup>	4.49	3.49	3.29	3.29	3.29
Price in €/kg <sup>a</sup>	9.98	10.91	8.77	8.77	9.97
Additional information at the front	Fuels a healthy gut  High in wheat bran fibre	30% less sugar  High fibre  Made with 71% wholegrain oats	No artificial colours  No artificial flavours	No artificial colours or flavours Responsibly sourced corn The Original since 1906	84% wholegrain  High in fibre
Additional information at the sides	Natural grains High in wheat brain fibre Healthy gut		Natural grains Rolled & toasted No artificial colours or flavours	Natural grains Rolled & toasted No artificial colours or flavours	84% wholegrain High in fibre No artificial colours or flavours
Additional information at the back	3.7g wheat bran fibre per serving High in wheat bran fibre That fuels a healthy gut	Start good one bowl at a time High fibre with oat grain fibre to support your gut health Lower sugar delicious granola with 30% less sugar	Natural grains Rolled & toasted	Natural grains Rolled & toasted	Natural grains Rolled & toasted
Labels	Helping you feel at your best every day Vegan Suitable for vegetarians  HFA approved  Manchester Beth DIN Kosher Parev	Vegan Suitable for vegetarians  HFA approved  Manchester Beth DIN Kosher Parev	Suitable for vegetarians HFA approved  Manchester Beth DIN Kosher Parev	Responsibly sourced corn Vegan Suitable for vegetarians HFA approved  Manchester Beth DIN Kosher Parev	

Note.

<sup>a</sup> Source: These prices were paid in the respective country to obtain the product.

questions about what the participants were saying.






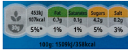

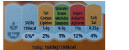

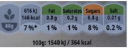
Selection of the Healthiest Product: Finally, participants were asked to choose the healthiest product among all five samples and justify their choice. This question aimed to highlight the aspects that participants prioritized when determining the health of food products. The participants' arguments showed which aspects were important for the evaluation of a healthy food product. Additionally, participants were asked if they live a healthy life, and if so, in what aspects of life do the

participants implement that, and participants were asked if they felt well informed about the health of food and what could help to be better educated about the health of a food. In total, the focus group discussions lasted 75 min each.

The rationale behind selecting these questions was to progressively deepen the discussion from the general perceptions of food healthiness to specific comparisons of product attributes. The initial broad questions were designed to capture participants' baseline understanding and



**Table 2**  
Example products from the brand Kellogg's in Ireland used in the group discussion.

Attributes	Example 1	Example 2	Example 3	Example 4	Example 5
Name	Bran Flakes	Crunchy Oat Granola Mixed Berries	Crunchy Nut	Cornflakes	Frosted Wheats
Product size	750g	350g	500g	500g	500g
Product design					
Product material	Cardboard and plastic	Plastic	Cardboard and plastic	Cardboard and plastic	Cardboard and plastic
Nutrition table (per 100g)	Energy 358 kcal Fat 2.2g Saturates 0.4g Carbohydrate 65g of which sugars 14g Fibre 17g Protein 11g Salt 0.66g	Energy 451 kcal Fat 14g Saturates 1.9g Carbohydrate 67g of which sugars 11g Fibre 10g Protein 9.3g Salt 0.01g	Energy 398 kcal Fat 4.5g Saturates 0.7g Carbohydrate 82g of which sugars 35g Fibre 2.5g Protein 6.0g Salt 0.75g	Energy 378 kcal Fat 0.9g Saturates 0.2g Carbohydrate 84g of which sugars 8.0g Fibre 3.0g Protein 7.0g Salt 1.1g	Energy 364 kcal Fat 2.0g Saturates 0.6g Carbohydrate 72g of which sugars 17g Fibre 9.0g Protein 10g Salt 0.03g
Ingredient list	<b>Wholewheat</b> (59%), <b>wheat</b> bran(18%), <b>wholewheat</b> flour, sugar, <b>barley</b> malt extract, glucose syrup, salt, natural flavouring.	Whole <b>oats</b> (71%), sugar, sunflower oil, <b>wheat</b> flour (6.5%), corn fibre, glucose syrup, puffed <b>barley</b> (2.5%), freeze dried fruits(2.5%) (blackcurrant, cranberry), emulsifier(soy lecithin), natural spice flavouring, natural flavouring, <b>barley</b> malt extract.	Maize, sugar, <b>peanuts</b> (6%), <b>barley</b> malt extract, molasses, honey(1%), salt, niacin, iron, vitamin B6, riboflavin, thiamin, folic acid, vitamin D, vitamin B12.	Maize, <b>barley</b> malt extract, sugar, salt, niacin, iron, vitamin B6, riboflavin, thiamin, folic acid, vitamin D, vitamin B12.	<b>Wholewheat</b> (84%), sugar, humectant (sorbitol), beef gelatin.
Recommended portion size	30g	45g	30g	30g	40g
Nutrition values for recommended portion size					
Price in €/product size <sup>a</sup>	2.99	3.99	5.29	3.15	3.00
Price in €/kg <sup>a</sup>	5.98	11.40	10.58	6.30	6.00
Additional information at the front	Fuels a healthy gut High in wheat bran fibre	30% less sugar High fibre	High in Vitamin D No artificial colours or flavours	50% of your daily Vitamin D needs Responsibly sourced corn	Wholegrain Heart healthy
Additional information at the sides	Natural grains Wheat bran fibre is a superior fibre Healthy gut	Made with 72% wholegrain oats	Responsibly sourced corn Natural grains Added goodness	The Original & best tasting Natural grains Added goodness No artificial colours or flavours	High in fibre Natural grains Heart healthy No artificial colours or flavours
Additional information at the back	3.7g wheat bran fibre per serving Superior wheat bran fibre Fuels a healthy gut	Start good one bowl at a time High fibre with oat grain fibre to support your gut health Lower sugar delicious granola with 30% less sugar	No artificial colours or flavours	Responsibly sourced corn Rolled & toasted Added goodness	Start your day with a delicious and healthy breakfast
Labels	Suitable for vegetarians HFA approved Manchester Beth DIN Kosher Parev	Vegan Suitable for vegetarians HFA approved Manchester Beth DIN Kosher Parev	Suitable for vegetarians HFA approved Manchester Beth DIN Kosher Parev	Suitable for vegetarians HFA approved Manchester Beth DIN Kosher Parev	

Note.

<sup>a</sup> Source: These prices were paid in the respective country to obtain the product.

definitions of healthy food, while the pairwise comparisons and final selection questions aimed to uncover the criteria and attributes (e.g., ingredient list, nutritional values, packaging design) that participants use in making health-related decisions about food products. This approach ensured that the discussions were both comprehensive and focused on the key aspects of food healthiness that the study aimed to explore. Product comparisons were particularly important as they allowed participants to engage with tangible examples, which helped to ground their abstract ideas about healthiness in real-world products. This method not only facilitated a richer discussion but also provided

insights into the practical application of healthiness criteria by consumers. These detailed guidelines and structured questions enhanced the transparency and replicability of the research, providing a clear framework that can be followed or adapted in future studies.

#### 2.4. Qualitative content analysis

The focus group discussions were recorded using an audio device, and then transcribed. The transcripts were summarized separately according to Mayring's summarising content analysis (Mayring, 1991, p.

211f.). Qualitative content analysis can be explained by seven basic steps, as shown in Fig. 1. This qualitative content analysis was conducted once for the German as well as for the Irish focus group discussion.

The statements of the participants were evaluated by assigning them to different topics as well as subtopics. Through this, a structured presentation could be obtained, and this facilitates the presentation of the results.

The topics of this work are important aspects of choosing food products; aspects of food healthiness mentioned by consumers; the consumer perception of food healthiness; and consumer desire regarding to how they could improve their knowledge of food healthiness. The subtopics for the topic of perception of food healthiness emerged during the analysis. The subtopics for the topic aspects of food healthiness according to consumer opinion also emerged during the analysis. All topics and subtopics are summarized for Germany and Ireland in Tables 6 and 7 in the appendix, in addition, the most important results can be found in the main findings.

When participants' statements were similar, they were combined into a generalization. The generalizations are separated by theme and summarized in the results section.

### 3. Results

#### 3.1. Results for Germany

In the following, the results of the German focus group discussion are presented. The first section contains the description of the sample. This is followed by the results regarding aspects of food healthiness mentioned by consumers, consumer perceptions of food healthiness and consumers' wishes to improve their knowledge of food healthiness.

##### 3.1.1. Sample description

The socioeconomic environment of the first author served as a starting point for finding participants, and social media was used to find people from the city where the focus group discussion took place, which helped to spread the invitation to the discussion. For the focus group discussion in Germany, a total of eight participants were found, four women and four men. The average age of this group was 23.4 years (Table 3).

##### 3.1.2. Important aspects of choosing food products

Most of the participants, when asked which product they would use from the sample products for daily consumption, answered that the product should be neutral or mixable and plain. They referred to the fact that they would then want to mix the product with another product and for that the selected product should be compatible with other foods. In addition, one participant mentioned that one could also alienate the product purpose and use it for something other than suggested by the manufacturer. Another participant elaborated that he would prefer a healthier product and then choose a healthier product when selecting food. Another aspect mentioned by a participant was that they need to know the taste of a product before choosing one.

##### 3.1.3. Aspects of food healthiness mentioned by consumers

Participants responded with different aspects to the question of what aspects they think of as they relate to food healthiness. For a summary, a mind map was created grouping the listed aspects and subordinating the subtopics to the themes (Fig. 2).

##### 3.1.4. Consumer perception of food healthiness

This section presents the results of this study regarding German consumer perceptions of food healthiness. During the focus group discussion, it emerged which topics are most important to consumers and how they perceive food healthiness.

**3.1.4.1. Ingredients list and ingredients as an indicator of food healthiness.** Most participants mentioned that an ingredient list with complicated ingredient names seems questionable at first view and gives the impression that the ingredients they do not understand cannot be healthy. Terms they do understand seem more appealing and healthier as a result. One participant mentioned that they would also not lean towards a product with flavour enhancers because they do not necessarily want to ingest flavour enhancers as they cannot classify their level of healthiness. One participant stated that she wants to understand the ingredient list and she needs to like the ingredients to perceive the product as healthy, she also stated that she researches online if she does not understand certain ingredients. It was also added that having a short, simple ingredient list makes a product seem healthier than one that has a long, incomprehensible ingredient list. Another aspect that participants mentioned was that they pay attention to the order on the ingredient list and where the healthy and unhealthy ingredients are located is important to them. According to some participants food healthiness is if healthy ingredients are further up front than unhealthy ingredients. Most of the participants defined unhealthy ingredients as sugar and healthy in this case as whole grains, wheat, and bran. Whole grains were mentioned several times by the participants as a healthy ingredient. One participant added that she would also define a product as healthier if it had added vitamins and minerals. It was also mentioned that when comparing products in terms of which product is healthier, that it is natural for the participant to focus on the ingredient list.

##### 3.1.4.2. Nutritional value table as an indicator of food healthiness.

Another attribute that was mentioned several times by the participants is the nutritional value table. It was mentioned in conjunction with the ingredient list on the one hand, but also some participants considered the nutrition table separately, citing it as an attribute they need to identify food healthiness. One participant testified that he prefers the nutrition table over the ingredient list for selecting healthy foods because he can be sure in the nutrition table he understands the terms, in the ingredient list he too often has unfamiliar terms that he cannot match. One participant elaborated that to identify food healthiness, he looks at the fat content and sugar content in the nutritional table and the ratio is important to him and based on that he can determine food healthiness. He added that you also have the protein information in the nutrition table and that is also an important factor in deciding on a healthier food. Another participant mentioned that a product with fewer calories is healthier than a product with more calories and that sugar and fat are negative aspects of a food product. One participant disagreed with that and said that there is a difference between healthy and unhealthy calories. Participants did not use kilojoules, saturated fat, fibre, and salt from the nutrition facts table to classify a food as healthier or healthier. They also did not address portion sizes in relation to food healthiness, as well as the reference intake for an average adult.

**3.1.4.3. Packaging design as an indicator of food healthiness.** The topic of product design was discussed by many participants for a long time and in the most diverse directions. Here we can find different opinions on how a healthy product should look like, which colours it should use or also how the product image should look like. However, in some points participants agreed with each other. The greatest agreement among the participants was found in the statement that natural colours appear healthier in packaging. By natural colours the participants understood a beige tone, or also green and brown tone. The All-Bran Flakes product served as a negative example, with some participants stating that the blue colour was too strong and demanded too much attention. One participant disagreed, the colour blue seemed healthier to her than pure white, which has the packaging of cornflakes. Also perceived positively in relation to food healthiness was the colour purple, as it reminded some participants of fruit, and in the Crunchy Oat Granola Mixed Berries product example, the product image matches the colours of the fruit and

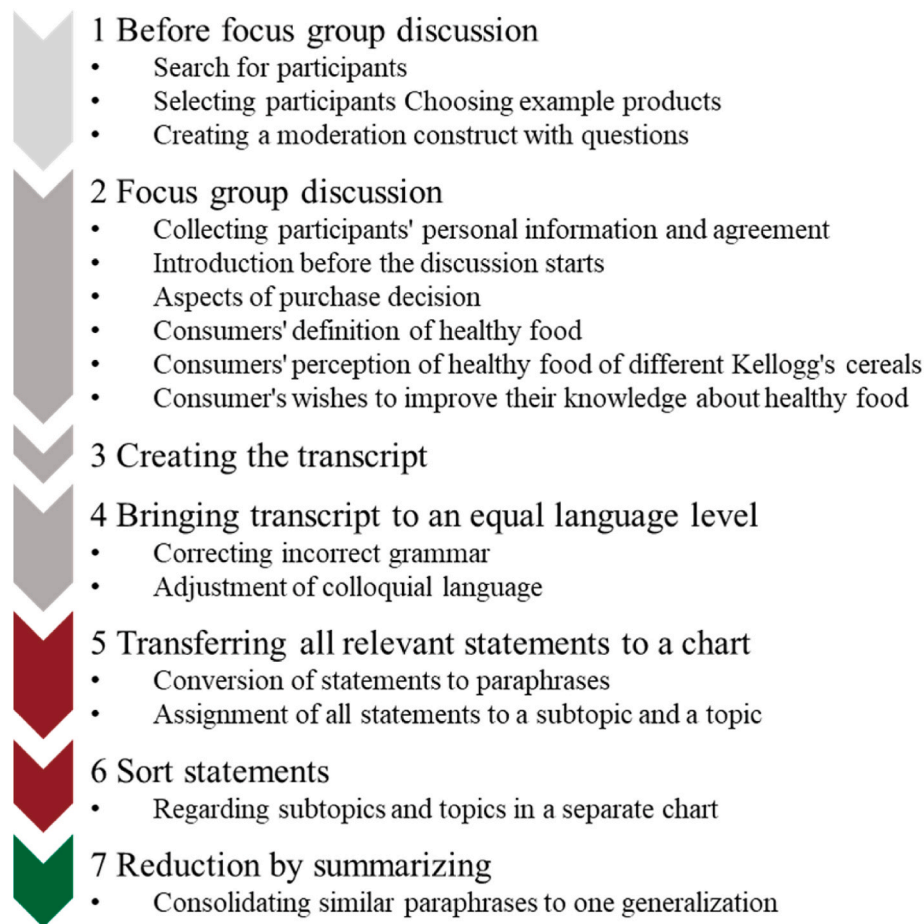


Fig. 1. Overview of the steps applied in the qualitative content analysis.

**Table 3**  
German sample description.

Nr.	Age	Gender	Educational background	Current field of work
1	24	f	Subject-related entrance qualification	Nursery-school teacher
2	21	f	Subject-related entrance qualification	Customer service
3	25	f	Bachelor of arts	Tattoo artist
4	24	f	Higher education entrance qualification	Surgeon assistant
5	24	m	Education specification	Customer service
6	19	m	Higher education entrance qualification	Customer service
7	25	m	Higher education entrance qualification	Police officer
8	25	m	Subject-related entrance qualification	Nursery-school teacher

the colours on the packaging. One participant stated that the Crunchy Oat Granola Mixed Berries seem healthier than all other products only from the appearance, she justified it by the fact that the colours of the product as well as the product image with the fruits seem fresh and not oppressive. Another aspect of the product design that participants picked up on was the product image on the product. One participant mentioned that he pays attention to the colour of the product on the product picture, and he rated the food as healthier if the product has a natural colour on the product picture, here he compared the All-Bran Flakes to the Corn Flakes and rated the All-Bran Flakes as healthier because the All-Bran Flakes are darker. One participant said that the

overall image of the product from the first impression must be coherent in terms of food healthiness and only then he takes a closer look at the product and reads through information on the back to check if it is really healthy. Another attribute that was addressed was the name of a product, the name Granola was described by a participant as healthy because she associates it with the name of a superfood. In addition, the packaging material was also addressed, one participant mentioned that he believes that he subconsciously perceives foods that are only packaged in plastic bags, for example Crunchy Oat Granola Mixed Berries, and not additionally in a cardboard box, as healthier, he justified this by being able to feel the product. Another brand was also mentioned here, which packs the cereals in transparent plastic bags, this brand was rated as healthier by the participants.

**3.1.4.4. Additional information on the package as an indicator of food healthiness.** All participants agreed on this point that additional information on the packaging as well as health claims do not make a food healthier. Participants agreed with the point that health claims and additional information make a positive impression, and one participant added that health claims are only useful for an individual when there is an acute problem with one's health and if there is a need to pay more attention to nutrition, thus making it easier to choose suitable foods. Another participant added that she does not believe that a food with additional information and health claims is a miracle food, she believes that manufacturers advertise their product as very healthy, but then in the end it is not as healthy as advertised by the manufacturer. A lack of trust towards health claims and additional information describing a healthy product was addressed by one participant, he basically does not trust big brands when they promote a product as healthy, he would

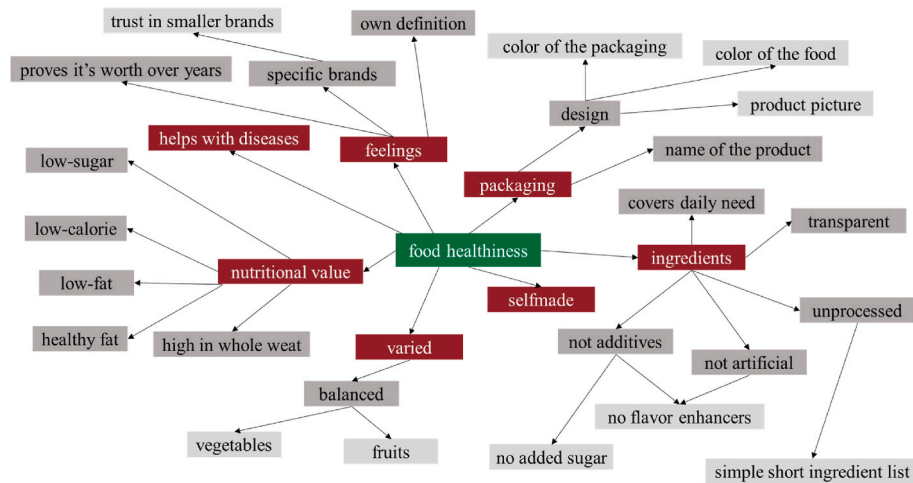


Fig. 2. Aspects of food healthiness mentioned by German consumers.

rather trust the smaller brands. Labels such as vegan or vegetarian, as well as the country of production were not discussed by the participants.

**3.1.4.5. Importance of the healthy aspects for consumers.** After the participants have discussed and analyzed the example products in a pairwise comparison, the participants were asked to decide on the healthiest example product out of all five products. This part of the focus group discussion shows which attributes are particularly important when participants must decide on a product in terms of food healthiness. The example quotes are translated from German into English.

Most participants classified a specific ingredient of a product as the most important aspect:

*"I would also lean toward the All-Bran Flakes because they have whole grains in them."* (Participant 3)

*"I would also lean toward the All-Bran, also for the same reasons. [...] the whole grains make up quite a bit."* (Participant 8)

But also, some participants mentioned the simplicity of the ingredient list of a product as an important aspect:

*"I think I'd also go for the All-Bran or even for the Cornflakes because the Cornflakes are the plainest."* (Participant 7)

*"So, if I want more of that, want more ingredients, I'd go with the All-Bran as well, if I want to go with something plain because I can't go wrong with that, I'll go with the Cornflakes."* (Participant 6)

*"I would also lean toward the All-Bran, those feel like they have the least amount of unnecessary stuff in them."* (Participant 8)

Two participants mentioned the health claims as an additional aspect to choose a healthy product:

*"I would also lean towards All-Bran because it has written healthy stuff on it as well."* (Participant 3)

*"However, the All-Bran promise something more with the information, which appeals to me."* (Participant 7)

Product picture was also mentioned as a first impression for choosing a healthy product:

*"So, the Cornflakes from the All-Bran look darker, there is fruit on the packaging, that looks healthier to me."* (Participant 3)

The colour of the packaging was also an aspect for the first impression for choosing a healthy product but not so important as the product picture:

*"So, if I were looking at a shelf from distance, I would lean towards the Toppas just from the colour scheme in terms of healthy, but if I were to get closer and then look at the picture, I would then lean towards the All-Bran."* (Participant 8)

In conclusion the participants chose the ingredient list and the nutrition value table as the most important aspects to identify food healthiness in their argument, the participants mentioned those aspects often in their argument. Regarding the ingredient list especially the simplicity of the list and easy to understand words were mentioned.

**3.1.4.6. Further aspect of food healthiness mentioned by consumers.** In addition to the indicators mentioned above, there was another aspect that the participants briefly touched upon when discussing food healthiness. One aspect that the participants also discussed was the price of a product, whether it says something about whether a product is healthy or not. Most participants disagreed that a healthy food is more expensive than an unhealthy food, one participant disagreed and stated that he believes healthier products are more expensive. As an example of this, he mentioned another brand that he associates as healthy that is more expensive than Kellogg's, for example. In addition, he also mentioned that he believes that unhealthy products, especially in XXL packaging, are usually cheaper than compared to healthy products. In addition, another aspect that was mentioned by a participant was that she associates food healthiness with the fact that it can positively influence the behavior of diseases and thus promote health. One aspect mentioned by several participants was their own subjective definition of food healthiness and how they feel about certain products or brands. One participant mentioned that a product that has been around for decades must have a reason for existing and must be good for people. Also, in terms of feelings, certain brands were associated with a healthy or unhealthy image and smaller brands were described by one participant as more trustworthy. Several participants stated that foods should be chosen in a varied way so that they are healthy for people and that in the diet one should eat a balanced diet of foods. Many participants related food healthiness to a holistic diet rather than reducing it to a single food. The last additional aspect that received approval from several participants was homemade foods. Participants agreed with each other that homemade foods are healthier than industrially made products.

### 3.1.5. Desires to improve knowledge mentioned by consumers

At the end of the focus group discussion in Germany, the participants were asked whether they felt well informed in the area of food healthiness and whether they could distinguish healthy from unhealthy foods. Most participants answered no. Most participants feel relatively well informed but are not completely sure. One participant mentioned that if



one wanted to fully understand nutrition, they would need to study this topic area. For this reason, participants were also asked what they would like to see in order to be better educated about food healthiness. Most participants responded that they would not want the manufacturer or packaging to mislead them and that they would want more transparency. Regarding these wishes, one participant expressed that it would be desirable if the manufacturers did not use technical terms regarding additives or colorants on the ingredient list, but used terms that are generally understandable and additionally listed them behind the technical terms in the ingredient list. She also added that the manufacturer should assume that the consumer knows nothing and should therefore choose terms that are as simple as possible. However, she also criticized that this could lead to the ingredient list becoming too long and that could scare off consumers, so she also said that the public should be better informed through other media.

Participants developed and discussed with each other some ideas on how to be more efficiently informed. The first idea from one participant was to print the ingredient list on the front of a product, as this would give consumers quicker access to the important aspects; he also noted that an unhealthy ingredient list might then be more likely to encourage the manufacturer to change the ingredient list, as consumers might see additives and the like at first glance. Another participant expanded on the idea, adding that it would only be necessary to list the first four ingredients on the front of the product, and manufacturers could then consider whether they would like sugar to be so far up front in the quantity ratio so that consumers see it at first glance.

The Nutri-Score<sup>1</sup> was also brought into the discussion by one participant. The participant criticized that he does not understand the Nutri-Score, but that he basically likes the display on a food to classify how healthy a food is. The participants then discussed, and the Nutri-Score was described as misleading and that the score lulls one into a false sense of security. The participants agreed that something similar to the Nutri-Score could be created, which would be mandatory. This score should be classified similarly to the Nutri-Score on the packaging with the help of a letter, but furthermore, there should be a QR code on each product that directs you to a website where a pro-list and a con-list are listed. This pro-list could include, for example, that it contains a lot of whole grains, and the con-list would say that it contains a lot of sugar.

Another idea that received negative feedback was that the shelves in the supermarket could be sorted by topics such as calories, sugar, vitamins, and the like, so that when the consumer is looking for a certain aspect, they can find it in one section. Here it was criticized that opinions would collide and also one product could fit several characteristics.

### 3.2. Results for Ireland

In the following, the results of the Irish focus group discussion are presented. The first section contains the description of the sample. This is followed by the results regarding aspects of food healthiness mentioned by consumers, consumer perceptions of food healthiness and consumers' wishes to improve their knowledge of food healthiness.

#### 3.2.1. Sample description

Social media served as a start for finding participants, also the socioeconomic environment of the first author was asked to find people from the city where the focus group discussion took place, this helped to spread the invitation to the discussion widely. Additionally, potential participants were solicited on the open street. A total of eight participants were found for the focus group discussion in Ireland, these were four women and four men. The average age of this group was 23.8 years

**Table 4**  
Irish sample description.

Nr.	Age	Gender	Educational background	Current field of work
1	24	f	Bachelor of applied languages	Sales assistant
2	25	f	Bachelor of science	Sales assistant
3	23	f	Secondary school	Office administration
4	24	f	Bachelor of law	Sales assistant
5	23	m	Mobile apps engineering	Sales assistant
6	25	m	Higher education	Software technician
7	21	m	Higher education	Microbial analyst
8	25	m	Secondary school	Barista

(Table 4).

#### 3.2.2. Important aspects of choosing food products

Most participants, when asked which of the sample products they would use for daily consumption, responded that the product should not need any additional ingredients and should be consumed as is. They cited Crunchy Nut as an example of this, as they would not need to add sugar, whereas with cornflakes you would need to add sugar. One participant commented that it depended on whether it was a meal or a snack and would make different choices depending.

#### 3.2.3. Aspects of food healthiness mentioned by consumers

A mind map was chosen to summarize the findings. Participants indicated different aspects when identifying food healthiness. In the mind-map, the aspects listed are organized by themes and subthemes (Fig. 3).

#### 3.2.4. Consumer perception of food healthiness

As already described in section 3.1.4 for the results of German consumers, the following sections describe the results of Irish consumers. During the focus group discussion, it became apparent which topics are most important to consumers and how they perceive food healthiness.

##### 3.2.4.1. Ingredient list and ingredients as an indicator of food healthiness.

Most participants discussed the ingredient sugar, here all agreed that sugar, even in various forms, is not one of the healthy ingredients and when choosing healthy food, they would rather reach for a product with less sugar. Two participants had a divided opinion about sugar, one participant made a distinction between "natural sugar"<sup>2</sup> and "unnatural sugar",<sup>3</sup> he classified natural sugar better than unnatural sugar on the list of ingredients and another participant gave a concrete example that molasses is a healthier alternative to conventional sugar. Several participants discussed about additives and agreed that the least amount of additives and preservatives is considered as healthier than a product with a bigger amount of those ingredients. Another aspect discussed by participants was dried fruits as an ingredient, one participant felt a product with dried fruits was healthier than a product without dried fruits. One participant disagreed and stated that she considered the dried fruit ingredient to be healthy. In addition to mentioning ingredients, comments were also made in general about the ingredient list, it was expressed that a plain product can motivate more to add healthy ingredients, as an example banana and other fruits were used, which then represents a healthier product, but at the same time a plain product can also invite to add unhealthy ingredients, as an example sugar was mentioned. Also, one participant added that he looks at the ingredients in the ingredient list first to compare a product to see if it is healthier than another product.

##### 3.2.4.2. Nutrition table and nutrition value for recommended portion size as an indicator of food healthiness.

Not only the nutritional value table

<sup>1</sup> The Nutri-Score is a score that helps to orient oneself in the field of food products. This should help to decide for a healthy and balanced diet. The score is not mandatory. The Nutri-Score is used in Germany, France, Belgium, Switzerland, and Luxembourg (BMEL, n.d.).

<sup>2</sup> Note: The participant identified with those names sugar from a fruit and.  
<sup>3</sup> white sugar that is also known under table sugar.



Fig. 3. Aspects of food healthiness mentioned by Irish consumers.

but also the nutritional values for the recommended portion size were an indicator of food healthiness for the participants. What was particularly noticeable here was that all participants agreed that many or few calories say nothing about whether a food is healthy or not. One participant, who also made a statement in this regard, also added that he would not trust a product with no calories, implying that a food should have calories in order to be healthy. As an example of the irrelevance of the number of calories, the same participant also added that the amount of calories a person needs depends on the lifestyle of the individual. One participant stated that for him, the amount of saturated fat, carbohydrates, and sugar is more important in classifying a food as healthy. Other parts of the nutritional table that had been mentioned is the salt content, this should not be too high in food and the fibre content was mentioned as a decision criterion, so a product with more fibre than another product is considered healthier for most of the participants. One participant also mentioned that a high vitamin and mineral content is important to him in food healthiness. In addition, participants used the nutritional values for the recommended serving size on the front of the product to classify a product as healthy. The more the nutritional values were colored with green, the healthier the product was perceived to be; as an example, it was also mentioned that a product with only red colored nutritional values was considered to be very unhealthy.

**3.2.4.3. Packaging design as an indicator of food healthiness.** In addition to the packaging material, the colour of the packaging and the name of a product were also important for the participants to be able to identify a product as healthy. Some participants felt that products that have the packaging colours of white, brown, and green, and generally use darker colours, are healthy because the participants associate the colours with natural colours, and also for the reason that it seems like the manufacturer puts more thought into the product than the packaging, which is said to have a positive effect in the context of healthy products. Some participants also agreed with the statement that they do not associate the colour red with food healthiness. In addition, two participants added that they associate healthy products with simple packaging that has little presentation for the product and should not convey entertainment through the product. Also, a clean packaging was associated with a clean ingredient list with no additives. Less packaging was also mentioned as an aspect of being able to identify a product as healthy, one participant referenced the Granola Crunchy Oat Mixed Berries as an example because he felt it used less packaging than the other products that were available as examples. He added that less packaging gives the impression that manufacturers are environmentally conscious, and he associates environmental consciousness with healthy products among manufacturers. Granola Crunchy Oat Mixed Berries served as another example for a participant in terms of naming a product, the word

granola was described as healthy in itself and shows that the naming of a product is also crucial in the context of food healthiness.

**3.2.4.4. Additional information on the package as an indicator of food healthiness.** In general, the participants were very sceptical about additional information on the packaging and health claims. One participant also expressed that he does not use the health claims of a big brand like Kellogg's as a credible source of information, for him the health claims on the packaging meant nothing as they are just keywords used by the manufacturers. He added that if he were looking for healthy foods, he would not choose products based on the health claims but would use more information on the packaging to evaluate the product. One participant, on the other hand, would pay attention to the health claims when comparing products to choose a healthier product. Two participants mentioned the labels of a product in the context of food healthiness, the one participant would basically not choose a product what has the vegan label, even if it would be a healthier product. The other participant questioned the labels on a product and was critical of lactose-free products. He would trust products that are in their original form more in terms of healthy than products with a label such as lactose free, as he is sceptical of what manufacturers have to add in the ingredient list for compensation to make a product taste like the traditional product. Additionally, it was mentioned by one participant that products labelled gluten-free also cause consumers to be put off. The origin was mentioned by one consumer as a positive aspect for food healthiness, because he associated Ireland with fresh farm products. Also, organic food was categorized into food healthiness by the consumers.

**3.2.4.5. Importance of the healthy aspects for consumers.** In the following the participants were asked to choose one of the five products by selecting the healthiest product and giving reasons for this. This can be used to show which attributes are particularly important for the participants when they have to choose one product out of several.

One participant identified a specific ingredient as the most important aspect to choose food healthiness:

*"It's the same way I would go for the granola because it has the fruit to help you."* (Participant 4)

Most participants identified the nutrition value as the most important aspect:

*"The Bran Flakes, to me, seemed the healthiest, because of the fibre."* (Participant 3)

*"If I pour Crunchy Nut I'd probably eat too much, Cornflakes for me are like that middle ground. Maybe I'm not getting as much fibre, but I'd be getting more of the vitamins."* (Participant 2)

*"I would choose Bran Flakes just for the source of fibre [...]." (Participant 1)*

For one participant the simplicity of a product is also an important aspect:

*"Definitely Cornflakes for me anyways, because they are plain." (Participant 2)*

The colour of the nutrition value at the front of the packaging was for one participant the most important aspect to identify food healthiness:

*"And you can also see it from the front tab the Cornflakes have the more green on nutrition table, which I consider as healthier." (Participant 4)*

*"The other thing that you might possibly look at is the bottom left corner, where it has the little symbols and if they are all red, there is no way this is going to be healthy." (Participant 4)*

In conclusion the participants mentioned the ingredient list and the nutrition value table often in their argument. Sugar as well as fibre was mentioned often by the participants.

**3.2.4.6. Further aspects of food healthiness mentioned by consumers.** Other aspects associated with food healthiness by participants in Ireland were mentioned. One additional aspect that participants discussed was how they felt about certain products and how they subjectively defined healthy. Some participants mentioned that healthy foods are also the ones you grew up with and that your parents taught you were healthy. And food healthiness is also foods that you enjoy eating and do not have to force yourself to eat, according to one participant. Another aspect that participants mentioned was the price of a product. Some participants mentioned that a healthy product is more expensive than an unhealthy product. In addition, the place of production was also mentioned as an aspect and Ireland, due to its background with farm products, was associated with freshness, organics, and healthy food. Two participants agreed that organic food is healthier than non-organic food and furthermore two participants associated fresh food with food healthiness. Also, some participants mentioned that food healthiness must be seen in relation to quantity, food healthiness could not be reduced only to one single food. Homemade food was related to food healthiness by some participants.

### 3.2.5. Desires to improve knowledge mentioned by consumers

At the end of the focus group discussion in Ireland, participants were asked if they felt well informed in the area of food healthiness and if they could distinguish healthy from unhealthy foods. Most participants answered that they feel somewhat confident in identifying a healthy food, but not completely. And also, it was mentioned that healthy can be defined differently and therefore participants feel more confident in choosing healthy products that are healthy according to their own definition, but not for the general public. One participant found it easier to classify unhealthy than healthy, believing that the closer one gets to healthy products, the more difficult it becomes to define healthy accurately, whereas with unhealthy products this is not the case. For this reason, participants were asked what they would like to see in order to be better educated about food healthiness.

Most participants responded that they would like the education system to educate one better and more intensively at a younger age. Two participants stated that you should not have to wait until you turn 20 to start understanding food healthiness because you are taking care of yourself, and your parents no longer care about what you eat. Education about food healthiness should start early in school and be a part of the education system, according to some participants. One participant mentioned that he was taught about it in school, but only what to eat to live healthy and not why, which he faulted. A participant also said that it is not the manufacturer's job to educate consumers, but that this education should be done in school.

Another point that was requested by a participant was to change the nutritional table in terms of its quantity. According to the participant, when comparing products, it would be easier to recognize a healthy product if you know how many nutritional values the product has on the whole product size. As an example, he mentioned cereals, that they should be listed with the size of the whole product in the nutrition table.

The last point raised by two participants was about the manufacturers and packaging of a product. The two participants wanted manufacturers to be more honest with the consumers, for that they would like to see manufacturers using statements, that make the food sound healthy, more responsible, so that that statement is not completely used for marketing, more like to inform the consumer about the truth, what benefits the product has.

## 4. Discussion

The findings on the issue of Generation Z's perceptions of food healthiness in Germany and Ireland, presented in section 3, are compared and discussed with existing consumer research literature on perceived food healthiness. In addition, the limitations of the present study are addressed and in conclusion, the main findings are presented in the general discussion and recommendations are made on how to respond to these findings.

### 4.1. Consumer perception of food healthiness comparing Germany to Ireland

#### 4.1.1. Ingredient list as an indicator of food healthiness

Both consumer groups regarded the list of ingredients as an important aspect in defining a food as healthy or unhealthy. It was noticeable that the German consumers were more emphatic about several ingredients and their naming, compared to the Irish consumers, who specifically discussed individual ingredients. The German participants made statements about the number of ingredients on an ingredient list, the order of ingredients, and ingredients whose meaning they did not know, whereas the Irish participants focused on one ingredient, such as sugar, and discussed its healthfulness. The similarity between the two groups was that both focus groups discussed the ingredient sugar a lot.

#### 4.1.2. Nutrition value as an indicator of food healthiness

There is a difference in the nutritional value table between the packaging in Germany and Ireland. The packaging for the Irish market has the nutritional values for the recommended portion size with calorie and kilojoule quantity on the front of the packaging, the individual key figures for fat, saturated fatty acids, sugar and salt are highlighted with different colours (green, orange, red) to indicate whether the values are still within the recommended range. In contrast, the front packaging on the German market only shows the recommended portion size and the associated calorie and kilojoule amounts without colours. In the Irish discussion group, the colours of the individual values on the front and the colours of the nutritional values were used by participants in Ireland to rate foods as healthy. The German focus group used the nutrition table with proximate values for calories, fat, carbohydrates, sugar, fibre, protein, and salt and did not address kilojoules and saturated fat. In contrast, the Irish participants discussed all nutritional values in their discussion except kilojoules. Both groups also addressed vitamins and minerals.

#### 4.1.3. Packaging design as an indicator of food healthiness

Regarding colours and their effect on how healthy something is, the German participants perceived natural colours, such as green and brown, as healthy, as well as the colour purple, as it represents fruit for the participants. It was also expressed in the German focus group that blue seems healthier than white, but again beige seems healthier than blue. In addition, the German participants addressed the product images on a product and perceived darker products on the product image as

more natural and healthier, as well as a product image, which is decorated with fruit. Irish participants also perceived natural colours as healthier, brown and green, in addition the colour white was also associated as clean and healthy. The colour red was classified as unhealthy by the Irish focus group. Both focus groups mentioned that naming a product also makes a difference and the name Granola seems healthier than the other sample products. In addition, both focus groups expressed that the type of packaging also has something to do with the perception of food healthiness. The German focus group expressed this aspect more critically than the Irish focus group, citing the transparency of a package as a reason that people subconsciously perceive; in the Irish focus group, less packaging was associated with environmental awareness, which in turn was associated with food healthiness. In addition, the Irish focus group discussed the fact that healthy products have a less elaborate design and appear rather plain in their design and thus the product itself is in the foreground. Furthermore, the German consumers used the product picture on the packaging to identify a healthy product, the Irish consumers did not include the product picture to identify food healthiness in their discussion.

#### 4.1.4. Additional information as an indicator of food healthiness

Both consumer groups showed a critical attitude towards additional information and health claims on the packaging and hardly used them in the discussion to identify a healthier product. In the German focus group, it was expressed that health claims make a positive impression for a product, but also again, distrust of such information was expressed that smaller brands are trusted rather than big brands. It was also mentioned in the German focus group that health claims do not lead to the product being seen as a healthy miracle cure, but that the information is not credible to the full extent. The German participants did not elaborate on labels or even the country of manufacture. Whereas in the Irish focus group, the country of manufacture, Ireland, was positively linked to fresh farm produce. In addition, it was also expressed that when products are compared, attention is also paid to which health claims are on the front of the packaging. However, most participants also used non-health claims and additional information to identify a healthier product. In addition, some participants were negative about labels such as vegan and gluten-free, and labels of this type were also more likely to make Irish consumers sceptical and lead to closer scrutiny of the ingredient list. One aspect that was shared by the German and Irish participants was that it was also expressed in the Irish focus group that larger brands are less trusted in terms of additional information on the packaging.

#### 4.1.5. Importance of the food healthiness aspects

Both focus groups showed that especially the ingredient list is important to identify food healthiness. In addition, the nutritional value table was also important in the Irish and German focus groups for discussing the healthiness of a food product, but the Irish consumers categorized the nutrition value more important than the German consumers. The aspects of packaging design and additional information on the products were included in the discussions in both groups, but in both groups these aspects were not as important as the ingredient list, and the nutritional value table.

#### 4.1.6. Further aspects of food healthiness mentioned by consumers

Both focus groups also discussed, apart from the aspects identified as indicators of healthy eating, other aspects which, although minor compared to the indicators, nevertheless played a role. Particularly striking was that for the Irish consumers the price of a product says something about whether a product is healthy or not. For the German consumers, price was also an issue, but the statement that more expensive products are healthier than cheaper products was only conditionally agreed to by one participant. The statement that home-made food is healthier than food that can be purchased ready-to-eat from the supermarket was agreed to by both focus groups. Other

aspects that were addressed in both focus groups were similar, the German consumers identified food healthiness as unprocessed food, and the Irish consumers identified food healthiness as fresh food. In addition, the German participants addressed that food healthiness needs to be balanced and should be considered in the whole diet, the Irish participants talked about quantity and that it is not about individual foods, but about the totality of several foods.

#### 4.1.7. Desires to improve knowledge mentioned by consumers

It was particularly striking here that all German participants see the task of educating people about food healthiness as lying with the manufacturer. Several suggestions were mentioned that would have to be implemented by the manufacturer and the state, whereas the Irish participants see the task in the education system. Two participants in the Irish focus group mentioned transparency and clarity, which is desired by the manufacturer, but the focus of the discussion was on the education system.

#### 4.2. Consumer perception of food healthiness in comparison to results from other literature

##### 4.2.1. Ingredient list as an indicator of food healthiness

In the Irish focus group, the issue of sugar was discussed, also as in the German focus group. The Irish focus group mentioned other types of sugar that they perceive as healthier compared to industrial sugar, such as molasses, just as the German focus group perceived fructose to be healthier as an example. This finding that fructose was perceived as healthier, especially in cereals, was shown by an experiment from Germany in 2015, here it was found that listing fructose as an ingredient in cereals led to a positive perception of health value (Sütterlin and Siegrist, 2015).

The ingredient list was one of the most important indicators for both discussion groups in Germany and Ireland to classify a product as healthy or unhealthy. This is also shown by another paper confirming that consumers pay most attention to ingredients, followed by the amount of sugar and fat in a food product in Germany (Jürkenbeck et al., 2022).

##### 4.2.2. Nutrition value as an indicator of food healthiness

A 2015 survey from Switzerland found that participants ignore the amount of saturated fat, protein, and salt when making a decision regarding food healthiness (Bucher et al., 2015). These findings are partially reflected in the present study, both focus groups discussed some nutritional values more, some nutritional values less, but the German focus group did not use the amount of saturated fat and salt to categorize a product as healthier. In contrast, the Irish focus group did not use the amount of protein to categorize a product as healthier.

In general, for both focus groups the amount of sugar was particularly important, for the German participants more when it came to nutrition value and for the Irish participants more when it came to the ingredient list, when they discussed about food healthiness. A similar result was found in the United Kingdom, that the total of sugar was the most important aspect to choose healthy food, also across different age groups and genders (Anabtawi et al., 2020).

In terms of the importance that the Irish focus group expressed towards nutritional information on the front of the package to be able to identify a food product as healthy, these findings were also supported by another paper (Ares et al., 2019). In the Irish focus group, the different colours of the nutritional information were used to help rank a product in healthiness, the red of the nutritional information was interpreted as a warning and signaled unhealthy eating. A qualitative study showed results that consumers from Uruguay used nutritional warnings to help them rank a product (Ares et al., 2019).

##### 4.2.3. Packaging design as an indicator of food healthiness

The results of the focus group discussion in both countries showed



that participants tend to use the design of the packaging to identify a product as healthy rather than other information found on the packaging. This finding from the focus groups is also reflected in the results published by a study from Spain in 2018 (Vila-López and Küster-Boluda, 2018). Here, 300 young consumers were surveyed, with an average age of 21.84, to find out if hedonic packaging differs from functional/healthy packaging. It was found that young consumers are more influenced by commercial/aesthetic cues (colours) than technical cues (healthy messages) (Vila-López and Küster-Boluda, 2018).

Both focus groups identified more natural colours in product packaging as healthier, here the German as well as the Irish participants named the colours green and brown. A 2017 experiment (Implicit Association Test) from the Netherlands explored the effects of colours on packaging in relation to food perception. It was found that participants in this experiment associated a healthy product with paler colored packaging (Tijssen et al., 2017). Participants in these focus groups in our study did not mention associating health with paler colored packaging. In contrast, another focus group discussion in Poland from 2015 found comparable results to ours from Germany and Ireland (Wąsowicz et al., 2015). It was found that the colours green, blue, red, yellow, and white were associated with healthiness, naturalness, fruit, and vegetables. These results are partially consistent with the results of the present study. Green was also perceived as indicating food healthiness by both focus groups. The colour white was perceived as indicating healthiness by the Irish participants because it gives the impression that the product is natural and purple was associated with fruit by the German participants, whereas the focus group from Poland associated red with fruit (Wąsowicz et al., 2015).

A 2018 conjoint analysis in the country of Uruguay showed that a product was rated as healthier when a product image was included in addition to the caption communicating ingredients (Miraballes and Gámbaro, 2017). These results are partially comparable to the results of the German consumers, in the German focus group the product picture was used as an aspect to classify a food as healthy in the first place. The Irish participants did not use the product image.

#### 4.2.4. Additional information as an indicator of food healthiness

A 2018 survey from Canada found that taste, convenience, and affordability were more important to consumers than additional information related to health (Anders and Schroeter, 2017). While the results of the present study did not address taste, convenience, and affordability in detail, it was mentioned by both focus groups that a product is also chosen based on taste and the additional information on the product was criticized more by the German participants than the Irish participants, however, both focus groups criticized additional information. It can be assumed that other aspects are more important to both consumer groups.

Furthermore, in 2018, it was found that the healthiness of a product is rated the same even if nutrition and health claims are on the product, no significant difference was found (Benson et al., 2018). These results can be confirmed by the German focus group, as in this discussion it was expressed that the products with health claims are not evaluated as particularly healthy, but also other products without health claims can have the same effect. The Irish focus group evaluated the health claims differently and the statements on the packaging were used by one participant to decide between two products.

In the Irish focus group, there was more discussion about labels and manufacturing than in the German focus group, here the manufacturing country Ireland was also brought into the discussion by an Irish participant, as well as several participants expressed that organic products are healthier than non-organic products. It was also significantly confirmed that organic origin of a product makes a product perceive healthier (Apaolaza et al., 2017).

### 4.3. General discussion

It was also noticeable that more information emerged from the transcript of the German focus group than from the Irish focus group, although the participants discussed a similar amount of time with each other. The statements of the German participants often focused more on the question than the statements of the Irish participants, who often repeated statements.

Both focus groups identified the same aspects as an indicator for food healthiness, for the German as well as for the Irish consumers the ingredient list, the nutritional value table, the packaging design and the additional information were an indicator for how they perceive a food as healthy and also both focus groups classified the ingredient list as well as the nutritional value table as the most important indicator to determine the health value of a food. Some of the differences in the discussions were in the subtopics as well as in the further aspects mentioned by the participants. Differences in perceptions of food healthiness between participants from different countries were also noted by another study, here confirming that demographic as well as psychographic variables were significantly related to the perception of foods (Thomson et al., 2017). This means that demographic as well as psychographic factors may have indirectly influenced the statements of the German and Irish focus groups. Accordingly, the results for the individual focus groups can only provide the basis for discussing potential effects in their respective regions.

This study could provide the basis to further investigate the respective market with regard to Generation Z and to obtain further results on this basis and thus to be able to make concrete recommendations for politics, food manufacturers and retailers. Thus, in policy, the terms of education could be improved by these findings. Educational institutions could improve nutrition education programs to promote healthy eating more specifically. In addition, food manufacturers could also benefit from further research to precisely implement the needs of Generation Z, which would in turn lead to the development and production of food being optimized, thereby saving costs and time. A food manufacturer's marketing could also focus specifically on Generation Z and its needs, with an increased focus on health-conscious features that appeal to this generation. Retailers could also target sales promotions more effectively. All of these impacts could contribute to outcomes such as a healthier population and sustainability. Since Generation Z is a young generation that already follows a different lifestyle than previous generations before it (Dimock, 2019), such measures would be more long-term and future-oriented with regard to Generation Z.

#### 4.4. Study limitations

A point already mentioned in 4.3, that demographic as well as psychographic variables play a role when it comes to the perception of food healthiness, can also be seen as a limitation, because the results of the focus group discussions could have been different if the participants did not come from the cities or close to the cities Buchholz in der Nordheide in Germany and Tullamore in Ireland. In addition, for both focus group discussions, eight participants were (ages of 18 and 25), which is a suitable number for a focus group discussion, but this also limits the representativeness for Germany and Ireland. Additionally, the territorial origin of the participants (urban vs. rural) was not specified. This could be a significant factor influencing the perceptions of food healthiness, as rural and urban environments often present differing food availability, cultural practices, and socioeconomic conditions (de Lanerolle-Dias et al., 2015). Given the young age of the participants, their background experiences, which are likely tied closely to their place of residence, could have played a role in shaping their food-related attitudes and behaviors. Future research should take into account the territorial origin of participants to provide a more nuanced understanding of these influences (Ingilis et al., 2008).

The samples as well as the qualitative study design offers an insight

into the opinions of the consumers of Generation Z in Germany and Ireland with open answers of the participants, by the possibility for the participants to discuss opinions and ideas with each other, an even more exact insight could be gained.

## 5. Conclusion

The aim of the study was to find out whether Generation Z has different opinions on the perception of food healthiness in different countries. The results of the study show that there are differences in perception between Germany and Ireland. However, both focus groups in both countries determined the same indicators to identify a food as healthy, for this especially the ingredient list as well as the nutritional value table were most important for both focus groups, but the focus groups partly discussed about other different subtopics.

In addition, both focus groups have been unsure about their knowledge about food healthiness and wished for a better communication strategy about food healthiness. Again, opinions differed, and the German participants wanted better communication by the manufacturers and their packaging of the product, and the Irish participants wanted better education at a younger age by the education system. These two ideas would be approaches to create better education for consumers regarding food healthiness so that consumers are better able

to make independent decisions that positively impact their health. This could positively counteract the diseases caused by unhealthy diets. Only by improving the level of consumer knowledge can a physically healthier society be achieved.

## CRediT authorship contribution statement

**Stephan G.H. Meyerding:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Conceptualization. **Sophie Ahrens:** Writing – original draft, Visualization, Investigation, Formal analysis, Data curation, Conceptualization.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Data will be made available on request.

## Appendix

**Table 5**  
Moderation guideline.

Topic	Details and Questions to ask	Method
Welcoming Introductions Explanation of the rules and process	Moderator welcomes everyone Participants introduce themselves Questions were asked Example products were shown Respectful tone No wrongs answers or statements	
Preferred products	Which product would you choose for daily use and why? Decision between five different Kellogg's cereals products	Showing the five product examples
Definition of healthy food	What are healthy food products for you? How can you tell if a food product is healthy? What attributes does a food product need to be claimed as healthy?	
Comparison of two products	Which product is healthier? Comparison between example product 3 and 5	Showing the two example products
Comparison of two products	Which product is healthier? Comparison between example product 3 and 4	Showing the two example products
Comparison of two products	Which product is healthier? Comparison between example product 2 and 5	Showing the two example products
Comparison of two products	Which product is healthier? Comparison between example product 2 and 1	Showing the two example products
Comparison of two products	Which product is healthier? Comparison between example product 1 and 4	Showing the two example products
Healthiest product of all five Further aspects Importance of healthy food Evaluation of the participants Participants' desires	Which product of all five is the healthiest one? What aspects are missing? What aspects have we not talked about yet? Do you try to live healthy? And in what aspects of life do you try to do that? Do you think you can correctly classify foods according to their level of health? What are your wishes to feel better informed?	Showing all five product examples

**Table 6**  
Main findings by topic for German consumers (translated from German).

Topic	Subtopic	Main findings	Example quote (translated from German)
1. Important aspect choosing food products	Simplicity	Consumer choose the most plain product	"I would go with the regular cornflakes because they are the best to mix with everything."
	Taste	Consumer would choose the most delicious product	"To decide I would have to try the All Bran Flakes to see what they taste like."

(continued on next page)

Table 6 (continued)

	Topic	Subtopic	Main findings	Example quote (translated from German)
		Healthy	Consumer choose a healthy option	"I would go with the cornflakes, the cornflakes aren't quite as unhealthy as the Crunchy Nut."
2.	Aspects of food healthiness mentioned by consumers	–	Several different aspects were mentioned	–
3.1	Consumer's perception of food healthiness (Ingredient list)	Understanding	Terms that are difficult to understand deter the consumer	"[...] if there is a list of ingredients with questionable terms, then I would be more reluctant to call it healthy."
		Flavor enhancer	Flavor enhancers are questionable for the consumers	"[...] Whether flavor enhancers are harmful, I don't know, but it also sounds like flavor enhancers are actually something you don't necessarily want in healthy food."
		Ratio	Healthy ingredients in the front of the ingredient list are important for the ranking of healthy food	"[...] If the sugar is in first or second place and even before the wheat, then I would not reach for that product either, instead of one of the other products where the sugar is a bit further in the back."
		Ingredient list length	Short ingredient list appears healthier	"[...] The simpler the product, the healthier it appears."
3.2	Consumer's perception of food healthiness (Nutrition value)	Calories	Difference in calories	"There is a difference between healthy and unhealthy calories."
		Sugar	Less sugar appears healthier	"If you have a choice in a meal to have a little less sugar in it, I would go with the one with less sugar."
		Fat	Less fat appears healthier	"So I usually look at the nutritional value table and [...] you know that it's basically healthier if it has less fat."
3.3	Consumer's perception of food healthiness (Packaging design)	Colour of the packaging	Green is associated with healthy	"[...] you could present it much healthier, for example with the colour green."
			Blue is not associated with healthy	"Blue is not appealing. I would not associate it with healthy, the colour purple is better, because it is it reminds of berries and has a healthier effect."
			Purple is associated with healthy	"Blue is not appealing. I would not associate it with healthy, the colour purple is better, because it is it reminds of berries and has a healthier effect."
		Product colour on the packaging	Darker products appear healthier	"[...] For example, with the All Bran Flakes, which are just a little darker and browner, they look more natural than the corn flakes."
		Product picture	Fruits make it look healthy	"Visually, the Crunchy Oat Granola look healthier because they have fruit in the product picture, it just makes everything look a little fresher and not as oppressive."
		Material	A plastic bag could be associated with healthy food	"Maybe subconsciously I perceive it that way, that something in the bag is healthier, but I don't think I would say it directly that way."
		Name of the product	A specific product name can associate healthy food	"Granola also just sounds healthier, whether you know what it is exactly or not, granola sounds like quinoa, just sounds like a healthy superfood."
3.4	Consumer's perception of food healthiness (Additional information)	Impression	Positive impression	"Additional information makes a positive impression."
		Trust	More willing to believe smaller brands	"So I wouldn't trust the Kellogg's brand, because it's a big brand. I would tend to trust smaller brands."
3.5	Consumer's perception of food healthiness (Importance of the aspects)	Simplicity of ingredients	Consumer choose the most plain product	"I would also lean towards the All-Bran [...], those feel like they have the least amount of unnecessary stuff in them. [...]."
		Product picture	Consumer would decide by a healthy product picture	"So the cornflakes from the All-Bran look darker, there is fruit on the packaging, that looks healthier to me."
		Ingredients	Wholegrain is important to the consumer	"I would also lean towards the All-Bran Flakes for the same reason because they have whole grains in them."
3.6	Consumer's perception of food healthiness (Further aspects)	Selfmade	Homemade food is healthier according to consumers	"I think on the whole you can say that if you prepare something fresh yourself, it's healthier and better than something packaged."
		Diseases	Positively influences diseases	"[...] there are ways to eat healthy, which can positively support a disease."
		Balance	A balanced diet is the most important aspect for some consumers	"For me, healthy is anything that ends up being a balanced diet. [...]."
4.	Improvement of knowledge	Easier access to information	Desire to an easier access to information	"Maybe it would be possible to print the ingredient list directly on the front of a product, so that one has a faster access [...]."
		Transparency	Desire for more transparency	"[...] if you use a little less technical terms, as far as the ingredients are concerned, as in the case of additives, not to put chemical terms there [...]."
		Other media	Desire to improve knowledge through other media	"[...] there simply needs to be better information for the general public through other media."
		Clarity	Desire to get more clarity	"[...] You have to assume that the consumer is not so smart and make everything a little clearer on the product. [...]."

Table 7

Main findings by topic for Irish consumers.

	Topic	Subtopic	Main findings	Example quote
1.	Important aspect choosing food products	Taste	Consumer would choose a delicious product	"I would choose Crunchy Nut, because they are not as bland. I don't need to put sugar with them."
		Usage	Consumer choose depending on the intended use	"[...] I'd probably go for the granola, but if I was just eating as a snack from the box, probably Crunchy Nut."
2.	Aspects of food healthiness mentioned by consumers	–	Several different aspects were mentioned	–

(continued on next page)

Table 7 (continued)

	Topic	Subtopic	Main findings	Example quote
3.1	Consumer's perception of food healthiness (Ingredient list)	Simplicity	A simple product is associated with healthy food	"I would say that the Bran Flakes are healthier because you're more likely to add fruit to it, because they are plain. [...]."
		Sugar types	Less multiple types of sugar are important for the ranking of healthy food	"For example that has multiple sugars in it, when you take the molasses and other ingredients like that, it's literally only sugars, which is bad, multiple types of different sugars can be misleading. [...]."
		Dried fruits	Products without dried fruits is associated healthier	"I have been more inclined to think things with dried fruits are more unhealthy."
3.2	Consumer's perception of food healthiness (Nutrition value)	Colour of nutrition table	The more green the healthier it appears to consumers The more red the less healthy it appears to consumers	"And you can also see it from the front tab the Cornflakes have the more green on nutrition table, which I consider as healthier." "The other thing that you might possibly look at is the bottom left corner, where it has the little symbols and if they are all red, there is no way this is going to be healthy. "
		Salt	Less salt is important for the ranking of healthy food	"If you have too much salt in a product it's definitely going to have some problems for you because too much salt is bad as far as I'm aware."
		Fibre	More fibre is important for the ranking of healthy food	"I would choose Bran Flakes just for the source of fibre. [...]."
3.3	Consumer's perception of food healthiness (Packaging design)	Material of the packaging	A plastic bag is associated with healthier food	"I think in particular cereals, if I'm looking for a healthy one, I expect it to be in a plastic bag closer to the granola and typically darker colours, if it's brown or something similar they don't care enough about the marketing so they're obviously more caring about the cereal."
		Colour of the packaging	Darker colours are associated with healthy food  Green is associated with healthy	"I think in particular cereals, if I'm looking for a healthy one, I expect it to be in a plastic bag closer to the granola and typically darker colours, if it's brown or something similar they don't care enough about the marketing so they're obviously more caring about the cereal." "[...] I'd associate white with clean and the brown being more earthy, green being healthy, obviously and red being bad because that's just because it's associated. [...]."
		Name of the product	A specific product name can associate healthy food	"Even just the word Granola makes it seem healthier."
3.4	Consumer's perception of food healthiness (Additional information)	Trust	Consumer does not trust health claims from a big company	"In in my opinion, and I don't need to be rude to Kellogg's themselves, a big company, but I look at it and I don't believe what I read, just keywords."
		Health Claims	Helpful for consumer when comparing products for the ranking of healthy food	"When you look at the front of the package I would compare what stands there for choosing, Frosted Wheats are high in fibre and the Crunchy Nut says high in vitamin D."
		Vegan Label	Consumer would not consider to buy a vegan product as a healthy food	"If I seen vegan on the front of the package. I wouldn't buy it. Personally, I wouldn't. [...]."
3.5	Consumer's perception of food healthiness (Importance of the aspects)	Ingredients	Simplicity of a product is ranked as the most important aspect Fruits are an important aspect for the ranking of healthy food	"Definitely Cornflakes for me anyways, because they are plain."  "It's the same way I would go for the granola because it has the fruit to help you."
		Nutrition value	Fibre is ranked as the most important aspect	"The Bran Flakes, to me, seemed the healthiest, because of the fibre."
3.6	Consumer's perception of food healthiness (Further aspects)	Growing up	Parents teach the children what is healthy	"[...] Like as kids, especially going to school, you have your cereal in the morning, and it can be either Kellogg's or Weetabix because your parents are telling you that those products are healthy. You don't know any better growing up and define those products as healthy."
		Quantity	Quantity is important for the ranking of healthy food	"I wouldn't necessarily say there's any healthy foods in particular. It's more a healthy quantity of particular foods. [...]."
		Liking a product	Not forcing yourself to eat something is associated healthier	"[...] but it might not be healthy if you're forcing yourself to eat it because it just causes you to eat other things instead."
4.	Improvement of knowledge	Clarity	Desire for more clarity on the product	"Remove ambiguity. Make it clearer."
		Honesty	Desire for more honesty on the product	"You'd need something that's like a more honest product. [...]. So, like, that's one aspect the manufacturer could change, more honesty."
		Education	Most consumers desire a better education in school for understanding healthy food	"[...] But it should be more integral in school. Explaining what healthy food is and more introduction to things is you might not necessarily argue with now."

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