



**Healthy and Quality Food Attitudes and Lifestyle: A
Generational Cohort Comparison**

Journal:	<i>The TQM Journal</i>
Manuscript ID	TQM-05-2023-0156.R2
Manuscript Type:	Research Paper
Keywords:	Health & safety, Quality concepts, Quality culture, Consumer Behaviour, Health care

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Abstract

Purpose: The aim of this study is to investigate how the different generations of consumers behave in the field of healthy and quality food consumption, considering their perception about healthy attributes and healthy eating style, what are the main trusted sources influencing the consumption or the attention toward healthy and quality food, how do they behave toward healthy and quality foods, and which benefits and barriers affects their consumption.

Design: Data for this study were obtained from a questionnaire survey carried out over a six-month period in 2021. The questionnaire was administered online. The sampling procedure was based on a convenient non-random sampling method applied to the Italian population aged between 18 and 75 years old. The data collection process resulted in 1,646 completed questionnaires.

Findings: The results show that in line with the theory of generational cohorts, each generation has its own specificities regarding food behavior. The study reveals a highly sensitive approach towards healthy and quality food consumption from both Z-ers and the Baby Boomers, while X-ers are quite aligned with the other generations. Millennials show specific, sometimes contradictory, attitudes and habits.

Originality: The present results offer new insights into the analysis of healthy and quality food consumption, highlighting significant differences among generations, which can inspire public and private intervention aimed at encouraging the overall attention and consumption of healthy and quality food with related implications in terms of society well-being and longevity improvements.

Keywords: Healthy Food; Quality Food; Healthy lifestyle; Generational Theory; Cross-generational study.

1. Introduction

In recent times, media have provided extensive coverage of health-related topics (Rana and Paul, 2017). This made consumers more health conscious and desirous of a better quality of life, leading them to realize the relevance of quality and safety food choices to both improve the personal wellbeing and reduce the incidence of lifestyle diseases, such as diabetes and heart disorders (Rana and Paul, 2017).

As highlighted by Grunert (2007), the way in which scholars and consumers perceive the food-related health and quality aspects has changed considerably in the last decades. While in the past they were usually considered separately by the literature (Petrescu et al., 2020), the academic research has gradually led to a convergence between the concept of quality and that of healthy, especially changing the meaning of food quality, which can be intended by using both objective and subjective indicators (Cardello, 1995). Indeed, by increasingly stressing the subjective dimension of the construct (Savelli et al., 2019), based on consumers' desires and expectations, food quality has been gradually associated to security, nutritional properties, sensory elements, and sustainability features (Murmura, 2015), which typically describes a food not only as high-quality but also as healthy. Therefore, the relationship between quality and healthy food has become stronger.

In this debate, health (and quality) has fully entered the consumers' food styles, with a rising attention towards the origin, seasonality, and quality of foods they purchase and consume daily. According to the Nielsen's Global Health & Wellness Survey (2015), about 49% of global people consider themselves overweight and are trying to lose weight by making more healthful food choices. Hence,

the demand for natural, fresh and foods without genetically modified organisms (GMOs) has grown considerably over the last decade, involving up to 43% of global consumers that are ever more looking for foods without artificial colours and flavours, based on vegetables and fruits, high in fibres, proteins, calcium, vitamins, or minerals, and low in cholesterol, salt, sugar and fat. The latest Coop Report 2022 depicts similar trends for the Italian market. During 2021, the consumption of healthy products has increased by more than 90%, especially concerning the categories of sport nutrition, fermented milk, vegetables, and energy drinks. By contrast, ready to eat products have recorded the biggest drop.

These trends reflect the occurrence of new consumption values, characterised by growing attention of individuals towards personal wellbeing (Apaolaza et al., 2018) and the quality and safety of life, also considering the chronic diseases concerns (Schulze et al., 2018) and the increasing number of food scandals recently occurred (Rafeeqe and Sekharan, 2018).

Based on the above evidence, this study addresses the topic of healthy and quality food consumption by drawing on the generational cohort theory, according to which members of different age groups represent a specific target with similar values, attitudes, and expectations, as they experience similar historical and social conditions (Bathmanathan et al., 2018). This theory has been applied in several contexts, such as work (Kuron et al. 2015), politics (Milkman 2017) and business decisions (Mosquera et al., 2018). In the consumer field, Kumar and Lim (2008) considered age as a variable of great interest to marketers, since consumers, over the life, tend to change their evaluation criteria about objects, services, and even other individuals. Notably, several studies have focused on age differences also within the quality and healthy food setting (e.g.: Contini et al., 2015). Many of them, however, have focused on a single age group, especially Millennials (e.g.: Lindsey-Warren and Dadzie, 2019; Savelli et al., 2019; Vallejo, 2018), and less frequently on other age cohorts such as Generation Z (e.g.: Kamenidou et al., 2019) or Baby Boomers (e.g.: Kim et al., 2013; Liu and Kwon, 2013). Prior research also resulted in different findings, sometimes contradictory. For instance, Liu and Kwon (2013) declared that people become more health conscientious getting older, while Nafees et al. (2022) found that health attributes' ratings are highest among the Millennials when purchasing food. Such inconclusiveness creates ground for further analysis. Moreover, to the authors' knowledge, very few studies have investigated the topic with a cross-generational approach, except for some research institutes (e.g., Nielsen, 2015) and scholars specifically focusing on certain foods, such as wine (Wiedmann et al., 2014) or fish (Olsen et al., 2008). Nevertheless, a cross-generational approach could be highly relevant for companies to identify the market potential (Lamb, 2010) as it allows for a diachronic and comparative examination of the healthy food phenomenon and offers the opportunity to examine the potential synergies and impacts of cross-generational strategies intended to support the entire society in the transition towards a more health-quality food lifestyle.

Building on this evidence, the main aim of the present study is to investigate whether and how the different generations of consumers behave in the field of health and quality food consumption by addressing four main research questions:

RQ1: How do different generations perceive healthy and quality attributes and eating style?

RQ2: What are the main trusted sources influencing the consumption or the attention towards healthy and quality food by generational cohorts?

RQ3: How do different generations essentially behave with respect to healthy and quality food?

RQ4: Which benefits and barriers affects the consumption of healthy and quality foods by different generational cohorts?

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Owing to the adoption of an intergenerational approach, this study contributes to the literature by providing new insights into the relationship between age cohorts and healthy and quality food consumption, from which valuable implications may be derived for both academics and practitioners. The remainder of the paper is structured as follows. Section 2 reviews the literature related to healthy and quality food and generational cohorts’ concepts. Section 3 describes the methodology, while section 4 presents the empirical results. Section 5 discusses the main findings by considering previous research, and derives practical implications for managers. The last section summarizes the results addressing our research questions and argues about limitations of the study and future research prospects.

2. Theoretical background

2.1 The relationship between healthy and quality food

Key-aspects for choosing healthy food include lifestyle factors, which have been often employed to describe how consumers make good decisions (Küster and Vila, 2017). Particularly, in the food context, prior research referred to the health-related behaviour, namely healthy lifestyle (Gil et al., 2000), as a general way of life based on the interaction between the living conditions and the individual patterns of behaviour determined by socio-cultural dynamics and personal characteristics (Grimaldo, 2010). By specifically focusing on healthy eating, the World Health Organization (2007) defined it as the eating behaviour enabling a person to accomplish a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. In this respect, foods have been often categorized as healthy or unhealthy – and, consequently, chosen by consumers as quality foods – according to several factors, such as their perceived fat and sugar content and/or the presence/absence of artificial ingredients (Provencher et al., 2009).

With -reference to food quality, it refers to both intrinsic and extrinsic attributes of food, which need to be addressed conjointly (Fargnoli et al., 2021). Intrinsic attributes work as perceptual factors representing the characteristics of food, such as chemical and physical components that can be instrumentally measured by gas chromatography and other measurement tools; these attributes are perceived firstly as taste, flavor and texture through sensory organs. The link between physicochemical characteristics and the perceptions is generally referred to as a psychophysical relationship. By contrast, extrinsic attributes are those described on packages and advertisements, such as product name, manufacturer and health promoting benefits, which work as cognitive factors of pleasantness (Ikeda et al., 2004).

According to the literature, healthy and quality eating is based not only on food characteristics, but also on the healthy and quality concepts held by the public (Küster and Vila, 2017), despite this emerged with some contradictions. Prior research, indeed, demonstrated that perceptions about healthiness or “fatteningness” of foods may bias estimations of caloric content of foods (Carels et al., 2007), developing a “health halo” effect according to which individuals could be more likely to underestimate the caloric content of main dishes in places such as restaurants or supermarkets claiming to offer “healthy and quality” food choices than in places that do not make such claim (e.g., McDonalds) (Chandon and Wansink, 2007; Provencher et al., 2009).

2.2 Attitude towards healthy and quality food choices: a general overview

In recent years, the healthy and quality food market has rapidly evolved. On the one hand, consumers have experienced an increasing improvement in life expectancy, which made them more concerned

about their health and related risks of diseases, leading to pay more attention to the personal lifestyle and the healthiness of their diet (Hosni et al., 2017). As a result, individuals **have become even more interested in** ensuring a balanced intake of nutrients by taking care of “variety, proportionality, and moderation in food selection and consumption” (Voinea et al., 2019, p. 5). They are increasingly **aimed at** avoiding the use of diet products such as red and processed meat, sweets and refined cereals, and fats of animal origin (Voinea et al., 2019). By contrast, they **tend to** perceive less processed foods, such as whole cereals, fruits and vegetables, eggs, fish, and unrefined oils, as more beneficial for their health (Grunert, 2016). Similarly, individuals are more inclined to consume organic and functional food as they are considered healthier, more natural, and fresher than conventional ones (Pilař et al., 2021).

On the other hand, healthy food has increasingly attracted the interest from food manufacturers aimed at providing an effective response to the emerging health-related trends of the demand. In this respect, continuing innovations have been developed in the agri-food industry, by both offering new products and introducing new production techniques (Hosni et al., 2017). As an example, Hosni et al. (2017) cited the introduction of new food products differentiated by nutritional characteristics such as light (no fat, sugar, salt), enriched (plus fibres, omega-3), and free of certain constituents (salt, sugar) products. New production techniques, instead, include organic farming, extrusion, and lyophilizing processes, as well as the use of new raw materials into processed foods such as algae, vegetable milks, soybeans, stevia, and so on.

All this suggests that, in today’s society, the consumers’ health consciousness is increasingly driving the food market and industry, leading to a growing interest in healthy food choices, which also translates into new business models and practices.

Notwithstanding this evidence, food choices are complex and are affected by multiple factors whose understanding is essential when dealing with questions related to consumers’ behaviour, perception, and beliefs towards healthy eating (Predanócyová et al., 2023).

Besides the individual lifestyle, early discussed in the above section, several scholars highlighted the role of nutritional knowledge as an antecedent of healthy food consumption. It positively impacts a person’s perception related to health, such as confidence about the general status of health, importance of attending health-related classes, and adoption of a reduced fat diet (Grainger et al., 2007). Notably, the general knowledge about food (Grainger et al., 2007) and self-perceptions of body image (Story et al., 2008) appear to be important factors affecting youngest consumers’ eating habits (Sang-Mook Lee et al., 2018).

Additionally, personal motives and needs determine the value individuals assign to the health and quality-related aspects of a product (Liñán et al., 2019). An early study of Eikenberry and Smith (2004), based on Minnesota consumers, found that preventing, maintaining or treating a disease, weight control, and family preferences are the main motivators of healthy and quality food choices. By contrast, personal moods, such as being hungry or bored, can affect eating choices in an unhealthy direction (Grønhøj et al., 2013; Power et al., 2010), as well as the work schedule of parents, the reliance on fast foods and the difficulties in resisting tasty junk foods can do (Power et al., 2010).

Beyond that, other situational factors can affect the healthy and quality eating behaviour of consumers. Particularly, Liñán et al. (2019) demonstrated that time of preparation, price, and taste could act as barriers to healthy eating, while Grønhøj et al. (2013) focused on distribution-related factors, highlighting how the nature of foods available in the physical environment where people need to shop can affect the nutritional quality of dietary practices.

2.3 *Generational cohorts and healthy and quality food consumption*

Several scholars, over the last decade, have devoted increasing attention to behavioural differences between individuals belonging to different age groups, based on the assumption that each cohort “shares common beliefs and values, has witnessed similar societal developments and changes and has developed a similar consumption behaviour” (Dabija, 2018: 2). Noteworthy, the generational theory helps to explain differences in consumers’ patterns suggesting that people who live at the same time period will exhibit similar values, attitudes, beliefs and desires as they are influenced by the same economic, political and social events (Valentine and Powers, 2013).

Despite the generational cut-off points are not an exact science (Dimock, 2019), a general consensus has been reached about the main characteristics of generational members, in terms of life habits, behavioural patterns, and consumption preferences, also concerning the food context.

Very similar to their own parents (i.e., Matures), Baby Boomers (born between 1946 and 1964) are strongly oriented by family, health, quality, responsibility, and work-related values, being active in the defence of human and workers’ rights (Strauss and Howe, 1991). Most of them are price-sensitive, scarcely attracted by luxury, and prefer real life experiences. As for the food choices, they usually believe in the opinion and recommendations from specialists (Borges-Tiago et al., 2016). Although their food shopping behaviours can be influenced by personal factors such as marital status, health condition, and body weight (Worsley et al., 2011), the baby-boom generation seems to be “more likely to pursuit health and less likely to be concerned with convenience and taste quality than the echo generation” (Park, 2018: 153).

Compared to Baby Boomers (and Matures), Generation X (i.e., X-ers, born between 1965 and 1980) is higher educated, strongly interested in personal life, and not very confident in institutions. People from this generation rely on values such as personal satisfaction and enjoyment and, during purchase, tend to be risk adverse and to use traditional decision-making methods (Lissitsa and Kol, 2016). As for food choices, X-ers like to eat outside home and to have a dietary lifestyle with a high content of animal proteins and a high consumption of convenience foods (Casini et al., 2015). According to Miller (2012), preparing and sharing food and having conversations related to food is a major social activity among X-ers. They don’t trust food related commercials, cooking shows and the opinions of family and friends (Shipman and Durmus, 2016). A recent study of Kamenidou et al., (2020) found that Matures, Baby Boomers and X-ers are more heavily engaged in actual organic and quality-certified food purchases than other generations (Van Doorn and Verhoef, 2011).

Millennials, or Generation Y (born between 1981 and 1995), are usually considered as the most educated cohort. They have a lower marriage rate, are more racially diverse and do not appear to have preferences for consumption that differ significantly from those of earlier generations (Kurz et al., 2019). Millennials are highly influenced by technology and most of their communication occurs via internet and social media (Del Sarto, S., and Gnaldi, 2022). Food represents a reason for socializing and bringing people together, thus Millennials often use social media for social purposes by generating contents on meals they cook and consume (Shipman, 2020). Huyghe and Van Kerckhove (2013) and Rivaroli et al., (2022) also underlined that Millennials pay attention to ethical issues in their food choices, thus preferring organic and natural products, as well as food items whose package is environmentally friendly. Generation Y spends more money for food items that are beneficial for health (Peskett, 2006) and is usually to participate in seminars, workshops, events, tastings, and food festivals related to food consumption (Shipman, 2020).

Finally, Generation Z (i.e., Z-ers, born after 1995) includes consumers who are born in the current society of instant mobile communications. The younger members do not remember any other

environment (Šedík et al., 2018). Z-ers are characterised as innovative and creative people with a strong desire for experiences and economic certainties. They are demanding consumers, asking for clarity and transparency from companies, with which they interact with comments and criticisms (Priporas et al., 2017). Kamenidou et al. (2019) has found that Z-ers **are not** usually engaged with sustainable food consumption beyond attempting to eat locally and seasonally. However, they expect more from companies in terms of sustainability and place high importance on reducing single use plastics, engaging with fair trade, and recycling schemes (Francis et al., 2018). This generation is highly interested in health benefits of foods and convenience of preparation. Additionally, natural content and the availability of food products, in terms of price and distribution (Mitic and Vehapi, 2021), are equally important factors in Z-ers' food choices. A Global Health and Wellness Survey of 30,000 people in 60 countries conducted by Nielsen (2015) reported that 41% of Generation Z were willing to pay a premium price for foods they perceive to be healthier, compared with 32% of Millennials and about 21% of Baby Boomers.

All these studies, while highlighting important peculiarities of each generation concerning its food choices, usually adopted an intra-generation perspective, by focusing upon a specific age-cohort. This allows to go deep into the specific characteristics of a single group, but none of them has included a cross generational perspective, which could be useful to better compare the analogies and differences between age-cohorts, besides understanding their peculiarities, with the certainty of having used the same instruments and data processing, as well as the same timing and conditions of data collection. This would provide appreciable information to food companies, orienting their market strategies. Notably, this would offer a more dynamic overview of the healthy food phenomenon, suggesting how it tends to evolve over the time, even if the research is carried out in a specific time-period, and could help managers to better identify how the current actions targeted to younger generations may impact on their future behaviour. Therefore, to cover this gap, this study developed such an approach for presenting its results.

3. Method

3.1 Instrument and data collection

Data for this study have been obtained from a questionnaire survey carried out over a six-month period (February-July 2021). The questionnaire was administered online, via Computer Assisted Web Interview (CAWI) method. This has been selected for several advantages, such as quickness and low cost, anonymity of respondents, automated creation of a database, geographic spread of respondents, and completeness of data collection (Kraut et al., 2004; Thompson et al., 2003). The CAWI is a type of survey where respondents fill in a questionnaire without the involvement of the person conducting the study (Sowa et al., 2015). In detail, the online questionnaire has been placed on an easy-to-remember domain and disseminated through the main social networks and communication tools, such as Facebook, Instagram, LinkedIn, Whatsapp and Telegram. The main problem with the CAWI method concerns the selection of a research sample that would allow for the complete generalization of statistical results to the entire population, due to difficulty in determining the respondents representativeness (Kraut et al., 2004; Sowa et al., 2015). In order to mitigate that, it has been applied proportional allocation and stratification to the sample, as specified in the next section of this paper (§ 3.2).

The questionnaire has been divided into four sections. The first one was aimed at investigating how people perceive healthy attributes, healthy food, and healthy eating style. The second section explored

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the main benefits and barriers associated with the consumption of healthy and quality food, as well as the underlying motivations and the trusted sources influencing the current or potential interest and attitude towards it. The third part of the questionnaire analysed the consumption of healthy and quality food and the overall behavioural intention of the respondents. Finally, demographic information has been collected concerning age, gender, school education, and familiar status.

In order to verify the face validity of the study, the questionnaire has been pretested on a pilot sample, conducted to learn of any discrepancies within the questions, which included determining whether the format of the questionnaire and questions were suitable. Additionally, it has been relevant also to establish the time duration for completing the **survey**. The pilot questionnaire was delivered via weblink to a total of 10 randomly selected participants for each generational cohort group. A total of 34 usable answers were obtained from the respondents; most of them reported that the questionnaire was easily understandable and required 10-12 minutes for completing it. Additionally, many of the respondents validated the content of the questionnaires, although minor changes to the final design of the instrument were undertaken based upon the received feedback. Subsequently, the final version of the questionnaire was sent to consumers.

Overall, the data collection process resulted in 1,646 completed questionnaires.

3.2 Sampling procedures

The sampling procedure was based on a convenient non-random sampling method, **based on** the Italian population aged between 18 and 75 years old, applying proportional allocation and stratification to it. It has been decided to focus on people who already transitioned into adulthood (i.e., over 18 years old), as they are able to make much more independent choices regarding food and other aspects of their life, compared to adolescents under 18 years. This has been considered extremely relevant for the correct acquisition of the survey answers.

The existing literature does not provide a common categorization of generational-cohorts and differences can be found in terms of both names and dates they were born between, depending on country and/or region, geographical location, or gender of the individuals (Parry, 2017). However, most research (e.g. Bordonaba-Juste et al., 2020; Lipowski and Bondos, 2018) adopts the American definition provided by the Pew Research Center, which classifies five age-cohorts that are considered globally applicable, **namely**: Silent Generation (or Matures) (1928 – 1945), Baby Boomers (1946 – 1964), Generation X (1965 – 1980), Generation Y (i.e. Millennials) (1981 – 1995), and Generation Z (born after 1995).

Following this categorization, the Italian population has been divided into different sub-groups or strata, and the final subjects have been selected from each stratum according to a proportional criterion (Teddlie and Yu, 2007).

Data from ISTAT (2021) have been considered for calculating the Italian population by age, while the sample size was gathered by applying the Brasini et al.'s (2002) formula (see Table 1).

[TABLE 1 HERE]

The Silent generation has not been included in the analysis as it is subject to an increase in chronic diseases, which could seriously bias the food habits, and a progressive decline in the decision making and buying behaviour's self-government that reduces the individual degree of awareness about food consumption (Achón et al., 2017).

Table 2 shows the demographic characteristics of the respondents.

[TABLE 2 HERE]

Before filling the questionnaire, respondents provided their informed consent by ticking a specific box in the online format.

3.3 Measures

Items selected for this study have been adapted from prior research to ensure content validity. However, this has been further assessed by both calculating the Cronbach Alpha values of each construct (see § 3.3) and developing face validity based on the pilot test (see § 3.2).

The list of *health and quality attributes* was drawn from the Nielsen Report (2015) on world eating habits, providing a list of items related to both increased nutritional values and decreased health risk attributes. The original list was slightly modified. Notably, the attribute ‘portion control’ was deleted since it is more related to healthy eating style than to healthy attributes. A similar list of attributes has been adopted by the International Food Information Council (IFIC) Foundation (2017), as well as by other researchers (e.g., Szakaly et al., 2018). *Health and quality foods* consist of a menu list that was taken from different sources, to depict a wide variety of foods. The original items-list of Goetzke et al. (2014), defining foods with additional health benefits, was enriched with other foods, including fruit, vegetables, and yogurt, given their large use in the Italian diet (Nielsen, 2015; IFIC, 2017). Some foods were further added following previous research of Lallukka et al. (2007) and Pawlak and Colby (2009), focused on healthy food habits and consumption, respectively. Items for assessing *healthy eating style* were taken from Vizireanu and Hruschka (2018), determining the key-dimensions of healthy eating styles and their effects on personal health. Both *benefits* and *barriers* associated with healthy food consumption were assessed by using the multi-items lists of Pawlack and Colby (2009), while *internal motivators* driving healthy habits were classified into four items according to the IFIC report (2017) and the similar definition of ‘cues to action’ provided by Deshpande and colleagues (2009). Finally, the *current consumption of healthy and quality food* was investigated by asking the respondents how much they consumed, over the last two weeks, the list of healthy foods previously used for assessing their health-related perception. Three items, based on Zeithaml and colleagues (1996), were further adopted for assessing the *behavioural intention* of consuming healthy and quality food.

All items were measured on a 7-point Likert scale, with 1 representing exceptional disagreement (or unlikely) and 7 representing exceptional agreement (or likely).

3.4 Data processing

The collected data have been analysed through SPSS Statistics software for Windows, Version 23.0. Descriptive statistics were performed to describe the respondents’ characteristics and to assess the frequencies of responses, their mean values, and standard deviations. Then, inferential statistics were used to analyse the differences between generational cohorts. In detail, a Principal Component Analysis (PCA) based on Kaiser-Meyer-Olkin (KMO) method followed by Varimax rotation (Cureton and Mulaik, 1975), was applied to explore healthy and quality attributes of food and healthy eating style (RQ1), trusted sources affecting the consumption and attention towards healthy and quality food (RQ2) and benefits and barriers derived from the consumption of such foods (RQ4). Variables with factor loadings less than 0.6 were excluded from further analysis, as they were not considered statistically significant (Jennrich & Sampson, 1966). Moreover, to verify the reliability of

the PCA, Cronbach’s alpha was computed, considering only alpha values greater, or very near to 0.70 as suggested by the studies of Nunnally and Bernstein (1994) and Churchill (1979) for exploratory research. **Finally**, the Analysis of Variance (ANOVA) was performed using F-tests **in order to assess** the equality of means (Markowski, 1990) and the differences/similarities of features among the four generational cohorts early defined.

The flowchart presented in Figure 1 summarizes the research approach.

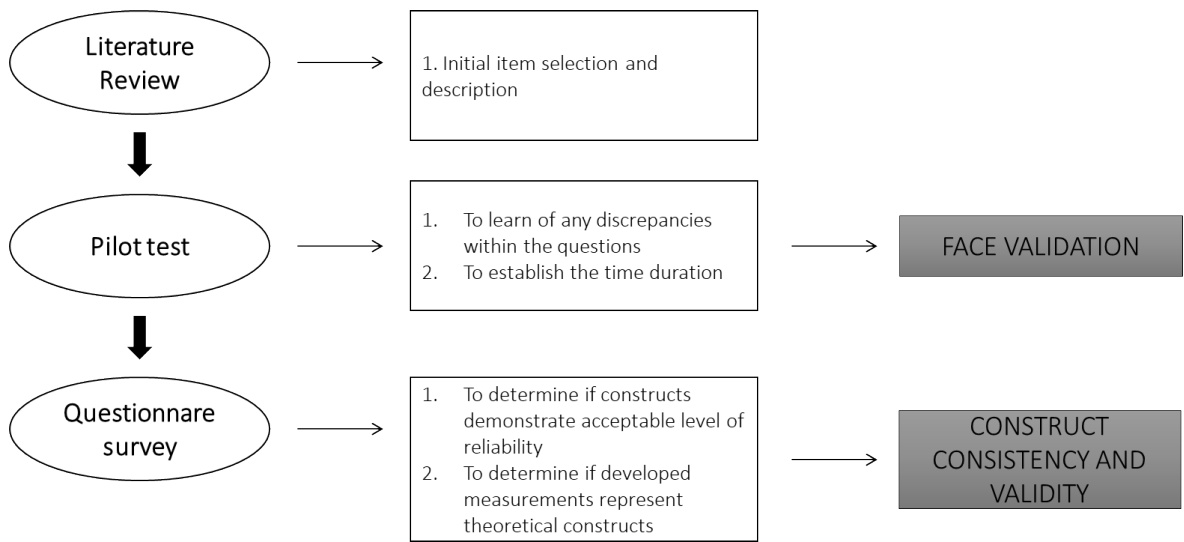


Figure 1. Summary of the research approach

4. Results

4.1 Perception of healthy and quality attributes and eating styles by different generations

By developing a PCA on consumer’s perception about healthy and quality food attributes (Table 3), four main categories emerged, namely “Less is more”, “Back to basic”, “More is more”, and “Necessary for life”. “Less is more”, with a cumulative variance of 14.666%, represents the group of consumers that consider, as healthy, those food that are poor in salt, carbohydrates, sugar, fat, and calories. The second category, “Back to basic” (cumulative variance of 28.931%), considers as healthy and high quality those foods that are plant-based, local and free from non-natural ingredients, while the category “More is more” (cumulative variance of 42.797%) defines healthy and quality foods those enriched with vitamins, minerals and other nutrients deemed necessary for health. Finally, “Necessary for life” (highest cumulative variance: 53.081%) considers as healthy and quality those foods that allow the protection of physical health and well-being, including the protection of teeth, skin, hair, and weight control.

[TABLE 3 HERE]

By applying a generational comparison on the above categories, it can be seen (Table 4) that Baby Boomers perceive the category “Less is more” as significantly more relevant in defining the healthy and quality attributes of food, compared to Generations Y and Z, together with the two categories “Back to basic” and “Necessary for life”, where they have the same opinion of Z-ers, which differ from X-ers and Millennials. The latter consider much less relevant than other generations those

aspects included in “Back to basic”, while Z-ers are the only one considering “More is more” as important in defining a healthy and quality food.

[TABLE 4 HERE]

Concerning the perceived healthiness and quality of eating style, again the PCA revealed four main categories. The first one, named “Behavioral dimension” (25.991% of cumulative variance) links a healthy and quality eating style to certain eating behaviors, such as having breakfast, avoiding excessive meals in the evening, and eating at regular times. The second category, i.e., “Social-related dimension” (cumulative variance of 38.047%), associates the quality of eating style to some relational aspects, including eating together and the influence of society’s judgments. The third category, “Calories-related dimension” (49.019% of cumulative variance), concerns those who do not pay excessive attention to what they eat and its caloric content, while the “Portion-related dimension” (55.319% of cumulative variance) concerns those who are more attentive to the quantity than to the quality of what they eat (Table 5).

[TABLE 5 HERE]

Making a comparison among different age groups (Table 6), the study shows that the “Behavioral dimension” is taken less into consideration by Millennials, while the “Social-related dimension” is significantly considered by Baby Boomers and this aspect decreases with the decrease in the age of consumers, with Z-ers who take it into consideration least of all. Similarly, Z-ers pay less attention to the “Caloric-related dimension” than the other generations, while Millennials seem to be more attentive to quantity rather than to the quality of what they eat.

[TABLE 6 HERE]

4.2 Sources of information influencing the consumption and attention towards healthy and quality food by generational cohorts

Trusted sources influencing the consumption and attention towards healthy and quality food can be grouped into three categories. The first one (with the most relevant cumulative variance: 65.133%) is linked to the opinion of a family member or friend, named “Peer-to-peer information”. It is followed by “Professional information” provided by a competent person such as a doctor, nutritionist, or wellness consultant (49.908% of cumulative variance), and the “Mass media information” (29.703% of cumulative variance) provided by TV advertising, web, and social media, and/or articles or newspapers (Table 7).

[TABLE 7 HERE]

Comparing the generations, all groups put their trust first in “Mass media information”, followed by the opinion of a competent person and, finally, of family and friends. However, by considering the differences among age-cohorts, it seems that Generation Z is mainly confident in mass media and health professionals, while Baby Boomers mainly rely on family and friends (Table 8).

[TABLE 8 HERE]

4.3 Healthy and quality food habits and behaviour of different generational cohorts

Making a comparison among different age groups of consumers on their healthy and quality eating habits, Table 9 shows that, compared to the other generations, Millennials eat more frequently red meat, even if not too often, while they also differentiate themselves for the higher consumption of white meat, sweetened soft drinks, French fries, and for a lower consumption of fruit and vegetables, where Baby Boomers are the most frequent consumers. Furthermore, Millennials, together with Baby Boomers, are the highest consumers of alcoholic beverages. Therefore, they appear to be the age group with slightly less healthy eating habits. By contrast, looking at the execution of physical activity, this increases with decreasing age. Hence, Millennials, and especially Z-ers, are those performing it more frequently.

[TABLE 9 HERE]

From the analysis of the results in Table 10, it emerges that among the four generations analyzed, Baby Boomers (whose opinion is often similar to X-ers) and Z-ers seem to be more satisfied with their choices of healthy and quality foods, so much so that they would continue on this path and also recommend them to friends and relatives, while Millennials seem to be more doubtful both about the quality and effectiveness of consuming healthy foods, and about recommending their choices to others. They do not feel too satisfied with what they have been done so far and do not place excessive trust in healthy and quality foods.

[TABLE 10 HERE]

4.4 Benefits and barriers affecting the consumption of healthy and quality foods by different generational cohorts

The PCA developed on the main benefits derived from the consumption of healthy and quality foods (Table 11), revealed the greatest cumulative variance associated to “Socio-cultural benefits”, including the possibility to be in compliance with religious or medical advice, and to appear younger (cumulative variance of 69.449%). These are followed by “Body-appearance benefits” (cumulative variance of 53.128%), linked to losing weight and feeling better, and finally by “Body-health benefits” (cumulative variance 29.160%), including staying healthier and having more energy and a cleanse body.

[TABLE 11 HERE]

Analyzing the differences among generational cohorts (see Table 12), “Body-health benefits” are among all Z-ers to distinguish themselves from the others for the relevance perceived, followed by Millennials. Similarly, “Body-appearance benefits” are perceived in a very relevant way by the Z-ers. As for the “Socio-cultural benefits”, these are less perceived and at the same level by all generations involved in the study.

[TABLE 12 HERE]

Additionally, performing a PCA on the barriers associated to the consumption of healthy and quality foods (Table 13), it emerged that “Convenience-concerned barriers”, related to the possibility to find these foods in supermarket and cooking them, are the most relevant ones, with a cumulative variance of 69.930%. The second category, with a cumulative variance of 50.120%, is that of “Social-concerned barriers”, related to the refusal on the part of family and friends to the consumption of healthy and quality food, which therefore leads to a personal non-consumption of the same. Finally, there are “Product-concerned barriers” (25.756% of cumulative variance), which consider problems related to taste, cost, and time of consuming these foods.

[TABLE 13 HERE]

The Product-concerned barriers are perceived most by Millennials, while they seem completely less relevant for Z-ers. As for the problems related to the fact that family and friends do not eat healthy food, therefore consumption is also discouraged for them, X-ers and Millennials seem to be most influenced by that, while “Convenience-concerned barriers” are more relevant for Baby Boomers and Millennials, but they do not seem to be relevant for Z-ers (Table 14).

[TABLE 14 HERE]

5. Discussion and implications

Our study reveals a higher sensitive approach towards healthy and quality food consumption by both Z-ers and Baby Boomers, compared to the other generations. Considering how different generations perceive healthy and quality attributes and eating style (RQ1), Millennials show specific, sometimes contradictory, attitudes and habits. This confirms only partially what has been found by the Global Health and Wellness Survey conducted by Nielsen (2015), reporting that after Z-ers, the second generational cohort that would be willing to pay a premium price for foods they perceive to be healthy and of high quality are Millennials, given their high interest in personal health and wellbeing.

By focusing on the youngest generation that will represent the market of the future, whose behaviour could heavily influence the future generations (Priporas et al., 2017), this is usually satisfied with healthy and quality foods choices and willing to continue this path. Z-ers tend to adopt a healthy lifestyle, by practicing physical activity regularly, despite they are also attracted by some foods (e.g., French fries, soft drinks, etc.) which are usually classified as unhealthy. This partially reflects the facts that young people, especially children and adolescents, like to seek out indulgent flavours and fun food experiences, especially when leaving their parental home (Li et al., 2020).

As for the main trusted sources of information (RQ2), however, Z-ers seem to be informed about the importance of having healthy and quality eating habits, based on meals regularity, slow food patterns and moderated consumption, thus showing an overall rational and conscious attitude towards healthy and quality food. Baby Boomers mainly rely on family and friends' suggestions in terms of food choice and usually adopt a healthy lifestyle based on healthy eating patterns, large consumption of fruit and vegetables and low intake of fat, caloric and sweetened products. This is in contrast with previous research that has found as Baby Boomers usually believe in the opinion and recommendations from specialists (Borges-Tiago et al., 2016).

Similarly, analysing how different generations essentially behave with respect to healthy and quality food (RQ3), it can be said that Baby Boomers demonstrated high interest in healthy and quality food choices. They are particularly concerned with health problems, which inspire their food consumption

and habits, to reduce potential diseases. This is surely in line with previous studies that found how this generation is heavily engaged in actual organic and natural food purchase behaviour (Kamenidou et al., 2020), as they are considered healthier, more natural, and fresher than conventional ones (Pilař et al., 2021). Baby Boomers are satisfied with past choices of quality food and declare to be willing to continue to use them.

Overall, Baby Boomers and Z-ers are very similar in their food behaviours. The underlying motivations probably explain the main differences between them with the former that are mainly driven by a deep sense of consciousness about health-related consequences of food choices, while Z-ers grew up in a family and social environment characterised by a strong sense of responsibility for proper nutrition, and health education is naturally engaged in their minds.

What emerges as new evidence from our study is the uncertain and ambiguous behaviour of the Millennials in relation to healthy and quality food. They usually adopt a less healthy lifestyle compared to Z-ers, characterized by higher consumption of red and white meat, sweetened soft drinks and alcoholic drinks, as well as of French fries. Meanwhile, they regularly practice physical activity. They do not care about healthy eating patterns, such as meals regularity and food intake moderation, and declare to be more willing to reduce the number of foods consumed rather than to improve the quality of them. Somehow, in the contrasting behavior of Millennials emerges what has been underlined in past studies (Shipman, 2020), namely that the functionality of food is seen more to socialize and not exclusively to keep fit and healthy.

As for the main benefits, and barriers affecting the consumption of healthy and quality foods by different generational cohorts (RQ4), Millennials declared to be doubtful about the quality and effectiveness of consuming healthy foods, despite their consciousness about health and body-appearance benefits related to healthy food consumption is high. Their current consumption is limited by product-related barriers such as taste, salinity, and sweetness of food. Maybe, these contradictory habits find explanation in the typical lifestyle of this Generation, which includes people in the middle of their young adulthood, deeply employed in their work as well as in their familiar commitments, as wives/husbands and/or parents of young children (Del Sarto and Gnaldi, 2022). Their lives are characterized by severe scheduling times, which fit many activities (e.g., jobs, sport, and hobbies) in a short time available. Hence, Millennials appear to be more vulnerable in food behaviours and their choices are often driven by convenience more than a rational awareness about what they purchase and eat. In addition, our results highlight among the potential barriers, difficulties for Generation Z in finding and cooking healthy and quality food, which could limit their current consumption. This confirms what is found by Mitic and Vehapi, (2021), that is, Generation Z is highly interested in convenience of preparation and pays attention on the availability of food products, in terms of price and distribution.

Practical implications can be achieved from these findings, supporting private companies and public institutions in enhancing a positive attitude towards healthy and quality food consumption. First, the cross-generational approach allowed us to emphasize the importance of adopting a segmentation **approach** when defining the market strategies and programmes for healthy and quality food products, since there are important differences in attitudes, beliefs and behaviours across different age groups. Specifically, our results provide useful suggestions in terms of product and communication policies. Health and quality attributes strongly influence the food consumption, therefore even if it is true that the consumers' health consciousness is increasingly driving the food market and industry, as suggested by Predanócyová et al., (2023), it is also relevant to underline that not all the attributes are equally important across the different generations. Certain food attributes, indeed, are more important

to younger generations and others to older ones. Z-ers mostly appreciate attributes called “More is more”, which characterize food enriched with calcium, vitamins, minerals and other micronutrients, while Millennials and Baby Boomers mainly relate food quality and healthiness to “Back to basic” attributes (i.e., all natural, GMO free, made from vegetables/fruit, etc.), “Less is more” (no cholesterol, no sodium, no sugar, etc.), and “Necessary for life” attributes (e.g. health protection, weight control, etc.). This may be due to the fact that information sources to which adult and older people are daily exposed (personal and/or mass media) clearly recommend limiting the consumption of such ingredients to reduce the risk of chronic diseases, like diabetes or hypertension, to which they are particularly exposed, as also underlined by Hosni et al., (2017). Anyway, product policies should be defined accordingly, by emphasizing different product qualities in line with age groups of reference. Manufacturers, for example, should look for areas where they can improve the nutritional profile of foods and highlight the health benefits their products provide to young consumers by developing new products incorporating the use of emerging nutrients such as probiotics, continuing the strategy of developing new food products differentiated by their nutritional characteristics such as ‘light’, enriched, and free of certain constituents as previously indicated by Hosni et al., (2017). Our results **also** suggest the importance to associate them to both health and appearance benefits, regardless of the age cohort. However, the “Body-appearance benefits” are more relevant for Z-ers than for other Generations, while “Body-health benefits” are more relevant for adults and older people. Hence communication campaign should reinforce such benefits when targeting different consumers. Specifically, in the case of Baby Boomers, communication should be strongly focused on health benefits and food could be proposed as “more than a food”, but as a substitute of a medicine, incorporating easy and convenient health solutions to some conditions such as obesity, diabetes, high cholesterol, and hypertension. Moreover, Z-ers and Millennials mainly trust in mass-media and specialized sources when seeking information about healthy and quality food, while adults and older people mostly rely on interpersonal information, conveyed by familiars and friends, Thus, media selection and message definition should be properly managed. When targeting older people, it is important to stimulate a positive word of mouth based on few, simple, information that are easy to understand. Manufacturers and retailers could help them **to** understand the benefits of ingredients and foods **by** using in-store signage/displays and package claims. Informal communication based on social network, which are increasingly adopted among adult and older people (Hruska and Maresova, 2020), could also assist this kind of communication, making it informal and reliable at the same time. Younger generations, on the other hand, could be reached with a more sophisticated approach, based on scientific articles, specialized press, academic and scientific specialists explaining the benefits of healthy and quality food. Of course, informal media, such as social networks, could be useful to communicate also with the youngest market, given the large use and adoption of technological devices, however the communication content should be adapted, by improving its complexity and scientific-based support.

Finally, practical implication can be developed at an institutional and societal level, concerning the need for training activities aimed at improving the overall knowledge about health benefits that are associated to healthy and quality food choices and lifestyle practices. Food companies, as well Government agencies and schools should invest in training programmes, based on different initiatives according to the target-generation. Baby Boomers should increase their engagement in physical exercise, which requires a specific offering of sporting education and activities; they should be better informed about healthy and quality food benefits by involving healthcare institutions, doctors, and health professionals; meanwhile, older people need to be reassured about healthy and quality food

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availability and opportunity to cook **it**. In this respect, cooking courses should be particularly useful, informing people about healthy food properties and their correct use in the kitchen. Z-ers, on the other hand, especially those of school-age, could benefit from more professional and dedicated activities provided by schools and educators, also based on health and quality food choices in university canteens, able to spread a conscious approach to food consumption. Finally, specific training programmes should be oriented towards Millennials, aimed at reducing their contradictory behaviours and assuring better alignment between intention and actions. As we have seen, while Millennials recognize the health and quality food benefits and declared to be both satisfied with their use and willing to continue in their consumption, their current behaviour is not always in alignment. Indeed, they consume a lot of meat, drink soft and alcoholic drinks, **and** are mainly concerned about taste and/or flavour attributes of healthy and quality food, which often limit their choices, and do not adopt healthy eating patterns. Hence, Millennials are the generational group which requires more attention from firms and institution and specific training intervention aimed at reducing the attitude-behaviour gap which currently limit their healthy and quality food choices.

6. Conclusion, limitations, and future research

In line with the generational cohort’s theory, this study highlights that each age-group has its own peculiarities regarding food habits, with the Millennials emerging as the category of consumers having the most uncertain and ambiguous behaviour. Although the results provided new insights into the analysis of healthy and quality food consumption, which can inspire public and private intervention aimed at encouraging the overall attention and consumption of this category of food, with related implications in terms of society well-being and longevity improvements, the current research is not without pitfalls. The main limitation of the study derives from the adopted sampling procedure. Applying a convenient non-random sampling technique disseminating the survey through weblink has some advantages as mentioned above, such as quickness and low cost, anonymity of respondents, automated creation of a database, geographic spread of respondents but does not permit complete generalizability of the study results. Furthermore, the analysis has been done only among Italian consumers and socio-cultural factors could have influenced the results obtained. Therefore, it would be relevant for future research to expand this analysis comparing consumers of different generational cohorts **from** different European countries, to verify similarities and differences that may emerge between countries, deriving primarily from their cultural aspects. It would be even more interesting to expand the research to another continent, such as America, by comparing food consumption behaviours between two continents which certainly show very different eating habits. Another limitation derives from the **quantitative** nature of the research **which** has the advantage of reaching a large sample of respondents, allowing the generalizability of the results obtained, but often fails in reaching a good depth of the same. Therefore, for future research it could be interesting to develop quali-quantitative **approaches** to obtain both generalizable and in-depth results, based on more targeted interviews and the qualitative opinion of consumers belonging to the different generational cohorts.

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Tables

Table 1. Data from sampling procedure (N=1,646)

Generation ¹	Years of birth	Age (2021) ²	Italian population size (N) ³	Statistically significant sample size (n) ⁵	Surveyed sample size
Baby Boomers	1946-1964	57-75	14.048.770	384,15	394
Gen. X	1965-1980	41-56	14.728.532	384,15	391
Gen. Y (Millennials)	1981-1995	26-40	9.907.213	384,15	456
Gen. Z	=>1996	=<25	4.688.966 ⁴	384,13	405

Notes:

¹ Pew Research Center (<https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>) [accessed: 8 June 2022]

² 2021 is the year of data collection

³ Total population by age-group on 1st January 2021: <https://demo.istat.it/popres/index.php?anno=2021&lingua=ita> [accessed: 15 January 2021]

⁴ Years considered: 1996-2003 (18-25 years old)

⁵ Brasini et al.'s (2002) formula:

$$n = \frac{Z^2 a/2 N}{4(N-1)\theta^2 + Z^2 a/2}$$

n = sample size

$Z^2 a/2$ = the confidence level, with $Z^2 a/2=1,96^2$ (The value 1.96 is calculated using the tables of the standard normal distribution. They refer to the areas of underlying probability to a normal curve with a mean equal to zero and a standard deviation equal to one)

N = population size;

θ = margin of error allowed (it has been set at 5%).

Table 2. Sample profile (No. 1.646)

	No.	%
<i>Gender</i>		
Males	726	44,1
Females	920	55,9
<i>Generation</i>		
Baby Boomers	394	23,9
Gen X	391	23,8
Gen Y	456	27,7
Gen Z	405	24,6
<i>Education</i>		
Primary school	92	5,6
Lower secondary school	281	17,1
Upper secondary school	613	37,2
Bachelor's degree	394	23,9
Master's degree	266	16,2
<i>Istat Area of residence</i>		
Northern Italy	474	28,8
Central Italy	836	50,8
Southern Italy	336	20,4
<i>Familiar status</i>		

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3	Live alone	173	10,5
4	Live with parents/brothers/sisters	638	38,8
5	Live with husband/wife/sons/daughters	752	45,7
6	Live with friends	83	5,00
7			
8			
9	<i>Children at home</i>		
10	Yes	456	27,7
11	No	1190	72,3
12			
13	<i>Elderly at home</i>		
14	Yes	367	22,3
15	No	1279	77,7
16			

Table 3. Principal Component Analysis on consumer perception of healthy and quality food attributes

	Components			
	<i>Less is more</i>	<i>Back to basic</i>	<i>More is more</i>	<i>Necessary for life</i>
Completely natural	-	.722	-	-
GMO free	-	.665	-	-
Without artificial ingredients, dyes, and flavors	-	.689	-	-
Made with vegetables / fruit	-	.641	-	-
Low in / cholesterol free	.664	-	-	-
Low in salt / sodium	.672	-	-	-
Low / sugar free	.710	-	-	-
Low / fat free	.751	-	-	-
Low / calory free	.722	-	-	-
Low content / fructose free	.601	-	-	-
Low in carbohydrates	.607	-	-	-
Enriched with calcium	-	-	.760	-
Enriched with vitamins	-	-	.677	-
Enriched with minerals	-	-	.764	-
Enriched with micronutrients	-	-	.783	-
Organic product	-	.609	-	-
With local ingredients	-	.605	-	-
Part of an important food group required for healthy and quality eating habits	-	-	-	.733
A food that protects health	-	-	-	.812
A food that is good for the skin / teeth / hair / nails	-	-	-	.795
A food that helps control weight	-	-	-	.670
KMO	0.900			
Cumulative Variance	14.666%	28.931%	42.797%	53.081%
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser normalization (rotation converged in 8 iterations).				

Table 4. Comparison among different age groups of consumers on the perception of healthy and quality food attributes

	Total sample											
	n. 1646 (100%)		Baby Boomers n. 394 (23.9%)		X Generation n. 391 (23.8%)		Y Generation n. 456 (27.7%)		Z Generation n. 405 (24.6%)			
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>Sig.</i>
Less is more	4.608	1.0929	4.766a	1.1544	4.590	1.1104	4.536b	1.0297	4.551b	1.0719	3.840	0.009
Back to basic	5.062	1.1196	5.337a	1.1836	5.021b	1.0890	4.676c	1.0108	5.268a	1.0771	32.484	0.000

Note: Score within the same statement followed by different letters are significantly different (i.e. “a” is different from “b” but not from “ab”). Significantly different average scores *= $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$. Bonferroni Post Hoc Test was applied.

	Components			
	<i>Behavioral dimension</i>	<i>Social-related dimension</i>	<i>Calories-related dimension</i>	<i>Portion-related dimension</i>
To have breakfast	.762	-	-	-
Do not skip meals	.659	-	-	-
Chew slowly	.791	-	-	-
Avoid large meals in the evening	.769	-	-	-
Avoid having a late dinner	.742	-	-	-
Recognize the value of food	.741	-	-	-
Eat in moderation	.787	-	-	-
Eat at fixed times	.611	-	-	-
Eat calmly	.760	-	-	-
Do not eat in a hurry	.714	-	-	-
Do not eat ahead of the TV	-	.702	-	-
Avoid eating too much to be accepted in a group	-	.738	-	-
Do not be distracted while eating	-	.797	-	-
Do not count the calories	-	-	.763	-
Don't be overly concerned about what you eat	-	-	.794	-
You can overdo it with food, as long as it is very healthy	-	-	.628	-
How much you eat is more important than what you eat	-	-	-	.742
Do not overly restrict food choices	-	-	-	.740
KMO	0.894			
Cumulative Variance	25.991%	38.047%	49.019%	55.319%
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser normalization (rotation converged in 5 iterations).				

[illegible]

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Note: Scores within the same statement followed by different letters are significantly different (i.e. “a” is different from “b” but not from “ab”). Significantly different average scores *= p< 0.10; **= p< 0.05; ***= p<0.01. Bonferroni Post Hoc Test was applied.

Table 7. Principal Component Analysis on trusted sources for the consumption or the attention toward healthy and quality food

	Mass media information	Components Professional information	Peer-to-peer information
Diagnosis of a disease (e.g. diabetes)	-	.712	-
A conversation with a trusted doctor	-	.746	-
A conversation with a family member / friend	-	-	.797
A conversation with a nutritionist / dietician	-	.843	-
A conversation with a healthcare professional (doctor, nurse, pharmacist, etc)	-	.803	-
A conversation with a wellness consultant	-	.627	-
A health-focused website	.693	-	-
Nutritionist advice on TV / social media	.765	-	-
Advice from a healthcare professional on TV / social media	.778	-	-
Advice from a health / nutrition blogger	.823	-	-
A new article / a newspaper headline	.777	-	-
Advice from a personal trainer on TV / social media	.860	-	-
Information disclosed by food businesses	.799	-	-
KMO	0.931		
Cumulative Variance	29.703%	49.908%	65.133%
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser normalization (rotation converged in 5 iterations).			

Table 8. Comparison among different age groups of consumers on trusted sources on the consumption or the attention toward healthy and quality food

	Total sample		Baby Boomers n.		X Generation		Y Generation		Z Generation		F	Sig.
	n. 1646 (100%)		394 (23.9%)		n. 391 (23.8%)		n. 456 (27.7%)		n. 405 (24.6%)			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Trust in media information	5.372	1.1027	5.416	1.1020	5.341	1.1285	5.267a	1.0447	5.476b	1.1336	2.889	.034
Competent person's trust	4.265	1.5217	4.165a	1.5632	4.307	1.5518	4.099a	1.4575	4.511b	1.4936	6.069	.000
Trust in family and friends	3.899	.8027	3.754a	.8634	3.809a	.7657	4.239b	.8863	3.742a	.5136	41.241	.000
Cronbach's Alpha	0.759											

Note: Score within the same statement followed by different letters are significantly different (i.e. “a” is different from “b” but not from “ab”). Significantly different average scores *= p< 0.10; **= p< 0.05; ***= p<0.01. Bonferroni Post Hoc Test was applied.

Table 9. Comparison among different age groups of consumers on healthy and quality eating habits

	Total sample		Baby Boomers		X Generation		Y Generation		Z Generation		F	Sig.
	n. 1646 (100%)		n. 394 (23.9%)		n. 391 (23.8%)		n. 456 (27.7%)		n. 405 (24.6%)			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
I eat red meat (steak, hamburger, sausage, cured meats, etc)	2.981	1,3830	2,957	1,4090	2,790°	1,2391	3,114b	1,4958	3,040b	1,3399	4,191	0,006

I eat white meat (chicken, fish, etc)	3.599	1,4136	3,598a	1,3967	3,517b	1,3920	3,857c	1,5175	3,388b	1,2841	8,660	0,000
I eat fruit and vegetables (salad, broccoli, fresh fruit, etc)	5.355	1,5954	5,596a	1,5224	5,422°	1,6135	5,035b	1,4091	5,415a	1,7830	9,691	0,000
Consumption of sweetened soft drinks (Coca, Orange, etc)	2.377	1,6614	2,056a	1,5055	2,176°	1,5548	2,945b	1,8431	2,242a	1,5337	26,669	0,000
I eat french fries (popcorn, tortillas, etc.)	2.245	1,3821	1,997a	1,3183	2,240°	1,3392	2,640b	1,5710	2,044a	1,1402	20,176	0,000
I drink alcoholic drinks (beer, wine, cocktails, etc)	2.783	1,6641	3,099a	1,8949	2,801b	1,6443	3,053a	1,5568	2,156c	1,3672	29,377	0,000
I do physical activity (running, walking, swimming, gym, etc)	3.512	1,7706	3,206a	1,8232	3,409b	1,7720	3,535b	1,7811	3,884c	1,6392	10,536	0,000
Cronbach's Alpha	0.897											

Note: Score within the same statement followed by different letters are significantly different (i.e. “a” is different from “b” but not from “ab”). Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$. Bonferroni Post Hoc Test was applied.

Table 10. Comparison among different age groups on consumers on their behavior toward healthy and quality foods

	Total sample n. 1646 (100%)		Baby Boomers n. 394 (23.9%)		X Generation n. 391 (23.8%)		Y Generation n. 456 (27.7%)		Z Generation n. 405 (24.6%)		F	Sig.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
I have a good knowledge of healthy and quality food	4.815	1.4993	4.911	1.5514	4.877	1.3997	4.713	1.5187	4.778	1.5156	1.557	0.198
I have more knowledge of healthy and quality food than my friends	4.525	1.6033	4.505	1.6719	4.563	1.5108	4.502	1.6535	4.533	1.5692	0.126	0.944
I am sure I can recognize which foods are useful to keep me healthy	4.857	1.4631	4.977a	1.5190	4.893a	1.4549	4.649b	1.4110	4.941a	1.4544	4.502	0.004
The time I spend eating healthy food makes me feel good	4.923	1.5606	5.046	1.5492	4.849	1.6062	4.803	1.5705	5.012	1.5065	2.457	0.061
The price of healthy and quality food is adequate	4.385	1.5879	4.632a	1.5965	4.274b	1.6468	4.239b	1.6083	4.415	1.4694	5.190	0.001

In general, the overall quality of healthy food is high	4.835	1.4779	4.967a	1.5536	4.877a	1.4483	4.625b	1.5023	4.901a	1.3806	4.523	0.004
I am satisfied with healthy and quality food	5.107	1.4784	5.160a	1.5490	5.090a	1.4534	4.844b	1.4810	5.368c	1.3807	9.330	0.000
Considering all my experiences with food, my healthful food choices have been wise	4.742	1.5740	4.873a	1.5643	4.762	1.5366	4.535b	1.5573	4.827a	1.6197	3.976	0.008
Based on my experience, I am very satisfied with healthy and quality food	4.890	1.4955	5.066a	1.5051	4.847	1.5011	4.651b	1.4851	5.030a	1.4587	7.054	0.000
I am going to continue to eat healthy and quality food	5.380	1.4916	5.515a	1.5204	5.332a	1.4891	5.066b	1.4766	5.647c	1.4182	12.539	0.000
I am very likely to recommend healthy and quality food to my friends	5.094	1.5684	5.236a	1.6008	5.074	1.6179	4.899b	1.5099	5.195a	1.5347	4.027	0.007
I am very likely to choose healthy and quality foods again	5.439	1.4743	5.538a	1.5383	5.460a	1.4773	5.149b	1.4479	5.647a	1.3899	9.321	0.000
Cronbach's Alpha	0.933											

Note: Score within the same statement followed by different letters are significantly different (i.e. “a” is different from “b” but not from “ab”). Significantly different average scores *= p< 0.10; **= p< 0.05; ***= p<0.01. Bonferroni Post Hoc Test was applied.

Table 11. Principal Component Analysis on benefits derived from the consumption of healthy and quality foods

	Components		
	Body-health benefits	Body-appearance benefits	Socio-cultural benefits
Eating healthy and quality food can make me feel better	-	.797	-
Eating healthy and quality food can help me take care of my body	-	.773	-
Eating healthy and quality food can help me lose weight	-	.809	-
Eating healthy and quality food can help me be healthier	.858	-	-
Eating healthy and quality food can help provide me with the right energy	.735	-	-
Eating healthy and quality food can make me look younger	-	-	.690
Eating healthy and quality food can help me cleanse my body	.869	-	-
Eating healthy and quality food can help me follow the food guidelines given by my doctor	-	-	.639
Eating healthy and quality food can help me follow my religion's food guidelines	-	-	.795
Eating healthy and quality food can help my bowel regularity	.662	-	-
KMO	0.866		
Cumulative Variance	29.160%	53.128%	69.449%
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser normalization (rotation converged in 5 iterations).			

Table 12. Comparison among different age groups of consumers on benefits derived from the consumption of healthy and quality foods

	Total sample n. 1646 (100%)	Baby Boomers n. 394 (23.9%)	X Generation n. 391 (23.8%)	Y Generation n. 456 (27.7%)	Z Generation n. 405 (24.6%)
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	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>Sig.</i>
Body-health benefits	5.667	1.0901	5.694a	1.1048	5.719a	1.0418	5.305b	1.0420	5.999c	1.0580	31.293	0.000
Body-appearance benefits	5.861	.9835	5.815a	1.0238	5.877a	.9469	5.715a	.9537	6.055b	.9822	9.072	0.000
Social-cultural benefits	4.513	1.1849	4.491	1.1715	4.458	1.2368	4.608	1.1505	4.481	1.1832	1.412	0.238
Cronbach's Alpha	0.703											

Note: Score within the same statement followed by different letters are significantly different (i.e. "a" is different from "b" but not from "ab"). Significantly different average scores *= p< 0.10; **= p< 0.05; ***= p<0.01. Bonferroni Post Hoc Test was applied.

Table 13. Principal Component Analysis on barriers derived from the consumption of healthy and quality foods

	Components		
	<i>Product-concerned barriers</i>	<i>Social-concerned barriers</i>	<i>Convenience-concerned barriers</i>
Healthy and quality food is too expensive	.793	-	-
Healthy and quality food doesn't taste good	.638	-	-
Preparing healthy and quality food takes a long time	.698	-	-
Healthy and quality food is not sweet enough	.686	-	-
Healthy and quality food is not salty enough	.645	-	-
I don't know how to find healthy and quality food in the supermarket	-	-	.784
I don't know how to cook healthy and quality food	-	-	.724
My children don't like to eat healthy and quality food	-	.749	-
My friends don't like to eat healthy and quality food	-	.794	-
My wife / husband doesn't like to eat healthy and quality food	-	.801	-
My family doesn't like to eat healthy and quality food	-	.796	-
KMO	0.941		
Cumulative Variance	25.756%	50.120%	69.930%
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser normalization (rotation converged in 6 iterations).			

Table 14. Comparison among different age groups of consumers on barriers derived from the consumption of healthy and quality foods

	Total sample n. 1646 (100%)		Baby Boomers n. 394 (23.9%)		X Generation n. 391 (23.8%)		Y Generation n. 456 (27.7%)		Z Generation n. 405 (24.6%)		<i>F</i>	<i>Sig.</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Product-concerned barriers	3.457	1.4446	3.375a	1.5418	3.553a	1.4636	3.755b	1.3802	3.110c	1.3170	15.698	0.000
Social-concerned barriers	3.092	1.5734	2.937a	1.6598	3.153b	1.5311	3.397b	1.5496	2.841a	1.4961	10.807	0.000
Convenience-concerned barriers	2.865	1.6162	2.943a	1.6469	2.832	1.5724	3.094a	1.6307	2.562b	1.5673	8.280	0.000
Cronbach's Alpha	0.832											

Note: Score within the same statement followed by different letters are significantly different (i.e. "a" is different from "b" but not from "ab"). Significantly different average scores *= p< 0.10; **= p< 0.05; ***= p<0.01. Bonferroni Post Hoc Test was applied.