

Exploring Health-Conscious Consumers' Consumption, Knowledge and Factors that Influence the Intention to Purchase Functional Foods

by

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Declaration

I, Avilasha Ramdut, hereby declare that the dissertation entitled “Exploring Health-Conscious Consumers’ Consumption, Knowledge, and Factors that Influence the Intention to Purchase Functional Foods”, which I hereby submit for the degree of Masters in Consumer Science at the University of South Africa, is my own work and has not previously been submitted by me for a degree at this or any other institution.

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I declare that during my study I adhered to the Research Ethics Policy of the University of South Africa, received ethics approval for the duration of my study prior to the commencement of data gathering, and have not acted outside the approval conditions.

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A. Ramdut

A. Ramdut

Date: 06 August 2022

Dedication

This dissertation is dedicated to my late mother, Anushka, for her love and measureless support from the heavens above. Mum, I made it!

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Abstract

There has been an increase in consumer awareness of the link between nutrition and overall health. As a way to advance the intake of a nutritious diet, 'functional foods' have been developed. 'Functional Foods' promote a healthy diet. The aim of this study was to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. This research bridged the gap in consumer research by increasing the understanding about functional food use and consumption. This study's objectives were addressed using a qualitative, interpretivist approach in addition to the exploratory phenomenological design. Eleven focus groups and ten individual interviews were used to collect data from health-conscious consumers. The findings imply that health-conscious consumers' knowledge and consumption of functional foods are related to the health and nutritional advantages of functional foods, as well as other aspects that contributed to their comprehension. In respect to the effect of attitude, subjective norms, and perceived behavioural control on health-conscious consumers' intention to purchase and consume functional foods, the results indicate participants had both favourable and unfavourable attitudes toward these foods. The findings of this study contribute to a more in-depth understanding of health-conscious consumers' behaviour in regard to functional foods. The study reveals a lack of consumer knowledge on conventional and modified functional foods, which presents an opportunity to educate consumers on the benefits of incorporating functional foods into their diets.

Isifinqo

Kube nokukhula kokuqwashisa kwabathengi mayelana nokuhlobana phakathi kokudla okunomsoco kanye nempilo yonke. Njengendlela yokuqhubekisela phambili ngokudliwa kokudla okunomsoco, kuye kwasungulwa 'ukudla okusebenzayo'. 'Ukudla Okusebenzayo' kukhuthaza ukudla okunempilo. Inhloso yalolu cwaningo bekuwukuhlola ukusetshenziswa kwabathengi abakhathalela impilo yabo, ulwazi kanye nezici ezithonya inhloso yabo yokuthenga ukudla okusebenzayo. Lolu cwaningo luvale igebe ocwaningweni lwabathengi ngokwandisa ukuqonda mayelana nokuthengwa kokudla okusebenzayo. Lolu cwaningo luvale igebe ocwaningweni lwabathengi ngokwandisa ukuqonda mayelana nokusetshenziswa kokudla okusebenzayo kanye nokudliwa kwawo.. Izingongo zalolu cwaningo zasingathwa kusetshenziswa indlela yekhwalthi, yokutolika ngaphezu komklamo wezimanga ezivelayo zokuhlola. Amaqembu ayishumi nanye okugxilwe kuwo kanye nezingxoxo eziyishumi zasetshenziswa ukuqoqa idatha kubathengi abakhathalela impilo. Okutholakele kusho ukuthi ulwazi lwabathengi abakhathalela impilo kanye nokusetshenziswa kokudla okusebenzayo kuhlobene nezinzuzo zezempilo nezomsoco zokudla okusebenzayo, kanye nezinye izici ezibe nomthelela ekuqondeni kwabo. Ngokuphathelene nomthelela wesimo sengqondo, imikhuba ecabangelayo, kanye nokulawulwa kokuziphatha okucatshangwayo enhlosweni yabathengi abakhathalela impilo yokuthenga nokusebenzisa ukudla okusebenzayo, imiphumela ibonisa ukuthi ababambiqhaza babenezimo zengqondo ezivumayo nezingezinhle ngalokhu kudla. Okutholwe kulolu cwaningo kunomthelela ekuqondeni okujulile kokuziphatha kwabathengi abakhathalela impilo ngokuphathelene nokudla okusebenzayo. Ucwanningo luveza ukuntula kolwazi lwabathengi ngokudla okuvamile nokushintshiwe okusebenzayo, okunikeza ithuba lokufundisa abathengi ngezinzuzo zokufaka ukudla okusebenzayo ekudleni kwabo.

Tshobokanyo

Go nnile le koketsego ya temogo ya badirisi ya kgolagano magareng ga dikotla le boitekanelo ka kakaretso. Go tlhagisitswe 'dijo tse di itekanetseng' jaaka tsela ya go tswelletsa go jewa ga dijo tse di nang le dikotla. 'Dijo tse di itekanetseng' di tswelletsa go ja ka tsela e e itekanetseng. Maikaelelo a thutopatlisiso eno e ne e le go tlhotlhomisa tsela e badirisi ba ba kgathalelang boitekanelo jwa bona ba jang ka yona, kitso le dintlha tse di tlhotlheletsang maikaelelo a bona a go reka dijo tse di itekanetseng. Patlisiso eno e fokoditse sekgala se se ntseng se le gona mo dipatlisisong tsa badirisi ka go oketsa go tlhalogangwa ga go dirisa le go ja dijo tse di itekanetseng. Maikemisetso a thutopatlisiso eno a diragaditswe go dirisiwa molebo o o lebelelang mabaka le wa thanolo mo godimo ga thadiso e e tlhotlhomisang go lebeletswe maitemogelo a sebele. Go dirisitswe ditlhopho tsa dipuisano di le somenngwe le dipotsopuisano di le lesome tsa batho ka nosi go kokoanya *data* go tswa mo badirising ba ba kgathalelang boitekanelo jwa bona. Diphithlelelo di kaya gore kitso ya badirisi ba ba kgathalelang boitekanelo jwa bona le go ja ga bona dijo tse di itekanetseng di amana le mesola ya boitekanelo le dikotla ya dijo tse di itekanetseng, gammogo le dintlha tse dingwe tse di akgelang mo go tlhaloganyeng ga bona ga seo. Malebana le ditlamorago tsa melebo, ditlwaelo tsa sebele, le taolo e e akanngwang ya maikaelelo a badirisi ba ba kgathalelang boitekanelo jwa bona a go reka le go ja dijo tse di itekanetseng, dipholo di bontsha gore bannileseabe ba ne ba na le melebo e e siameng le e e sa siamang malebana le dijo tse di itekanetseng. Thutopatlisiso e senola go tlhabela kitso ga badirisi malebana le dijo tsa tlwaelo le tse di fetotsweng tse di itekanetseng, e leng se se tlhagisang tšhono ya go ruta badirisi ka mesola ya go akaretisa dijo tse di itekanetseng mo dijong tsa bona.

**The student and supervisor is unable to confirm the correctness of the translated abstracts.*

Summary

There is a growing awareness among consumers of the link between nutrition and overall well-being. Consumers seem to need a greater understanding of how to improve their diets to achieve optimal health. 'Functional foods' have been developed to expedite the intake of a nutritious diet. In general, functional foods are whole foods that have been fortified, enriched, or otherwise enhanced with additional nutrients. The aim of this study was to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The paucity of consumer research on functional foods served as a driving force behind the need for this investigation. As greater knowledge of the usage and consumption of functional foods is gained through this study, the gap in consumer research will be bridged.

To address dietary issues and promote healthy living, this study included conventional and modified functional foods, which are widely accessible and available to the majority of South African consumers. The health-conscious consumer was the primary focus of the study; however, it is understood that health consciousness may not be of importance to many consumers in South Africa due to resource constraints, attitude, and the presence of several other factors that may influence the implementation of health-conscious behaviour. However, it was essential for the purposes of this research to identify the role that health awareness will play in the achievement of Sustainable Development Goal 3 (good health and wellbeing), as well as what has to be done to increase consumers' health consciousness where functional foods are concerned.

Considering that the Theory of Planned Behaviour (TPB) is used to predict behaviour, it was considered a suitable theoretical framework for this research as it has not been used to address the topic of this research before. The TPB offers a rational framework for analysing health-conscious consumers' intentions regarding the purchase of functional foods. This was accomplished by taking into account the influence of attitude, subjective norms, and perceived behavioural control as the three primary components that lead to the intention to purchase.

A qualitative methodology was applied within an interpretivist paradigm to address the objectives of this study. The phenomenological research design strengthened the interpretivist paradigm allowing the researcher to consider the phenomenon through the experience of the participants. The study further applied an exploratory and descriptive research design to facilitate the lack of research on the phenomenon and describe the phenomenon as presented

by the participants. To facilitate the research design, online focus groups and individual interviews were conducted to gain insight from participants on their understanding of the research topic. The study made use of convenience, purposive, and snowball sampling strategies to recruit participants for the study. The inclusion criteria set for this study required participants to be health conscious, heard about/exposed to/knowledgeable about functional foods, have a disposable income, be able to communicate in English, and able to make their own purchasing decisions. A list of family, friends, and co-workers who fit the inclusion criteria for the study were conveniently approached to participate in the study. Through these participants, snowball sampling was continued.

Data collection commenced after the interview guide were pilot tested. The same interview guide was used for both focus groups and individual interviews. Thirty-eight participants were recruited resulting in the majority of the participants being female, residing in Gauteng, between 18-39 years of age, with Grade 12 + a diploma/degree/masters/doctorate qualification, and permanently employed. Ten participants took part in individual interviews and eleven focus group sessions were held, which comprised 28 participants, each of which included two to four participants as mini focus groups were used. Data saturation determined the number of focus groups and individual interviews. The focus groups and individual interviews were digitally recorded and verbatim transcribed. Individual interview transcripts were compared to focus group transcripts to examine whether there were any variations between the two data gathering methods. Content analysis was used to analyse the data, whereby open coding was applied to identify the codes in the data. Categories and sub-categories were formed representing the groups of codes. After analysing both sets of data, it was discovered that the participants in the focus groups and individual interviews expressed similar viewpoints. The data were thus aggregated since there were no variations in the responses between these two data gathering methods.

Trustworthiness criteria were applied to ensure credibility of the findings. Ethics approval was also obtained from the College of Agriculture and Environmental Sciences (CAES) Health Research Ethics Committee prior to data collection (reference 2021/CAES HREC/072).

The findings suggest that health-conscious consumers' understanding and use of functional foods were linked to the health and nutritional benefits of functional foods. Other contributory factors that added to their understanding was facilitated through reading, influential people, content from social media platforms, and mealtime menu planning. In addition, participants expressed an interest in learning more about functional foods and not considering purchasing or consuming functional foods. Importantly, many of the foods consumers labelled as

'functional foods' were foods they consumed and utilised on a daily basis. Furthermore, health-conscious consumers' awareness and use of conventional and modified functional foods were lacking. Although the participants' responses aligned with the definitions of conventional and modified functional foods, many participants did not know what these functional foods were. This fallacious understanding showed that health-conscious participants had no understanding or knowledge of these types of functional foods. Access to information and a better awareness of the types of functional foods and their availability may increase the use of these foods. The factors that impact their choice to purchase and consume functional foods included availability, health and nutritional advantages, price, external influences, including weather, packaging and brand, quality, time, and personal considerations.

The findings further suggest that in relation to the influence of attitude, subjective norms, and perceived behavioural control on health-conscious consumers' intention to purchase and consume functional foods, participants showed a positive and negative attitudes toward these foods. The outcome of the participants' contribution primarily focused on health initiatives. Some participants did not notice functional foods since they had no interest, did not comprehend what they were, and it did not play a role in their health and wellness. In terms of the subjective norms and the influence on the intention to purchase functional foods, some participants were socially encouraged to buy and consume functional foods by a parent, work colleagues, through social influencers, media personnel and content, medical professionals, friends, family members, and retailers. These people and stores impacted participants' health, food preparation, and consumption; other participants were not socially coerced.

In relation to perceived behaviour control and its influence on the intention to purchase functional foods, participants were able to include functional foods into their diets since they were readily accessible, nearby, and on their shopping list. As a result of these types of foods accessibility, several participants reported feeling satisfied, relieved, and grateful for having them in their possession. On the other hand, it was found that some participants also had difficulties in acquiring or utilising these sorts of foods because of their lack of knowledge as well as the price, availability, lifestyle, and flavour of these foods. Participants stated that educating others about functional foods would provide them the knowledge and rationale needed to include these foods into their daily regimens.

The study contributes towards a deeper understanding of health-conscious consumers' behaviour towards functional foods, revealing the lack of consumer knowledge on conventional and modified functional foods as an opportunity to educate consumers towards the purposeful inclusion of functional foods in their diets. Incorporating the TPB in this study

provided insight into the attitude divide towards functional foods as well as the role of social influences and easy access to functional foods influencing the intention to use and consume functional foods. It is only through a greater knowledge of the health-conscious consumer's perspective on functional foods in connection to their intake and use that the market for the health-conscious consumer can flourish.

Future research should focus on a quantitative study exploring factual knowledge about functional foods in order to determine the exact aspects consumers do not know about functional food in order to create specific functional food educational content. In order to successfully implement both conventional and modified functional foods, requires a complete grasp of the requirements and purchasing patterns of consumers in relation to matters of nutrition and health. It is essential to devise consumer marketing strategies that are both trustworthy and effective in order to promote functional foods.

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List of acronyms

AND	Academy of Nutrition and Dietetics
CAES	College of Agriculture and Environmental Sciences
CAGR	Compound Annual Growth Rate
COVID-19	Coronavirus Disease 2019
CVD	Cardiovascular Disease
FDA	Food and Drug Administration
FFC	Functional Food Centre
FFC	Functional Food Centre
FOSHU	Foods for Specified Health Use
GM	Genetically Modified
KAP	Knowledge, Attitude and Practices
MHLW	Japanese Ministry of Health, Labour, and Welfare
NCDs	Non-Communicable Diseases
PBC	Perceived Behaviour Control
REC	Research Ethics Committee
SDG	Sustainable Development Goal
TPB	Theory of Planned Behavior
USD	United States Dollars
VEF	Vitamin-enriched Foods
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

This chapter presents a background to the research problem of this study and addresses existing research on functional foods. The Theory of Planned Behaviour (TPB) is also briefly mentioned, as it formed the theoretical framework of this study. The aim and objectives of the research are presented, and a summary of the research methodology, ethical clearance, and the dissertation's layout are presented.

1.1 Introduction and background

Consumers have become increasingly concerned about their health and are more aware of the relationship between health and diet (Rosito & Kassem, 2019; Kandylyis, 2021). They also seemingly require more knowledge on how to boost health through diet (Annunziata & Mariani, 2019). Foods include nutrients and bioactive compounds such as lipids, peptides, and antioxidants that are essential for human nutrition (Galanakis, 2021). An approach to expedite the consumption of a healthy diet has been the development of “functional foods” (Wilkinson et al., 2005, p. 5). Martirosyan and Singh (2015) describe ‘functional foods’ as: “Natural or processed foods that contains known or unknown biologically active compounds, which, in defined, effective non-toxic amounts, provide a clinically proven and documented health benefit for the prevention, management, or treatment of chronic disease” (p. 214). In 1991, the interest in and use of functional foods were so immense that the Japanese Ministry of Health’s Labour and Welfare (MHLW) established the ‘Foods for Specified Health Use’ (FOSHU) as a regulatory system authorising statements on food labels concerning foods’ impact on the human body (Lichtenstein, 2018). Since the FOSHU regulations’ introduction, there has been an upsurge in functional food products due to consumer demand (Iwatani & Yamamoto, 2019), resulting in functional foods becoming a diet and nutrition trend (Tatke et al., 2018). This definition of ‘functional foods’ is carried further throughout this research.

The popularity of functional food has thus increased since it was first promoted in 1984 by the Japanese (Siro et al., 2008) and, according to Ozen et al. (2014), the market for these products has been growing steadily. Functional foods are also regarded as among the most actively researched areas of food science (Liang et al., 2016). This is because functional foods might help prevent chronic disease or optimise health (Ellis, 2022), thereby reducing healthcare costs and improving consumers’ quality of life (Daliri & Lee, 2015). Functional foods are designed with a particular goal in mind: to have a nutritional advantage as a result of their

intake, which can be attributed to the inclusion of bioactive compounds (Munekata et al., 2021). In addition to supplying the macronutrients and micronutrients the body requires, functional foods that contain bioactive compounds have been shown to benefit health in various ways; for example, by lowering the risk for health issues or promoting overall health (Arshad et al., 2021). These compounds are naturally present in functional foods or can be introduced through fortification or enrichment. However, the future of functional food will depend on the degree to which consumers acknowledge and accept these products (Hall, 2009).

According to the Academy of Nutrition and Dietetics (AND) (formerly known as the American Dietetic Association), functional foods are broken down into four categories: (1) **Conventional foods** are the most basic foods and are not enriched or fortified; they remain in their natural state (Tatke et al., 2018). (2) **Modified foods** have been enriched, fortified, or enhanced with nutrients or other beneficial ingredients (Seher, 2010). These foods have nutrients added to them that do not naturally occur in the food (Tatke et al., 2018). (3) **Medical foods**, as described by Chmielecki et al. (2023), are “formulated to be consumed or administered enterally under the supervision of a physician and which is intended for the specific dietary management of a disease or condition for which *distinctive nutritional requirements* (emphasis added), based on recognised scientific principles, are established by medical evaluation” (p. 2). (4) **Foods for special dietary use** are similar to medical foods that are commercially available but require monitoring by a healthcare provider (Tatke et al., 2018).

Today, diet not only aims to fulfil hunger and supply nutrients but also avoid nutrition-related diseases and improve consumers’ physical and mental wellbeing (Giannetti et al., 2009). A strong correlation exists between consumers’ health consciousness and the necessity for functional foods (Hoque et al., 2018). The number of consumers who require good, nutritious, convenient, and safe foods is gradually growing due to various socio-economic demographic factors, lifestyles, and changes in the pattern of food consumption (Rezai et al., 2012). One of the recent changes in food consumption patterns among South African consumers is an increased interest in functional foods. Consumers have been influenced by rising health trends, encouraging them to re-evaluate their diets (O’Connor & Venter, 2012). An understanding of consumers’ knowledge of foods’ health-promoting aspects is thus significant (Kendilci et al., 2017).

As indicated by Hoque et al. (2018), increased knowledge in this area is primarily attributed to consumers’ health consciousness. Health consciousness typically affects consumers’ food choices and therefore impacts food purchasing decisions (Huang, 2014). Hence, the

importance of exploring health-conscious consumers' consumption, knowledge and the factors that influence the intention to purchase functional foods is emphasised.

Worldwide, functional food products have become increasingly popular (Nguyen et al., 2019). It is estimated the global demand for functional foods and beverages will reach 529.66 billion United States Dollars (USD) by 2028, exhibiting a compound annual growth rate (CAGR) of 9.5% during the forecast period, as the market's value stood at USD 258.80 billion in 2020, according to a popular site (Fortune Business Insights, 2023). The need for functional foods can be explained by the increased need for nutritious foods, a constant rise in life expectancy, and the need for greater quality of life among consumers (Rezai et al., 2012; Haripriya & Mageshwari, 2021). It is therefore important to consider consumers' behaviour to improve and recognise the value and impact of functional foods (Jain et al., 2014). In this context, an understanding of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods is essential, where consumption is comparable to the use of functional foods.

1.2 Classification and health benefits of functional foods

Functional foods are classified as whole foods (foods that are either not processed at all or processed minimally) (Sohal, 2020), fortified foods (foods that have nutrients added to them that do not naturally occur in the food) or enriched/enhanced foods (nutrients that were lost during processing are added back in) (Butler, 2017). These foods are likely to have health benefits when consumed frequently at an efficient level as part of a particular diet (Patekar & Hingade, 2020). Nutraceuticals, also classified as functional food, were defined by Dr Stephen De Felice in 1989 as "food, or parts of a food, that provide medical or health benefits including the prevention and treatment of disease" (Torabally & Rahmanpoor, 2019, p. 11480). Nutraceuticals are a sector of dietary supplements made from whole foods to enhance health (Andrade, 2017). This view is substantiated by Srivastava (2018), who also states that nutraceuticals can be functional food ingredients or dietary supplements derived from natural sources (mostly of plant origins, such as garlic, red pepper, ginger, and turmeric). The AND categorises functional foods into four groups: conventional foods, modified foods, medicinal foods, and foods for dietary usage (Tatke et al., 2018), all of which were succinctly described in Section 1.1.

Conventional foods are the most basic form of functional foods because they are not enriched or fortified; they remain in their natural state (Tatke et al., 2018). A few examples of these foods are (1) oats, where the key ingredient is fibre, which helps reduce cholesterol

levels (Tatke et al., 2018). (2) Most whole fruits and vegetables fall into this category because they are rich in phytochemicals such as lycopene, which is found in tomatoes, watermelon and pink grapefruit, to name a few (Petre, 2018); lutein, found in spinach, kale or broccoli (Jaret, 2021); and contain vitamins and nutrients as key ingredients that help reduce the risk of certain cancers and heart disease (Tatke et al., 2018). (3) Herbs and spices, such as cloves, turmeric, ginger, rosemary and pepper are also deemed conventional foods that are as rich in health benefits as they are in taste (Palmer, 2019). Ogbunugafor et al. (2017) found that spices and herbs are revered for their potential health properties as they have positive effects in the treatment of numerous diseases, especially chronic diseases such as cancer, diabetes, and cardiovascular diseases.

Modified foods, as previously defined by Seher (2010), are foods that have been enriched, fortified, or enhanced with nutrients or other beneficial ingredients. These types of functional foods have nutrients added to them that do not naturally occur (Tatke et al., 2018). This author identified key food products and linked modified food items with health advantages. A few examples of these foods are (1) yoghurt (Ajmera, 2020), which contains the probiotic strains *Lactobacillus acidophilus* and *Bifidobacterium strains*, widely recognised as dramatically improving digestion (Adjei-Fremah et al., 2018); milk and fruit juices to which vitamin D and calcium are added (Tatke et al., 2018) – a key ingredient to potentially reduce the risk of osteoporosis and hypertension (Tatke et al., 2018) – (2) folic acid-enriched bread (Tatke et al., 2018), which has the key ingredient to potentially reduce the risk of heart disease and neural tube birth defects (Tatke et al., 2018); and (3) energy drinks that have been enhanced with herbs such as ginseng and guarana, also fall into this category (Tatke et al., 2018). Enhanced foods contain added nutrients that were lost during food processing (Tatke et al., 2018).

Medical foods are defined by the Food and Drug Administration (FDA) as “food which is formulated to be consumed or administered enterally under the supervision of a physician, which is intended for the specific dietary management of a disease or condition for which distinctive nutritional requirements, based on recognized scientific principles, are established by medical evaluation” (Tatke et al., 2018, p. 142). The statutory and regulatory references to medical foods can be found in 21 U.S.C. § 360ee(b)(3) and 21 C.F.R. § 101.9(j)(B), stating that a medical food is not a drug (Minsk et al., 2016). These foods are a separate set of foods used under medical supervision to satisfy the particular nutritional needs caused by an illness or condition (Minsk et al., 2016). They are also made for patients who experience challenges in their ability to digest or absorb regular foods, or whose ability to metabolise nutrients is restricted (Berry et al., 2020). Medical foods include specialised formulas designed for people

with health problems (Tatke et al., 2018). A few examples are Axona, which is used for treating Alzheimer's disease, and Souvenaid, used in treating dementia (Tatke et al., 2018). Patients with specific illnesses and limited quality of life may benefit from medical foods (Holmes et al., 2021).

Foods for special dietary use are comparable to commercially available medical foods but must be closely monitored by a healthcare practitioner (Tatke et al., 2018). Due to a variety of health issues, such as celiac disease, lactose intolerance, and obesity, these items meet certain dietary requirements, like gluten-free foods, lactose-free dairy products, weight-loss foods, and new-born formulas (Tatke et al., 2018).

The present study focuses on the consumption of conventional and modified functional foods. According to literature, **conventional functional foods** include oats, watermelon, tomatoes, broccoli, and turmeric, and **modified functional foods** include yoghurt, milk, folic acid enriched bread, energy drinks with ginseng and guarana and fortified fruit juices. The functional foods considered in this study are only a guideline obtained from literature where authors have discussed these foods as conventional and modified functional products. This includes oats (Wu et al., 2019), watermelon (Connolly et al., 2019), tomatoes (Duttaroy, 2011), broccoli (Ciumărnean et al., 2020), turmeric (Wongcharoen & Phrommintikul, 2009), and modified functional foods like yoghurt (Buendia et al., 2018), eggs (Murphy, 2020), folic acid enriched bread (Wheatfoods.org, 2019), energy drinks with ginseng (Kim, 2018) and guarana (Raman, 2018), and fortified fruit juices (Bhardwaj et al., 2014). These foods were chosen for their ability to reduce the risk of cardiovascular disease (CVD), the leading cause of non-communicable disease deaths in South Africa, while TB was the leading cause of death from a communicable disease (StatsSA, 2018). These types of foods are easily attainable in stores and have a potentially beneficial effect on wellness (Ellis, 2022). However, although these functional foods have been identified in the literature, this study opened the topic of conventional and modified functional foods to research participants and did not specifically interrogate each of these functional foods.

Past studies on functional foods conducted in South Africa by Vorster et al. (2003); Brink et al. (2005); Harmse (2005); Dlamini et al. (2010); O'Connor and Venter (2012); Mpofu et al. (2014); Iwu (2016); Smith and Swart (2018); Dukhi and Taylor (2018); and Acham et al. (2018) focused on one or a smaller number of functional foods. For example, indigenous edible plants (such as bitter melon /kola/leaf, coconut oil, plantain, okra, tea, soybeans, and soursop, to name a few), probiotics and prebiotics, rooibos, soy products, plant sterols and locally produced functional food (such as edible mushrooms, tiger nuts, moringa, zobo drink, to name

a few). This research focused on functional foods available in stores where most consumer decisions about food products are made (Prinsloo et al., 2012; Castro et al., 2018). They form part of a range of familiar products consumers encounter when selecting food products for consumption. However, it is not the purpose of this study to determine what the consumer knows about each of the conventional or modified functional foods listed in literature, but to determine their general understanding of these categories of functional foods.

1.3 Theory of Planned Behaviour in the context of health-conscious consumers' purchase intention of functional foods

The TPB, as introduced by Ajzen (1985), was considered in an effort to reach a better understanding of the processes in which consumers are involved that lead to their intent to purchase functional food products. The TPB provides a clear yet sensible framework for analysing health-conscious consumers' intentions to purchase functional foods. It does this by considering the influence of attitude, subjective norms, and perceived behavioural control (PBC) as the three main components that lead to the intention to purchase. This theory is further discussed in Chapter 3. Based on the literature reviewed in this dissertation, a conceptual framework of health-conscious consumers' consumption, knowledge, and the factors that influence their intention to purchase functional foods is presented in Chapter 3. It also outlines the TPB's position in relation to this study's main concepts.

1.4 The functional foods market

The present scenario of the functional foods market is explained in Figure 1.1, which shows the market share of functional foods in different countries. As depicted, a major share in the functional food market is held by the United States of America, and the least in China/Asia, Canada, Australia/New Zealand/Latin America, Eastern Europe/Russia/Middle East/Africa, which makes up 1% of the market share (Tatke et al., 2018).

In 2015, the functional food market was led (and a large market share was represented) by North America. In 2018, effective markets in the Middle East and Africa amounted to 178.48 million USD and were expected to increase to 239.75 million USD by 2023, a 6.1% CAGR increase (MarketDataForecast, 2019). These figures illustrate the extent to which functional foods have progressed since their inception.

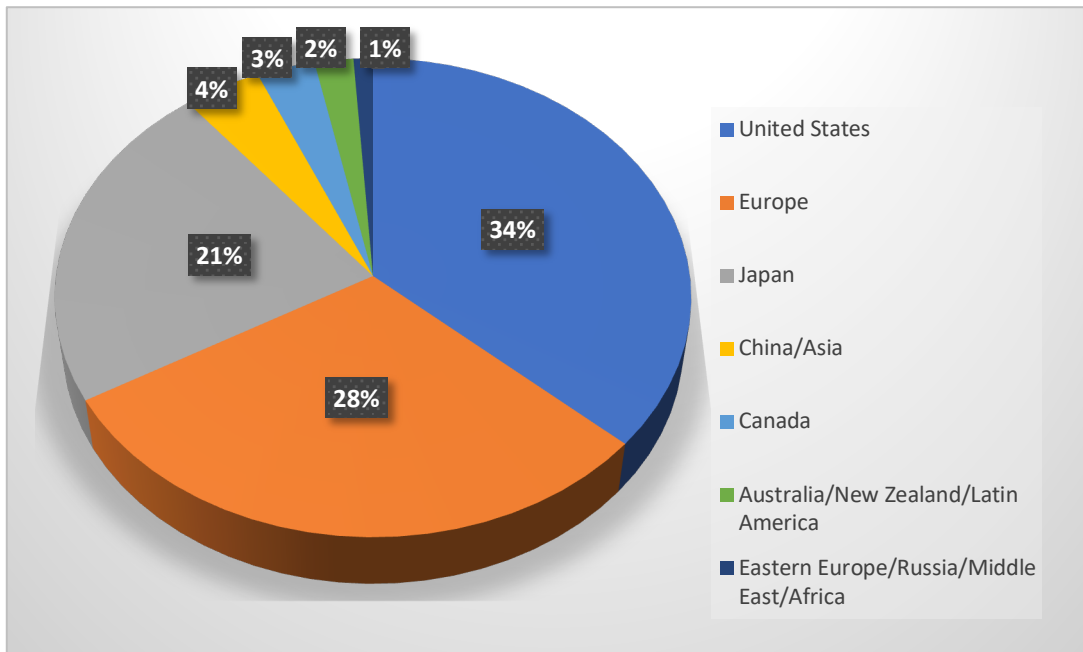


Figure 1.1: Market share of Functional Foods (Source: Tatke et al., 2018)

As seen in Figure 1.1, the market rate for these foods is relatively high in many countries, but a small market percentage is held in South Africa. The country’s market for functional foods is thus still in its infancy but is on a steady trajectory (O’Connor & Venter, 2012). It is therefore imperative for South African consumers to gain insight into functional foods’ potential contribution to their health and wellbeing.

1.5 Previous research on functional foods

In order to explore health-conscious consumers’ consumption, knowledge and the factors that influence their intention to purchase functional foods, it was necessary to determine the scope of research that has been conducted in this field. Table 1.1 presents an overview of studies that focused on functional foods. These are briefly presented in terms of the research topic, when the study was conducted, the most significant findings, and the authors who wrote the article.

Table 1.1: Previous research on functional foods

Article	Description and findings
Knowledge, Attitude and Practices (KAP) towards Diet and Health among International Students in Dublin: A Cross-Sectional Study (2020)	This study's objective was to evaluate the knowledge, attitudes, and practices (KAP) of diet and health during international student acculturation. In conclusion, the specific information obtained was inadequate, even though international students had blunt ideas about a balanced diet and functional foods. International students should gain more nutritional knowledge to prevent adverse health effects (Liu et al., 2020).
Consumers' attitudes and intentions toward consuming functional foods in Norway (2020)	This study investigated antecedents of consumers' attitudes and intentions to eat functional foods in a representative sample of Norwegian consumers. It found that utilitarian eating values were firmly and favourably correlated with consumers' attitudes to functional food use. Hedonic values were less firmly and less negatively linked with attitude, thus concluding that the food industry needs to increase hedonic interest to promote the economic growth of healthy products (Nystrand & Olsen, 2020).
Some Key Factors Affecting Consumers' Intentions to Purchase Functional Foods: A Case Study of Functional Yogurts in Vietnam (2019)	This study assessed several key factors that affect consumers' attitudes and intentions with respect to purchasing functional foods in an emerging market economy. An expansion of the Theory of Reasoned Action was created and then validated using interviewer-administered questionnaires to collect data from Vietnamese participants who were interested in functional yoghurts. Health consciousness and subjective norms were found to considerably boost consumer attitudes towards functional yoghurt purchases, and subjective norms and attitudes seemed to be fundamental for the consumer's decision to purchase these yoghurts (Nguyen et al., 2019).
Healthy Foods as Proxy for Functional Foods: Consumers Awareness, Perception, and Demand for Natural Functional Foods in Pakistan (2019)	This research examined consumers' knowledge, awareness and perceptions of the use of functional food products. The empirical study indicated that most consumers have little awareness and knowledge of functional food products in Pakistan, particularly in rural areas, and the consumption rate for functional food was small. The findings showed that healthy consumers were more interested in consuming functional foods than consumers with ill health (Ali & Rahut, 2019).

Article	Description and findings
Consumers Requirements for Functional Foods (2019)	The aim of the study was to investigate consumers' awareness, knowledge, and interest in functional food consumption. In acknowledgement of the functional food concept, as the primary success driver for consumer product growth, customer awareness and prospects were identified. A lack of knowledge or misinterpretation of the term 'functional foods' was determined. It was critical for consumers to be informed about the health advantages of functional foods and functional ingredients, and motivated by ethical and insightful marketing (Maxim et al., 2019).
Perceived Correspondence of Health Effects as a New Determinant Influencing Purchase Intention for Functional Food (2019)	This research demonstrated the importance of a new factor in consumers' adoption of health products: a perceived correspondence to health benefits. Binary logistic regression models analysed variables that affect customer acceptance. According to the findings, the functional food market could anticipate greater acceptance if the effects consumers experienced correlate accurately to the functional food manufacturer fortifying the carrying individual with an ingredient not normally present in the carrier (Temesi et al., 2019).
A Review on Potential of Some Nigerian Local Food as Source of Functional Food and Their Health Promoting Benefits (2018)	This review was conducted as part of an endeavour to gather and document various local functional food sources in Nigeria, derived from both plants and animals. The aim was to highlight the inherent potentials associated with these sources. The study emphasised the correlation between functional food and health, as well as the various domains encompassed by functional foods. This study discovered that further investigation is needed to determine individuals' perceptions regarding the health benefits of certain local foods from Nigeria, which have been identified as functional food sources (Acham et al., 2018).
A Focus on Four Popular "Functional Foods" as Part of a Strategy to Combat Metabolic Disease Through the Increased	The objective of this study was to ascertain the potential advantages of incorporating fruits and vegetables into the dietary regimen for individuals with chronic conditions such as diabetes mellitus and hypertension. This narrative review explored the diverse applications of plants, which extend beyond their conventional use in medicine. These applications encompass various domains such as food preparation, beverages,

Article	Description and findings
Consumption of Fruits and Vegetables (2018)	fragrances, culinary flavouring, and cosmetics. Moreover, plants hold significant potential in mitigating the adverse impact of diseases and health conditions. The pursuit of sustainable practices necessitates the exploration of cost-effective alternatives for the extensive extraction of medicinal plants, alongside the identification and characterisation of bioactive compounds with potential therapeutic applications (Dukhi & Taylor, 2018).
Aspalathus linearis (Rooibos) – a functional food targeting cardiovascular disease (2018)	This review incorporated pertinent scholarly sources to examine the therapeutic capacity of Rooibos within the context of CVD, which presently represents the most prevalent non-communicable ailment. This study examined the therapeutic efficacy of whole plant extracts in comparison to isolated active ingredients, while also considering the potential risks associated with overdose or interactions between herbs and drugs. The existing body of research strongly supports the notion that Rooibos possesses advantageous properties as a preventive and complementary therapeutic functional food in relation to CVD (Smith & Swart, 2018).
Consumer Preference towards Functional Foods in Delhi, India-A case study (2016)	This study explored Delhi consumers' evaluation based on socio-demographic information, consumer awareness and acceptance, and factors affecting willingness to pay for functional food. It found that all consumers' literacy level was high, meaning consumers knew about health and the value of diet in taking care of their families. They were more conscious of their health conditions and fitness. They used functional foods to enhance their physical appearance due to their lifestyle behaviour (Kondepudi et al., 2016).
Food as Medicine Functional Food Plants of Africa (2016)	This study investigated "Food as Medicine: Functional Food Plants of Africa", examining African foods that possess diverse characteristics including prebiotic, probiotic, satiety-inducing, immune-modulating, stress-reducing, sports performance-enhancing, cognitive-enhancing, sleep-promoting, metabolic syndrome-alleviating, antioxidant-rich, and unsaturated fat-containing properties (Iwu, 2016).

Article	Description and findings
Development of a locally sustainable functional food based on mutandabota, a traditional food in southern Africa (2014)	This research focused on the advancement of a regionally viable functional food derived from mutandabota, a customary culinary element in the southern African region. This study found a method for facilitating the availability of <i>L. rhamnosus yoba</i> , a strain of probiotic bacteria, for the rural communities residing in southern Africa. This was accomplished by harnessing the potential of mutandabota, a traditional food, which contains abundant quantities of viable <i>L. rhamnosus yoba</i> surpassing the recommended daily intake thresholds (Mpofu et al., 2014).
Functional Food: A Growing Trend among the Health Conscious (2013)	The objective of this study was to explore functional food concepts and regulatory bodies in various countries. A summary of Malaysia's food growth potential was provided and addressed the factors that may impact the purchasing of functional foods. The findings illustrated local consumers' habits in frequently purchased processed and functional foods, and offered insights into consumers' desire to eat healthy foods. It found functional food intake is equal to individuals' awareness and behaviour in matters of wellbeing. The need for reliable knowledge and education practices arises as consumers have little understanding of functional ingredients (Lau et al., 2013).
Awareness, Knowledge, Understanding and Readiness to adopt bioactive food ingredients as part of functional food consumption by health-conscious consumers of the city of Cape Town (2012).	The aim was to determine consumer awareness, knowledge and understanding of bioactive food ingredients in order to create consumer preparedness for South African foods (and dietary supplements). Five phases of the new product adoption protocol were developed and appropriate for consumers to buy commodities like food. These stages emphasise that interest plays a key role in consumer product adoption. Consumers need to be conscious and interested to be aware of functional foods and/or bioactive foods before they are purchased. The first consumers to turn from a stage of awareness towards adoption will be those who actively seek information about the ingredients, thus improving their awareness, knowledge and understanding. However, most consumers need extensive education on bioactive food ingredients in order to increase their knowledge of these foods (O'Connor & Venter, 2012).

Article	Description and findings
Consumer Acceptance of Functional Foods and Their Ingredients: Positioning Options for Innovations at the Borderline Between Foods and Drugs (2011)	This study found that functional food acceptance was influenced by three factors: consumer characteristics, purchasing situation, and product characteristics. The study analysed these influencing factors using the example of joint health ingredients (e.g., glucosamine). It found the degree to which consumers were knowledgeable and appreciative of the therapeutic advantages of certain ingredients seemed to have affected the market adoption of functional ingredients. Consumer knowledge also depends on consumers' individual health status as it determines their involvement in searching for data regarding particular functional nutrition (Bornkessel et al., 2011).
Functional foods development in the European market: A consumer perspective (2011).	This research offers information that can lead to more successful strategic and tactical decision-making in marketing. In addition, the findings can help government agencies interested in designing programmes for public health. Marketing tactics need to advocate for functional foods in order to make them even more accessible to target consumers and prevent confusion with other generic health foods, such as light and nutritional products. The findings of the study suggest (regarding public initiatives) that focus must primarily be placed on educational campaigns and communication, because the consumer is assured of public authorities' knowledge (Annunziata & Vecchio, 2011).
Indigenous edible plants as sources of nutrients and health benefitting components (nutraceuticals) (2010)	The objective of this study was to examine various approaches for cultivating indigenous edible plants and assess their potential as viable sources of nutraceuticals. This study determined that the optimal use of the plant's potential benefits may be achieved by incorporating its leaves into the diet as a vegetable, a practice observed in certain segments of the South African population. Therefore, there is a significant nutritional benefit in advocating for the cultivation of <i>Amaranthus spp</i> , due to their ability to provide pro-vitamin A and their nutraceutical advantages (Dlamini et al., 2010).
Consumer knowledge of functional foods (2009)	The research established a multidimensional metric for evaluating consumers' knowledge of functional foods. Gender, employment, income, and age served as a benchmark of consumers' interest

Article	Description and findings
	in functional foods. The study extended the application of consumer information to unsustainable and edible products and offered further insights into the increasingly functional food market from the consumer point of view (Sääksjärvi et al., 2009).
Consumer acceptance of functional foods: Socio-demographic, cognitive and attitudinal determinants (2005)	The purpose of this research was to establish socio-demographic, cognitive and attitudinal influences as possible determinants of the acceptance of functional foods. The probability of a functional food's acceptance also increased with the involvement of an infirm family member, albeit this effect diminished with a higher degree of reported knowledge or understanding of the concept. The objective of this study was to determine consumer acceptance of functional foods (Verbeke, 2005).
South African Consumers' Perception of Soy and Soy Products (2005).	This study evaluated South African consumers' perceptions of soy and soy products. Overall, individuals of African descent exhibited a greater inclination towards the acceptance and appreciation of soy products, in contrast to individuals of Caucasian descent. A greater proportion of individuals of Indian descent exhibited awareness of soy-based meat alternatives compared to individuals from other racial backgrounds. The researcher established that marketing strategies in South Africa should prioritise targeting consumer segments that exhibit a strong preference for the taste of soy and demonstrate a consistent inclination towards the regular consumption of soy-based products (Harmse, 2005).
Market and product assessment of probiotic/prebiotic-containing functional foods and supplements manufactured in South Africa (2005)	The objective of this research was to identify South African-made probiotic and prebiotic products and assess the labelled health and content claims in light of existing scientific evidence and proposed South African regulations in the Foodstuffs, Cosmetics, and Disinfectants Act. The study's findings suggest there is a need to revise proposed regulations in South Africa pertaining to products containing probiotics and prebiotics. Furthermore, it is recommended that manufacturers of such products assume responsibility for ensuring that consumers receive accurate and scientifically supported information that adheres to legal requirements (Brink et al., 2005).

Article	Description and findings
Functional foods with added plant sterols for treatment of hypercholesterolaemia and prevention of ischaemic heart disease (2003)	The aim of this study was to assess the necessity, effectiveness, safety, and target demographic of a functional food product (specifically, Pro-activ, a spread containing plant sterols) within the context of South Africa. The prevalence of hypercholesterolemia and CVD in South Africa has prompted the need for suitable functional foods. The consumption of approximately 2 grams of plant sterols per day, incorporated into a spread containing approximately 20 grams, has been observed to have a significant impact on reducing both total cholesterol and low-density lipoprotein (LDL) cholesterol levels by approximately 10 - 15% (Vorster et al., 2003).
Functional Foods: Benefits, Concerns and Challenges—A Position Paper from the American Council on Science and Health (2002)	This review classified several functional foods by type of evidence to support their functionality, strength, and recommended consumption. While many functional foods are promising, public health is concerned with providing adequate scientific evidence to support the promotion of healthy foods as well as structuring functional arguments. Consumers must understand that featured foods do not constitute a “magic bullet” or a panacea for poor health habits. “There are not good and bad “foods”, only good and bad dietary patterns” (Hasler, 2002, p. 3779).

As reported in Table 1.1, research conducted by these authors mainly focused on an evaluation of consumer knowledge, comprehension, attitude, awareness, perception, preference, acceptance, as well as socio-demographic, cognitive, and attitudinal drivers of the intention to purchase functional food products. These studies were generally internationally based and conducted using a quantitative methodology. The studies reflect a paucity of research on health-conscious consumers’ consumption, knowledge, and the factors that influence their intention to purchase these types of foods in South Africa.

From the information presented in Table 1.1, it can be deduced that no research could be found that addressed consumers’ knowledge of functional foods in South Africa. There was also no research being conducted on the influence of knowledge on functional food purchase decisions as there are very few South African studies, in general, looking at functional foods. As noted in Section 1.2 (Foods for Special Dietary Use), prior studies on functional foods specifically looked at the health benefits and the prevention and management of chronic diseases. Previous research has also not explored health-conscious consumers’

consumption, knowledge and the factors that influence their intention to purchase functional foods, particularly in South Africa, validating the need for this study to be conducted, as explained in Section 1.6.

1.6 Problem statement

With the increased value of the functional food market, according to a widely accepted source (Grand View Research, 2022), interest in healthy foods has similarly increased (Childs et al., 2011). Functional foods are not often marketed to consumers in the South African marketplace despite the rising trend, and those that are available are seldom advertised as functional foods (i.e., with health statements telling consumers about the benefits of their consumption) (Nystrand & Olsen, 2020). Currently no legislation is available in South Africa to support marketing communication on functional foods. Since developing nations, such as South Africa, are confronted with an increasing number of lifestyle-related health issues, these countries must increase their expenditure on rigorous scientific research on the potential of functional foods (ISAAA, n.d.).

Currently, there is very little research on consumers' knowledge of conventional and modified functional foods in South Africa. Moreover, little research has been conducted on the influence of this knowledge on functional foods and the decision to purchase such foods. There are very few South African studies, in general, looking at functional foods. Previous South African research conducted on the topic by Vorster et al. (2003) focused on the use of functional foods with plant sterols added to treat hypercholesterolemia and prevent heart attacks. Another study by Brink et al. (2005) focused on a market and product assessment of probiotic/prebiotic-containing functional foods and supplements manufactured in South Africa. Harmse's (2005) research investigated South African consumers' perception of soy and soy products. Dlamini et al.'s (2010) study found indigenous edible plants were sources of nutrients and health-benefiting components (nutraceuticals). In addition, O'Connor and Venter (2012) explored awareness, knowledge, understanding and readiness to adopt bioactive food ingredients as part of functional food consumption by health-conscious consumers in Cape Town.

Mpofu et al.'s (2014) study fixated on the development of a locally sustainable functional food based on mutandabota, a traditional food item in southern Africa. Iwu's (2016) study explored "Food as Medicine: Functional Food Plants of Africa", while Smith and Swart's (2018) research specifically looked at *Aspalathus linearis* (Rooibos) – A functional food targeting cardiovascular disease. Dukhi and Taylor (2018) conducted research focusing on four popular "functional foods" as part of a strategy to combat metabolic disease through the increased

consumption of fruits and vegetables. Acham et al. (2018) also reviewed some Nigerian local foods' potential as a source of functional food and their health-promoting benefits. However, they did not explore health-conscious consumers' consumption, knowledge and the factors that influence the intention to purchase functional foods in depth. Furthermore, the majority of the studies (Hasler, 2002; Verbeke, 2005; Sääksjärvi et al., 2009; Annunziata & Vecchio, 2011; Bornkessel et al., 2011; Lau et al., 2013; Kondepundi et al., 2016; Temesi et al., 2019; Maxim et al., 2019; Ali & Rahut, 2019; Nguyen et al., 2019; Nystrand & Olsen, 2020; Liu et al., 2020) were internationally based and conducted quantitatively. Quantitative research is expressed in numbers and graphs, which are used to establish generalisable facts about a topic. Conversely, with qualitative research, words are used to convey findings, allowing a deeper understanding of subjects that are currently unclear (Streefkerk, 2019). Hence, a qualitative study could help illuminate South African health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

It has been determined that many consumers acknowledge the link between health and nutrition (O'Connor & Venter, 2012), resulting in consumers taking greater responsibility for their own health and wellbeing by turning to their diets (Hasler, 2002). However, many consumers do not realise what functional foods are (O'Connor & Venter, 2012) or the benefit that these foods provide to aid consumers' decision to purchase more functional food items. As pointed out by Grebow (2014), consumers who are not familiar with functional foods are less likely to purchase or consume them. The fact that many consumers do not think about the number of calories and nutrients a 'health food' contains emphasises the importance of food products specifying they are protecting consumers' health (Küster-Boluda & Vidal-Capilla, 2017).

Pecorino et al. (2016) found that sensory attributes (taste and appearance) and socio-demographic characteristics, like level of education, affect the consumption of functional foods. Most consumers believe functional food consumption will enable them to preserve good health, hence the need for policymakers to increase awareness (Ali & Rahut, 2019). Thus, consumers need to be made more aware of the nutritional benefits of functional foods, which will likely result in the consumption of these types of foods and help enhance their wellbeing (Weiss, 2016).

As stated, there is a rising trend of functional food consumption in the South African market, and it is imperative to understand health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. In addition, it is assumed

that functional food consumption and a healthy lifestyle are related. Combining these two aspects together helped the researcher gain meaningful insights into South African consumers' understanding and approach to functional foods and the purchase of these food products.

When it comes to explaining and forecasting behaviour across a wide range of areas, researchers have relied on the TPB (Ajzen, 2020). According to the TPB, behavioural intentions are determined by three factors: attitude, PBC, and subjective norms (Ajzen, 2020). The TPB therefore provided a simple but practical basis for evaluating health-conscious consumers' beliefs, intentions, subjective norms, attitudes, and PBC in their intention to buy functional foods.

1.7 Sustainable Development Goal 3's relevance to this study

As a global framework for goal setting, the Sustainable Development Goals (SDGs) are seen as a unifying force that every nation should strive to attain (Fanzo, 2019). Of the 17 SDG goals, SDG 3 speaks to "good health and well-being" and is of particular relevance to this study. This goal ensures that "no one is left behind", as emphasis is placed on promoting equality in order to satisfy the needs of women, children, and vulnerable groups in particular (WHO, 2023). Focus is also placed on the nexus of poverty, discrimination and health challenges (De Larch & Theron, 2020).

Improvements were made to many individuals' health prior to the outbreak of COVID-19, but more work is still required to eliminate a variety of illnesses and deal with various chronic and emergent health concerns in their entirety (United Nations, n.d.). Del Castillo et al. (2018) explain the possibility of creating sustainable health by using various techniques, such as a healthy diet based on functional foods. Functional foods are a source of nutrients and linked to a range of important health advantages, including the prevention of illness, the prevention of nutritional deficiencies, and the promotion of good health and wellbeing (Ajmera, 2020).

This study considered conventional and modified functional foods available to most consumers in South Africa that could be included in their diet as a means to address dietary challenges and healthful living. Although the study focused on the health-conscious consumer, it is also understood that health consciousness may not be important to many consumers in South Africa. Resource constraints, attitudes and many other factors potentially influence the implementation of health-conscious behaviour. However, it was important for the researcher

to determine the role of health consciousness in achieving SDG 3, and what needs to be done to improve consumers' health consciousness.

1.8 Justification of the study

This research aimed to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The lack of consumer research on functional foods warranted this study. Through this study, the gap in consumer research will be addressed to attain a better understanding of the use and consumption of functional foods. At this time, it is not certain what consumers understand functional foods to be, and if they do include functional foods for the purpose it is intended, especially where the health-conscious consumer is concerned. It is also unclear whether the health-conscious consumer's purchases of conventional and modified functional foods are initiated from a clear understanding of these foods. Since the role of functional foods and what the consumer understands these foods to be is not clear, this research is justified. It is only through a better understanding of the health-conscious consumer's position on functional foods in relation to their consumption and use that it will be possible to grow the market for the health-conscious consumer.

As previously indicated, there is also a growing demand for information on consumers' knowledge of functional foods and the link consumers make between a diet that includes functional foods and general health and wellbeing. It was thus important that this study be conducted to specifically determine consumers' current position on functional foods and their health consciousness if SDG3 is to be achieved.

1.9 Research aim and objectives

The aim of this study was to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The following research objectives and sub-objectives were formulated to achieve this aim:

Research objective 1

1.1 To determine health-conscious consumers' understanding of the term 'functional foods'.

Research objective 2

2.1 Apply the three components of the TPB to determine:

- 2.1.1 Attitude's impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.
- 2.1.2 Subjective norms' impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.
- 2.1.3 PBC's impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

Research objective 3

- 3.1 To explore health-conscious consumers' subjective knowledge and use of:
 - 3.1.2 conventional functional foods; and
 - 3.1.3 modified functional foods.

Research objective 4

- 4.1 To identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods.

Research objective 5

- 5.1 To explore health-conscious consumers' use of functional foods.

1.10 Methodology

This section describes the methodology suggested to address the study's objectives. The first element to be considered in any study's design is the research paradigm. A paradigm determines the researcher's philosophical approach and has important implications for the research process, including the choice of methodology and techniques (Kivunja & Kuyini, 2017). This study employed an interpretive/constructivist paradigm. For research conducted under the qualitative interpretivist paradigm, the phenomenological theory best suited this study. The current study aimed to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods through the careful application of the phenomenological theory.

The researcher used non-probability sampling techniques to recruit participants, including snowball sampling. Snowball sampling is used when it is difficult to meet the target characteristics; in this process, the participants are recruited by established connections or personal associates (Naderifar et al., 2017). One of the notable benefits associated with snowball sampling is its efficacy in targeting consumers who are difficult to engage with

(Raifman et al., 2022). The drawbacks are that it is typically difficult to determine sampling error or draw meaningful inferences about populations based on the sample obtained (Ebenezer & Piate, 2023). These disadvantages can be curbed by ensuring appropriate inclusion criteria are outlined (Naderifar et al., 2017). The inclusion criteria that directed this study's snowball sampling specified that participants had to:

- perceive themselves to be health-conscious,
- be over the age of 18 years,
- be conscious of purchasing health-related food products,
- be conversant in English as the interviews would be conducted in English,
- have a disposable income to purchase health-related food products,
- be able to make their own purchasing decisions,
- have heard about functional foods, been exposed to functional foods, or perceive themselves to be knowledgeable about functional foods.

There has been growing interest in healthy food consumption in South Africa due to increasing health concerns. In 2019, South Africans' health and wellness continued to post stable demand and positive growth, as local consumers were affected by the growing trends in health that inspired them to re-evaluate their diets (Euromonitor.com, 2022; Thompson, 2019). Dolman et al. (2007) demonstrated that over 80% of South African metropolitans understood the significance of food intake habits in the control of cholesterol, blood pressure and diabetes. This study was conducted in predominantly urban areas of South Africa and was limited to the geographic boundaries of the Republic of South Africa.

1.11 Data collection methods

The research instrument for this study was focus groups and individual interview sessions. Focus groups are interviews conducted with a small group of six to ten participants that are unstructured and free flowing (Walden, 2006). This study adopted an online mini-focus group format and an individual interview session approach to gather data. Focus group sessions consisted of 3-4 people, and one participant engaged in each individual interview session. The participants were recruited using the snowball sampling strategy. This entailed:

- Verbally conveying the type of participant required to participate in this study, who met the inclusion criteria.
- The researcher's email address was shared with potential participants.

- Once the participants contacted the researcher through email, the following information was provided:
 - the details of the research project,
 - the informed consent form,
 - a demographic questionnaire (which will include age, gender, location [reside within the borders of South Africa], education, income and employment status),
 - date and time for the online focus group or individual interview session.

The snowball sampling strategy criteria were used, and participants were recruited by established connections or personal associates for the focus groups and individual online sessions. The criteria were reconsidered in terms of when data saturation had been achieved on all questions and if additional focus groups were required to support data saturation. The online focus groups and individual interview sessions were recorded and transcribed for future reference and analysis (Myers, 2020).

1.12 Trustworthiness of data

“Trustworthiness refers to quality, authenticity, and truthfulness of findings of qualitative research” (Cypress, 2017, p. 254). It is defined as a study’s credibility, transferability, dependability, confirmability, authenticity (Kyngäs et al., 2020) and reflexivity (Palganas et al., 2017). **Credibility** indicates that the research review demonstrates reliable outcomes (Rosito & Kassem, 2019). Credibility analyses if the study’s findings reflect credible knowledge derived from the participants’ original data and are an adequate depiction of their original opinion (Lincoln & Guba, 1985). Triangulation is the use of multiple methodologies, sources, or evidence in order to enhance comprehension of a given phenomenon (Campbell et al., 2020). Using focus groups to triangulate data improved data quality and understanding of the phenomenon under study (Caillaud & Flick, 2017). The researcher ensured credibility through triangulation. Methodological triangulation helped reduce bias, improve validity and data saturation (Fusch et al., 2018). Member checking was also conducted to review participants’ experiences (Birt et al., 2016). In addition, the process of transcript validation was employed to ensure the accuracy of participants’ responses.

Transferability in qualitative analysis is the extent to which specific research findings may be transferred to other participants’ backgrounds or circumstances (Moser & Korstjens, 2018). The researcher thus provided a comprehensive description of all contextual factors that influenced the study, enabling the possibility of comparing it with similar situations. Readers

of this study can execute transferability (Moser & Korstjens, 2018) The reader thus relates the features of the study's scenario to aspects of an environment or setting with which they are familiar (Moser & Korstjens, 2018).

Dependability ensures the attainment of consistent and replicable findings (Stenfors et al., 2020). A study's dependability is assessed by examining the research findings, interpretation, and participants' ideas (Lincoln & Guba, 1985). The focus group and individual interviews were audio recorded, and the data were verbatim transcribed (Halcomb & Davidson, 2006). It was therefore important to engage an impartial specialist to evaluate the gathered data, interpret the data, and analyse the research findings.

Confirmability is a test of how well the findings are validated by the collected data, as the characteristics of trustworthiness are based on whether or not the data correlate with the outcome (Kyngäs et al., 2020). The use of an audit trail is a prevalent method for establishing confirmability and proves to be highly advantageous in the composition of the findings chapter (Nowell et al., 2017). The audit trail was used as part of the research process to explain the researcher's measures in collecting, analysing, and evaluating the data.

It is necessary to ensure that the data and interpretations of the findings are not figments of the researcher's imagination, but clearly derived from the data (Lincoln & Guba, 1985). **Authenticity** is thus a new set of standards that includes justice demonstration, ontological, catalytic, and tactical authenticity (Amin et al., 2020). The conveyance of authenticity is achieved through the emotional tenor of people's experiences (Walkington & Ommering, 2022) and is a key component of trustworthiness, relating to unbiased research findings (Morobe, 2018). Authenticity was applied in this study by adhering to strict ethical standards in order to make the analysis as original as possible. It was also applied by making it possible for readers to understand health-conscious consumers' knowledge of and the factors that influence their intention to purchase and consume functional food.

To be reflexive, a researcher must be aware of how the research process has changed them personally and how that change has influenced their research (Palganas et al., 2017). According to Nowell et al. (2017), it is recommended that researchers keep a record of their own critical evaluations of their research methods. **Reflexivity** is a key component of trustworthiness, and it was shown in this study through the researcher's awareness of her role in data collection, analysis, and interpretation, as well as the preconceptions brought to the study (Moser & Korstjens, 2018).

1.13 Ethics

It is important that participants' identities and rights are protected when conducting focus groups (Freeman, 2007). Participants were assured of the confidential nature of their information and the focus group discussions. In this instance, the data provided by participants were only considered by the researcher and supervisor and not shared with anyone else. In this study, the participants' anonymity was addressed by anonymising the transcripts, and data submitted to the researcher were kept in a safe place. Participants were informed that they would be able to leave the focus group or interview discussions at any time if they felt overwhelmed (Rosito & Kassem, 2019). Consent was given freely (voluntarily) and easily understood by the participants, mitigating the chance of intimidation or undue influence (Manti & Licari, 2018).

For participants to be included in a study, they must be properly informed of the nature of the study and have the right to choose whether to participate (Arifin, 2018). The participants were asked to submit a written consent form in which the research purpose and expectations of participants were explained. The researcher also briefly recapped the information before the focus group sessions started. If the participants subsequently withdrew their consent after having first given it, this was respected; withdrawal of consent would have automatically rendered the data the participants provided unusable. No individuals withdrew their consent during the focus groups or individual interview sessions.

Ethical approval was obtained from the REC (reference 2021/CAES_HREC/072) from the College of Agriculture and Environmental Sciences (CAES) Health Research Ethics Committee for this study, as indicated in Appendix 1.

1.14 Chapter layout

This dissertation is presented in eight chapters. A brief description of each follows:

Chapter 1 presents information about the background of the research, the research problem, the aim and the objectives of the research. It describes health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods and summarises the research process. The data collection methods and ethical clearance attained are also presented.

Chapter 2 provides a literature review on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The chapter first presents a definition of the term 'functional foods'. It also looks at how the use of functional foods improves cardiovascular health. A detailed explanation of the need for, and health-conscious consumers' understanding of, functional foods is presented, as well as the most important factors influencing consumers' intention to purchase functional foods. An understanding of consumers' knowledge in general is also offered, and existing studies focusing on individuals' knowledge of functional food consumption and purchasing behaviour are considered.

Chapter 3 provides a discussion on the TPB, which was examined in order to better understand health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. Since the TPB is used to predict healthy eating behaviour, it was expected that this theory would constitute a sound theoretical background for this research. A conceptual framework is also provided, which was used to illustrate the researcher's approach.

Chapter 4 describes the research methodology used in this study. This chapter outlines the research paradigm, the type of study, the location of the study, the sampling strategies used, the inclusion criteria, as well as the instrument and data collection method used in this study.

Chapter 5 presents the findings of the research. The data are presented and discussed using diagrams to promote an understanding and interpretation of health-conscious consumers' understanding of the term 'functional foods' and their use of these food products.

Chapter 6 presents the findings of the research. The data are presented and discussed using diagrams to promote an understanding and interpretation of health-conscious consumers' knowledge and use of conventional and modified functional foods, as well as the factors that influence their intention to purchase and consume these foods.

Chapter 7 presents the findings of the research. The data are presented and discussed using diagrams to promote an understanding and interpretation of the influence that attitude, subjective norms and PBC have on health-conscious consumers' intention to purchase and consume functional foods.

Chapter 8 concludes the research by providing a summary of the main findings and offers suggestions for further research. The conceptual framework is revisited and discussed in

terms of the research findings. The study's contributions, recommendations and limitations are also presented.

1.15 Style of referencing

The style of referencing used in this study for in-text citations and references was guided by the Department of Life and Consumer Sciences' preference, namely the Harvard referencing method.

1.16 Contribution of the research

This study was conducted by the researcher with direction from the supervisor, who provided timeous feedback regarding progress on the research project. Guidance on structuring the dissertation, as well as support and advice on the research process, were also received.

1.17 Turn-it-in

According to the master's and doctoral procedures in the CAES at the University of South Africa, it is mandatory that the final examination copy is submitted through the similarity programme Turn-it-in, and that the similarity report is examined by both the researcher and the supervisor. This process was thus followed to allow submission for examination. The researcher ran the final copy of this dissertation through Turn-it-in, and the certificate for this is included in Appendix 3 of this document.

1.18 Research outputs

In addition to giving a presentation at a conference, one article is planned to be submitted to an accredited journal.

1.19 Conclusion

The introduction and background information provided insight on functional foods and consumers' perception of these types of foods, reviewed under different categories of functional foods (conventional, modified, medical and foods for special dietary use). The problem statement was briefly discussed in this section, which conveyed consumers' lack of understanding of functional foods, illustrating the need to increase awareness of these types

of foods and entice consumers to purchase and consume them. The key to achieving SDG3 (“Ensure healthy lives and promote wellbeing”) was also explained. In addition to a description of the techniques and methods used to collect data, a synopsis of the study’s aim and objectives was presented. Additionally, ethics approval and the dissertation’s structure were presented, and included information on exploring health-conscious consumers’ consumption, knowledge and the factors that influence their intention to purchase functional foods. The next chapter presents a comprehensive overview of the relevant literature related to the ideas under consideration in this study.

CHAPTER 2

LITERATURE REVIEW

In Chapter 2, a discussion of the main concepts of this study is presented.

2.1 Introduction

This chapter provides an overview of key concepts related to functional foods and consumers' purchasing behaviour towards these products. This section also discusses the need for functional foods in South Africa, the importance of functional foods in lower-income groups in South Africa, and health-conscious consumers' approach to functional foods. In addition, the South African market of functional foods, relevant literature that addresses the three elements of health-conscious consumers' consumption, knowledge, and factors (socio-demographic factors, attitude and beliefs), organoleptic attributes and pricing's influence on the intention to purchase functional foods are also presented. Health-conscious consumers' understanding of consumption, knowledge, and the factors that influence their intention to purchase functional foods are also explored. Existing studies are reviewed, focusing on knowledge in relation to functional food consumption and purchasing behaviour. First and foremost, a general review of functional foods and health foods is presented, where functional foods' role in CVD prevention is considered.

2.2 Defining functional foods

In the 1980s, Japan first coined the term 'functional foods'. Since then, many different definitions have explained functional foods, but with the same central significance (Rattanachaikunsopon & Phumkhachorn, 2018), which is that functional foods offer health benefits beyond their nutritional value (Ajmera, 2020). At present, there is no universally accepted definition of functional foods despite steady industry growth worldwide (Teng et al., 2020). With reference to the Functional Food Centres' (FFC) definition of 'functional foods', bioactive compounds are seen as the backbone of functional foods. These are understood as the "primary and secondary metabolites of nutritive and non-nutritive natural components which generate health benefits by preventing, managing or symptomatically treating chronic diseases" (Castillo et al., 2018, p. 1-2).

2.3 Defining health foods and natural foods and the distinction between them and functional foods

According to the Food and Drug Administration (FDA), the classification of “healthy foods” is contingent upon their composition, wherein the presence of substantial quantities of fruits, vegetables, whole grains, and dairy is deemed essential, with stringent restrictions imposed on the inclusion of added sugar, sodium, and saturated fat (Siu & Drewnowski, 2023). A study by Lusk (2019) found that consumers’ opinions of “healthy”, which are mostly dependent on fat content, are somewhat aligned with the FDA definition. However, it also appears to be a larger and more complex notion that defies a simple and uniform description. The term “natural” can be explained through the definition provided by the Food Standards Agency (2008), wherein it denotes that “natural” primarily consists of ingredients derived from nature. In addition, the definition of “natural foods” inherently conveys the notion of healthfulness and minimal processing; however, as elucidated by Moore (2021), this term lacks a precise and well-defined definition. Conversely, functional foods are foods or food ingredients that offer health advantages beyond fulfilling fundamental nutritional requirements (Henry, 2010). According to Arshad et al. (2021), functional foods are characterised by the presence of bioactive compounds, such as lipids, peptides, and antioxidants (Galanakis, 2021) that have demonstrated potential health benefits, such as reducing the likelihood of developing health conditions or enhancing overall well-being. The term “health and/or natural foods” pertains to food products that assert specific health benefits or provide essential vitamins and minerals, whereas “functional foods” encompass bioactive compounds, which may include healthy or natural foods that contribute to the promotion of overall well-being.

2.4 Use of functional foods to improve cardiovascular health

CVD is the world’s leading cause of death and a rising health concern (Alissa & Ferns, 2012; StatsSA, 2018; WHO, 2021). CVD is a multi-fold mechanism that predominantly affects the blood vessels and, ultimately, the heart (Chiu et al., 2018). Lifestyle-related factors, including nutrition, plays an important role in the development and treatment of CVD (Asgary et al., 2018). Functional foods have been used throughout history for their medicinal properties (Ríos-Hoyo et al., 2017), and are formulated according to their specific nutritional role. These can improve health retention, protect against chronic diseases, and induce physiological benefits (Asgary et al., 2018). Consuming the biologically active compounds present in fruits and vegetables may help reduce the risk of some diseases (Gul et al., 2016; Olaiya et al., 2016).

For the current study, the following conventional functional foods were chosen: **oats**, as an effective source of β -glucan, which helps lower both total cholesterol and LDL cholesterol levels. Findings have indicated that eating only 3 grams of oat β -glucan per day will reduce LDL cholesterol by 10% and decrease risk of CVD by 20% (Wu et al., 2019). A daily intake of fresh **watermelon** improves lipid profiles, decreases blood pressure, and increases antioxidant capacity, which may have implications for chronic diseases such as CVD (Connolly et al., 2019). Watermelon contains phytochemicals such as lycopene, vitamin C, β -carotene, and total polyphenolic content that possess anti-inflammatory, anticancer, and antioxidant properties (Maoto et al., 2019). **Tomatoes** also contain a number of antioxidants like lycopene, flavonoids, and trace elements that are essential for cardiovascular health (Duttaroy, 2011). The health benefits of **broccoli** are mainly linked with its high content of bioactive compounds such as lutein, zeaxanthin, B-carotene, and flavonoid; its beneficial effects on preventing CVD is that it improves lipid and carbohydrate profiles, reduces pro-inflammatory cytokines and markers of oxidative stress (Ciumărnean et al., 2020). The anti-thrombotic, anti-proliferative, and anti-inflammatory effects of curcumin found in **turmeric**, and its ability to decrease serum cholesterol levels, can reduce the risk atherosclerosis (Wongcharoen & Phrommintikul, 2009). The anti-inflammatory effects of curcumin can also act as a possible preventive therapy for atrial fibrillation (Wongcharoen & Phrommintikul, 2009).

The modified functional foods include: **yoghurt**, which contains probiotic bacteria and may reduce inflammation and cardiovascular risk factors (Buendia et al., 2018). **Eggs** are considered a total protein source since they contain all the essential amino acids (Murphy, 2020). One large egg contains 6 grams of protein, and is high in many other nutrients, such as iron, choline, folate, vitamins A, B12 and D, and zinc (Murphy, 2020). Drouin-Chartier et al.'s (2020), Deghan et al.'s (2020) and Qin et al.'s (2018) study found the consumption of one egg per day was not associated with the increased risk of CVD. **Folic acid enriched bread**; folic acid is used to fortify foods. Popular sources among general consumers, such as Wheatfoods (Wheatfoods.org, 2019), claim that folic acid can help reduce CVD and colon, cervical and breast cancers, and regulate homocysteine, an amino acid formed by the body, which is believed to protect against heart disease. The key active ingredients of **ginseng** are ginsenosides, which have multiple medicinal properties, including anti-oxidation, anti-inflammatory, vasorelaxation, antiallergic, antidiabetic and anticancer (Kim, 2018). Ginseng has beneficial effects on cardiac (Yoon et al., 2020; Irfan et al., 2020) and vascular disorders, including antioxidation, regulation of vasomotor activity, the modulation of ion channels and signal transduction, enhancement of lipid profiles, change of blood pressure, improvement of cardiac function, and decreased platelet adhesion (Kim, 2018). **Guarana** contains procyanidin

B1, procyanidin B2, epicatechin, and catechin, showing promise in various health benefits including improving focus and reducing CVD (Silva et al., 2019). Guarana can assist with cardiovascular health by improving blood supply, preventing blood clots, and may also reduce the risk of oxidation of bad LDL cholesterol (Raman, 2018). **Fortified fruit juices** include nutrients like vitamins, minerals, trace elements, energy, and phytochemicals like flavonoids, polyphenols, and antioxidants that have demonstrated differing health benefits and keep the digestive system healthy and reduces CVD (Bhardwaj et al., 2014). The listed functional foods are not a saturated sample; only a few have been selected due to the exploratory nature of the study. Further studies could include other functional foods that have not been selected at this time.

Based on the previous discussions, it is evident that functional foods are associated with several potential health benefits. Dwane et al. (2020) indicate that non-communicable diseases (NCDs) are a major cause of deaths globally, with two out of five deaths associated with NCDs. The World Health Organisation (WHO) (2020) adds that more people die from CVD each year than any other cause, due to risk factors such as tobacco use, an unhealthy diet, physical inactivity, obesity (which can result from a combination of unhealthy diet, physical inactivity, and other factors), elevated blood pressure (hypertension), abnormal blood lipids (dyslipidaemia), and elevated blood glucose (diabetes mellitus). South Africa is a country with great diversity in terms of race and economic standing, yet the prevalence of CVD is high among all citizens (Dolman et al., 2007).

2.5 The need for functional foods in South Africa

In well-developed countries, functional food has been widely embraced and is now a new food trend (Hassan et al., 2020). A global online survey conducted by Nielsen (2005) established South Africa as an emerging market for functional foods, since South African consumers are becoming increasingly concerned about healthy diets. Widely cited sources, such as Euromonitor International (2022), also explain that because food fortification is ubiquitous in South Africa (with most staple goods having a fortified form), one of the largest categories of health and wellness packaged food in South Africa is fortified/functional packaged food. Consumers' increasing interest in the idea of functional food, and the risk of lifestyle-related and chronic conditions, has led to the use of food for basic nutrition and preventive health benefits (O'Connor & Venter, 2012).

However, South Africa has one of the highest income inequality rates globally and has extreme poverty (Chakona & Shackleton, 2017). In 2017, 6.8 million South Africans experienced

hunger, according to a popular site (Stats SA, 2019). For many South African households, food insecurity is thus a reality; approximately 50% of households live in poverty and cannot afford essential healthy food (Vermeulen et al., 2020). Poverty-stricken consumers comprise nearly half of the South African population, representing both formal and informal retailers' powerful and valuable market segment (Kroll, 2016). While major dietary diseases are more prevalent in lower-income groups at risk of poverty, efforts to produce healthy products at lower prices are minimal. Therefore, by researching ways to minimise production costs and increase awareness of this specific category of customers, the development and accessibility of functional food products will be encouraged among those who really need them (EUFIC, 2006).

Maintaining good health, consuming a healthy diet, or treating an underlying chronic condition can be a challenge for many reasons (including low finances and resources, competitive goals, and tension) among those dealing with poverty and food insecurity, as cited by a well-known source (FRAC, 2017). Poverty, food insecurity and inadequate nutrition have serious ramifications for the health and well-being of children, adults, and older adults, including a greater risk for chronic disease and poor mental health (FRAC, 2017). Laraia et al.'s (2017) study highlights the need for strategies that identify the various ways in which poverty impacts dietary behaviour as low-income individuals and families have particular difficulties eating healthy. French et al. (2019) concur and state that low income also contributes to poor dietary intake. In comparison to higher-income earners, lower-income earners eat less fruit and vegetables, more sugar-sweetened drinks, and their total dietary quality is lower.

While South Africa is a food-secure country, many of the country's households lack access to diverse foods rich in nutrients and are food insecure. There is a high undernutrition prevalence, primarily because of significant deprivation and unemployment rates (Chakona & Shackleton, 2017). South Africa also has an incredible range of crops consisting of traditional cereals, pulses, vegetables, and fruits with functional properties, rich in fibre, antioxidants, polyphenols, β -carotene, micronutrient absorption agents; these can be helpful in preventing malnutrition and chronic dietary deficiency (Guiro et al., 2010). In addition, Vermeulen et al. (2020) state that the strongly required dietary quantities of zinc, iron, and vitamin A – as vital micronutrients important for South African diets – are provided in milk, eggs, fruits and vegetables. These micronutrients are essential for an effective immune system, immune cell development, and enable the body to fight diseases. Better knowledge and increased production of these foods' functional properties will serve as a source of innovation for African agricultural products and consumers (Guiro et al., 2010).

Lower-income households typically purchase foods of lower nutritional quality compared to higher-income households (French et al., 2019). Therefore, functional food plays a special role in the sense that these types of foods are not only meant to compensate for hunger and provide the requisite human nutrients, but also help avoid nutritional deficiencies and improve the consumer's physical and mental well-being (Vegari et al., 2010).

2.6 Health-conscious consumers' understanding of functional foods

Health-conscious consumers lead a wellness-oriented lifestyle and are apprehensive about health, exercise, stress, and the environment (Kraft & Goodwell, 1993). They take full responsibility for their wellbeing and are excellent patrons of health-related goods and services (Kraft & Goodwell, 1993). These types of consumers are concerned about their health and pay heed to their lifestyle and dietary requirements (Ali & Rahut, 2019). Consumers are increasingly proactive regarding their health, and this, in essence, has stimulated the worldwide demand for functional foods and drinks (Kapoor & Munjal, 2017). Health consciousness is a crucial catalyst for the 21st century consumer markets, according to widely read sources (Euromonitor.com, 2006). A study published by the Kerry Company Group (specialising in real and wholesome ingredients) claimed 65% of consumers seek functional benefits from their food and drink (Poinski, 2019). Health-conscious consumers have also created a demand to make functional foods an emerging area in food science, according to widely read sites (Marketresearch.com, 2020). Common consumer sources, such as Worldhealth.net (2019) claim this sudden interest may be motivated by a greying population looking to attain more function and health benefits from their food, a more health-conscious population, or democratisation of information.

Functional food sales are minimal in developing countries, where only the affluent population can purchase them (Euromonitor.com, 2006). South African consumers are becoming more health conscious and connecting healthy foods to well-being, thereby moving towards healthier alternatives (Cant et al., 2014). According to widely read sources such as Euromonitor.com (2022), health and well-being continued to increase the stable demand and positive current value across most of the South African categories in 2019, as local consumers were affected by rising health trends, prompting them to reassess their diet. Poinski (2019) pointed out that 58% of consumers considered a balanced diet as an elite way to productively manage their health. Consumers thus prefer food items not just for the nutrition or satisfaction they provide, but also for the extra functions they can offer to help live better lives (Yao, 2020).

Despite the impact that functional foods can have on these types of consumers, as stated in section 2.4, this study does not focus on food insecure consumers who may not have the financial means to consider functional foods. Instead, this study focuses on health-conscious consumers who consider themselves capable of guiding their own health, yet relatively few take particular measures (Szakaly et al., 2011). The level of perceived health risk is high, but the information needed for risk management (nutritional) is incomplete (Szakaly et al., 2011). This phenomenon illustrates the importance of researching health-conscious consumers.

2.7 The most important factors that influence consumers intention to purchase functional foods

This section provides an overview of the most important factors influencing the intention to purchase and consume functional foods identified from the literature. It presents key findings from previous research on consumers' consumption, and factors that influence their intention to purchase functional foods. In addition, several studies have been reviewed that explore various aspects of the use of functional foods, given their increasing relevance for consumers in general. The contributing factors from the reviewed literature include the influence that socio-demographic factors, attitude and beliefs, organoleptic attributes and pricing has on health-conscious consumers' intent to purchase functional foods.

2.7.1 Socio-demographic factors

Lau et al.'s (2013) study has shown that consumers in developed countries are interested in healthier foods or are more willing to buy products for health-promoting purposes. Socio-demographic characteristics such as age, monthly income, education, and price also play a significant role in influencing the consumer's decision to buy and/or use functional food (Maxim et al., 2019). The influencing factors form the purchasing decision towards functional foods, and include socio-demographic features such as gender, education, and age (Kraus, 2015; Dogan et al., 2011). In addition, Teng et al. (2015) indicated that there is a significant relationship between marital status, location, education level, family size, age, and income affecting buying behaviour towards functional foods. Consumer and product characteristics and purchasing situations are influencing factors of functional foods and the biggest success factor is consumers' recognition of functional food (Bornkessel et al., 2011). Ali et al.'s (2018) study found that consumers' socio-demographic profiles, product characteristics, market attributes and psychological factors are more likely to affect decisions to buy health and wellness food.

Kondepundi et al. (2016) add that female consumers play an important role in buying and purchasing functional foods in the family. In the United States, the functional food consumer is defined as being female, well educated, from higher-income groups with varied ages of 35-55 (Verbeke, 2005). Sääksjärvi et al. (2009) also explain that women from Finland seem to know more about functional foods than men and thus have a greater intention of using them. A meta-study conducted by Siro et al. (2008) emphasised women are the key consumers of food both in Europe and in the United States. However, Futara and Hoshino (2021) found that Japanese male shoppers were more likely to purchase functional foods.

Consumers of varying ages have different needs and wants (O'Connor & Venter, 2012). Age was found to be connected to the purchase of various functional food items; for instance, young respondents from the UK, Denmark, Spain and Poland were more likely to pay for a product such as soy-containing tomato juice (Hall, 2009). There is also an increasing demand among young people for healthy foods, functional foods, and a wider variety of natural food products on the market (Maxim et al., 2019). Plasek et al.'s (2019) study of Hungarian consumers demonstrated that the 36–50-year-old age group deemed functional food products as being vital in the prevention of chronic diseases. They also considered purchasing and consuming functional foods an important prevention method.

Siro et al. (2008) suggested in their literature review that higher-educated and higher-income individuals in the United States and Europe are key consumers of functional foods. This claim is in line with the findings from Maxim et al. (2019), who also state that Romanian consumers with a higher educational level and higher income purchased functional products more often than their counterparts. An increase in income also relates to a rise in the intake of functional foods and educated Pakistani consumers appeared better informed and inclined to consume functional food (Ali & Rahut, 2019). Thus, socio-demographic variables such as age, education, income, gender, marital status, and location can influence consumers' responses to functional food products.

2.7.2 Attitudes and beliefs

According to the TPB (Ajzen, 1991), attitude towards behaviour is a measure of approval or disapproval of that behaviour, resulting in a positive attitude favourably influencing the intention to perform that behaviour (Küster-Boluda & Vidal-Capilla, 2017). Consumer attitude within the food context has the strongest relation to intention, including functional food behaviour (Nystrand & Olsen, 2020). An analysis of consumers' attitudes toward a commodity,

concept or service is a good way to better understand their behaviour (Ajzen & Fishbein, 2005). Consumers' attitudes, in addition to demographic factors, were found to be strongly associated with the intent to use functional foods (Urala & Lähteenmäki, 2007). A consumer's attitude towards functional foods can significantly influence their decision to buy or not buy those commodities (Somehagen et al., 2013). This is caused by consumers' concern about their health and their need to live a healthier lifestyle (Küster-Boluda & Vidal-Capilla, 2017). Nowadays, consumers are not only concerned about a product's physical characteristics but the nutritional information it provides, which aids the consumer in adopting a healthier lifestyle (Hamdan et al., 2016). It can therefore be concluded that consumer attitudes do have a direct influence on their decision to purchase and consume functional food products, which may also be the case for health-conscious consumers.

According to Maina's (2018) study, consumers' belief in a product has a positive impact on product acceptability since it plays a significant role in consumers' accepting new products. Consumers' beliefs about health benefits from foods seem to be a strong determinant for selecting functional foods (Babicz-Zielinska & Jezewska-Zychowicz, 2017). Several consumers believe foods can contribute to their health by improving their well-being and preventing certain diseases (Florea et al., 2016). Attitudes toward functional foods have been shown to be affected by a variety of beliefs and attitudes. The elements that contribute to the formation of these beliefs and attitudes may be categorised into groups representing the consumer and product characteristics (price, health claims and organoleptic analysis) (Maxim et al., 2019). As suggested by Hoque et al. (2018), consumers' preference for food is immensely influenced by beliefs about product characteristic and processing methods. Fiedler and Bless (2000) argue that belief is generally understood under numerous aspects that, in turn, characterise consumers' attitude, preference and purchasing intentions. As consumers purchase functional foods to varying degrees, their trust in these goods may be based on belief rather than empirical evidence (Martirosyan & Singh, 2015). Thus, beliefs are a strong predictor in many contexts for consumer behaviour, including purchase decisions (Pappalardo & Lusk, 2016).

2.7.3 Taste as an organoleptic attribute

Some of the most important factors affecting consumers' choice of functional foods are their organoleptic attributes – especially taste (Krystallis et al., 2008; Temesi et al., 2019). Consumers agree that a contributing factor to their intention to purchase functional foods is the taste of the product (Khatkar et al., 2016). The decision to purchase functional food products is thus influenced by a product's sensory and non-sensory characteristics (Plasek &

Temesi, 2019). Stronger taste dictates food acceptability since people typically associate the experience with the presence of nutrients (Maina, 2018). The addition, the removal or modification of food ingredients may have adverse implications on taste and other organoleptic characteristics, and taste could thus be inversely linked to the choice of food for use (Krystallis et al., 2008). Krystallis et al. (2008) also mentioned that, despite convincing claims regarding the advantages of its consumption, the absence of flavour in a functional product reduces consumption probabilities. In return for its positive health benefits, the consumer would not likely sacrifice taste (Temesi et al., 2019).

2.7.4 Pricing

Price is a significant factor affecting consumers' purchase behaviour towards functional foods (Nguyen et al., 2019). Consumers often pay higher food prices that lead to better health given the importance of quality foods (Ali & Rahut, 2019). Their willingness to pay for functional food is based on food values relating to origin, health, naturalness, and quality, and consumers' wellbeing is thus not the only explanation for functional food purchases (Pappalardo & Lusk, 2016). For functional products, consumers are willing to pay for the amount of health characteristics in the food to attain the potential benefit from consuming the product (Ali & Rahut, 2019). Futara and Hoshino (2021) similarly found price to have no impact on the production of functional food. As Annunziata and Vecchio (2013) suggest, if consumers perceive an improvement in product quality or if they find the product burden greater, then this effect is positive. Price perception thus greatly affects a consumer's decision to purchase a product (Albari, 2020).

Based on the literature review, socio-demographic factors, attitude and beliefs, organoleptic attributes and pricing were considered important factors contributing to consumers' intent to purchase functional food products. These factors were examined as each play a key role in consumers' purchase intent and consumption of functional foods, according to literature. In the next section, the TPB is viewed in relation to this study. This theory suggests that action is driven by intent, based on attitude, subjective norm, and PBC to determine food choices; patterns and consumption of food purchases; and attitudes and desires. Even though there are several studies on functional foods that have focused on the TPB (Bakti et al., 2020), no study has applied this theory to the health-conscious consumer in South Africa.

2.8 Consumers' knowledge of functional foods

Consumer expertise is a simple part of product knowledge, as expertise entails an extensive array of knowledge and procedural competence and product expertise; these affect the various stages of consumers' decision-making processes (Viot, 2012). Product knowledge has become a profoundly important consideration for consumers in their decision-making processes when met with a variety of choices (Robertson et al., 2018). The conceptualisation of consumer knowledge of functional foods builds on existing consumer knowledge literature with multiple knowledge distinctions (Sääksjärvi et al., 2009). What the consumer 'perceives' is important in every stage of the buying decision process, from the moment the individual recognises the need to identify the issue, look for knowledge (information), determine alternatives, purchase, then consume the product or service, and then reach the post-purchase process (Ellis, 2015). Therefore, an individual's understanding of an available product is a significant factor affecting the purchase decision (Gambaro et al., 2013).

Due to the significant impact of knowledge on consumer behaviour, researchers have extensively studied product knowledge (Han, 2019). The analysis of consumers' product knowledge involves both subjective and objective measures (Selnes & Grønhaug, 1986). The most familiar characteristic of knowledge projected in literature that is also applicable to functional foods is the difference between objective and subjective knowledge (Sääksjärvi et al., 2009). Subjective knowledge refers to consumers who prefer to have their own conception or suppose their own knowledge of a functional food product. Meanwhile, objective knowledge is at times referred to as real knowledge, or knowledge of the truth, and is current, factual information held by individuals in their long-term memory (Von Schaewen, 2014; Ellis, 2015; Marx, 2017; Robertson et al., 2018).

Objective and subjective disparity in consumer knowledge is one of the main factors affecting consumer attitudes towards products or brands and buying behaviour (Vaitkiene & Vainauskiene, 2019). Von Schaewen (2014) showed that personal factors are person's attitude, norms, and knowledge; these were a strong predictor for both the attitude towards fairtrade foods and their consumption. The more people think about these products, the better the person assesses these products and the more they buy them, which may be a similar situation with functional foods. Gambaro et al. (2013) found in their study that a large amount of self-confidence accounted for an increased level of subjective knowledge, which was a stronger driver of consumer behaviour than objective knowledge. Conversely, Seechurn et al. (2009) reported women and consumers with higher education levels in Mauritius showed increased functional foods knowledge, whereas Florea et al. (2016) presumed that functional

food awareness was based on income and level of education. Stewart-Knox et al. (2007) found that more educated consumers were more prepared than less educated consumers to buy functional food. These studies illustrate that subjective knowledge has a strong influence on consumers' behaviour regarding functional foods.

The higher levels of knowledge consumers have towards functional foods the greater their cognitive capacity and precise performance, relating to consumers easily making the right decisions to choose or reject a product (Nguyen et al., 2019). Knowledge of functional food is an important factor guiding consumers to functional foods and having a balanced diet (Phuah et al., 2015). A relationship thus exists between nutritional knowledge, health perception and eagerness to try functional foods (Ares et al., 2008). Consumers who are knowledgeable about food and nutrition are concerned about their own health, believe diets are essential, and dietary recommendations are more likely to result in the consumption of healthier foods (Sääksjärvi et al., 2009). Consumers who are more susceptible to health through functional foods are more aware of how to prevent diseases and improve their bodily functions by achieving satisfaction with a food-related lifestyle (Schnettler et al., 2015). The findings from a focus group study conducted among Hungarian consumers revealed health-conscious consumers were interested in healthy eating opportunities and were able to manage their own health (Szakaly et al., 2011). This suggests the importance and impact that knowledge may have on consumers' decision to potentially purchase functional foods.

Numerous studies have been conducted globally on consumer knowledge and behaviour relating to functional foods, including studies in Europe (Verbeke, 2005; Landstrom et al., 2007; Urala & Lähteenmäki, 2007; Annunziata & Vecchio, 2011; Bornkessel et al., 2014), the USA (Wong et al., 2015) and Asia (Büyükkaragöz et al., 2014; Siegrist et al., 2015). However, only a small number were conducted in developing countries (Seechurn et al., 2009; Salleh et al., 2015). Apart from these studies, Ares et al. (2008) showed that consumers with low levels of knowledge about nutrition were not interested in functional food consumption, while consumers with the greatest knowledge of nutritional products wanted the enrichment of healthy products. Increasing consumer awareness and knowledge concerning functional food is vital, as most participants from a study conducted by Vella et al. (2014) indicated they were actively searching for information on functional foods. Lack of knowledge or fear of unknown products is a contributing factor as to why new foods are not willingly accepted (Morawska et al., 2016). These findings suggest that knowledge can affect consumers' interests in functional foods and educational strategies may thus be needed to promote the consumption of functional foods (Ares et al., 2008).

In summary, the factors pertaining to consumers' awareness of functional foods yielded diverse findings. Subjective knowledge is acquired through first-hand encounters and subsequently interpreted by the individual who has undergone the experience. This study primarily examined subjective knowledge, derived from personal experiences and involves the formation of conjectures based on similarities between past experiences and the information being labelled as knowledge. The study investigated consumers' subjective perspectives in relation to functional foods, specifically focusing on their personal emotions, viewpoints, and encounters.

2.9 Existing studies regarding knowledge in relation to functional foods consumption and purchasing behaviour

The relationship between various types of knowledge and consumers' functional food consumption and purchasing behaviour is a well-researched field. Some of the most important researchers and their areas of knowledge are explored next.

Hall (2009) conducted a study using a mailed questionnaire to UK and Denmark consumers, and telephone interviews with Spanish and Polish consumers regarding self-reported knowledge, behaviour intentions and purchase behaviour of functional foods. The findings showed several factors, like cooking from scratch, personal history of food poisoning, awareness of food pathogens and socio-demographic variables are correlated with daily functional food purchases. The findings also indicate several factors, including food pathogen knowledge, food safety education level, probable changes in behaviour in response to food safety messages, and socio-demographic variables were linked to respondents' self-reported level of comprehension of functional foods.

Sääksjärvi et al.'s (2009) research established a multidimensional metric for evaluating Finnish consumers' knowledge of functional foods and found that most consumer knowledge scales have been created based on consumer durables. Consequently, these were considered useful to develop a scale that would directly apply to the domain of functional food. The scale was conceptualised to consist of four components: objective knowledge, subjective knowledge, general knowledge, and specific knowledge. The findings showed that the components of knowledge correlate moderately, and the objective and specific information are key components of the index, as experts from novices are differentiated.

Hassan and Mustapha (2010) examined Malaysian consumers' intention to purchase and consume functional foods, resulting in identifying the factors supporting individuals' acceptance/rejection of functional foods. A self-administered questionnaire that used a Likert scale was planned, piloted, and reviewed. It focused on evidence of knowledge of functional food products as well as essential knowledge sources on functional foods used by consumers to learn about the advantages of the functional food selected. This research provided marketing researchers and practitioners insight into consumers' actions and helped them devise successful marketing strategies for functional foods.

Rezai et al.'s (2012) research examined young consumers living in the Klang Valley, Malaysia, and their awareness and perception of functional food. A survey was conducted with 439 respondents who were interviewed using a structured questionnaire. The TPB was used to examine consumer consciousness and expectations of functional food. The findings reflected three variables independently influence consumer awareness: consumer perceptions, perception of healthy food, and perceived control of the behaviour (income). Therefore, understanding consumers' needs and desires, their attitudes to food safety and their awareness and understanding of functional food can help the food industry promote functional foods, thereby increasing consumers' desire to purchase functional food.

A cross-sectional descriptive study by O'Connor and Venter (2012) of a quantitative nature was used to collect data through a survey, using a pilot-tested questionnaire. A process of 'associated group analyses' was used to evaluate South African respondents' awareness, knowledge and understanding of the ten bioactive food ingredients. The overall characteristics described in that study included health and lifestyle characteristics such as nutrition, health and wellness, and showed how concerned and interested consumers were in nutrition, in particular. By sampling consumers from these markets, the key outcome was that food industries and marketers should increase awareness, knowledge and understanding of bioactive food products to ultimately promote consumers' purchasing of these foods.

Florea et al.'s (2016) objective was to assess Romanian consumers' awareness, interest and attitude regarding functional food and whether income level or education level affect consumers' knowledge and interest. Data were obtained using Google Docs from an online questionnaire. Their study found that, while low-income consumers were not better informed, high-income consumers were more interested in functional food. Income also affected interest in the purchasing of healthy foods, and level of learning did not affect knowledge of healthy food, but it could be affected by level of income. This strongly indicates Romanian consumers' need for education and information campaigns.

Wulan (2017) explored some of the factors that promote functional food product adoption among Indonesian consumers. The first is marketing communication; in this case, shown by the food label. The second factor is consumer knowledge, and the third is consumer's confidence in functional food product. Lastly, past experience using a functional food product impacted consumers' adoption of functional food products. This study used a self-reported questionnaire. The findings showed that the food label influences knowledge positively, which is in line with O'Connor and Venter's (2012) findings. Moreover, greater knowledge of functional foods would increase consumers' rate of adoption.

Divya and Nakkeeran's (2018) empirical study used regression analyses to assess whether Indian consumers' behaviours towards functional foods impact their ability to consume these foods. Data were collected through a self-administered questionnaire. The purpose of this article was to determine the main factors influencing consumers' ability to eat functional food. This study was one of the initial attempts to evaluate the joint mediating impact on consumer readiness in the use of functional foods. These findings indicated that reward and necessity play a more critical role in consumers' attitude towards functional foods than confidence and safety. The mediating impact on nutrition, perceived knowledge, and subjective norms also have a significant effect on the readiness to consume functional foods.

Afina and Retnaningsih's (2018) study aimed to examine the impact of Bogor Agricultural University students' knowledge and attitude on functional food consumption. This study used a cross-sectional design and primary data were collected by a self-administered technique using a questionnaire translated from Sääksjärvi et al.'s (2009) study. The findings showed that knowledge of functional foods among students were low, but consumption frequency was at a moderate level. The Pearson correlation test was used and reflected a positive result between knowledge and attitude. This meant that the higher consumers' knowledge was, the higher their attitude would be. A linear regression test also showed that students' characteristics (age and allowance), knowledge, and attitude considerably influenced consumption behaviour. An essential positive link was reported between knowledge and attitudes. Allowance and attitude were also linked positively to consumption frequency.

Chammas et al.'s (2019) study was used to evaluate Lebanese consumers' knowledge of functional foods and functional ingredients, attitudes, and acceptance. Socio-demographic, medical status, consumption and knowledge of functional foods and functional ingredients were examined using an interviewer-based questionnaire. The findings indicated that fitness centres, schools, universities, and the internet may indeed be useful routes for the promotion of functional foods and communication. The study showed that Lebanese consumers know

about and use functional foods. This analysis also reflected that various functional foods attracted different groups of Lebanese consumers. Moreover, consumers require additional functional food information through trusted authoritative resources, such as healthcare practitioners, dietitians, and doctors. Food producers and advertisers must connect with customers more efficiently by having more targeted marketing ads, clearer labelling, and better use of claims.

A majority of these studies were internationally based. The studies reported various different methods aid in consumers awareness, consumption and purchase intent of functional foods. Hall (2009) also found a link between food pathogen knowledge, food safety education level, which predicted behaviour changes in response to food safety messaging, and socio-demographic variables. Hassan and Mustapha's (2010) research reported a way for marketers to better understand consumer behaviour and design practical meal marketing strategies. In addition, Wulan (2017) determined that better consumer understanding of functional foods would increase adoption rates. Conversely, Divya and Nakkeeran's (2018) findings suggest nutrition, perceived knowledge and subjective norms influence consumers' willingness to consume functional foods. These studies emphasised the necessity of raising consumer knowledge of functional foods, which will result in consumers' increased desire to acquire and consume these foods.

2.10 Conclusion

Key concepts relating to health-conscious consumers' consumption, knowledge, and the factors that influence their intention to buy functional foods were discussed in this chapter. Each of the evaluated parameters has a significant impact on consumers' purchase and consumption intentions related to functional foods. The genesis and purpose of functional foods were presented in a definition. Research on how these foods promote cardiovascular health was also addressed by a number of researchers. Functional foods were also discussed, highlighting how these foods may assist South African consumers in terms of their health and well-being. A wide range of literature focused on the many features of functional foods offered by various researchers. This study also looked at the most critical elements influencing consumers' interest in purchasing functional foods. A discussion of consumers' knowledge of functional foods, as well as current research on this topic, concluded the chapter.

The TPB and its involvement in this research, as well as the conceptual framework, are discussed in the following chapter.

CHAPTER 3

THEORETICAL BACKGROUND

This chapter introduces the TPB that was used as a theoretical framework, together with the proposed conceptual framework, to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

3.1 Introduction

The TPB has been shown to predict healthy eating behaviour (Bakti et al., 2020; Lash et al., 2016; McDermott et al., 2015; Gronhoj et al., 2012). This theory implies that individuals engage in healthy behaviour when a favourable attitude and subjective norms – together with a high degree of PBC – exist (Garg, 2016). Subsequently, the TPB may be considered a sound theoretical framework to explore health-conscious consumers' consumption, knowledge and the factors influencing their intention to purchase functional foods.

As the TPB has not been applied before to address the topic of this research, its use would make a novel contribution to this field of study; a clear understanding of health-related behavioural intention in relation to functional foods has not been documented before. In order to argue the TPB's relevance and value to this study, the components of this theory are discussed in more detail in this chapter. The chapter also presents the proposed conceptual framework and important concepts determined from the literature and specific to this study that may influence the consumption and use of functional foods. Furthermore, the conceptual framework will also present the TPB's proposed role concerning its influences on functional food use, consumption, and possible behavioural outcomes. Additionally, the conceptual framework suggests that consumers' health and well-being in South Africa might benefit from a deeper appreciation of how the TPB impacts the purchase and consumption of functional food products. A discussion is offered on the importance of this study and its role in achieving SDG 3, which relates to "good health and well-being" for all.

3.2 Theory of planned behaviour (TPB)

The TPB (see Figure 3.1) is one of the most common and influential theories describing consumers' behaviour, developed by Ajzen in 1985 (Ukenna et al., 2018; Bakti et al., 2020; Fleseriu et al., 2020). Ajzen created the TPB as an extension of the Theory of Reasoned Action to improve the framework's forecast capacity and better understand human intentions

and behaviour (Mitchell & Ring, 2010). This theory assumes that consumers make sound choices and use available knowledge for pragmatic reasons (Ajzen, 1991). In the TPB, a consumer's actual behaviour can be determined by the meaning of their behavioural intent; the greater their intention, the higher the likelihood of purchasing behaviour (Bakti et al., 2020).

The TPB consists of three components, namely attitude, subjective norms, and PBC. These components influence intentions (Han & Wahyudi, 2017), resulting in the behaviour the consumer exhibits. In relation to this study, the behavioural outcome can either lead to the purchase of functional food products or not lead to purchasing such food products. However, it is important to understand the context of each of the components of the TPB, illustrated in Figure 3.1, to fully comprehend their contribution to intention and behavioural outcomes. As shown in Figure 3.1, behavioural intentions are influenced by (1) attitude toward the behaviour, (2) subjective norms, and (3) PBC.

3.3 Attitude

Attitude refers to an individual's relatively stable and consistent tendency to act based on their perceptions, likes and dislikes, events, objects, and the environment (Ukenna et al., 2018). It is also described as a positive or negative way of thinking or feeling, which leads to an individual's behaviour (Bashir, 2020). Attitude also assists in controlling the way information is obtained, processed, and ultimately used or rejected (Urala & Lähteenmäki, 2003). There have been a few studies undertaken by researchers on the impact that consumer attitudes have on their intentions to buy functional foods. A study by Salmani et al. (2020), on Iranian consumers' views about vitamin-enriched foods (VEFs) using the TPB, indicated that attitudes and subjective norms did predict the use of VEFs. Bakti et al. (2020) employed the components of the TPB (attitude, subjective norm, and perceived behaviour control) on the purchase intention of functional foods in their study among young students from the University of South Tangerang. Their study determined that young consumers' attitudes and subjective norms impacted their willingness to purchase functional foods, but consumers' repurchase intentions were unaffected by how they evaluated their level of behavioural control. The TPB was employed in Rezai et al.'s (2012) study to investigate Malaysian consumers' socio-demographic attributes and attitudes toward functional foods. Their findings revealed that the vast majority of Malaysian consumers had a favourable attitude toward functional foods.

A consumer's attitude is influenced by their assessment of various facets that ends up creating either a good or bad image in the consumer's mind (Pande & Soodan, 2015). The TPB variable measures (intention, attitude, subjective norm, and PBC) were used to measure intention to

consume omega-3 enriched novel foods, and attitude was found to be a significant determinant of intention, while subjective norms and control beliefs were not (Patch et al., 2005). According to Urala and Lähteenmäki's (2003) research on functional foods, attitudes modulate the manner in which information is processed, adjusted, used, or declined. Accordingly, it is reasonable to suggest that an investigation of attitudes toward a behaviour is justified in pursuing the intent to behave in a certain manner (Ukenna et al., 2018). As a result, health-conscious consumers' attitudes were explored so a better understanding could be reached of the influence attitude has on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

3.3.1 Subjective norm

Subjective norms refer to the perception of social pressure on an individual to conduct certain behaviours (Bashir, 2020). It derives from the normative values of a person, which are actions anticipated by prominent people in an individual's life (Ajzen, 1991), such as relatives, close friends, staff members, assistants, supervisors, and business partners (Ukenna et al., 2018). Subjective norms thus deal with the pressure stemming from influential others. Therefore, subjective norms are meant to reflect the social pressures exerted on an individual to follow a certain behaviour (Botelho et al., 2019). A study by O'Conner and White (2010) investigated the factors that affected Australian non-users' readiness to embrace a free trial of vitamin supplements or functional foods. The attitudes of these Australian non-users and their subjective norms were important determinants of their propensity to utilise each of the health products under investigation. In addition, Australian participants' fear of the risks connected with the product was shown to be a factor in their intention to purchase functional foods.

A study by Bakti et al. (2020) determined subjective norms positively influence South Tangerang students' intention to purchase functional foods. Multivariate data analysis of Nguyen et al.'s (2019) study – on some of the key factors affecting Vietnamese consumers' intentions to purchase functional foods (specifically focusing on functional yoghurts) – revealed that, while health awareness and subjective norms significantly improved consumer attitudes in relation to the purchase of functional yoghurts, the perceived price of functional yoghurts adversely affected these attitudes. Additionally, subjective norms and attitudes were found to be important predictors of consumers' intention to purchase functional yoghurt. Therefore, it was crucial to investigate how subjective norms affect health-conscious consumers' intentions to purchase functional foods, which may be either a positive or negative influence.

3.3.2 Perceived behavioural control (PBC)

PBC refers to people's perception that a behaviour of interest is either simple or difficult to execute (Ukenna et al., 2018). In this regard, PBC refers to the difficulties consumers may experience in purchasing, consuming or using functional foods. According to Bakti et al. (2020), one of the most significant factors influencing a consumer's behaviour is PBC, which was described as young consumers' perspective about the ease or difficulty of ingesting functional foods. While PBC may only alter behavioural intent, it can also directly affect actions, since an individual's desire to conduct an action may be strong, but an external element may prevent the activity from being executed (Ajzen, 1991). It attempts to explore both perceptions of controllability (external control) and perceived self-efficacy (internal control) (Fishbein & Ajzen, 2010), as self-efficacy is an indicator of one's confidence in conducting a specific action (Zainuddin, 2019). Self-efficacy has also been related to the purchasing of functional foods (Cox et al., 2004; Cox & Bastiaans, 2007).

A representative sample of Norwegian consumers was used in Nystrand and Olsen's (2020) research to examine the factors that influence consumers' attitudes and intentions to consume functional foods. They found that consumption frequency was strongest when associated with intention, accompanied by self-efficacy and PBC. The TPB therefore asserts that an individual's behavioural intent and actions are influenced by their intention toward attitude, subject norms, and PBC (Pourmand et al., 2020), as illustrated in Figure 3.1. However, the dotted line also indicates that a person's ability to regulate their conduct may be influenced by circumstances outside their control, whether or not they intend to do so, depending on how much control they truly have over their behaviour, and how true they believe their perceptions of control are (Sansom, 2021).

This indicates that there may be actual determinants that can be used to control behaviour. Thus, PBC is an important component to explore in relation to the purchase intent of functional foods. The control consumers have over the consumption, use and purchase of these foods has not been fully understood.

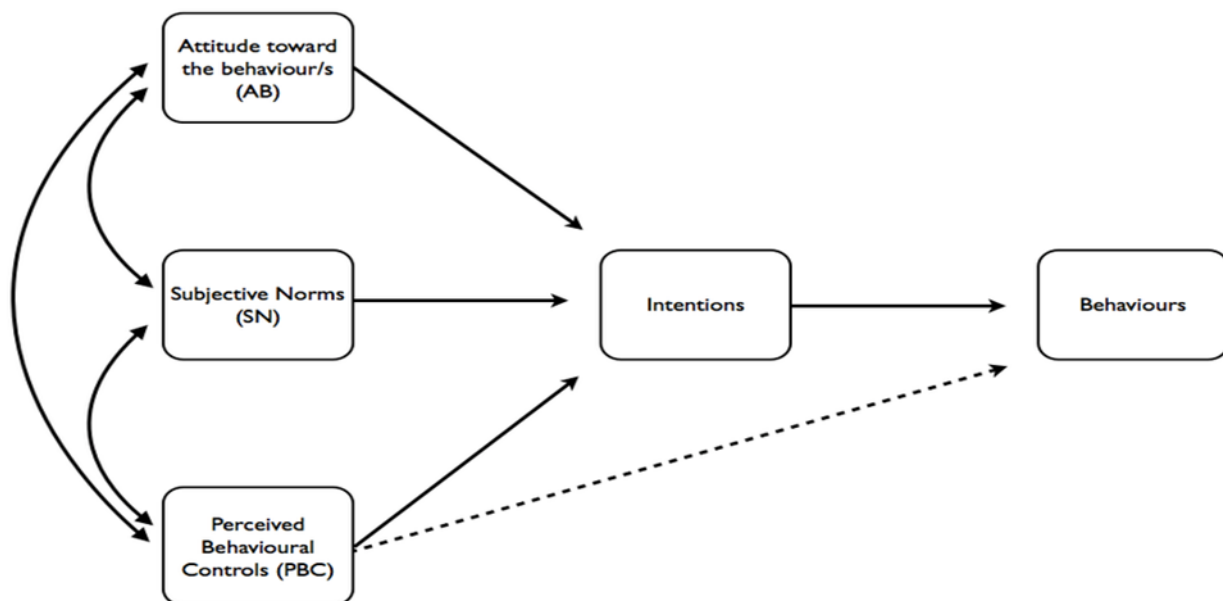


Figure 3.1: Theory of Planned Behaviour (Ajzen, 1991)

3.4 Value of the TPB in health behaviour research

The TPB was an appropriate theoretical framework for this study since it is strongly supported by comprehensive empirical data evaluating the link between attitudes, subjective norms, PBC and intent (Ajzen, 1991). As a result, the TPB may be useful in determining how all three components relate and influence the intent to purchase functional foods. In terms of healthy behaviour prediction, this theory is one of the most appropriate that can be used to predict the intention to purchase functional foods (Salmani et al., 2020). The TPB's value in predicting consumer behaviour intent (in relation to various health-related studies) has been documented. The TPB contributed to predicting consumers' views about VEFs in Iran using attitudes and subjective norms (Salmani et al., 2020). The TPB was also successful in predicting young students from the University of South Tangerang's purchase intention for functional foods (Bakti et al., 2020). Attitudes and subjective norms influenced their propensity to buy functional foods, whereas repurchase intentions were unaffected by how they appraised their degree of behavioural control.

Furthermore, several studies have investigated how well the TPB predicts healthy eating among consumers. One of these studies by Nystrand and Olsen (2020) examined the TPB framework to demonstrate Norwegian consumers' functional food consumption. They determined that perceived behavioural influence was insignificantly correlated in the authors' basic model in terms of intention and consumption frequency, as well as being negatively

related in the extended model. This factor reveals consumers' willingness to act, which was related to resources, opportunities, and barriers (Bakti et al., 2020).

According to Bakti et al. (2020), young South Tangerang students' intention to purchase functional foods was highly impacted by attitudes and subjective norms. However, their findings also indicated that PBC had no meaningful impact on purchasing intention. Using Ajzen's TPB as a theoretical framework, Pandey et al.'s (2021) research sought to anticipate plant-based yoghurt consumers' intention to consume plant-based yoghurt alternatives in Denmark. The authors found PBC control emerged as the most important factor in predicting consumers' desire to purchase these replacements. The goal of Hamdan et al.'s (2016) study was to utilise the TPB to determine the variables that influenced students from four different universities to consume Sunnah functional foods. Sunnah functional foods are Halal, and 'tayyiban' words govern the use of food for Muslim consumers. Producers have thus focused on creating functional foods that combine several Sunnah sources and have been sold under the title 'Sunnah food' (Hamdan et al., 2016). The researchers found that the desire to consume Sunnah functional foods was intrinsically correlated to subjective norms (influence from others) and behavioural control (difficult or easy to consume).

In the studies that have been presented, the TPB has been useful in some instances to predict and, in other instances, explain a broad variety of health behaviours and behavioural intent. Based on these studies, the TPB may be useful for exploring health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. However, the TPB's value in the presented studies has been forthcoming within a quantitative paradigm, resulting in statistical analysis to predict behavioural intent. Importantly, the TPB's application within a qualitative paradigm where health-related behaviour is studied (Patch et al., 2005; Nolan-Clark et al., 2011; Mohamad et al., 2019) remains limited. The current study will thus make a contribution to better explain the role of each of the components within the context of functional foods using a qualitative paradigm to investigate this phenomenon. The described investigations determined how effectively the TPB predicts healthy behaviour using quantitative methodology. Using the TPB's principles in exploring behavioural intention, a conceptual framework that includes the components of the TPB, as well as the important concepts that relate to this study, are presented next.

3.5 Influences on functional food use and consumption

In Chapter 2, specific influences were discussed that might have an effect on consumers' consumption, use and purchase of functional foods. These influences are presented within

the conceptual framework for this study and the role they may play within the TPB and behavioural intent to purchase functional foods. Each of these influences is summarised to establish their relevance to this study within the proposed conceptual framework.

3.5.1 Organoleptic Attributes: Taste

Cazacu (2012) states that regardless of the growing consumer desire for food that provides beneficial properties, taste remains one of the most important determinants of a consumer's purchasing choice. Decisions to purchase functional foods were based on numerous factors, taste being one of them (Harrison-Dunn, 2016). Consumers have shared common motives for wanting to purchase functional food as they gave for purchasing conventional foods (European Sensory Network, 2015; Topolska et al., 2021). Convenience and taste were considered the most critical factors, according to a popular source (European Sensory Network, 2015). Many consumers consider taste the most significant element in buying and eating foods (Bui, 2015). When items' taste is reduced, people are more inclined to avoid them regardless of their nutritional value (Bui, 2015). Also, in the functional foods market, taste has been regarded as 'critical' in shaping consumers' behaviour in terms of buying these products (Verbeke, 2005). Therefore, taste may be an important influencing factor in relation to the intent to purchase conventional and modified functional foods. Although the purpose of this study was not to determine taste's influence on the intent to purchase functional foods, its relevance to this study cannot be overlooked. Taste has been found to be an important product attribute consumers note when purchasing food products, which may also be the case in this study.

3.5.2 Socio-demographic

Socio-demographic factors such as age, gender, marital status, level of education, income, and others are correlated with intake (Verbeke, 2005; Ares & Gambaro, 2007) and the intent to purchase functional foods (Guiné et al., 2020). In a study conducted by Teng et al. (2015), certain socio-demographic characteristics impacted the consumer's awareness and decision to purchase natural and synthetic functional foods. However, Annunziata and Vecchio (2011) found that consumer demographics, gender and age, do not play a major role in consumers' knowledge or consumption of functional food. These contradictory findings suggest functional-food consumers should not be generalised demographically (Annunziata & Vecchio, 2011). However, it is not the purpose of this study to explore socio-demographic factors' influence on consumers' intent to purchase functional foods. For the purpose of this study, socio-

demographic information was used to provide a description of the study sample and give context for the findings' interpretation.

3.5.3 Price

According to Levrini and Jeffman dos Santos (2021), in the perception of goods on the market, price is definitely one of the most important aspects. Price may be utilised as an indication of the quality of the goods by determining procurement choices among consumers (Srdjan et al., 2020). The impression of a product's price has a significant impact on a consumer's choice to acquire functional food (Albari, 2020). It was also found that consumers weigh the price of functional foods when determining whether to buy these products (Nguyen et al., 2019). Consumers commonly assume that functional foods are more costly, and the misconception will adversely impact consumer buying (Nguyen et al., 2019). Price is therefore a central element in consumer buying behaviour (Ares et al., 2010), although not a specific influencing factor that this study determined.

The influencing factors, shortly referred to as influencers in Figure 3.2, have been identified within the literature and were discussed in Chapter 2. However, these influencers were determined or measured in any way in this study. These influencers were included in the framework as they form important elements in consumers' purchase decisions and may also have been identified by participants in this study.

3.5.4 Health-conscious consumer factors

According to Ali and Ali (2020), consumers across the world are making a transition to healthier eating alternatives. Research conducted by Le et al. (2013) found that people's diets were better when they showed a favourable attitude toward healthy eating. In the study conducted by Nguyen et al. (2019), health consciousness was one of the important factors that affected consumers' attitudes and intentions to purchase functional products. Nguyen et al. (2019) also state that functional food purchases are impacted by their availability. Consumers will be more likely to buy functional food items if they are made more widely obtainable to them. Consumers would be inclined to eat functional foods, according to the TPB, provided that there is a subjective norm in place regarding their consumption of these foods (Bakti et al., 2020). Using functional food as an example, O'Conner and White (2010) demonstrated the influence of subjective norms on behavioural intention in regard to these types of foods. PBC attempts to explore both perceptions of controllability (external control) and perceived self-efficacy (internal control) (Fishbein & Ajzen, 2010). Self-efficacy is an

indicator of one's confidence in conducting a specific action (Zainuddin, 2019). Self-efficacy has also been related to purchasing and being involved in functional foods (Cox et al., 2004; Cox & Bastiaans, 2007). Consumption frequency was strongest when associated with intention, accompanied by self-efficacy, and PBC (Nystrand & Olsen, 2020).

3.5.5 Health-conscious consumers' subjective knowledge

One of the study's objectives was to explore knowledge and how it influences consumers' intention to purchase functional foods. Subjective knowledge is the amount of information that a person believes they understand about a certain item (Han, 2019). It tests consumers' expectations about how much they think they know about a product (Sääksjärvi et al., 2009). A person's attitude toward a product with good characteristics is more appealing when the individual believes in those attributes (Von Schaewen, 2014). Consumers' attitudes toward actualised behaviour are informed by a subjective behavioural belief in products or services, and cognitive appraisal of prospective outcomes (Ruangkanjanases et al., 2020). The consumer's attitude towards functional foods might greatly impact their purchasing choice (Somehagen et al., 2013). Health awareness and improving behaviours to support one's health are recognised as driving factors to consume (Kraus, 2015) and the intent to purchase functional foods (Sääksjärvi et al., 2009).

People who prioritise wellness in the context of their diet are better able to prevent illness and enhance physiological performance (Schnettler et al., 2015). An individual's engagement in or opposition to an activity might be mandated by subjective norms (Divya & Nakkeeran, 2018). According to Bakti et al. (2020), a subjective norm supporting the use of functional foods, as suggested by the TPB, might entice consumers to seek them out. A significant factor in a consumer's decision to acquire a product is whether or not they rely on the wise counsel of those they value (Nguyen et al., 2019). The TPB notes that consumers are able to consume functional foods when individuals have a subjective norm to support the consumption of functional foods (Bakti et al., 2020). According to Fanning-Hardin and Ricks (2017), the performance of a behaviour is impacted by a sense of PBC when there are enough resources and the ability to govern impediments to actions. A study conducted by Nystrand and Olsen (2020) reported that in the domains of health and well-being, self-efficacy is believed to be a more accurate predictor of intention than PBC. Beliefs about the availability of resources such as time, money, and cooperation from others are thought to influence PBC (Ajzen, 2020). Having a positive attitude and feeling supported by society's subjective norms is thought to

influence consumers' conduct by making them more likely to believe they can perform the desired action (Ajzen, 2020).

3.5.6 Health-conscious consumers consumption

Within the context of the conceptual framework, attitudes and beliefs have been shown to be significant elements prompting consumers' preferences regarding functional foods (Verbeke, 2005). The most prominent variables were those linked to perceptions about functional foods, accompanied by beliefs about functional foods (Guiné et al., 2020; Bui, 2015). Beliefs about the dietary importance and health effects of a food item are more important than real nutritional value and health consequences in influencing an individual's diet choice (Jain et al., 2014). Attitudes influence how information is utilised or rejected, according to Urala and Lähteenmäki's (2003) research on functional foods. Consumers' attitudes toward and willingness to purchase items improve when they are positioned as healthy or attain beneficial nutritional information (Küster-Boluda & Vidal-Capilla, 2017).

Subjective norms indicate a perceived social obligation to exhibit behaviour that greatly leads to the prediction of intention to partake in a balanced dietary behaviour (McEachan et al., 2011). Rezai et al. (2012) also noted that subjective norm has an immediate effect on deliberate behaviours related to the purchasing of functional foods. When it comes to purchasing a product, consumers often base their choice on the advice of people they know and trust (Nguyen et al., 2019). Divya and Nakkeeran (2018) agree consumers' views regarding the consumption of functional foods are positively influenced by subjective norms. One of the most significant factors influencing a consumer's behaviour is PBC (Bakti et al., 2020). PBC can affect behavioural intent and may also directly affect actions. An individual's intent to perform the action can be high, but a factor outside the individual's control can hinder the actual execution of the behaviour (Ajzen, 1991).

Based on the discussion related to the influencers and components relevant to the TPB, the following conceptual framework is proposed.

3.6 Conceptual framework

The conceptual framework proposed for this study is based on the TPB. It offers a clear but rational framework for evaluating health-conscious consumers' intentions, subjective norms, attitudes, and PBC (Gronhoj et al., 2012). The conceptual framework presented in Figure 3.2

was developed from literature and composed to illustrate important influencers identified from the literature that affect the possible use and consumption of functional foods. It is proposed in the conceptual framework that the three health-conscious-related influencing concepts (consumer factors, consumer subjective knowledge and consumer consumption) form an integral part of this study. According to literature, these concepts may exert a vital influence on the intention to use and consume modified and conventional functional foods that were explored in this study.

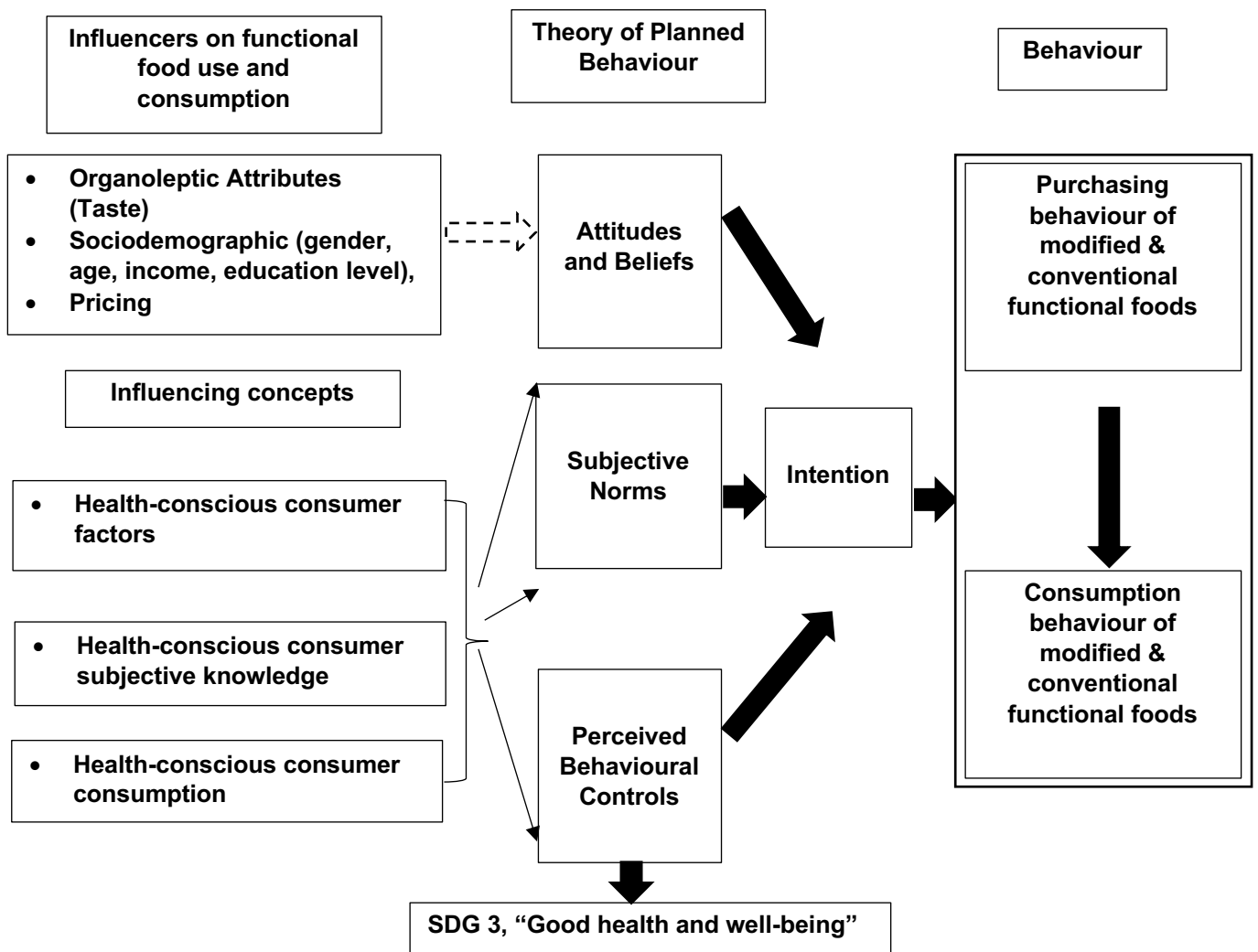


Figure 3.2: Conceptual framework (Adapted from Ajzen, 1991)

While the organoleptic attributes, socio-demographics and pricing were recognised and discussed in this chapter as influencers of the use and consumption of functional foods (Section 3.4), they were not the main focus of this study. The conceptual framework for this study proposes that the three influencing concepts (consumer factors, consumer subjective knowledge and consumer consumption) may impact consumers’ attitudes and beliefs,

subjective norms, and PBC, thereby impacting their intention to behave a certain way towards functional foods. This may result in either purchasing or possibly not purchasing functional foods, which may directly influence the consumption of modified and conventional functional foods in more specific terms. In relation to these influences on the consumption and use of these two types of functional foods, and the resulting behaviour of purchasing or not purchasing these functional foods, good health and well-being (as proposed in SDG 3) may be compromised.

These determinants can influence the consumers' expected actions (Rezai et al., 2012). In the TPB, behaviour depends on intention, which, in turn, is influenced by attitude towards behaviour, subjective norms, and PBC (Hauser, 2013).

3.7 Sustainable Development Goal 3 “Good health and well-being”

Health is emphasised as a key aspect of sustainable development in SDG 3, “Ensure healthy lives and promote well-being for all at all ages”, as cited by a widely accepted source (PAHO, 2020). A popular cite reflects sustainable development cannot be measured without taking health into consideration (sdgcompass.org, 2015). Children's right to an education is jeopardised when their health is compromised, which reduces their future economic opportunities and leads to an increase in global poverty (sdgcompass.org, 2015). Many approaches may be used to achieve sustainable health and wellness, such as consuming a diet rich in functional foods (Del Castillo et al., 2018). A study by Putnik and Kovacevic (2021) found that incorporating functional nutrition into one's diet might have significant health benefits. Consumers and businesses that focus on human well-being and long-term economic prosperity have shown tremendous interest in these types of products. As consumers become more aware of the health advantages of functional foods, they are more likely to purchase and consume them, which will contribute to the achievement of SDG 3.

3.8 Conclusion

The reviewed influencers include health-conscious consumers' subjective knowledge, socio-demographics (gender, age, income, education level), attitudes and beliefs, organoleptic attributes (taste), and pricing. These variables' impact on behaviour and intentions are expected to be mediated by their effects on the theory's key determinants. The more positive an attitude is, the more likely it is that a consumer will want to behave in a particular way. Influencers may either increase or decrease intent and behaviours, but it all depends on belief.

It is also important to understand the role that health-conscious consumers play in reaching SDG 3, and what needs to be done for them to become even more health-conscious as a result of this investigation. In the next chapter, the methodologies used to explore the study's objectives are described.

CHAPTER 4

METHODOLOGY

This chapter describes the methodology suggested to address the study's objectives.

4.1 Introduction

The preceding chapter presented an overview of the theoretical background, which included a discussion on the TPB and the conceptual framework that guides the aim of this study. To address the objectives set out in Chapter 1 of this dissertation, the methodology that best suited this study is presented in this chapter. The chapter focuses on an overview of and reasons for the paradigm within which the study is contextualised, the particular research design applied to this study, and the sampling strategy used to recruit participants. The data collection methods and analysis procedure are also described.

The following section recaps the aim and objectives of the study to guide the discussion pertaining to the study's research methodology.

4.2 Research aim and objectives

The aim of this study was to explore health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The following research objectives and sub-objectives were formulated to achieve this aim:

Research objective 1

1.1 To determine health-conscious consumers' understanding of the term 'functional foods'.

Research objective 2

2.1 Apply the three components of the TPB to determine:

2.1.1 Attitude's impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

2.1.2 Subjective norms' impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

2.1.3 PBC's impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

Research objective 3

3.1 To explore health-conscious consumers' subjective knowledge and use of:

3.1.2 conventional functional foods; and

3.1.3 modified functional foods.

Research objective 4

4.1 To identify the factors that influence health-conscious consumers' intention to purchase and consume functional foods.

Research objective 5

5.1 To explore health-conscious consumers' use of functional foods.

The research methodology employed in this study is discussed in further detail in the following sections. The first aspect of the methodology relates to the research paradigm that was used as a framework within which the study was designed to address the research objectives.

4.3 Qualitative methodology

A qualitative methodology was applied in this study to gain a better understanding of consumers' experiences concerning the functional food phenomenon. In particular, Tenny et al. (2022) explained that understanding thoughts, views, or experiences is the goal of qualitative researchers who collect and analyse data that are not numerically based. It is also utilised to achieve a deeper understanding of a topic or develop new research ideas. People's thoughts and feelings may be discovered through qualitative research methods. Researchers use the method to observe and evaluate, acquiring a deeper comprehension of human behaviour, experience, attitudes and intents (Mbaka & Isiramen, 2021). Hence, a qualitative methodology was employed to acquire a deeper understanding of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

4.4 Interpretivist paradigm

In general, a paradigm determines the researcher's philosophical approach and has important implications for the research process, including the choice of methodology and techniques (Kivunja & Kuyini, 2017). Furthermore, as defined by Guba and Lincoln (1994) "a paradigm is a basic set of beliefs or worldview that guides research action or an investigation" (p. 105).

Within the paradigm, the nature of knowledge is detailed and explored (Brown & Duenas, 2019). Considering the overarching qualitative methodology within which this study was positioned, an interpretive (also referred to as a constructivist) paradigm was used (Kivunja & Kuyini, 2017).

Interpretivism states that people develop their own understanding and awareness of the world through experience and reflection (Gupta, 2017). This paradigm seeks to generate and understand how research participants construct their individual and mutual meanings of the phenomenon of interest (Lauckner et al., 2012; Denicolo et al., 2016). It helps the researcher give significance to the way things are and identify aspects or elements that may otherwise not be readily exposed (Bisman & Highfield, 2012; Pham, 2018). Levers (2013) suggests the significance of interpretivist researchers being cognizant of the inherent diversity of perspectives, stemming from the diverse backgrounds, cultures, and perspectives that individuals may employ when perceiving and comprehending the world. This parallels the emergence of a multifaceted interpretation among individuals. However, the interpretivist paradigm is particularly effective in inductive analysis, since it attains meanings in its own way from participants' perspectives (Denicolo et al., 2016). When a study is interpretivist in nature and tries to recognise the complex perspectives of a wide subset of stakeholders, the ability to interpret their experiences is an important methodological factor (Kivunja & Kuyini, 2017). The underlying foundation of this paradigm is based on the notion that individuals actively generate their own cognitive interpretations as they engage with their surroundings (Kivunja & Kuyini, 2017). The interpretivist paradigm therefore helped the researcher gain a better understanding of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. This paradigm is based on human experiences, and the meaning of these experiences was presented from the perspective of the participants in this study, representing their understanding.

In support of the interpretivist paradigm, the phenomenological approach further underpinned the research design. Phenomenology aims to accurately characterise an event or experience by seeking out the viewpoint of people who have encountered it (Jamali, 2018). Through this approach, it was feasible to ascertain the divergent viewpoints individuals and collectives held regarding the world based on different circumstances, and these interpretations of reality are contingent upon a range of contextual and cultural factors (Alhazmi & Kaufmann, 2022). According to Qutoshi (2018), the key benefit of the phenomenological approach is that it is possible to gain in-depth knowledge of a phenomenon embedded within the study participants' perspectives and viewpoints. It also provides an opportunity to listen to participants and learn about their experiences. This approach was selected because it enabled the researcher to

better understand the significance of participants' understanding within the setting of their daily life (Austin & Sutton, 2014). Conversely, the limitations associated with the phenomenological approach pertain to the potential influence of the researcher's prejudice on the findings (Fernandez, 2017). Prejudice can be curbed by collectively analysing the data from the participants being interviewed (Smith & Noble, 2014). To address the challenge, both the researcher and supervisor discussed the analysed data to reach a consensus on the emerging categories obtained from the findings.

Phenomenology was a valuable way to understand health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods since this approach explored the experiences individuals shared. The process allowed the researcher to understand the "phenomenon by exploring it from the perspective of those who have experienced it" (Teherani et al., 2015, p. 670).

4.5 Research design

The research design aims to establish a suitable framework for a study. In this regard, the research design is seen as the research framework that forms the "Glue" and maintains all the elements of a research project (Akhtar, 2016, p. 68). The selection of a research design plays a crucial role in ascertaining the means by which pertinent data can be acquired for a given study (Tomaszewski et al., 2020). It is important as it provides the evidence required to solve the research problem with the greatest possible accuracy, clarification, and unambiguity (Ganeshpurkar et al., 2018).

The exploratory research design is employed to look at research topics that have not been comprehensively explored (Casula et al., 2021). This research design is commonly used in research problems where the researcher lacks prior data or has limited existing studies to reference (Mbaka & Isiramen, 2021). Bakti et al. (2020) successfully applied an exploratory research design to investigate Indonesian consumers' expectations about functional foods. Little was known about the advantages and benefits that attracted consumers to functional foods, which was explored through the use of a quantitative methodology. Therefore, the lack of insight and understanding of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods initiated an exploratory design for this study as it gave the researcher insights into the problem and thus could assist in better understanding this phenomenon. Ultimately, exploratory research serves as a valuable means to satiate the researcher's intellectual curiosity and need for profound

understanding. Such investigations aid in the collection of factual information, the emergence of data, and the identification of interesting trends within the data.

In order to augment the exploratory design in this study, a descriptive research design was also used. It characterises a population, circumstance, or phenomenon, and is particularly useful in situations where the subject or issue under investigation has not been comprehensively explored (Lambert & Lambert, 2012). According to Lambert and Lambert (2012) and Nassaji (2015), data collection for qualitative descriptive research is primarily concerned with determining the nature of the individual occurrences under investigation and characterising a phenomenon and its features. As a result, data collection consists mostly of organised, open-ended individual or focus group interviews with a low to moderate level of formality. In the case of this study, online focus groups and individual interviews were conducted to gain insight from the participants on their understanding of the research topic, aligning with the nature of a descriptive research design.

Based on the above, exploratory research was deemed useful to gain a better understanding of this field of study and develop more specific insight into this phenomenon. Therefore, for the purpose of this study, an exploratory, descriptive research design was used.

4.6 Study location

Functional foods are becoming more popular, and demand is increasing even in underdeveloped nations (Ali & Rahut, 2019). Because of rising health concerns, there has been an upsurge in healthy food consumption in South Africa. Many consumers want healthier food that offers nutritional benefits (Cant et al., 2014). In 2019, Health and Wellness continued to report stable demand and positive growth in South Africa, as local consumers were affected by the growing trends in health that inspired them to re-evaluate their diets (Euromonitor.com, 2022; Thompson, 2019). Dolman et al.'s (2007) study on South Africans' beliefs regarding food and cardiovascular health showed that over 80% of metropolitan consumers understood the significance of food intake habits in the control of cholesterol, blood pressure and diabetes. Van der Merwe et al.'s (2016) study found that South African metropolitan consumers accepted the fact that vegetables could contribute to their wellbeing; the consumers found them healthy and nutritious, and responded to fresh vegetables favourably. Knorr's (2020) report stipulated three-quarters of South Africans claimed to eat healthily with some regularity.

Overall, the demand for wellness and fitness has increased and continues to expand as a result of the lifestyle revolution, making South African consumers more health conscious. The

health-conscious consumer in South Africa was of particular interest for this study, particularly their approach to the consumption and use of functional foods. Therefore, the study was conducted in the limited geographic boundaries of the Republic of South Africa. Participants who took part in this study were predominantly from urban or metropolitan areas. Although it was not the researcher's intention to draw participants from specific metropolitan areas in South Africa, participants were specifically localised within Johannesburg, Cape Town and Durban. This is attributed to the sampling and recruitment strategies that were applied, as discussed in the next section.

4.7 Sampling strategy

The primary goal of the sample was to select suitable participants to better examine the focus of the study (Lopez & Whitehead, 2013). Samples in qualitative research are typically small to encourage the depth of case-based study (such as the case of functional foods) that is important to this method of inquiry (Vasileiou et al., 2018). More specifically, in order to address the objectives effectively, the population considered must be clearly specified (Rosito & Kassem, 2019); in the context of this study, the population was the health-conscious consumer in South Africa. The health-conscious consumer was generally educated, had done their research, and knew what they believed about good health (Watkins, 2019), making them suitable participants for this study.

This study made use of non-probability sampling strategies to recruit participants. Non-probability is a sampling method where every member of the population is not informed of the probability of selection in the sample (Bhardwaj, 2019). Non-probability sampling offers distinct advantages in situations where it is impractical to access a sizable population for the purpose of conducting random sampling. Additionally, this sampling method proves beneficial when researchers seek participants possessing specific expertise or knowledge within a particular domain (Obilor, 2023). Non-probability sampling strategies, according to Stratton (2021), are considered less objective compared to probability approaches, as this sort of sampling involves the researcher's selection of participants without providing an opportunity for every member of the target population to participate in the study.

This study employed three different non-probability sampling strategies, namely the convenience, purposive, and snowball sampling strategies. The **convenience sampling** strategy merely contained participants who appeared to be most available to the researcher (Baltes & Ralph, 2020). A disadvantage associated with convenience sampling is the lack of generalisability of the findings to the general population, thereby compromising the findings'

reliability in accurately reflecting the perspectives of the general populace on a specific subject matter (Jager et al., 2017). However, the current study was exploratory in nature, and the intent was not to generalise or transfer the findings to any other population. Therefore, convenience sampling was also included in this study as it encourages the use of specific inclusion criteria through which a more homogenous sample can be achieved.

Purposive sampling is typically used to define and select data-rich cases for qualitative research employing the most efficient use of restricted sources (Patton, 2002). This sampling strategy is not random but intentionally specified to include the most appropriate participants to address the research questions in the most appropriate context (Johnston et al., 2020). This claim is supported through the use of inclusion criteria that specifies particular conditions for participating in the study, resulting in a homogenous sample. One of the benefits of using the purposive sampling strategy was that it enabled the researcher to extract a considerable amount of data (Ames et al., 2019), allowing for an explanation of the findings' dramatic influence on the population. A drawback of this strategy was that, irrespective of the type of purposive sampling strategy used, it can be prone to researcher bias as a result of evaluations not being based on defined criteria (Sharma, 2017). In light of the disadvantages associated with purposive sampling, the researcher's bias was addressed through specific inclusion criteria, discussed under Section 4.7. Therefore, purposive sampling was a deliberate and planned sampling method that was used to select particular research participants who met the study's inclusion criteria.

Snowball sampling was the third sampling strategy used in this study. This method is used when it is tough to meet the target characteristics whereby the participants are recruited by established connections or personal associates (Naderifar et al., 2017). One of the notable benefits associated with snowball sampling is its efficacy in targeting consumers who are difficult to engage with (Raifman et al., 2022). Conversely, this particular sampling approach presents a limitation in terms of the researcher's ability to effectively exercise control over the composition of the study's sample (Sharma, 2017). As the name implies, initial participants are chosen because they meet predetermined criteria, and more respondents are subsequently drawn from the range of possible participants based on referrals (Naderifar et al., 2017). These individuals meet the inclusion criteria set for the study. The disadvantages were addressed in this study by ensuring appropriate inclusion criteria were outlined (Naderifar et al., 2017).

Thus, considering the above, these sampling strategies were considered most suitable for this study, allowing the researcher to address the study's objectives.

4.8 Inclusion criteria

In keeping with the purposive sampling strategy and ensuring homogeneity of the research sample, inclusion criteria were used to recruit participants for this study. Inclusion criteria consistently, effectively, systematically, and objectively identify the study's population (Garg, 2016). The inclusion criteria that directed this study's purposive sampling strategy follow.

Participants were required to:

- perceive themselves to be health conscious. "South Africa (SA) was identified as an emerging market for functional foods in a global online survey by AC Nielsen in 2005" (O'Connor & Venter, 2012, p. 60). The consumption of functional foods has been recognised as one of the most significant internal motives for consumers, with consumers who are more concerned with their health and diet being more likely to consume functional foods (Baker et al., 2021), making these participants best suited to partake in this study. Perceived health consciousness was posed as an inclusion criterion for this study as the participants' actual level of health consciousness was not determined due to the exploratory nature of the study;
- perceive themselves as knowledgeable about functional foods. According to Yun et al. (2020), a typical consumer who is aware of and knowledgeable about functional foods is one who has a high income, is highly educated, and lives in an urban area. Although these characteristics were identified by Yun et al. (2020), it was important that potential study participants were at least perceived to be knowledgeable about functional foods. Perceived knowledgeability was used as an inclusion criterion as the level of knowledgeability was not determined for this study. The purpose of this study was exploratory in nature and not designed to work with a particular level of functional food knowledge. By applying a perceived state of functional food knowledge, it was believed these participants would be able to make a significant contribution to this study based on their understanding of functional foods, making them best suited to partake in this study;
- over the age of 18 years;
- conscious of purchasing health-related food products; thus, actively including health-related food products in their food purchases. The term "wellness-oriented" lifestyle refers to individuals who are concerned with eating healthy foods, because these individuals accept personal responsibility for their health (Kraft & Goodell, 1993). Therefore, they made excellent participants for this study;
- conversant in English as the interviews were conducted in English;

- have a disposable income to purchase health-related food products;
- able to make their own purchasing decisions; and
- have heard about functional foods, been exposed to functional foods, or perceived themselves as knowledgeable about functional foods. The importance of these participants having heard, been exposed to, or knowledgeable about functional foods was related to their ability to make a valuable contribution to this study. The researcher gained in-depth insight from the participants on the research topic. This study thus aimed to include consumers with some awareness of functional foods as their opinions were needed to determine their understanding of functional foods.

Considering the three sampling strategies that were discussed in Section 4.6 and the inclusion criteria used to recruit participants for this study, the next section explains how these strategies were implemented to recruit participants based on the inclusion criteria.

4.8.1 Participant recruitment strategy

The ability to successfully recruit and retain study participants is critical to the overall effectiveness of the research project (Manohar et al., 2018). Therefore, to start the recruitment process (based on the inclusion criteria), the researcher compiled a list of relatives, acquaintances, and co-workers who met the study's inclusion criteria and were considered convenient. In this way, participant recruitment was initiated. Through this method, the researcher contacted seven individuals who were asked to participate and through whom the snowball sampling continued, with them as initial recruiters of study participants. The potential participants or recruiters were contacted either in person or over the phone by the researcher. Thereafter, each of these participants received a short introduction about the research topic and was asked to make contact with a variety of other potential participants who met the inclusion criteria and invite them to participate in the study on a voluntary basis. They therefore acted as recruiters for participants in this study.

The participants who were contacted by the recruiters included acquaintances, family members, and co-workers, among other people. The recruiter was asked to provide the potential participants with the researcher's email address if they were interested in participating. Once the participants came into contact with the researcher through email, the following information was provided: the details of the research project; the informed consent form; a demographic questionnaire (which included age, gender, location within the borders of South Africa, education, income and, employment status); and the date, month, and time of the proposed online focus group or individual interview session. According to Naderifar et

al. (2017), individuals who would normally be difficult to locate may be reached in an efficient and cost-effective manner when applying the snowball sampling strategy. This method greatly assisted the researcher in obtaining access to participants who met the inclusion criteria for this study.

4.9 Data collection methods

Different data collection methods were used in this study. Focus group interviews and individual interviews were conducted to generate data. The purpose of each of these data collection methods is discussed next. A questionnaire was also used to gain demographic information from the participants, which is outlined in this section.

4.9.1 Focus groups

A focus group can generally be described as a group discussion on a subject led by a qualified group moderator (Stewart, 2018). During focus groups, a thorough discussion on a specific topic takes place, and the researchers can ask participants to clarify, illustrate, or better answer a question or topic (Nyumba et al., 2018). This style of interview is reflective of real-world experiences, which is why focus group interviews were used in this study (Statistic Solutions, 2021).

Synchronous online focus groups were used as they provided an opportunity for real-time discussion (Thrul et al., 2017). Synchronous online focus groups promote rich discussions, allowing participants to explain their subjective points of view (Moore et al., 2015). Generally, the size of a focus group is limited to 8-10 people (Myers, 2020), but some studies have recommended a minimum of 3-4 people to be included in focus group discussions (Burrows & Kendall, 1997), referred to as mini-focus groups. Mini-focus groups, consisting of 4-6 participants, has experienced a surge in popularity due to the advantages associated with smaller group sizes, such as enhanced ease of recruitment and increased participant comfort during discussions (Cox & Van Gorp, 2018). In this study, 11 mini-focus groups were conducted, comprising 2-4 participants. The number of focus groups was determined by data saturation being achieved on all questions, which occurred after 11 focus group sessions.

According to Dilshad and Latif (2013), the focus group interview is one of the most useful strategies for gathering qualitative information, where a reasonably homogenous group has the opportunity to reflect on the interviewer's questions. An advantage of focus groups, according to Nyumba et al. (2018), is that these discussions enable researchers to readily

assess how participants reply to questions concerning the study's topic. Moreover, vital information may be obtained from audial inflexions, such as tone, cadence, and amplitude of their voices. Conversely, the disadvantage of focus groups is 'groupthink', which is defined as participants being lured into thinking as a group (Akhmad et al., 2021). To effectively address this phenomenon, it is crucial to actively engage with participants' perspectives and employ targeted questioning techniques to elicit diverse viewpoints and distinctive insights, which was implemented in this study. The online focus groups were recorded since it was essential to transcribe the sessions for future reference and analysis (Myers, 2020).

4.9.2 Individual interviews

Adhabi and Anozie (2017) state that qualitative research relies heavily on in-depth individual interviews as the fundamental method of gathering data. The interview may be regarded as a sort of discussion where the researcher strives to learn more about a topic from the perspective of an individual being interviewed (Adhabi & Anozie, 2017). In this study, ten individual interviews were conducted as determined by data saturation. The online individual interview sessions were recorded to later transcribe the sessions for future reference and analysis (Myers, 2020).

There are several advantages to conducting an individual interview, including the ability to obtain insight into people's views on an issue, and gain deeper knowledge of their experiences (Ryan et al., 2013). This was the purpose of exploring health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. It was possible to prevent biases in the interview process by carefully crafting the questions (pilot testing the interview guide) and getting a second opinion from a peer or mentor (the supervisor in this instance). It is imperative to exert diligent efforts in maintaining objectivity and eliminating prejudice when conducting individual interviews within the research process.

4.9.3 Context for interviewing within COVID-19 pandemic

The online COVID-19 guidelines were applied to both focus groups and individual interviews. As a result of the Coronavirus Disease 2019 (COVID-19) outbreak, many qualitative researchers have been forced to use online data collection methods (Lobe et al., 2020). As stated by Neris et al. (2023), the use of protocols that effectively mitigate in-person interactions with individuals played a pivotal role in mitigating the transmission of the pandemic. Data collection was conducted between June 2021 and July 2021; the country was in alert level 3

from 16 June to 27 June 2021, and alert level 4 from 28 June to 25 July 2021. According to Unisa's COVID-19 Guidelines: Implications of alert levels for researchers and postgraduate students stated that during alert level 3, "No research that requires physical human participant interactions nearby, e.g., face-to-face interviews, focus groups, or human sample collection (excluding clinical research as permitted by national guidelines and relevant Unisa permit)", "No research is to be conducted in homes, communities, restricted government facilities for the aged" and under alert level 4 it states that "No research that requires physical human participant interactions in close proximity, e.g. face-to-face interviews; focus groups or human sample collection (excluding clinical research as permitted by national guidelines and relevant Unisa permit)", "Telephone and/or online platform interaction with human participants". As was the case with this study, once contact was established with the researcher, participants were informed that focus groups and individual interviews would be conducted online, using the Teams platform. By using the online platform, the COVID-19 guidelines stipulated by Unisa were adhered to during data collection for this study.

4.9.4 Reasoning for combining focus groups and interviews

Focus groups and interviews, in particular, allow researchers to explore thoughts, emotions, ideas, and opportunities that can be conveyed through the participant's narrative (Kabir, 2016). Therefore, to gather data to address the study's objectives and follow a qualitative research paradigm, focus groups and individual interviews were used as data gathering methods. The combination of focus groups and interviews may be useful to researchers since it unveils complementary perspectives on a phenomenon (Lambert & Loisel, 2008). Focus groups and individual qualitative interviews, according to Kaplowitz and Hoehn (2001), have the potential to give researchers access to and an understanding of people's actions and perspectives that cannot be directly monitored. Furthermore, focus groups have been shown to be fruitful, and are deemed one of the most effective ways to analyse and produce new ideas through group dynamics. In contrast, in-depth interviews facilitate a comprehensive and thorough dialogue between the researcher and the participant, enabling a deeper exploration of the research topic (DeJonckheere & Vaughn, 2019) and different insights about the research phenomenon. Therefore, both methods were used to allow different perspectives to emerge during data collection.

4.9.5 Application of the interview guide

An interview guide was used to conduct the focus groups and individual interviews. This guide also ensured that consistency was maintained throughout the focus groups and interviews,

and that all questions were asked during the interview engagements. Moreover, in order to ensure the effectiveness and value of focus groups and interviews, it is imperative to present participants with appropriate and well-formulated questions (Dilshad & Latif, 2013). To ensure that the questions put to the participants were meaningful and addressed the study's objectives, the study's operationalisation was confirmed, as presented in Section 4.9.7. Through this process, specific questions were generated to address each of the study's objectives. Pilot testing of the questions (suggested in the operationalisation of the study) is discussed in Section 4.10.1.

In true discussion fashion (which is the purpose of both focus groups and individual interviews), participants were encouraged to provide responses that were elaborations. They were dissuaded from one-word answers such as 'Yes' or 'No', which do not provide enough information for the researcher to understand the experience or thinking around a specific aspect related to the study (Poppulo, 2018). To encourage discussion and gain a deeper understanding of the primary question, probing questions were utilised, such as 'Why' or 'How' (Poppulo, 2018), allowing the participants to expand on and explain their responses. Therefore, probing questions were used during the focus groups and interviews to gain greater insight into what participants conveyed. This helped the researcher to better understand the participants' logic and feelings.

4.9.6 Semi-structured interviews

The focus groups and individual interviews were semi-structured. Semi-structured interviews are in-depth interviews where participants are required to answer open-ended questions that have been predetermined (Jamshed, 2014). Interviewing key informants who have personal experiences, perspectives, opinions, and beliefs that are relevant to the research question is the primary goal of semi-structured interviews (DeJonckheere & Vaughn, 2019). Therefore, semi-structured interviews were used to learn more about participants' experiences and thoughts about the research topic.

4.9.7 Operationalisation of the study

Through the study's operationalisation, it is possible to indicate the way in which the research objectives will be measured. As this study was framed within the qualitative research paradigm, where qualitative focus groups and individual interviews were used, questions were developed to facilitate discussions about the topic. Therefore, specific questions were developed that best addressed each of the research objectives; the proposed questions that

were formulated are listed in Table 4.1. These questions also formed the interview guide that was used to facilitate each of the focus group and individual interview sessions. The questions were pilot tested before the main study commenced, as discussed in Section 4.10.1.

Table 4.1: Operationalisation of the study

<p>Research objective 1</p> <p>1.1 To determine health-conscious consumers’ understanding of the term ‘functional foods’.</p> <p>1.1.1 What do you understand when you hear the term ‘functional foods’?</p> <p>1.1.2 How did you become familiar with this term?</p> <p>1.1.3 What do you know about functional foods that is important to you?</p> <p>1.1.4 What do you think is the purpose of functional foods?</p> <p>1.1.5 Can you name some of the products you include in your shopping list that are important functional food items for you to consume?</p> <p>1.1.6 Which are your favourite functional food products and why?</p> <p>1.1.7 Are there any particular sources you consult on functional foods? Which are they, and why do you consult these sources?</p>
<p>Research objective 2</p> <p>2.1 Attitude’s impact on health-conscious consumers’ consumption, knowledge and the factors that influence their intention to purchase functional foods.</p> <p>2.1.1 When you purchase food products, do you specifically look for functional food products?</p> <p>2.1.2 Were you always keen on purchasing functional foods? If not, why, and if yes, why was it important to you?</p> <p>2.1.3 Has your idea about functional foods changed in any way? What do you attribute it to?</p> <p>2.1.4 What role has your health consciousness played in your purchase and consumption of functional foods?</p> <p>2.1.5 What does it mean to you to be health-conscious?</p> <p>2.1.6 What important things does your health consciousness include?</p> <p>2.1.7 How has your health consciousness influenced your purchasing of functional foods?</p> <p>2.2 Subjective norms’ impact on health-conscious consumers’ consumption, knowledge and the factors that influence their intention to purchase functional foods.</p> <p>2.2.1 Do you feel pressured socially to purchase or not to purchase functional food products; if so, why?</p> <p>2.2.2 If previously answered yes, from whom does the pressure originate?</p>

2.2.3 In which way do friends and family influence your decision to purchase functional food products?

2.2.4 Are there any individuals or groups of people who would influence your purchasing decision and consumption of functional food products?

2.2.5 What influence does any individual or groups of people have on your purchasing decision and consumption of functional food products?

2.2.6 How important is it that you are seen to be using or including functional foods in your food purchases?

2.2.7 Who introduced you to functional foods, or how did you become aware of functional foods?

2.3 PBC's impact on health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

2.3.1 Are you easily able to include functional foods in your food purchases or not? Explain your experience.

2.3.2 What has been your main hindrance in purchasing or using functional foods?

2.3.3 How does it make you feel to be able to purchase functional foods? Explain your feeling.

2.3.4 If you had to share your belief about functional foods with someone, what would you say those beliefs are?

Research objective 3

3.1 To explore health-conscious consumers' subjective knowledge and use of: Conventional functional foods and Modified functional foods.

3.1.1 What do you think conventional functional foods are?

3.1.2 According to your opinion, which foods are conventional functional foods?

3.1.3 Do you include these foods in your food purchases?

3.1.4 Of these products, which is the most important conventional functional food item to you?

3.1.5 Which advantages do you think the foods that you mentioned as conventional functional foods hold?

3.1.6 What do you think modified functional foods are?

3.1.7 According to your opinion, which foods are modified functional foods?

3.1.8 Do you include these foods in your food purchases?

3.1.9 Of these products, which is the most important modified functional food item to you?

3.1.10 Which advantages do you think the foods that you mentioned as modified functional foods hold?

Research objective 4

4.1 To identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods.

4.1.1 What factors would influence your decision to purchase and consume functional foods?

Research objective 5

5.1 To explore health-conscious consumers' use of functional foods.

5.1.1 As a health-conscious consumer, how important is it to you to include functional foods in your diet?

5.1.2 Are there any specific rules or processes that you follow to make sure that functional foods are included in your diet? Explain these rules or processes.

5.1.3 How do you make sure that functional foods are present in your diet?

4.9.8 Demographic questionnaire

A short demographic questionnaire was used to record information about the participants' backgrounds (see Appendix 4). The demographic information allowed the researcher to gain insight into the participants' characteristics (Allen, 2017). Therefore, the demographic questionnaire included information that pertained to participants' age, residence, gender, level of education and employment status. After initial email interaction with the researcher, a response including the demographic questionnaire was sent to each participant. Individuals were asked to complete the demographic questionnaire, which was in an MS Word format, and return it to the researcher through email.

4.10 Data collection procedure

Data collection commenced after the first participants were recruited and continued as the participants availed themselves for the study. However, in order to collect data for this study, the interview guide for the focus groups and individual interviews was first pilot tested, as discussed next.

4.10.1 Pilot testing the interview guide

In order to ensure the efficacy of the focus groups and interviews, the interview guide (see Appendix 5) was pilot tested prior to the start of the main study. To determine the optimum way to carry out a large-scale research project, researchers perform a pilot study, which is a preliminary small-scale study (In, 2017). Pilot testing an interview guide is a method of testing to assist the researcher in detecting potential issues and possible solutions to the questions to be presented to participants (Majid et al., 2017). In qualitative research, pilot interviews are

an important step that emphasises the importance of improvising prior to and during the main study (Majid et al., 2017).

The questions presented in Section 4.9.7 were pilot tested. The process allowed the researcher to practice interviewing, create rapport with participants, and acquire interviewing and conversational skills important for the data collection process. Following the conclusion of the pilot test, it was clear from the manner in which the questions were answered that adequate information would be gathered to accomplish the research objectives. It was discovered that participants understood the questions and could answer them without the researcher having to reformulate or clarify the questions. No adjustments were made to the interview guide. After pilot testing the interview guide, it was estimated the interviews would last roughly 30 to 60 minutes, depending on the number of participants who attended the online focus group sessions or depth of elaborations on a particular question during the individual interviews.

4.10.2 Data gathering of the main study

Focus groups and individual interviews were utilised to gather data to meet the research objectives. Data collection commenced during June and July of 2021. A total of 38 participants participated in this study. Ten participants took part in the individual interviews, and 11 focus group sessions were conducted, which comprised of between two-four participants per session. All interview participants (whether in focus groups or personal interviews) were already present when the interviews began, allowing the researcher to commence with the electronic interviews without any delays. The researcher made introductions to the session or interview, described the purpose of the study once more, and confirmed the inclusion criteria that were used to select the participants for this study. Each person was then allowed to make a short presentation about themselves to the other participants in the focus group or to the researcher during individual interviews. The participants were informed that everyone was expected to be an active participant; that there were no 'right' or 'wrong' answers; they should speak freely but not interrupt others while they were talking during sessions since this complicates transcriptions and unravels participants' responses. Participants were also notified that sessions would be audio recorded and that the recordings would only be used to ensure the researcher's notes were correct. Recordings would not be heard by anyone outside this project other than the transcriber. The recording of the interviews began when the focus group discussion or individual interview started and finished after these ended.

This information was shared with the participants in more detail in the informed consent form that was returned to the researcher prior to the focus group or personal interview. The researcher went on to explain the objective of the consent form and why personal information was being collected (see Appendix 2). Following the conclusion of the focus group and individual interview sessions, the researcher thanked participants for their time and involvement, and all participants received a R100.00 Takealot voucher as a token of the researcher's appreciation. The researcher sent participants a voucher code, which they could use to make online purchases in light of the COVID-19 pandemic's restrictions under which data gathering took place.

4.10.3 Data saturation

In qualitative research, a guiding principle is to sample only until data saturation has been achieved (Moser & Korstjens, 2018). Data saturation is widely used to measure sample size in qualitative research (Guest et al., 2020). The importance of saturation and its significance depends on the theoretical approach and analytical methods used (Saunders et al., 2018). When using the phenomenology approach, researchers need to be able to employ probing questions and create a state of epoché to attain data saturation (Fusch & Ness, 2015). Data saturation occurs when no new information is obtained during data analysis, signalling to researchers that data collecting may halt (Hennink & Kaiser, 2022). The focus group and individual interview sessions were completed at a point of saturation when no new data emerged in any of the data gathering methods. After completing the focus group and individual interview sessions, data analysis commenced, which is discussed in the next section.

4.11 Data analysis

Data analysis is critical to ensure credible qualitative research (Maguire & Delahunt, 2017). Qualitative data analysis, despite its inductive nature and emphasis on extracting meaning, encompasses a wide range of approaches that serve various purposes and are rooted in distinct ontological and epistemological foundations (Noble & Smith, 2014). Data that are collected by interviews, focus groups or other discussions are frequently recorded by audio or video (Bengtsson, 2016), which was the case for this study. In order to analyse the information collected from the recorded individual interviews and focus groups, it was necessary to have the recordings transcribed, resulting in usable transcripts of the data (Busetto et al., 2020). Verbatim quotes from individuals play a significant role in providing accurate information about their individual views (Paaß et al., 2012). Quotes are effectively selected and displayed so that the reader not only understands the intellectual foundation of the study, but also

understands the experience and the reason for the argument being addressed in the study (Thorne, 2020). It was assumed that verbatim quotes could provide readers with a greater depth of comprehension (Corden & Sainsbury, 2006) as part of the data presented in Chapters 5 to 7. The focus group and individual interview sessions were thus digitally recorded and transcribed verbatim to assist in the data analysis and presentation of the data for this study. Data analysis of the transcripts commenced with the researcher carefully reviewing, studying, and reading each transcript numerous times (Alase, 2017) to uncover recurring patterns of meaning in all the interviews and focus group transcripts. The transcripts for the individual interviews were analysed separately from the focus group transcripts to see if differences in the experiences from the focus group interview and individual interviews emerged. Content analysis was applied to analyse the data resulting from each of the data gathering methods.

Using content analysis, researchers may establish the existence of certain words, themes, or ideas within a given set of qualitative data. This study employed a methodology to assess the semantic significance and interrelationships of specific words, themes and conceptual notions within the textual material. As a result of content analysis, participants' words were examined to identify the most important concepts that emerged (Babin & Zikmund, 2015). First, open coding was conducted. According to Williams and Moser (2019), open coding is a method of data analysis where the researcher seeks to find and classify unique ideas and concepts. In the first step of open coding, data were split into meaningful expressions and expressed in a single word or a concise sequence of words (Williams & Moser, 2019). Following the open coding process, axial coding was the next step in the data analysis process. In this step, the researcher was able to link the many codes that were previously discovered. An important part of axial coding is the identification of links between the open codes (Williams & Moser, 2019). Axial coding was used in this study as it helped the researcher merge the data to uncover codes, categories, and subcategories within the participants' answers (Allen, 2017). After both sets of data were analysed, it was found that similar categories emerged as similar viewpoints were expressed by participants in the focus groups and individual interviews. The data were thus aggregated as no differences were found in the responses between the groups. The results of the analysis may be found in Appendix 6, in the tables that illustrate each category with quotations.

4.12 Trustworthiness

"Trustworthiness refers to quality, authenticity, and truthfulness of findings of qualitative research" (Cypress, 2017, p. 254). It is defined as the measure of a study's credibility, transferability, dependability, confirmability, authenticity (Kyngäs et al., 2020) and reflexivity

(Palganas et al., 2017). To ensure that trustworthiness was addressed in this study, each of the trustworthiness measures was applied and is discussed next.

Credibility means that the research review showed correct, valid, trustworthy findings (Rosito & Kassem, 2019). It determines whether the study's conclusions reflect plausible knowledge taken from the original participant data and are an appropriate representation of their original views (Lincoln & Guba, 1985). Purposive sampling was used in this study as it promoted the application of specified inclusion criteria to ensure a more homogeneous study population. According to Graneheim and Landman (2004), selecting study participants with prior knowledge and insight into the subject under inquiry enhances research credibility. The researcher also continued to collect data until a point of saturation was reached.

Transferability in qualitative analysis is the degree to which the outcomes of certain research findings can be applied to other backgrounds or environments with other respondents (Moser & Korstjens, 2018). The attainment of transferability can be facilitated through a comprehensive elucidation of the research context and the fundamental assumptions that underlie the study (Stenfors et al., 2020). The researcher encourages a potential user's evaluation by means of a thick description (Lincoln & Guba, 1985). This was accomplished in this study by the researcher providing a clear and complete explanation of the research location, unit of analysis and inclusion criteria, sampling strategy, data gathering procedure and techniques, and data analysis process.

Dependability ensures the attainment of consistent and replicable findings (Stenfors et al., 2020). The method and the product must be compatible with the research (Lincoln & Guba, 1985). Dependability entails evaluating research outcomes, interpretations, and suggestions from participants so that all data obtained from study participants can be endorsed (Lincoln & Guba, 1985). This was achieved by audio recording the focus group and individual interviews, and data were transcribed verbatim (Halcomb & Davidson, 2006). Prior to beginning the main research study, a pilot interview was conducted to evaluate all the data collection tools and address dependability. According to the pilot test, the data collection techniques were adequate for achieving the study's goals.

Confirmability is a test of how well the findings are validated by the collected data, as the characteristics of trustworthiness are based on whether or not the data correlates with the outcome (Kyngäs et al., 2020). An audit trail was used as part of the research process to explain the measures in collecting, analysing, and evaluating the data. To address the idea of confirmability in this study, focus group and individual interviews were audio recorded and

transcribed verbatim. The interpretations, the development of themes, concepts, sub-concepts, and findings were discussed with the research supervisor until concurrence was obtained.

It was necessary to ensure that the data and interpretations of the findings were not imagery figments, but clearly derived from the data (Lincoln & Guba, 1985). **Authenticity** is a new and less commonly used set of parameters including justice demonstration, ontological authenticity, catalytic authenticity, and tactical authenticity (Amin et al., 2020). Qualitative samples are usually small and chosen deliberately to pick information-rich cases for in-depth study (Patton, 2002). Authenticity is an important component of trustworthiness, which relates to research findings containing no bias (Morobe, 2018). Authenticity was applied in this study by adhering to strict ethical guidelines in order to make the analysis as original as possible. It can also be applied by making it possible for readers to understand health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

"Through **reflexivity**, researchers acknowledge the changes brought about in themselves as a result of the research process and how these changes have affected the research process" (Palganas et al., 2017, p. 426). According to Nowell et al. (2017), researchers are urged to retain a record of their own critical reflections on their research methods. Reflexivity is an important element of trustworthiness and was employed in this study. The researcher was conscious of her involvement in acquiring, analysing, and interpreting data, as well as any preconceptions she brought to the study (Moser & Korstjens, 2018).

4.13 Ethics

It was important that participants' identities and rights were maintained in a safe environment when conducting focus groups (Freeman, 2007). The most common way to describe ethics is as principles of conduct that differentiate between acceptable and inappropriate behaviour (Resnik, 2015). Researchers are expected to preserve the life, wellbeing, integrity, anonymity and security of research participants (Yip et al., 2016). Certain significant ethical issues to be discussed when conducting qualitative research include anonymity, confidentiality, and informed consent (Sanjari et al., 2014). Ethics approval was obtained from the REC (reference 2021/CAES_HREC/072) from the CAES Health Research Ethics Committee before the main data gathering for the study commenced.

Participants were assured of the confidential nature in which their information and the discussions from the focus groups would be used. In this instance, the data participants provided were only considered by the researcher and supervisor and not shared with anyone else. When the information first became available to the researcher, confidentiality was immediately established. Conversely, anonymity was described as knowledge of the individuals that could be gleaned from the data provided or any other information associated with them (Sim & Waterfield, 2019). In this study, the participants' anonymity was addressed by anonymising the transcripts and data submitted to the researcher, which were kept in a safe place. Participants were informed that they would be able to leave the focus group discussion at any time if they felt overwhelmed or exhausted (Rosito & Kassem, 2019). Protecting participants from possible harm is an important factor in anonymity and privacy (Flemming & Zegwaard, 2018). Consent was given freely (voluntarily) and easily understood by the participants, mitigating the chance of intimidation or undue influence (Manti & Licari, 2018). Participants included in a research study were properly informed of the nature of the study and had the right to choose whether to participate (Arifin, 2018).

Fairness, objectivity, consideration, confidentiality, and non-discrimination were essential to the participants who took part in the study (Resnik, 2015). Respect is a vital part of research, and participants' private information such as beliefs, attitudes, opinions, and records may not be shared with others, without the participants' knowledge or consent. The researcher also obtained the participants' informed consent, and participants' right to autonomy and confidentiality was protected. The participants were asked to fill out a written consent form explaining the contents of the research. The researcher also briefly recapped the information before the focus group and individual interview sessions started. If any participant subsequently wished to withdraw their consent after having first given it, this would have been respected; withdrawal of consent automatically renders the data the participant provided as unusable. In this study, no participant withdrew.

The ethics committee provide researchers with guidelines on how to address COVID-19 in relation to the research conducted. Researchers and postgraduate students benefit from the document's practical guidelines on how the alert levels affect research in order to restrict the transmission of the virus and lower the danger for the researcher and study participants (Meyiwa, 2020). The guidelines Unisa provided were applied by the researcher.

4.14 Conclusion

The fundamentals of the research paradigm, research design, study sample, sampling strategy, study location, data instrument, and data collection methods were described in this chapter. The researcher also discussed the data analysis, trustworthiness, and ethics that applied in this research. The findings acquired in line with the research objectives and the conclusions derived from the collected data are addressed in more detail in the next chapter.

CHAPTER 5

FINDINGS AND DISCUSSION 1

In this chapter, the first part of the data will be presented and discussed using diagrams to promote an understanding and interpretation of health-conscious consumers' understanding of the term 'functional foods' and their use thereof.

5.1 Introduction

The preceding chapter described the methodology utilised to address the study's objectives to explore health-conscious consumers' knowledge and the factors that influence their intention to purchase functional foods. An exploratory, descriptive research design was used to explore the participants' opinions, awareness and understanding of functional food products (i.e., conventional and modified functional foods). Focus groups and individual interviews were used as qualitative data collection techniques in this study. In this chapter, the data that were collected using the qualitative data collection techniques are presented. The findings are structured and presented in accordance with the order in which the study's objectives were formulated.

The qualitative data were coded to identify categories that address a specific research objective (see Appendix 6). The categories' discussions are supported with verbatim quotations from the participants, presented in a table format, in order to authenticate the findings (see Appendix 6). As each objective is discussed, an initial overview of the findings is presented, using a diagram to illustrate each category, followed by important subcategories that emerged from the findings.

The participants' demographic information is provided, followed by a short review of the research objectives and operationalisation of these objectives to ensure the context within which the data are presented is clearly established.

5.2 Participants' demographic characteristics

Generally, the inclusion of demographic questions in a questionnaire enables researchers to elicit information about their participants, allowing them to contextualise the data to better define participants and evaluate their findings (Allen, 2017). It is against this backdrop that the

findings presented in this chapter should be considered. Participants were asked to provide basic demographic information in Section A of the questionnaire. The demographic section featured questions focusing on participants' age, whether they resided within the borders of South Africa, the province they resided in, their gender, their level of education, and their employment status. The purpose of this study was not to compare demographic data to participant responses, and hence did not contain any racial distinction between participants, since the researcher had no intention of establishing any such disparities.

Participants who took part in the study were recruited based on the following inclusion criteria. Participants:

- perceived themselves to be health-conscious,
- perceived themselves as knowledgeable about functional foods,
- were over the age of 18 years,
- were conscious of purchasing health-related food products;
- were conversant in English as the interviews were conducted in English;
- had a disposable income to purchase health-related food products;
- were able to make their own purchasing decisions; and
- had heard about functional foods, been exposed to functional foods, or perceived themselves as knowledgeable about functional foods.

Table 5.1 presents the demographics of participants who participated in the interview and focus group session. Demographic data from individual interview and focus group participants were merged because the study was not designed to distinguish between focus group and individual interview participants. The findings in Table 5.1 show the various categories of demographic criteria that were utilised. Frequencies (n) and percentages (%) indicate the response for each of the demographic categories. There was a total of 38 participants in this study; ten participants participated in the individual interviews, and 11 focus group sessions were conducted.

Table 5.1: Demographic data from participants

Demographic Criteria	Percentage (%)	Frequency of Participants (n)
Age group		
18–39 years	66	25
40–64 years	32	12

Demographic Criteria	Percentage (%)	Frequency of Participants (n)
65+ years	2	1
Reside within the borders of South Africa		
Yes	100	38
No	0	0
Province		
Gauteng	76	29
Eastern Cape	0	0
KwaZulu-Natal	21	8
Free State	0	0
Limpopo	0	0
Northwest	0	0
Western Cape	3	1
Northern Cape	0	0
Mpumalanga	0	0
Gender		
Male	37	14
Female	63	24
Education		
Lower than matric / Grade 12	3	1
Matric / Grade 12	26	10
Grade 12 + a diploma/degree/masters/doctorate	71	27
Employment status		
Permanent full-time	60.5	23
Permanent part-time	0	0
Contract work	3	1
Self-employed	26	10
Unemployed	10.5	4

The findings show that of the 38 participants who took part in the study, the majority were women (63%; n=24), while approximately a third of the participants were men (37%; n=14). The highest percentage of participants who took part in this study were between 18-39 years of age (66%; n=25). A third of the participants were between 40-64 years of age (32%; n=12), and only one participant was older than 65 + years of age (2%; n=1). All 38 participants resided within the borders of South Africa, with a large percentage living in Gauteng (76%; n=29), fewer participants living in KwaZulu-Natal (21%; n=8), and only one participant living in the

Western Cape (3%; n=1). The participants mostly reported higher education diplomas/degrees/masters/doctorates (71%; n=27), followed by a few participants with matric/grade 12 (26%; n=10); only one participant's (3%; n=1) level of education was below matric/grade 12 (3%; n=1). Lastly, the question on participants' employment status showed that the majority were permanent full-time employees (60.5%; n=23), with 26% (n=10) of the participants being self-employed, and four participants unemployed at the time of the study (10.5%; n=4). One participant (3%; n=1) was employed on contract.

In summary, participants who took part in this study were mostly women, residing in Gauteng, between 18-39 years of age, with Grade 12 and a diploma/degree/masters/doctorate qualification and permanently employed. Studies conducted by Kondepundi et al. (2016), Sääksjärvi et al. (2009), Siro et al. (2009), Seechurn et al. (2009), and Verbeke (2005) similarly found that women played an integral role in the purchase and use of functional foods, were well-informed, and had a high level of education. Subsequently, this may be why many of the participants who volunteered for this study were well educated female participants.

5.3 Findings from the study

In this section, each of the objectives listed in Table 4.9.7 (as presented in the operationalisation of the objectives through means of specific questions that were developed to explore the objectives) are presented. Each objective is explored in terms of the main categories that emerged from the data generated on the question presented to the participants. A discussion of the findings follow, and verbatim quotes from participants are included in support of each category. References are also made to literature and findings from other related studies that support or challenge the findings presented in this study.

The qualitative data were coded to determine which categories addressed a particular research objective (see Appendix 6). Certain categories that comprise sub-category discussions are aided by verbatim quotes from the participants in order to validate the conclusions of the study, which are provided in a table format (see Appendix 6). Data from both focus groups and individual interviews were combined to provide a comprehensive picture of the collected data. Where additional information that was not revealed in both groups emerged, it is presented in relation to the focus group or individual interview from which it was derived. The word "interviews" or "interview" is used to refer to the sessions that were conducted to generate the data; this pertains to both focus groups and individual interviews combined. The findings on the study's first objective are presented next.

5.3.1 To determine health-conscious consumers' understanding of the term 'functional foods' (Objective 1)

To fulfil the study's first objective, the first segment of the online focus groups and individual interviews investigated health-conscious consumers' understanding of the term 'functional foods'. As a result, the interviews started by the researcher asking participants: **“What do you understand when you hear the term functional foods?”** Two distinct categories emerged from the data, each of which best described the participants' understanding of the term 'functional food'. A third category reflected some participants 'uncertainty' about what the term meant. Thus, those participants who could express their understanding of 'functional foods' explained functional foods as having (1) “Nutritional benefits”; (2) “Health benefits”; and the third group expressed (3) “Uncertainty” about the term 'functional foods'. The diagrams below highlight the most used concepts (indicated by the bulleted words and expressions used in Figure 5.1) that explain the categories.

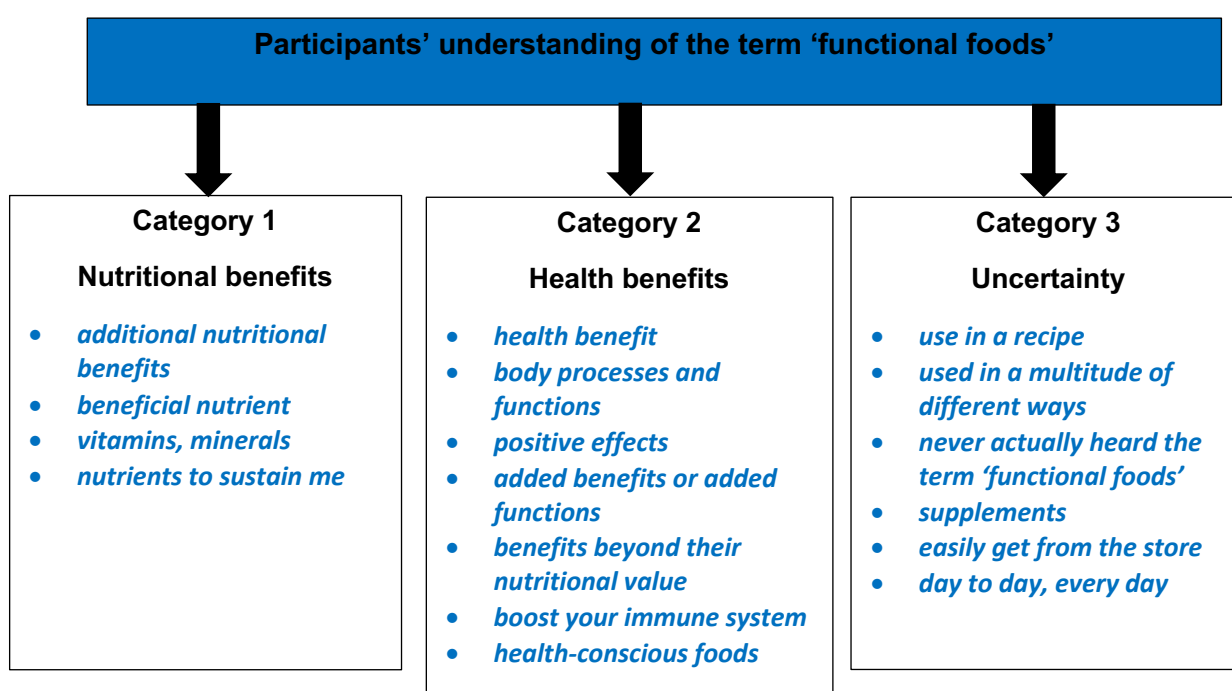


Figure 5.1: Participants' understanding of the term 'functional foods'

One of the key categories that emerged from the data was the **nutritional benefits** associated with functional foods. These were described by a participant as: *“It could be perhaps a modified food or a food that has perhaps additional nutritional benefits”*, or this participant who explained: *“Foods or kinds of foods that when paired with something else have beneficial nutrient”*. A participant said: *“Foods that are probably very nutritional for you”*, and another

agreed: *“I suppose foods that are nutritious. They supply a function other than just junk food or to supply a craving... but it would be a food that supplies you with nutrition”*. These views are aligned to Ajmera’s (2020) statement that functional foods have the ability to improve health in ways that go beyond the basics of nutrition. Most participants agreed that functional foods are healthy and advantageous to health. One participant, in particular, noted that she perceived functional foods to include added vitamins and minerals when she explained:

“Yes, I think it adds something like vitamins, minerals ... something that you add to your food to make it more healthy. So that is what I would say”.

In addition to providing critical nutrients for proper health maintenance, growth, and development, functional foods may assist in bridging nutritional deficiency gaps (IFT, 2021). Despite the fact that functional foods were described as *“Foods that are probably very nutritional for you”*, some participants shared *“My understanding is very simply that uh, food that the nutrients to sustain me”* or *“I think that it is foods that provide an additional nutritional value, that it has a bit of nutrients... extra nutrients compared to just normal food”*. Functional foods are typically high in essential nutrients like vitamins, minerals, essential fats, and fibre, and by incorporating a variety of functional foods into a diet – inclusive of both conventional and modified functional foods – it can provide the necessary nutrients required for the body and avoid nutritional deficits (Ajmera, 2020). Based on the participants’ responses, the idea that functional foods offer a nutritional advantage was obvious among participants from both groups (focus group and individual interviews).

The second category that emerged from the data also depicts both interview and focus group participants’ understanding of the term ‘functional foods’. Participants from the individual interview sessions specifically identified the **health benefits** of functional foods, which they articulated in support of the body’s functioning. A participant mentioned *“My understanding is that the food that you are purchasing serves a function other than just filling you. In other words, it has a value to it – be it health”*. Another participant explained the health benefits by offering specific examples:

“Foods that have a health benefit asserted with them like if you are sick people tend to eat oranges because its high in vitamin C, if you are a person whose trying to lose weight you’ll eat less fatty foods, because that obviously contributes to weight gain and it is to do with the benefits and functions that food provides your body on a daily basis”

Stated in more simple terms, this participant reflected, *“My understanding is that it has benefits. Something that is beneficial to your health”*. According to Ajmera (2020), there are several health benefits connected with eating foods that are considered to be functional. When it comes to chronic illnesses like heart disease, cancer, diabetes, stroke and osteoporosis, a diet rich in functional foods is one of the ways such illnesses can be prevented (Levy, 2019). Participants also understood functional foods help the body to function, as indicated by this participant:

“Okay. Probably... when I hear that, I would think that it is foods that help the body to function in a way that will be beneficial for the body, for the organs and well-being of that person... of the consumer”.

Participants further identified functional foods' **positive effects** on health. They said *“Well, I would say I understand it by what we tend to eat as a staple. And as far as what we perceive to be good for us. That is my understanding”* and *“To my knowledge or understanding of functional food, it is food that can serve a purpose either from the health aspect or... let us say, protein or vitamin aspect to a consumer or customer”*. Conversely, a few participants believed that these functional foods have **added benefits**: *“So, I guess functional foods are foods that have like added benefits or added functions to it. So, I guess in one, in one breath, it is like food that is sort of like high in fibre for example. Like it is known for fibre but obviously has the benefit of maybe lowering cholesterol or, you know, sugar levels or such”*. Another participant said: *“Functional foods... What I understand about it, is healthy foods or foods that offer benefits beyond their nutritional value. That should also include food or fruits with vitamins etc. Yes, that is what I know about it”*.

For these participants, functional foods serve a purpose: *“Foods that can help boost your immune system or help you fight off certain diseases... yes, just giving you extra than what you would you get from your normal daily diet”* and *“Just the foods that serve functions. Say you want to lower your cholesterol, so then you eat food that is known to lower cholesterol”*. This claim is further substantiated by John and Singla (2021), stating that it is essential for people to consume functional foods, not just for their nutritional needs, but also to prevent certain illnesses. Moreover, participants believed functional foods to be **healthy foods**, such as meat, fruits, vegetables, eggs, and natural fats. They mentioned: *“Functional foods... usually, for me, it is the basic food source of what we can get through. Say from small age until currently, it has always been a set of meat, fruit and vegetables”* and *“Oh, my interpretation of functional foods is to help you be a little bit more healthy. Like general*

vegetables, eggs, natural fats and all that kind of stuff. So that is my understanding - that it is better for my well-being”.

A few participants conveyed **uncertainty** of what functional foods were, as indicated by this participant who explained functional foods were types of foods that have a multitude of uses:

“For me, when I hear the term ‘functional foods’ it is foods that can be used in a multitude of different ways. For example, for me the best example would be something like flour. That is a simple staple for a lot of people, but that flour can be turned into bread, it can be turned into pasta. Yes, it is a carbohydrate, but it is a better carbohydrate than regular sugar. So, for me it is a multi-functional product. So, I think I have to say that would be, what my understanding would be. Something that you can use in a multitude of different ways”.

On the basis of the **food groups**, another participant expressed her understanding of functional foods by stating:

“I would determine this being a food out of the I’m not sure how many groups there are in the food structure, I would say carbohydrates your proteins, starches and those that would be required to make your body work on a daily basis. I think there’s 4/5 food groups, saying that one of each is essential to make the body function on a daily basis”.

A participant found that functional foods are **easily attainable** at the store. She mentioned *“Something you can easily get from the store. Something you eat daily. Healthy”*. Meanwhile another participant interpreted functional foods as relating to the functionality of the food:

“Functional meaning day to day, every day, kind of... It is just going to create a need for filling your body. Maybe nutritiously... it is... functional... That is a bit of a hard one”.

Unfamiliarity with the term ‘functional foods’ was prevalent among some participants. A participant stated:

“To be honest I have never actually heard the term ‘functional foods’ before. No idea what it is. It is probably something that is easy to prepare, but at the same time still in-line with healthy foods. Maybe? Well, maybe the natural products or organic products”.

Her reaction offered some insight into the fact that consumers who are compelled to think about functional foods may believe these foods are healthy. Another participant used the most popular search engine Google to obtain an understanding, and she explained: “So for me, it was the first time when you sent out the e-mail that I heard about functional foods and then I just went to Google”. The more these participants researched functional foods on the internet, the greater understanding they acquired. They also gained more insight into what these types of foods are, which resulted in them reaping the benefits of their research efforts.

The words ‘functional foods’ were further explored by obtaining participants’ thoughts on “**How did you become familiar with this term?**” Two different categories emerged that represent the way participants were introduced to the term ‘functional foods’: (1) “Through reading”; and (2) “Through people”, which will be shown in the diagrams below. These highlight the most common ideas (indicated by the bulleted words and expressions used in Figure 5.2) and explain the categories.

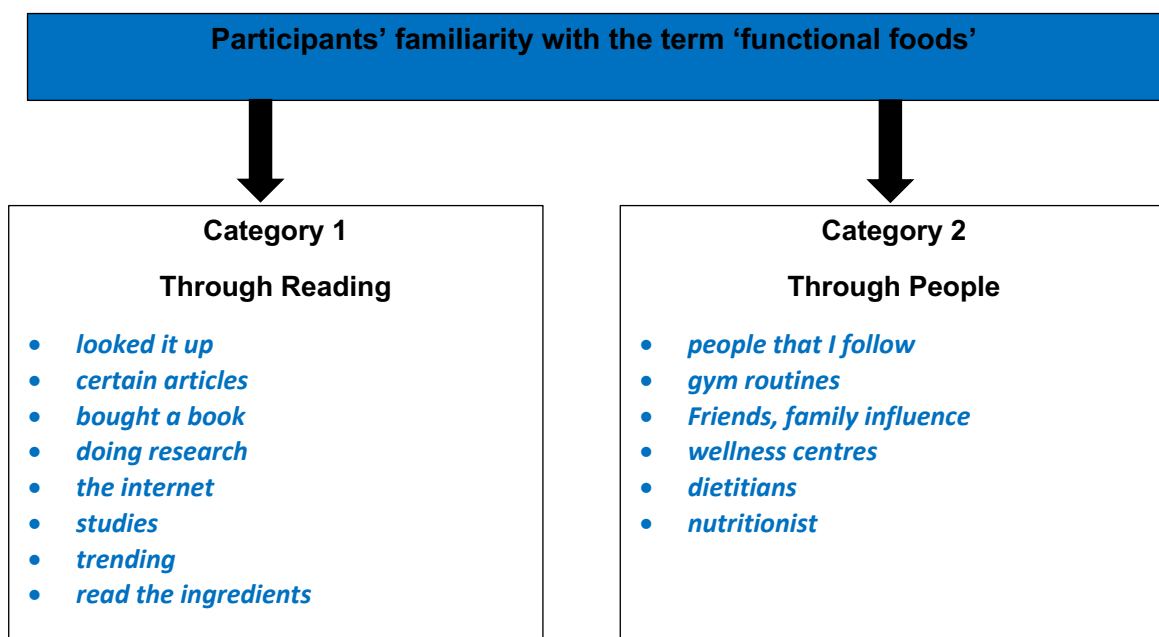


Figure 5.2: Participants familiarity of the term functional foods

When assessing participants’ familiarity with the term ‘functional foods’, acquired **through reading**, participants indicated that they had “*looked it up*”, or “*have come across it in certain articles that I have read*”. In another instance the participant received a book that engaged him in the term ‘functional foods’. He explained:

“I was bought a book on Cancer and Cancer foods. And there it started talking specifically to food groups and how they can help you or how they are detrimental to you. So that is how I started understanding what the functional food groups were”.

This finding is in line with Pradani's (2021) claim that reading is vital since it is used to acquire information. Reading is important to learn all information included in the text so that it might supply knowledge for the reader's future.

In other instances, by reading up on **healthy food sources**, this participant was introduced to functional foods: *"Just doing research and finding out what foods are healthy and good for you. And I just came across the term"*. Another participant watched videos to gain insight on functional foods and reported: *"When I went vegan, I did quite a bit of research, but I have not actually done research on the term functional foods, but it has been mentioned ... I guess I just understand the term from what the videos and stuff would say about it"*. There is a wealth of material available on the internet that can be accessed at any time by anybody (Sharma, 2019), and this knowledge has helped participants better understand the term 'functional foods'.

One participant was rather more specific in terms of the technical use of the word 'term' and 'concept' in relation to functional foods, seeing it broadly associated with health. She conveyed:

"To tell you the truth, it is not a term, it is a concept to me, and I think everybody is familiar with eating healthy. So, if that is the right definition of it. Then ... so it is not a term as such... since time immemorial the concept of health has been around, so I am not familiar with it as a term, but purely as a concept"

According to a few participants, the term 'functional foods' was first brought to their attention through **their studies** at university or college, as expressed by a participant stating:

"For me yes, also through my studies as a Chef. But I think I really became more interested in the different food types and functional foods and whole foods, when I became more health-conscious and the more health-conscious I became, the more interested I became with different products and what it means and what do they do for you, when you look at nutritional values and so on".

When this participant came across the term 'functional foods', she was **conducting research** on how to live a healthy lifestyle. She expresses *"It was a change of lifestyle, I guess. When you decide you have had enough of the rubbish in life and you want to live a clean, healthy*

life, you start doing your research and terms come up, so yes". Healthy foods being **on trend** was how another participant became familiar with functional foods:

"I think more along the lines of what is trending at the moment. And not even just trending, the popularity of the healthy aspect. Healthy food is very popular at the moment. People are more aware of what they are consuming ... what is in their food".

One participant felt that it is integral to lead a healthier lifestyle as one becomes older. She mentioned *"I think getting older you start to realise to look after yourself. And so, you tend to gravitate towards research towards superfoods/functional foods and those types of things".* Topolska et al. (2021) concur that the most positive factors influencing functional food adoption are the health advantages and the desire to use it. Feger (2020) agrees that consumers are taking a more proactive position on their health, focusing on what they eat to promote physical, mental, and emotional well-being. Therefore, for many of the participants, their familiarity with the term 'functional foods' was created by health advocacy.

Conversely, other participants were not familiar with the term, as shown by this participant's statement:

"So I think... like I mentioned that I did not know that the term existed or that something like ginger would be referred to as a functional food for me. It would be... is it a vegetable or a fruit? So, I did not know that you can break it down even further if it makes sense. So, the more I read about it, that is when I got an understanding of what it is. On the internet".

One conveyed that she was not aware if the products that she purchases are classified as functional foods despite her belief that they provide certain advantages. She explained:

"It is just from a thought of it. When the survey came 'What was functional food', so as I was saying, it is adding in additional things to form a function. So, I am hoping it is correct (laughs). From your survey... it has not been something I have really thought about lots before. I have bought products because of the fact that they do something, but I never knew they were termed as such".

Another participant stated: *"I have not heard the term before but just the word 'functional' and 'food' – it just makes sense what it means".* Given that these participants explicitly expressed

they had not heard of the term 'functional foods', their response was based on their subjective understanding of the term, which is a food providing a function.

It is important to note that one participant became familiar with the term 'functional foods' when the researcher posted the invitation to participate in the study: *"Well, I'm gonna be honest. I actually only started reading it after I read about your presentation. And, and obviously because I knew I was gonna be partaking this. I mean, I have to be honest because it was something I wasn't aware of but obviously read about it now and I now am familiar with it"*. The inclusion criteria for this research specified that "participants had heard about functional foods or had been exposed to functional foods or perceive themselves to be educated about functional foods". Consequently, some participants were somewhat concerned that their answers to questions on functional foods may not be as detailed and truthful as those participants who had been actively engaged in functional foods for a longer time.

Participants became acquainted with the term 'functional foods' either by reading, whether it was an article or a book, through the use of the internet, or through conversations with other people. They emphasised the many ways various people contributed to their knowledge of the term. A few participants were not familiar with the term but attempted to answer the questions posed; however, their responses were contingent on their understanding of what functional foods were. This was the case with one participant who only became familiar with the term after reading through the research presentation. This situation highlights the need to raise public knowledge of functional foods, which will help people to better understand and use these foods in the most positive way possible.

The second category through which participants gained an understanding of the term 'functional foods' was **through people**. Participants emphasised different ways people contributed to their understanding of functional foods. One participant specifically mentioned that by following specific people she became familiar with functional foods: *"I have come across it in certain people that I follow with regards to diet programs and exercise regimes"*. Another indicated how **gym instructors** had contributed to her familiarity with the term:

"with exercise and all of that... from gym routines and all of that... the gym instructors have always spoken about getting functional foods".

This finding is validated by Nguyen et al. (2019); Bakti et al. (2020); Salmani et al. (2020); and Rezai et al. (2012) stating that consumers' propensity to buy functional foods was directly influenced by subjective norms. Subjective norms refer to how a person perceives and

responds to social pressure from individuals who matter (such as family, friends, co-workers, and others). Subjective norms help people act in a specific way and creates their desire to conform to other people's expectations (Ham et al., 2015). Participants mentioned *"Friends, family influence. People talking about it, seeing separate shopping, in shopping centres - the aisles and that sort of thing"*. Nguyen et al. (2019) found that consumers' reference groups and key people's views strongly influence their product appraisal or purchasing decisions. A study conducted by Divya and Nakkeeran (2018) also determined that having a higher level of subjective norms, which is the influence of others, will increase consumers' willingness to use functional food products.

As a result of one participants' health situation, she sourced information and dietary requirements from dietitians; she conveyed: *"Mainly because of my health situation, like certain things that I need to like watch out for foods and I have been to a couple of dietitians as well that have given me more information on what foods are good for me with regard to my illness that I have as well"*. Being in the medical field, another participant became familiar with the term 'functional foods':

"I am in the medical field so we deal with a lot of different medical personnel, including a nutritionist and they make mention of this when they speak about how you should lead a healthy lifestyle in terms of at home and at work. That you should have a balanced lifestyle".

Despite information from the nutritionist, the feedback provided from this participant is more in line with 'health foods' rather than what the term actually means. This study included participants who were already familiar with the term 'functional foods' as a result of their encounters with other people. However, there were also a significant number who became acquainted with this term after the researcher invited participants to take part in the study, as previously discussed. Some participants indicated they were exposed to functional foods through two means: first, through reading, and second, through people who contributed to their familiarity with the term. However, their understanding of the term was associated more with health-related food products than the actual definition of the term itself. The necessity to promote greater knowledge of these sorts of foods is thus supported by the fact that several participants were unfamiliar with the term based on their responses.

Upon evaluating participants' understanding of functional foods and their familiarity with these, the next question was: **"What do you know about functional foods that is important to you?"** One category emerged from discussions with the participants, reflecting (1) "Health

benefits” as the single most important benefit of functional foods. This category is reflected in the diagram presented below; this diagram emphasises the most common concept (indicated by the bulleted words and expressions used in Figure 5.3) and provides an explanation of the specific category.

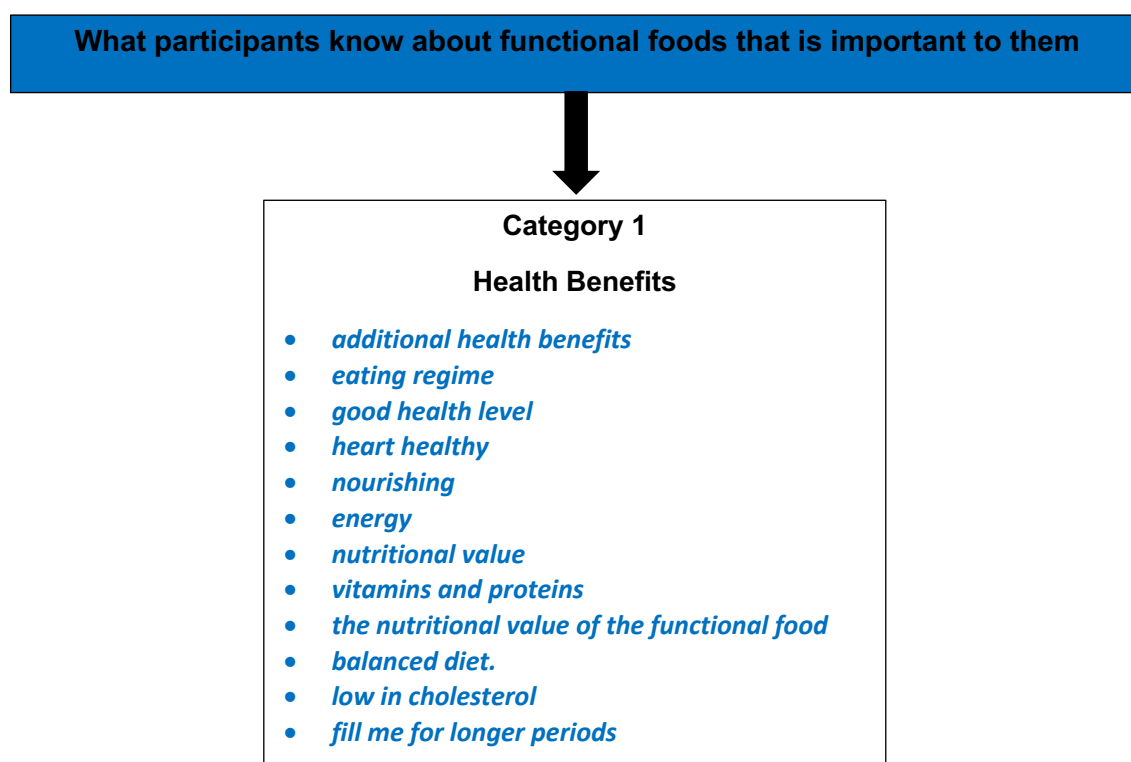


Figure 5.3: What participant know about functional foods that is important to them

This finding was expressed by statements such as “*Simply that it may have additional health benefits*”. A participant explained how she acquired knowledge about the **benefits** that functional foods provide as follows:

“I try and focus my diet in the way I eat and how many times a day I eat based around superfoods, which I think would form part of functional foods. I try to adapt my eating regime towards healthier more functional foods. I try to stay away from processed non beneficial trans fatty foods. Mainly health benefits, the energetic vitalising benefits you get from eating these foods your body processes. You have a better digestive response to it, and long-term health benefits that would be felt immediately, from known studies there are definite facts that these foods aid your health”.

In this participant's opinion, functional foods' significance lies in their ability to improve **overall health** and wellness:

"I think it is obviously maintaining a good health level. So what is important to me is making sure that I put the right kind of stuff into my body that is going to help improve my immune system, improve the way that my energy levels and the way that I think because sometimes you can... I find that if you eat well, you have got a clearer mind. So I would say that is kind of my understanding, to a certain extent. I am not a genius in that! Look. If I can add, it is just making sure that you have the right combinations of food that is going into your body to ensure that you have got the right kind of vitamins and everything in your system. It does not help if you just eating meat all the time. You need some sort of options and maybe eat some nuts... some pecan nuts or... that kind of stuff".

This view is substantiated by Tarantino (2016), who states that as a result of the ability to lower illness risks, increase metabolism and enhance absorption of nutrients (while also aiding weight loss), these foods are essential from a health perspective on many levels.

Most participants agreed that **health benefits** is one of the most important aspects of functional foods, specifically coming from diet and the type of foods consumed. Participants indicated: *"Uhm, I guess it will be like a repetition of the first answer where it is like, like, uhm, what was it? Like oats and stuff, that have fibre but obviously have the potential to reduce, like, cholesterol and stuff and you've got like, chia seeds You've got your flax seeds You've got fruits, berries, kiwis apples"* and *"So my understanding would be to improve with the health benefits. So, that is why I would add... so I have been buying these things but like I mentioned, I was not aware that they are called functional foods. So, I was buying them because I knew that if I add them in to my diet they will they would somehow contribute to my health"*. Another participant listened to other people's views on the consumption of functional foods, and deemed these much 'preferred'; she indicated: *"Just listening to all these other people, I suppose functional foods may be a preferred choice to go that route rather than medications – so go for the more natural approach with functional foods"*.

The important factor of functional foods for one participant was their need to contain **nutritional elements** to sustain her: *"They need to contain the various elements that would be able to sustain me as an individual"*. The next few participants believed that these foods are integral because they contribute to **nourishment and energy**: *"So, you know, functional foods that they are nourishing"* and *"that they give me the level of energy"*. However, another

participant conveyed that the importance placed on these foods is dependent on the function required from that food. She expressed:

“It depends on the function you want out of the food, so for example if you’re sick you must consume more vitamin C, if you are a person that active you use a lot of potassium, so you need to eat foods that have the minerals that your body needs, depends on your blood and body type, of the type of foods that you should be eating, to most beneficial your body”.

A participant further emphasised the significance of reading product labels, citing the following reason:

“Yes. Also, like when you are reading the back and seeing your sugars and how much it entails and obviously going in-line with your diet, you would obviously consume the amounts that are like... I would not say allowed, but that you would prefer”.

The **nutritional value** that these products contain was also of importance to participants. They reported the products, *“have... they have probably like got a lot of, like... I would say vegetables and things like that have got a lot of nutritional value. So that is what I would see it as. All kinds of fruits and vegetables that would be probably part of it”* and *“Well... it needs to be healthy, nutritious, vitamins... stuff like that”*. Participants who suffered from chronic illnesses, such as diabetes, heart disease, and cancer, agreed they must consume a healthy diet in order to control their symptoms. This was the primary reason functional foods were so important to them, as explained by the following participant:

“Well like I am diabetic so, certain foods that are high in sugar, that I should not be eating, certain foods that can help reduce cholesterol and eating at the right times. Following a healthy diet, a lot of fruit and vegetables”.

When asked about the importance of certain foods to her diet, a participant said that grains, nuts, and whole foods are particularly significant to her due to the many health benefits these foods provide:

“I think the most important ones are grains and nuts and whole foods. Those ones tend to be important too, especially the Mediterranean influence with the beans and pulses and that kind of ancient grains. Those are quite important because of fibre and also reducing inflammation”.

The main significance for another participant was the multiple uses of functional foods, as she conveyed:

"I think it is, as I said earlier... for me, it is a matter that you can use one product in a multitude of different ways. That for me is important. If we consider our current economy and financial state of a lot of households it becomes very difficult to buy random foods, you need to count your cents. You need to be very careful with what you spend and how much you spend. So for me functional foods that I can use in multiple ways and store for a long time, that is what is important for me".

Consuming the right foods was considered an important factor to this participant, who explained:

"I think that is very well said, what the other participant has said. I think in this day and age when we are so worried about what we are putting in our bodies, I think that what we feel is important too. If we are going to binge-eat sweets and chocolates and stuff, then your body starts to feel it. I think that when we are either exercising or want to feel good, we must want to know what goes into your body. So I think the other participant's right. You want to know what concoctions want to go into your body. You want to know what is right. And I guess even if you do not have enough information about ... 'okay, should I have more carbs, should I have more protein?' ... What is the right diet because there are 10 000 diets and next week there is a new diet out and everyone says, 'Follow my diet'. I think there are so many diets or trainings that people want to follow that I think none of us really know what is the right food to consume or the right quantities of food to consume".

Another participant disclosed uncertainty when she said:

"I am just thinking, I am not exactly sure. I think it depends what you want out of the functional food, like if you... as the other participant said, if you are looking to lower your cholesterol or you are looking to something with less salt then... It would depend on what you are trying to get out of the functional foods".

A participant also explained:

"I do not know too much about functional foods but I just know, as the other participant said, foods that are low in cholesterol... foods that are low in salt help with hypertension... just some stuff like that".

Participants expected functional foods to provide as sensation of **satiety lasting longer** and being of good quality: *“I would say that it has to fill me for longer periods of time. It has got to be rich in quality”*. In terms of what participants knew about functional foods and why they were significant, health benefits were the most pertinently mentioned aspect. However, participants articulated this factor in a more general, holistic perspective rather than specifically relating it to benefits that functional foods actually provide.

On further interrogation on the functional food concept, the ‘health benefits’ associated with functional foods remained the most important characteristic of functional foods when participants were asked: **“What do you think is the purpose of functional food?”** Findings are illustrated in the diagram that follows, which highlights the most important findings (indicated by the bulleted words and expressions used in Figure 5.4) and provides an explanation of the specific category.

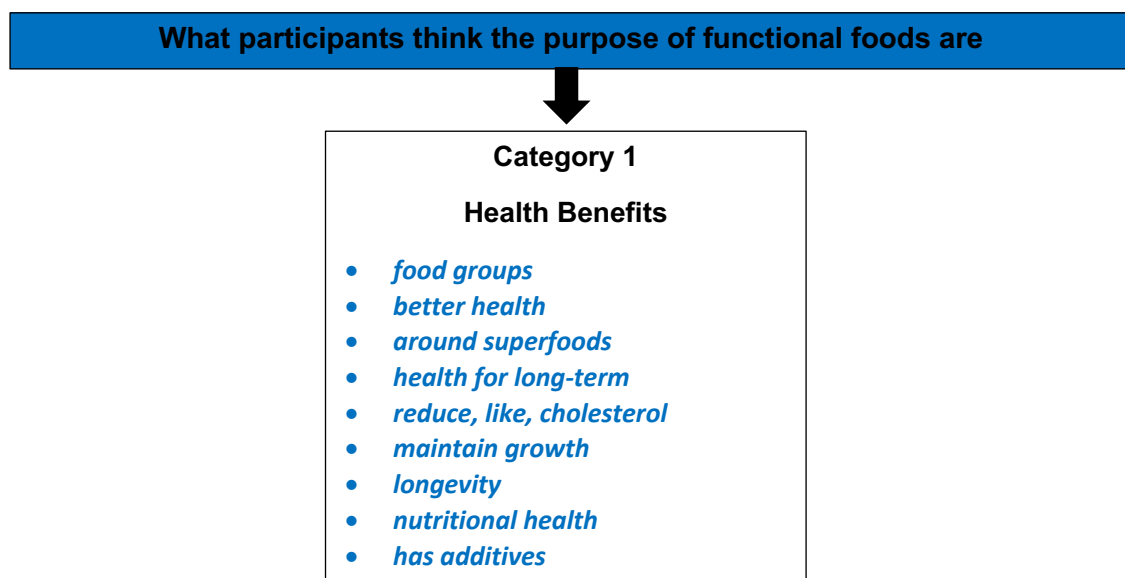


Figure 5.4: Participants think the purpose of functional foods are

These participants conveyed that the purpose of functional foods is to promote **health** and wellness. They explained: *“Difficult to say from a consumer perspective except for maybe better health. If it is a health food then it would be better health or more nutritional value from the food. The additional benefits would be indirect benefits like more holistical awareness about, you know... life and whatever, for a reason but, yes, anyway”*, and *“I think there’s a purpose for functional foods, I think there’s a reason, why we have such a, and I’ll go back to the food groups again, I think every single one has a duty and performs its own function in order for your body to function, if you gonna get your body then its like what the other participant said its something that you need to look at diet in order for your body to function*

properly". The consumption of a specific diet was an integral part of one participant's lifestyle, leading to **long-term health** benefits:

"I try and focus my diet in the way I eat and how many times a day I eat based around superfoods, which I think would form part of functional foods. I try to adapt my eating regime towards healthier more functional foods. I try to stay away from processed non beneficial trans fatty foods. Mainly health benefits, the energetic vitalising benefits you get from eating these foods your body processes. You have a better digestive response to it, and long-term health benefits that would be felt immediately, from known studies there are definite facts that these foods aid your health".

Long-term benefits and sustainability were mentioned by one participant explaining: "Yes, I mean obviously health for long-term, but, keeping healthy and on the dietary side I see it as giving you energy and making you sustainable throughout the day. Moods. Keeping your moods healthy. And to add to that, immunity. Definitely". Whereas another participant stated that functional foods "have the potential to reduce, like, cholesterol and stuff". This is inferred by Levy (2019) stating that each functional food has a somewhat different mechanism for preventing illness, based on the particular bioactive compounds it contains. In this participant's opinion, the most prominent purpose of functional foods is to provide **nutritional benefits**:

"The purpose is probably to feel... like for you to maintain growth; to make sure that you grow normally, like for instance from infancy to adulthood; to make sure that you develop properly as a human being. And as well as to continue helping you to just be healthy and to keep you away from disease".

According to Ajmera (2020), high-nutrient functional foods have been linked to a slew of positive health outcomes. Participants agreed that functional foods' purpose is, "It is just to make you healthier I think because it has an added nutritional value to it. So that is what I would say" and "I think it is foods that are... like besides just having a caloric value it also has additives like vitamins and other additives that will help you be healthier". It is thus evident that functional foods are often associated with positive health benefits. This view is supported by Khalaf et al. (2021), who state that functional foods include nutritional elements that may aid in the maintenance of a healthy lifestyle and, in some cases, can even cure certain disorders. One participant equated organic food with 'functional food' and emphasised that the food consumed should be in line with health and well-being. She said, "As an organic food, one wants to consume food that one considers to be appropriate for one's wellbeing". Functional

foods' grouping into different **food categories** was based on their purpose, according to another participant:

"To be grouped... and this is my take... is that, functional foods are grouped into what is their purpose. In other words, what is grains, what is meat, what is protein, what is poultry, what vegetables do you need. So if I want to lose weight, what should I eat or not eat to be functional for that goal. So, my function at that time is to fight a disease so I looked at what ... that is the function that I need and what food groups fit into that function"

Longevity, for this participant, was the purpose of consuming these types of foods, as she explained *"I would also say that it helps you live longer and look how you want to – fitness goals"*. Health benefits were most important to participants when it came to functional foods' purpose, but they expressed this in a more broad, comprehensive way than what they conveyed functional foods actually offer.

Participants were asked: **"Can you name some of the products you include in your shopping list that are important functional food items to you to consume? and Which are your favourite functional food products and why?"** They identified the following products as the most significant functional foods that they included on their shopping list for consumption, as well as their favourite functional food products: (1) "Fruits and vegetables"; (2) "Meats, poultry and eggs"; (3) "Spices"; (4) "Seafood"; (5) "Legumes, nuts, grains and seeds"; (6) "Cereals"; (7) "Dairy products"; (8) "Oil products"; and (9) "Fermented Beverages". Their views are shown using the diagram below, making reference to the most often used ideas (indicated by the bulleted words and expressions used in Figure 5.5) and providing an explanation of the multiple categories.

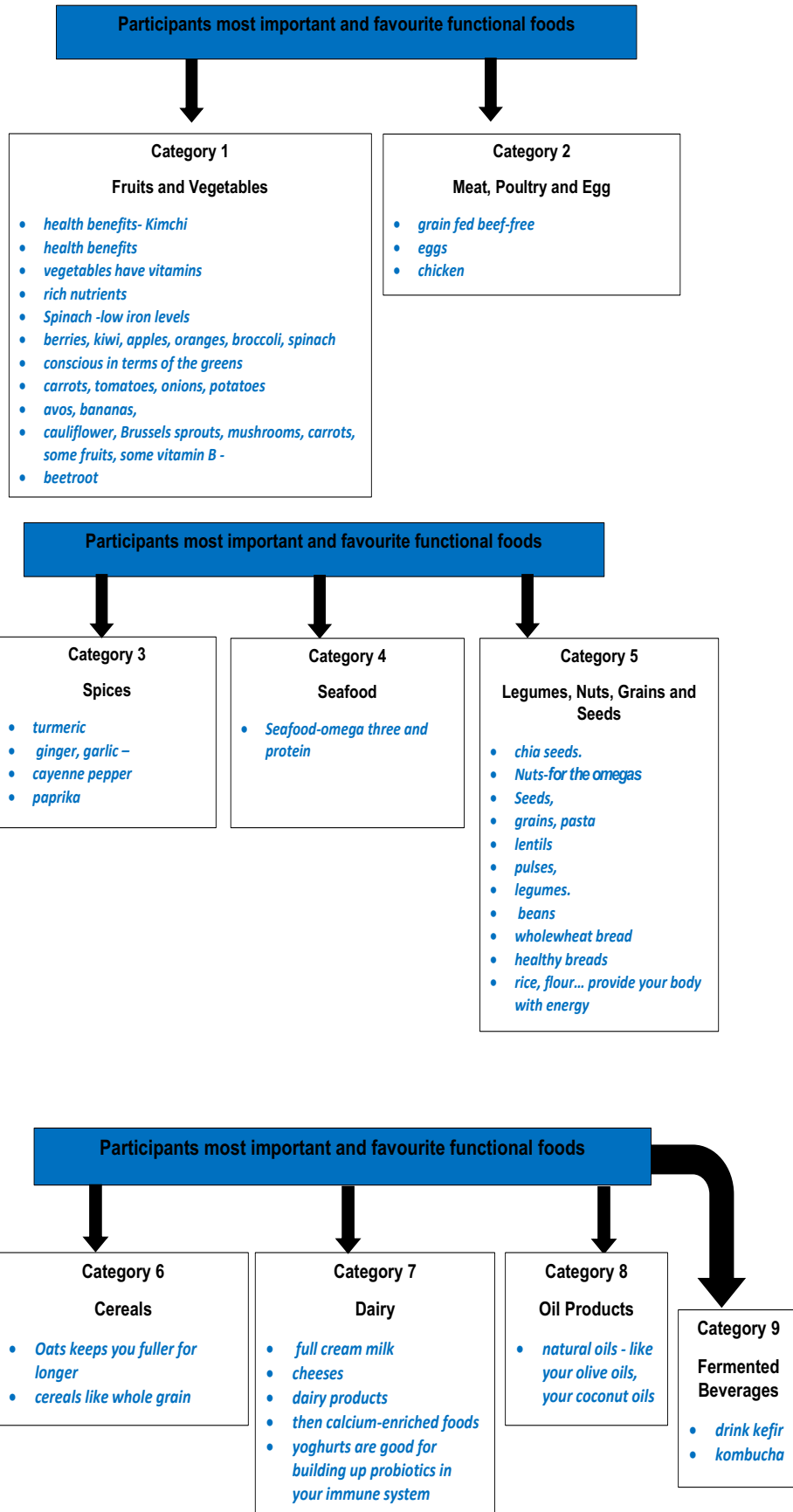


Figure 5.5: Participants most important and favourite functional foods

From the interviews, **fruits and vegetables** were specified as **avos, berries, apples, bananas, kiwi, oranges, grapefruit, lemon, broccoli, spinach, cauliflower, lettuce, cabbage, tomatoes, cucumber, onions, potatoes, leafy vegetables, kimchi, butternut, sweet potato, pumpkin, peas, beetroot, green beans and carrots**. These were considered functional food items. According to Joy et al. (2016), fruits are a good source of a variety of antioxidants as well as other essential nutrients. Functional foods are a category of food products characterised by the presence of specific components that have been proven to minimise or prevent the occurrence of illness (Arshad et al., 2021). These components are referred to as phytonutrients, and includes lycopene, anthocyanins, beta-carotene, lutein, zeaxanthin, isothiocyanate, and allicin, among others (Arshad et al., 2021). The reason why the majority of these participants stated, “*Fruits and vegetables*”, and specifically the “*Fruits and vegetables*” listed above, is attributed to these products being their favourite products and in most cases very common and well-known items. However, a participant mentioned kimchi, a fermented food product that is not well-known in South Africa. She claimed: “*I have also heard about the health benefits of things like Kimchi which I presume is a functional food*”. Chin (2021) states that *Lactobacilli bacteria* are used in the process of making fermented foods like kimchi, and consuming fermented foods containing probiotics may aid in the maintenance of a healthy gut flora. It may also serve in reducing unpleasant symptoms associated with intestinal illnesses.

Another participant ate fruits and vegetables purely for the health benefits they provide: “*Well, I do eat a lot of vegetables and fruits, Yeah, just for health benefits*”, and another shared:

“Think I must mention my shopping list. Spinach. Spinach because one of the things I have always had health issues with is low iron levels. So I try to eat a lot of spinach and besides I love it and it is versatile- you can make a nice spinach salad, you can make curried spinach... yes. And I try to include it in the diets because I know it is good for the kids - I disguise it well”

When it comes to health, the advantages that fruit and vegetables offer were communicated by this participant in the following way: “*I think they have got a lot of health benefits for certain of your body functions or organs or improve your immune system*”. Participants stated these fruits and vegetables were their favourites due to the nutrients and benefits they provide for their health and overall wellbeing.

These next few participants shared the previous participants’ sentiments of fruits and vegetables being their favourite functional foods and the type of functional foods they included

in their shopping list: *“I would say a wide range of vegetable, we try and grow our own in the spring and summer seasons to benefit from high nutrient base veges”*; or this participant who also mentioned:

“Okay, so my favourite would definitely be fruits. I think fruits are an everyday thing. At home we try to blend our fruits and make a smoothie - a fruit smoothie or a fruit juice. So whichever fruit we have available in the house, we just cut it up and blend it and that is just all your added nutrition into one glass. So for me it has got to be fruit”.

Many different types of fruits and vegetables rank high on this participant’s list of vital and favourite functional foods: *“Uh, yes, sure. Uhm berries, kiwi, apples, oranges, broccoli, spinach”*. Green fruit and vegetables were preferred by another participant who explained: *“We are also very food conscious in terms of the greens, spinach, broccoli, cauliflower, salad items, lettuce, cabbage, tomatoes, cucumber, avo is very important to us”*.

A number of participants associated spinach with health benefits. According to a participant *“The one thing that I have enjoyed eating recently is spinach because of the iron content and because it is a very quick and easy side dish to make”*. The nutritional aspect that fruits and vegetables contain is what drew participants to purchase and consume them. They mentioned: *“Yes, it is a lot of vegetables and fruits as well. Because fruits for example, they usually contain a lot of vitamins and stuff that could be really healthy for people”* and *“Cauliflower, broccoli, spinach, avo definitely that is important we love it, butternut, squash. Those vegetables have a lot of nutrients like your vitamins and anaemic-your spinach, because that food is iron related. If your iron levels are low that is a very product to eat and I do sometimes, so I do find myself with low iron and we eat spinach and the leafy greens”*. Fruits and vegetable not containing additives or not processed in any way were considered better for one’s wellbeing:

“I think a lot of the items that you might consume... in terms of raw materials, such as fresh fruits and vegetables, stuff that there are not... that do not have preservatives or fancy... hindered in anyway. I think those are good things to consider”.

Only a few participants mentioned **meat, poultry and egg** products being included in their shopping list as important functional food items, as indicated by these quotes: *“grain fed beef-free range”* and *“And eggs for the children – protein”*. Sireesha and Prasanna (2019) state that a substantial amount of vital nutrients is found in poultry, eggs and meat. According to the authors (Sireesha & Prasanna, 2019), human health has benefited from the creation of

nutrient-enriched, high-value-added poultry eggs and meat. In terms of “meat, poultry and egg” products being their favourites (and their reasoning) was explained by this participant who indicated that: *“I would say steak... but lean meat obviously. Because it is healthy, and it is nice to eat”*, or another participant said:

“Functional food for every person is different things to function every day. So that is what it is supposed to be. So, for me, for example, if I just ate mutton or I ate chicken yesterday and the day before that”.

While it is widely acknowledged that fish is indeed a highly regarded source of Omega-3 fatty acids (Derbyshire, 2019), omega-3 fatty acids, proteins, vitamin B12, and significant quantities of iron are all found in other meat (Kausar et al., 2019). Another participant also added that *“My favourite would be chicken and pasta. I just enjoy chicken. It is like our go-to everyday kind of cook”*. According to Kralik et al. (2017), changes in poultry feed mix may alter the composition of chicken meat, resulting in chicken meat that is higher in nutritional value and enhanced with useful elements. Consequently, chicken meat is elevated to the status of a high-value food product that, in addition to having high-quality nutritional content, also includes ingredients that promote consumers' wellbeing (Kralik et al., 2017).

Other participants who preferred eggs expressed that *“In our house we have lots of eggs”*. Pal and Molnar (2021) claim eggs are a good source of protein and contain a variety of macronutrients and micronutrients that are necessary for the body's functioning.

According to Khan et al. (2011), there is a strong belief among consumers that the food they consume has a direct impact on their overall well-being. This claim is supported by the views of some participants who regarded meat as a functional food due to its perceived health benefits. Participants' responses were predominantly influenced by their daily purchasing habits and their comprehension of the overall nutritional content of meat products. Therefore, their preference did incline towards meat due to its classification as a functional food.

With the third category being **spices**, only a few participants included these in their shopping lists as an important functional food product to consume. Some mentioned the following spices were their favourite functional food product: **turmeric, ginger, cayenne, paprika and garlic**. The reasons participants purchased these spices and these being their favourite was attributed to their belief that these are valuable for their health, as pointed out by this participant: *“Well I battle to sleep so I find turmeric really helps me relax. It relaxes my mind and I only drink turmeric in the early evening and it helps me sleep”*.

As well as being well-known for its immune-enhancing properties, spices such as turmeric and ginger have been demonstrated to play a role in maintaining good digestive health and assisting with inflammation reduction (Gelski, 2020). This claim is in line with a participant's remark, *"Then on the spice side a lot of turmeric, ginger, garlic – really high in fighting that"*, or another who conveyed *"then obviously spices - like... I am quite a big fan of putting cayenne pepper in my food"*.

Aside from imparting flavour and scent to meals, spices have been utilised to impart antibacterial properties as well (Sharma et al., 2017). In addition, Yashin et al. (2017) claim spices protect against both short-term and long-term illnesses because they have strong antioxidant properties that can fight off toxins in food and pollutants in the environment. The wide range of cellular functions of spices suggests they may have advantageous benefits for a range of chronic conditions (Sharma et al., 2017).

The fourth category was **seafood**, and it was also considered an important functional food product as part of participants' shopping lists and among their favourite functional food products. The following examples were provided by a small number of the participants; **mackerel, sardines, herring, salmon and hake**. A participant conveyed she prefers seafood due to the protein and omega 3 fatty acids they contain: *"Yes, so for me, mostly seafood because of omega three and the protein. So since I am into bodybuilding I like to consume foods that are high in protein"*. Due to its exceptional nutritional content, fish is considered one of the most important and necessary foods in the human diet (Ashraf et al., 2020). However, one participant shared that seafood is more of a preference for her, and aids in weight loss. She said:

"And then seafood - it is something that I like and also I think because of when you read about it and you trying to lose weight, you kind of get to know which foods would agree with you or... not really agree but which foods would work for weight loss and that is how I kind of got into eating less meat and more fish. But not knowing that I am actually... it is contributing to my health, it was about trying to lose some weight".

Participants also reflected their preference for different types of fish: *"I occasionally eat something like Mackerel"* or *"I would say... the main thing that we buy is fish"*. Fish and fish products are an excellent source of essential nutrients, including proteins, lipids, vitamins, minerals, and antioxidants, which have been shown to promote both physical and mental health, as well as reducing the risk of illnesses (Sarojnalini & Hei, 2019).

Participants included legumes, **nuts, grains and seeds** in their shopping lists and deemed these important functional food items to consume. They specifically mentioned **chia seeds, nuts, pulse, flax seeds, sunflower seeds, pumpkin seeds, beans, almonds, wholewheat bread, bread, pasta and brown rice**. They were also asked about their favourite functional foods and why, and one participant said that chia seeds were her favourite because they provided her with satiety. She emphasised: *“chia seeds. I often make that in a shake with some bananas, fruit products in the morning usually in a blend, keeps you fuller for longer so you don’t feel hungry as often. It is a nice snack it keeps you energetic”*. The omega-3 fatty acids, proteins, and vitamins in chia seeds have been shown to have a positive effect on health. In addition, hemp seeds are a rich source of protein, vitamins and minerals (Montero et al., 2023), and pumpkin seeds are recognised as notable sources of proteins, carotenoids, tocopherols, and antioxidants, while also being characterised by their low-caloric content (Batool et al., 2022). One participant reported a preference for consuming nuts due to the feeling she attains, and the health benefits associated with nuts: *“I also like nuts as a snack it keeps you full for longer, it is healthy foods and it makes you feel good”*. Another participant shared that nuts are:

“my favourite is the snacky stuff. I like nuts. Yes, those things for me are my favourites, So, for me, I enjoy it because I am not a... yes, I live a healthier lifestyle, but I am not someone who has to eat three to five to six meals a day. These are the things I like because it does not necessarily fill me up that I feel bloated, but I am full enough to like carry out until I need a proper meal... like sit down for dinner”.

This finding is in line with Gunnars’ (2019) claim that these foods provide satiety, are crunchy, and packed with essential nutrients that many people need. The reason for nuts being a favourite and an important functional food item to include in this participant’s shopping list is based on her claim:

“I love my nuts, for the omegas... we have got heart problems in our family, so we need to watch it. And all the grains because it is a smart source of just fibre”.

Many health advantages are connected with consuming whole grains, which have been a part of the human diet for a very long time. Its consumption results in a decreased risk for diabetes, heart disease, and high blood pressure (Jennings, 2019). The particular health-promoting bioactive components in whole grains, bran and germ make whole grains nutritious and advantageous (Calinoiu & Vodnar, 2018).

Legumes were also a part of participants shopping lists and one of their favourites, as they indicated, *“Obviously being your legumes. So very important to have that in our diet”* and *“I buy legumes and beans mostly, veggies, soy products... like for instance soya chunks”*. In terms of nutrition, legumes are an excellent source of vital amino acids, complex carbohydrates, fibre, and contain essential vitamins and minerals (Maphosa & Jideani, 2017). Legumes contain bioactive substances that may lower individuals’ risk of diabetes, cardiovascular disease, and some malignancies – whether eaten alone or in combination with other foods like cereals (Martin-Cabrejas, 2019). The nutritional benefits of nuts include a wide range of vitamins and minerals, such as omega 3, protein and antioxidants, contributing to its status of a functional food (Natures Garden, 2020).

Different types of breads were also mentioned by participants, which they perceived to be functional foods as they said, *“Bread, I try to stay more to whole wheat bread, so yes, those are the things”* and *“healthy breads as well, I find that very filling, like the seed breads”*. One participant stated flour is a functional food. However, the feedback from this participant was more related to the functionality of the food product than what functional foods are:

“Okay, so I have to say my biggest functional foods are rice, flour ... I supposed it will be your starches. Because you can do so much more with them. They provide your body with energy, which is in the form of carbohydrates, which is a better form of sugar to burn, a better form of energy for your body to absorb. Especially if you are a very active person, you do a lot of exercise, you go running or hiking, you go to the gym ... that kind of stuff, you are going to need that extra energy. And that for me ... the best way of getting that is from doing your own ... for example, your own bread or making your own pasta. Because that way you control the amount of additives that is in it. So yes, I think, it must be flour then”.

Another category of functional foods included in the participants’ shopping lists was **cereals; oats**. Oats were also a favourite among the participants:

“Oats is a big one, raw oats. I often make that in a shake with some bananas, fruit products in the morning usually in a blend, keeps you fuller for longer so you don’t feel hungry as often. It is a nice snack it keeps you energetic”.

Oats is an example of a conventional functional food. As a functional food that provides physiological advantages, oats include the active component β -glucan, “which has a hypoglycaemic impact, a hypocholesterolemic effect, an effect on cancers and hypertension”

(Ahmad et al., 2014, p. 17). Due to the beta-glucan-containing fiber found in whole grains, oats have been demonstrated to lower inflammation, improve the immune system, and enhance cardiovascular health (Goldman & Ajmera, 2021). Wong (2021) empathises that β -glucan is a soluble fiber, which impedes food movement in the intestines, slowing down the absorption of carbs, and blood sugar levels remain more stable. Furthermore, it passes slowly through the digestive system, absorbing cholesterol along the way (Wong, 2021). Oats was a preference for this participant due to flavour and convenience: *“I like oats... I do not know; they just taste good”*.

Participants also suggested that **dairy** products were important functional food products to include in their shopping lists for consumption, namely **milk, cheese, yoghurt, butters, and calcium enriched foods**, which is included under dairy products. Participants were also asked which functional food products were their favourites and the reasons for their response. A participant mentioned full cream as an important and favourite functional food product, however she was not certain whether this product is good for her. She explained: *“The only thing is, which I do not know if it is good, is that I like full cream milk”*. Another participant preferred yoghurt because it provides gratification and is convenient. A participant also reported a preference for different dairy products when she conveyed: *“then calcium-enriched foods as well because as you get older osteoporosis is a thing that you need to consider”*. Among the most widely utilised components in the production of functional dairy foods are probiotics, prebiotics, mushrooms, and plant food bioactive extracts, which are fermented milk, yoghurt, and cheese (Martins et al., 2019).

Healthy **oil products** were considered important functional food products to include their shopping list, as stated by this participant: *“I use things like natural oils - like your olive oils, your coconut oils in your cooking”*. Olive oil is an essential nutritional and functional source that contributes to the maintenance of a healthy oxidative state. In addition to its high oleic acid content, olive oil's health benefits are attributed to its polyphenol antioxidant capacity (Akdas et al., 2020). Coconut oil is very nutritive, including a high concentration of fiber, minerals and vitamins; it is designated a 'functional food' since it delivers several health advantages in addition to its nutritional value (Dutta, 2016). Virgin coconut oil contains medium-chain fatty acids, which is important for human health (Ghani et al., 2018). The nutritional components included in dairy foods are excellent delivery vehicles for a wide range of purported advantages, including anti-ageing and increased sensations of fullness (Berry, 2016).

Because of the fermentation procedures used to manufacture **fermented beverages** such as **kefir and kombucha**, both drinks are rich in probiotics, which are favourable microorganisms that can be found in foods and the digestive tract (Panoff, 2020). This was the reason a participant preferred these products: *“Mine are going to be the probiotics. Like I said, I drink kefir and make my own kombucha. I think gut health is really important for your overall immune system and your overall health”*. Another participant also conveyed: *“I make my own kombucha”*. This finding is further substantiated by Hackett (2021), who states that, from enhancing the health of the gut microbiota to strengthening the immune system, these fermented beverages provide a broad variety of health advantages to consumers.

A variety of functional foods rich in nutrients, according to Ajmera (2020), should be included in a healthy diet. In addition to providing the body with important vitamins and minerals, these foods also aid in the promotion of general health and wellbeing. The foods mentioned by participants were regarded as functional foods since they provide health advantages over and above those provided by basic nutrition. A variety of functional foods were listed by participants, which were additional to what was included in the research. Even though functional foods were highlighted by participants, they were often mentioned as a result of their frequent consumption or usage rather than these types of foods being functional food items themselves.

Participants were then asked: **“Are there any particular sources you consult on functional foods? Which are they and why do you consult these sources?”** The following categories emerged from their response: (1) “Social media content”; (2) “Literature content”; (3) “No sources consulted”; and (4) “Influential people”. Responses are reflected below using diagrams that reference frequently used concepts (indicated by the bulleted words and expressions used in Figure 5.6) and explain numerous categories.

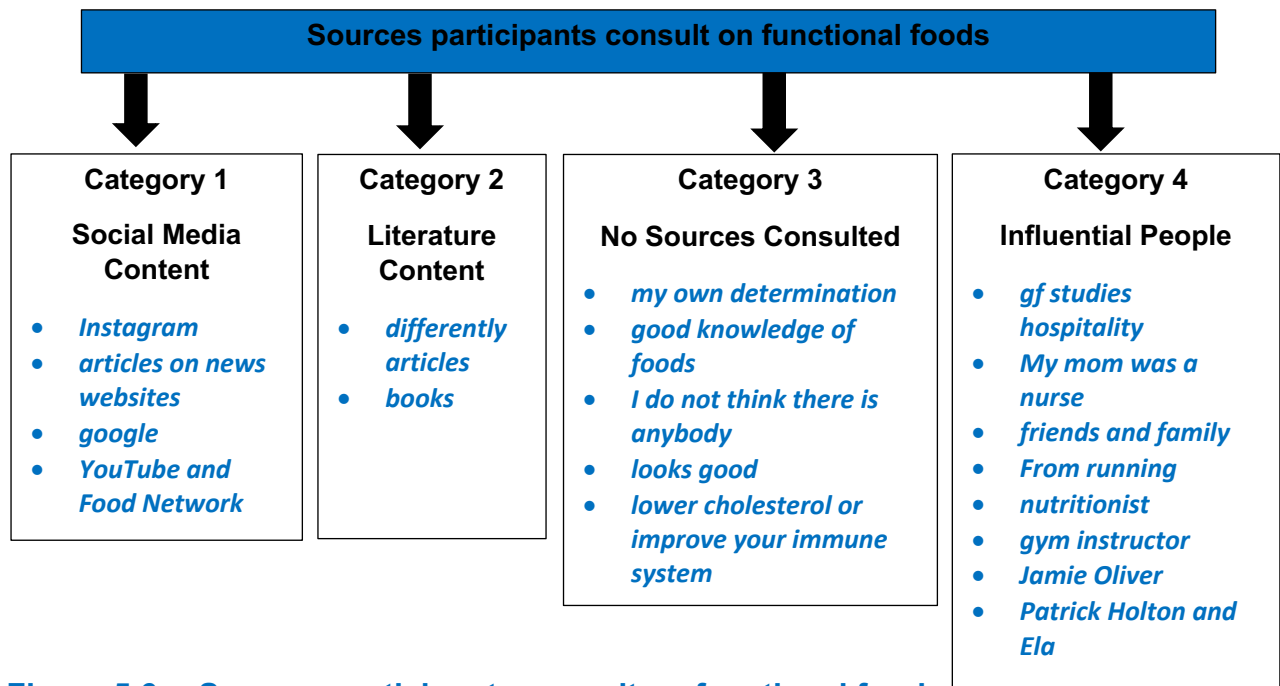


Figure 5.6: Sources participants consult on functional foods

Social media content was the most important source consulted on functional foods according to most participants. This participant used Instagram, where she followed certain people:

“It would have to be... Instagram factly speaking. I follow certain thought leaders that produce content about functional foods”.

Ferko (2022) states **Instagram** is the most effective platform on which to communicate with an audience about branding and establish a connection with prospective consumers. Other social media sources were also used, as explained by these participants: *“I would come across articles on news websites”* or using Google and Instagram to seek out ‘functional foods’: *“I normally would like to google, What healthy foods, what are the best foods. Like I also follow a lot of these Keto things on Instagram”*. According to Grady (2017), for many consumers, **Google** is one of the most significant websites visited for guidance, inspiration, and to seek information. A participant explained: *“I like to google a lot of the foods recipes, I like Jaimie Oliver because he has wholesome foods, because his very big on growing your own veges and also has his own garden”*, and another said: *“And yes, for me, it has to be YouTube and Food Network and obviously ... I am not too big on Pinterest, but mostly Food Network and YouTube, those are my sources”*. This view is substantiated by Folkvord et al. (2020), who claim a daily activity for millions of individuals around the globe is to follow other people on social media networks. Several food marketers have begun collaborating with well-known ‘social influencers’ in order to reach their following and promote of (food) goods and services

on social media (Folkvord et al., 2020). It can be inferred that in order to maintain a healthy lifestyle or include functional foods as part of their lifestyle, social media was a convenient source from which participants obtained information about these types of foods, as we are in an era where internet technology dominates.

Another source participants used to obtain information on functional foods was **literature content**. A participant explained: *"I would say it is a group of differently articles, like you say sources, articles"*, and another said: *"I used obviously the book that initiated it"*. For these participants, obtaining literature on functional foods, whether it was a **book or article**, was the most conducive way to obtain relevant information to better help include or make these foods a part of their diet and promote their wellbeing.

A few participants stated there were **no sources consulted** on functional foods, and they had different views. A participant shared: *"I make my own determination from how I would like to structure my diet"*, and another believed she had the knowledge to make her own decisions regarding "healthy foods"; as she said *"I have got a fairly good knowledge of foods, So it is knowledge that is fairly well known"*, whereas this participant stated: *"I do not think there is anybody actually. We kind of just tend to go with the flow"*. Although she had not consulted any sources, one participant noted that she first heard the term from a dietician:

"You know what, not, not necessarily. I think the only time I've really heard the term briefly is when I saw a dietician. I don't think there's been any other situation, where I've heard that term or spoken about it".

A participant reportedly consulted no sources; however, if these products are promoted, she paid heed: *"No, there isn't any. I just get mountains of emails and I skim them from time to time and when it looks interesting ... like Deepak Chopra Er, you know promote them then I do take heed"*. The choices participants made were based on factors that matter the most in terms of the kinds of functional foods that should be consumed to improve their health. Participants indicated there were no specific person influencing their decision of what to purchase and consume; their decision was individually based.

The last category from which a substantial number of participants sourced information on functional foods was **influential people**, as indicated by this participant: *"gf studies hospitality she had some food science books that I read through"*. Another participant whose parent was a nurse obtained information on functional foods through her: *"My mom was a nurse, my father*

was/is... *she is a retired nurse*". In other examples, friends and family were a driving force for participants to purchase or consume functional foods:

"friends and family... my wife is very supportive of it and she will say 'are we going to have this or that' to try and get me to eat more of the product".

A participant heard about functional foods through his **sporting activities** and other people: *"From running I have heard of certain foods that are supposed to be good for that. I do eat some of them but not in particular – like no sort of ... like, I cannot eat this because I am eating that"*. Another participant's source of information on functional foods was her **gym instructor** and friends. She mentioned: *"Do you know... obviously, it used to be my gym instructor. And then some friends"*.

Nutritionists' guidance on what foods to take and what foods to avoid was sought by the following participant:

"Well, I generally go for a light mayo. If I am in the store...Not necessarily... I just generally... if I am shopping, we do go to a nutritionist and she says obviously stay away from, like your tomato sauces which are full of sugar and thing like that. So if you can do anything that is light or fat-free, with the diet that we are on, I mean I know there are people that are doing high-fat. So they look for the fatty mayonnaises. So it just depends on what... but I generally go for a light if I am looking".

According to Bakti et al. (2020), consumers would be willing to eat functional foods, in accordance with the TPB, if there was a subjective norm that supported the intake of these types of foods. Subjective norms have been proven to influence behavioural intention with regard to functional food (O'Connor & White, 2010). **Jamie Oliver** (a popular British chef) was an important source of information for one participant who explained: *"I always follow Jamie Oliver because I really enjoy his style of cooking and his natural ingredients"* and another participant shared **Patrick Holton and Ela** (who are chefs) played an integral part in the types of food she consumed: *"I follow Patrick Holton and Ela... the vegan chef. I find that she has got great natural remedies"*. It can therefore be deduced that subjective norms play a role in favourably influencing consumers' propensity to consume functional foods.

The primary objective of this section was to explore how health-conscious consumers perceive the term 'functional foods'. The findings showed that participants linked health and nutrition, which they deemed primary advantages of these functional foods. They also mentioned other

factors contributing to their perception being reading, influential people and social media content. They also listed a variety of food products that they considered functional foods, but these foods were what they typically consumed on a daily basis. Since the study determined the health-conscious consumers' understanding of the term 'functional foods', the succeeding section explores health-conscious consumers' use of functional foods.

5.3.2 To explore health-conscious consumers' use of functional foods (Objective 5)

Aiming to achieve the study's fifth objective, the fifth section of the online focus groups and individual interview sessions explored health-conscious consumers' use of functional foods. The analysis of interview session and focus group participants' use of functional foods commenced with the question: “As a health-conscious consumer how important is it to you, to include functional foods in your diet?” From the data analysis, two categories emerged, reflecting two reasons the participants included or did not include functional foods in their diet: (1) “**Imperative**” with the subcategory being for (a) “**Health and Nutritional benefits**”, and the second being (2) “**Not imperative**”. These categories are shown using diagrams that reference frequently used concepts (indicated by the bulleted words and expressions used in Figure 5.7) and explain numerous categories.

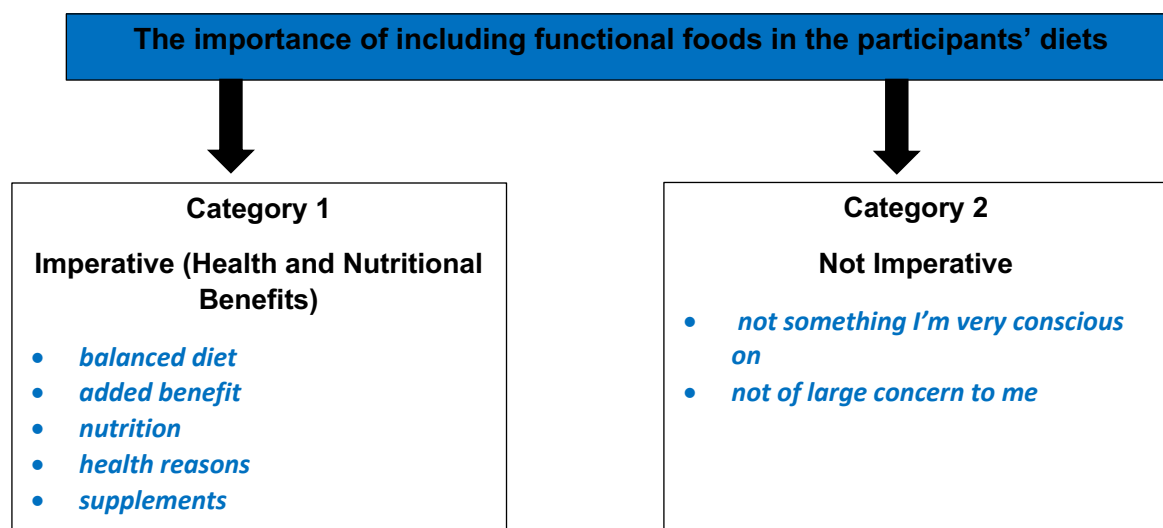


Figure 5.7: The importance of including functional foods in the participants' diets

Most participants conveyed that it is **imperative** and due to the (a) “health and nutritional benefits” that these foods provide that they include these types of foods in their diet. The **importance** of including functional foods in their diet was quite evident, based on this quote:

“I consider it to be essential to having a balanced diet and I go out of my way to use functional foods regularly in my meals. When I cook I will choose functional foods over and above non-functional foods if at all possible because of the health benefits”.

Another participant emphasised the significance of adding functional foods in her diet by saying: *“Almost a 100%. I believe the body needs to constantly digest, and obviously in smaller amounts, helps with weight, weight gain & weight loss”.* Ajmera (2020) supports this view by adding that there are several health advantages to consuming functional foods. One of the best strategies to avoid chronic diseases is to consume a diet high in functional foods (Levy, 2019).

Another participant specifically said it is about getting the **supplements** in her body, as she stated: *“It is very important. I think... it is making sure I am getting the right food supplements into my body”.* **Health reasons** were also an integral reason for including functional foods in their diets according to these participants: *“Yes, it is also very important to me to include functional foods in my diet and also for health reasons”* and *“It is pretty much crucial. I mean at the end of the day all these functional foods form the basis for our diets”.*

The purchasing of functional foods was important to a participant due the **benefits** they provide for their wellbeing: *“It is very important. It makes up my body, my type, my mental state, my health state, how I function with my duties at work and even my moods”.* Another participant shared:

“For me, I think it is very important... Again, I think from health benefits and exactly also what the other participant said as well. I am looking for weight loss or I am looking for relaxing, sleep for body balance... all of those things, then I am going to include it in my diet, because I know it is going to give me some sort of benefit besides nutrition”.

A vast majority of these participants concurred that its integral to include functional foods in their diet because of the nutritional value these foods provide, promoting their longevity. Arshad et al. (2021) state that food products with health claims are popular among consumers because they believe they may help them live longer and better. It can be deduced that regularly including these foods in one’s diet has several health advantages (Motohashi et al., 2017).

The second category entailed participants stating that it is **not imperative** to include functional foods in their diet, as indicated by these quotes: *“It is not something I’m very conscious on which I maybe should be a little bit more”* and *“It is not of large concern to me but then if I am*

out shopping and I do see a functional food option being advertised then I will lean towards getting that because I do know that they are healthier". Although these participants claimed functional foods are not essential to their everyday lives, they did recognise the need to include these nutritious foods into their diet because of the benefits they provide. If more awareness is created around what functional foods are and the health benefits that these products offer, it will entice participants to purchase these products and make it a part of their diet. Vella et al. (2014) claim that the most often-mentioned element that would encourage the use of functional foods is increased awareness and understanding. Success with functional foods depends on raising consumer awareness and maintaining an ever-expanding body of information about these types of foods (Papp-Bata et al., 2018).

The exploration of health-conscious consumers' use of functional foods continued with the researcher asking participants: **"Are there any specific rules or processes that you follow to make sure that functional foods are included in your diet? Explain these rules or processes."** From the study's analysis, two categories emerged: (1) "Types of foods consumed and purchased"; and (2) "No rules", with the following subcategory: (a) "Personal choice". The findings are reflected in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 5.8) and provide an explanation of the categories.

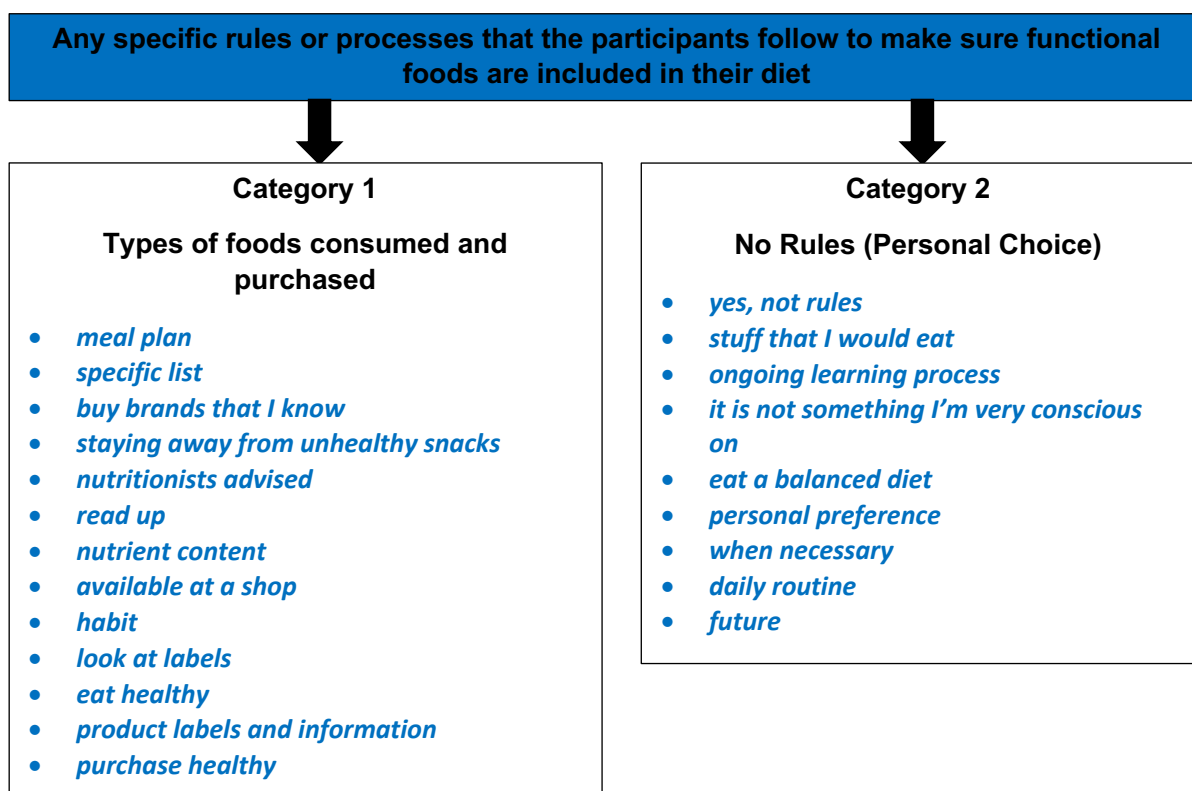


Figure 5.8: Any specific rules or processes that the participants follow to make sure that functional foods are included in their diet

The first category that emerged focused on the **types of foods consumed and purchased**, as explained by participants who said sticking to a **list** of functional food products is the only rule they follow: *“My first rule is to always have a specific list. Instead of writing down ‘vegetables’ write specifics... exactly what you are looking to buy and only buy those specifics”*. Others mentioned **planning** being integral:

“I definitely do plan as I mentioned a few moments ago. So, when I go shopping I am planning what I am going to make that week. And then I will still think ... if it is cold ... What I am going to make on a hot day compared to a cold day is going to be two totally different meals”.

According to Ravato (2017), an inventory of the foods that are consumed in the household are kept through the use of a grocery list. Having a list can prevent making unwise last-minute meal selections. **Brand loyalty** was also important for a participant who said: *“Yes. I buy brands that I know carry functional foods and I visit stores that I know stock functional foods”*. Another participant’s rule was simply to stay away from **unhealthy foods**: *“So rules for me would just be staying away from unhealthy snacks mainly because we tend to snack too much on unhealthy things”*. This participant listened to a **nutritionist**: *“I think for me, it is more of what the nutritionists have advised”*. Another determined the product’s **nutrient content** to know what the correct products are to consume:

“I often read up about it and find out what the nutrients is. I have also got an Application on my phone which tells you the sodium content of what you are eating or the nutritional value or the... what do you call it? The carbohydrates or sugars or whatever”.

Including functional foods in their diet had become a **habit** as participants mentioned: *“For me as well, it has become habit”* and *“I think for me it is more of a habit. It is something that I need to do so that I do not feel pain after a week”*. **Product labels and information** were also examined by participants to see the product’s health and/or nutritional value: *“So, I will look at labels. I will look at percentage, RDA etc. on the side of the product”*. Another shared:

“I think it is important to look at food labels but also portion sizes. Sometimes you could be overeating too much of a healthy food and the benefits like.. no longer help”.

Purchasing healthy components to prepare a smoothie was considered a rule in this participant’s mind, and she made certain this rule was followed:

“The processes of getting the healthier stuff is, the smoothies. So, you just incorporate everything into a smoothie, and you have all of your healthy things in one go”.

In order to guarantee nutritious foods are included in their diets, participants were very selective about the foods they purchased. In most instances, a shopping list was created and/or a meal plan was drawn up to follow. Dominko (2020) adds that an efficient shopping list and meal plan may save time and money in the long run, as well as reduce the amount of food wasted and unhealthy snacks purchased. When purchasing functional food products, this participant ensured they are **available in a shop**: *“Butcheries, I got to specific veg stores, specific retail where I know these products are stocked”*. From their responses, it is clear that each of the participants follows a certain set of guidelines when it comes to including functional foods in their diet.

For the second category, some participants conveyed that there were **no rules** or processes followed to make sure functional foods were included in their diet; it was based on **personal choice**. This participant stated that she did **not adhere to any rules**, and she ate meals on her own initiative:

“No, Because I take it as it comes, and you know like I’m saying, fasting days we eat certain things, non-fasting days so I guess it, it and also, it is mood and personal individual taste or feeling for the day”.

The next few participants agreed there were no rules they adhered to and their choices to add functional foods into their diets were solely a matter of **personal preference**: *“Yes, not rules, per se. I just read what they do to your body”* and *“No, there are no rules. No, I do not follow any rules. It is nothing that I am following throughout”*. According to her statement, this participant purchased functional foods **when necessary**: *“I also do not really have any specific rules or processes. I just (buy) what I feel that I need to use for that day”*, whereas another said: *“Not necessarily. As I said it is an ongoing learning process. It is a journey”*.

There was no specific strategy in place for a participant who stated that this is merely part of her **daily routine**:

“No ... I do not have any rules or processes for you. I do not have a specific diet plan planned out though. I do not have a gym instructor giving me a diet plan at this current stage. So, we do not have a plan. We just make what we have got in the fridge and go with that”.

There were no rules or protocols in one participant’s lifestyle, but she acknowledged that it is something she may want to consider in **the future**: “No, I don’t. It is not something I’m very conscious on which I maybe should be a little bit more” and:

“But I tend to not have any rules per se. At the moment I am just trying to eat a balanced diet and just find out what works for me. Because I have done most of these diets and eating programs and I have gotten to a point where you cannot fully cut out something, it is not good for you”.

These participants did not follow any rules or processes in terms of including functional foods in their diet, as it was deemed a personal choice. They consumed or purchased foods based on how they were feeling and generally made decisions on consuming foods or functional foods for that specific day. Some participants included functional foods/healthy foods in their diet based on an understanding of the nutritional benefits these types of foods provide; hence having these foods as part of their diet. For others, functional foods had become a part of their daily regime therefore rules and processes were not required.

Participants were then asked: “**How do they make sure that functional foods are present in their diet?**” Three categories emerged from their response, with the first being (1) “Part of a shopping list and/or meal plan”; the second being (2) “Part of a diet”; and the third being (3) “Not enough knowledge”. The findings are presented in the following diagrams that highlight the most important ideas (indicated by the bulleted words and expressions used in Figure 5.9) and provide an explanation of the various categories.

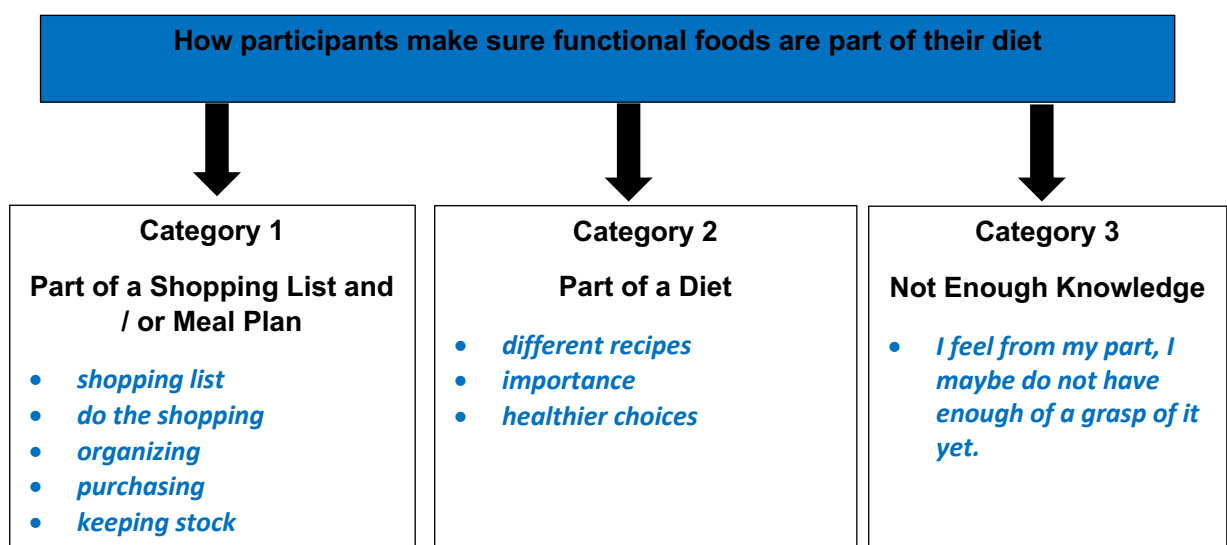


Figure 5.9: How participants make sure functional foods are part of their diet

In terms of the category '**part of a shopping list and/or meal plan**', participants ensured functional foods were present in their diet by creating a **shopping list**. They suggested: *"Shopping list plays an integral role, on your choice of foods because we try and avoid eating out or unnecessary products but every now and again"* and *"I always make sure that it is on the shopping list and if we are out on that, I make sure I go purchase the functional foods"*

Single-handedly **doing the shopping** was one way a participant included these types of foods in her diet:

"I do the shopping. I have actually got a list on my fridge and I just tick off whatever I need and then I go and buy it".

Karim (2021) states that it is a good idea to stick to a shopping list when grocery shopping in order to control unplanned purchases. According to Ravato (2017), an inventory of the foods that are eaten in the household may be accomplished via the creation of a shopping list.

Organising functional foods in the home is something that one participant took very seriously: *"So I generally try and keep all the grains that are on the lists for Mediterranean in the house, along with the fruits and veggies that go with them"*. Another participant also shared the same sentiments and explained:

"Yes. I think, for me the most important thing is that in my household, that is what is there. It is functional foods. So, they are always included in the diet. It comes back to the thought process".

Purchasing certain products from the store requires some preliminary planning and consideration as inferred by a participant: *"I think again, like we have said in the previous question, when you go into the shop you have got intentions to buy certain components you have got to have an idea set out of what you are going to make - certain meals"*. Natural herbs, were also types of functional foods that were part of a participant's diet:

"Yes, definitely, it is a conscious... it is something that you are conscious of. In my mind, funnily enough, it is herbs – the natural herbs that I always consciously buy and for me, I always reap the benefits of it to include it in my cooking. When it is shopping and big shopping lists".

In order to guarantee nutritious foods are included in their meals, these individuals were very selective about the items they bought. In most instances, a shopping list was created and/or

a meal plan was written up to follow. Adding to this, Dominko (2020) states that creating an effective shopping list and meal plan may save time and money in the long term, as well as limit the purchase of unhealthy products. By **keeping stock** of functional foods in her fridge, a participant ensured they were a part of her diet: *“Well, first of you have got to make sure that you have got it in your fridge.”*

With the second category, most participants conveyed that they made functional foods a **part of their diet**, as explained by this participant who cooked using a lot of **different recipes**: *“I guess... I cook a variety of recipes. I do not stick to such a limited diet, and I tend to also... I am generally interested in world cuisine”*. Another participant substituted “unhealthy” ingredients with functional food ingredients based on the recipe she used:

“I just look for new recipes and if they are slightly healthier then I see which foods I can replace”.

However, another participant indicated the **importance** of including functional foods in her diet as she stated, *“I think in theory it is very important, to have something like that in your diet every day”*. *“On a day-to-day basis I would try and do a more healthier choice in what I’m eating”* was also mentioned by a participant. These participants understood functional foods to be **“health foods”**, and their understanding of health foods is that they are important for their wellbeing, hence making these products a part of their diet. This was accomplished by purchasing and looking at recipes that already incorporate these types of foods. If the recipe does not use a specific healthy ingredient, they simply substitute the ingredient with a healthier option. It can therefore be deduced that participants made functional foods/“health foods” part of their diet.

For this participant, **not enough knowledge** is a deterrent in understanding what these foods are and the purpose of purchasing these:

“Look, I think... Functional foods have to be a conscious decision. Unfortunately, I feel from my part, I maybe do not have enough of a grasp of it yet. Although I enquire a lot about it, but I think the more I understand what I need to look for, I will then go and purchase that”.

Public awareness and understanding of functional foods were highlighted as a common strategy for promoting their use (Vella et al., 2014).

5.4 Conclusion

This chapter's fundamental goal was to gain in-depth insight into how health-conscious consumers view the term 'functional foods' and their use of these types of foods. Findings reflected that participants linked health and nutrition as key advantages that functional foods provide. They mentioned contributing factors to their purchase decision include reading, influential people, content from social media platforms, creating a menu plan, these foods being part of a shopping list, and having specific rules and processes to ensure these foods are a part of their diet. In addition, some participants indicated they did not feel concerned or conscientious about the act of purchasing or consuming the aforementioned foods, and they felt the need to acquire further information in order to pursue these foods. It is also worth noting that many of the foods identified as 'functional foods' were really foods participants ate and used on a regular basis.

Having established health-conscious consumers' understanding and utilisation of functional foods in this chapter, the next chapter explores health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods.

CHAPTER 6

FINDINGS AND DISCUSSION 2

In this chapter, the second part of the data are presented and discussed using diagrams to aid in an understanding and interpretation of health-conscious consumers' knowledge and use of conventional and modified functional foods. The factors that influence their intention to purchase and consume these foods are also provided.

6.1 Introduction

The preceding chapter established health-conscious consumers' understanding and use of functional foods. This chapter explores health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods. The factors that influence health-conscious consumers' intention to purchase and consume functional foods are also described.

6.1.1 To explore health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods (Objective 3)

As part of the study's third objective, the third section of the online focus group and individual interview sessions explored health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods. The questions that followed were developed to determine participants' specific knowledge about conventional and modified functional foods. The session thus started by asking, "**What do you think conventional functional foods are?**" Two groups of participants emerged, the first being (1) "Those who perceived conventional functional foods to be natural and convenient". Two categories were mentioned, namely (a) "Natural" and (b) "Foods that are available" and (2) "Those who were uncertain about conventional functional foods", and these reflected being (a) "Uncertain". The diagrams below refer to the most often used ideas (indicated by the bulleted words and expressions used in Figure 6.1) and explain the multiple categories.

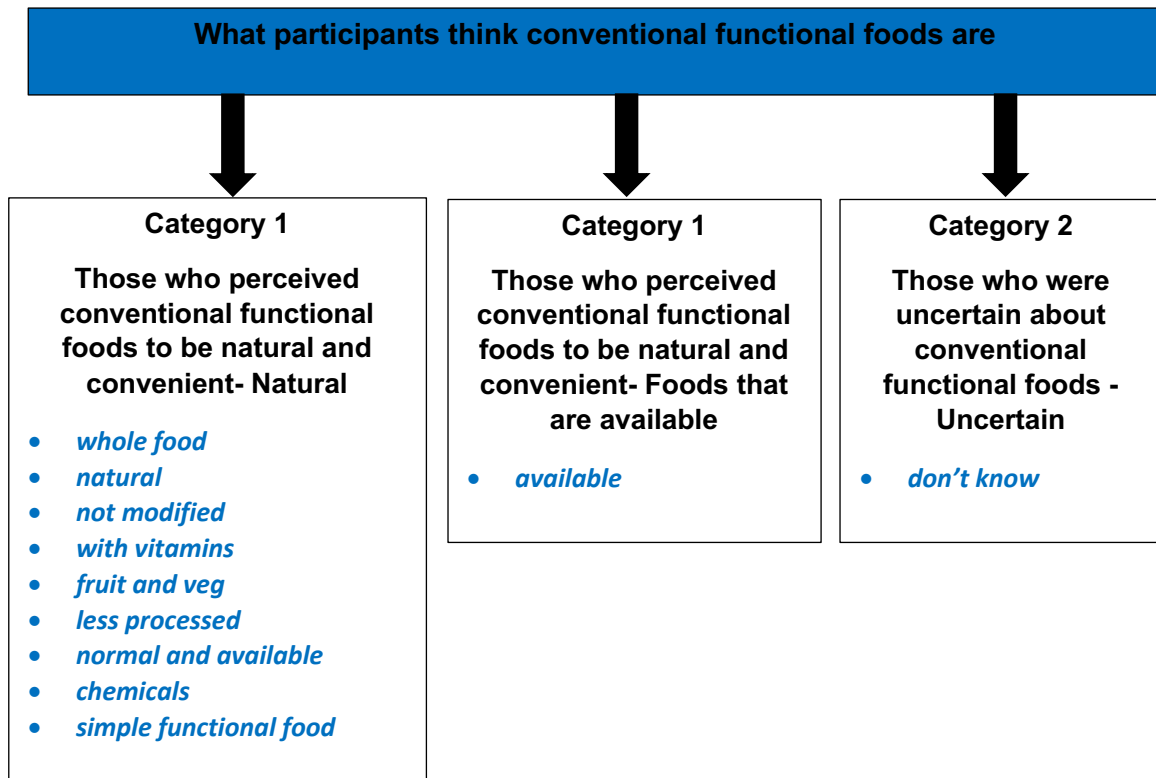


Figure 6.1: What participants think conventional functional foods are

Following an analysis of the data of **those who perceived conventional functional foods to be natural and convenient**, one category emerged that indicated what the participants believed functional foods to be, which was that it was **natural**. Most participants collectively stated that conventional functional foods are foods that are *“Whole food. Something that is unmodified or unedited”*. Some participants were unsure but still stated: *“I think, more so your natural products with vitamins, somewhat like your oranges type of thing.”*

In another instance, fruit and vegetables were classed as conventional functional foods. A participant explained: *“I think it is normal fruit and veg. Apples. Whatever you can get that has not been changed or touched”*. Another said:

“So that would be the old-fashioned like Jungle Oats. Because you have not changed them, they are just in their normal state. You have not modified them to add anything. No additives... Like spinach for iron, etc. Because they are naturally found/sourced in that manner. They have not been scientifically generated or enhanced”.

According to Ajmera (2020) and Hobson (2021), natural, whole-food components high in essential vitamins, minerals, antioxidants, and heart-healthy fats are considered conventional functional foods. Participants claimed they were *“More like your raw products less processed*

products. Fruits vegetables”, or *“The normal, like I’ve indicated to you. An avo, a banana, that is picked and made available”*. Examples of conventional functional foods are fruits, vegetables, nuts, seeds, legumes, whole grains, seafood, fermented foods, herbs, spices and beverages (Ajmera, 2020). **Chemicals**, according to a participant, are used in the cultivation of conventional functional foods: *“Okay, so conventional foods for me are organic foods that have been grown with the help of pesticides or herbicides”*. However, ginger was specifically classed as a type of conventional functional food product by this participant:

“I would say... probably something like ginger. But I am only saying this because I think it is like a simple functional food”.

Based on the participants’ feedback, there appeared to be a certain level of understanding of what conventional functional foods are, aligned with Ajmera’s (2020) and Hobson’s (2021) description of these foods. A few participants had to think about what conventional functional foods were and were unsure about these types of foods when this question was posed. The fact that their responses corresponded with the description of conventional functional foods was attributable to their association of these foods with ‘health foods’.

A very small number of participants believed conventional functional foods are **foods that are available**. A participant stated, *“My guess would be eggs, carrots and stuff like that. They are quite easy to get hold of, they can be grown, you can buy them very excessively”*. Another explained: *“I am just trying to think now. Conventional... standard meals that are available”*.

It can be inferred from these remarks that participants considered conventional functional foods to be convenient foods, even though they believed they were choosing healthy food.

Lastly, a great number of participants stated they were **uncertain** of what conventional functional foods were, with these participants specifically mentioning, *“Again, I would say I do not know for certain”*, and *“Shu, I actually don’t know to be honest with you. I guess not such healthy foods. I really don’t know”*. Participants in this group were unable to provide a definitive response as to what conventional functional foods were. However, this finding can be curbed by raising consumer awareness of functional foods and maintaining an ever-expanding corpus of knowledge about these foods (Papp-Bata et al., 2018). This view is supported by Vella et al. (2014), who discovered that greater knowledge and comprehension were the most significant factors promoting the consumption of functional foods, which in this situation may be of considerable value to these participants.

The researcher posed the following question: “**According to your opinion, which foods are conventional functional foods?**” to all participants (those who understood what conventional functional foods were and those who were uncertain). Participants conveyed that the following were considered conventional functional foods: (1) “Fruit and veg”; (2) “Spices and Herbs”; (3) “Legumes, Seeds, Nuts, Grains, Flour-based and Cereal”; (4) “Seafood”; (5) “Natural foods”; (6) “Animal foods”; (7) “Tea”; and (8) “Uncertain”. The categories are presented in diagrams below that reference the most often used ideas (indicated by the bulleted words and expressions used in Figure 6.2) and provide an explanation of the multiple categories.

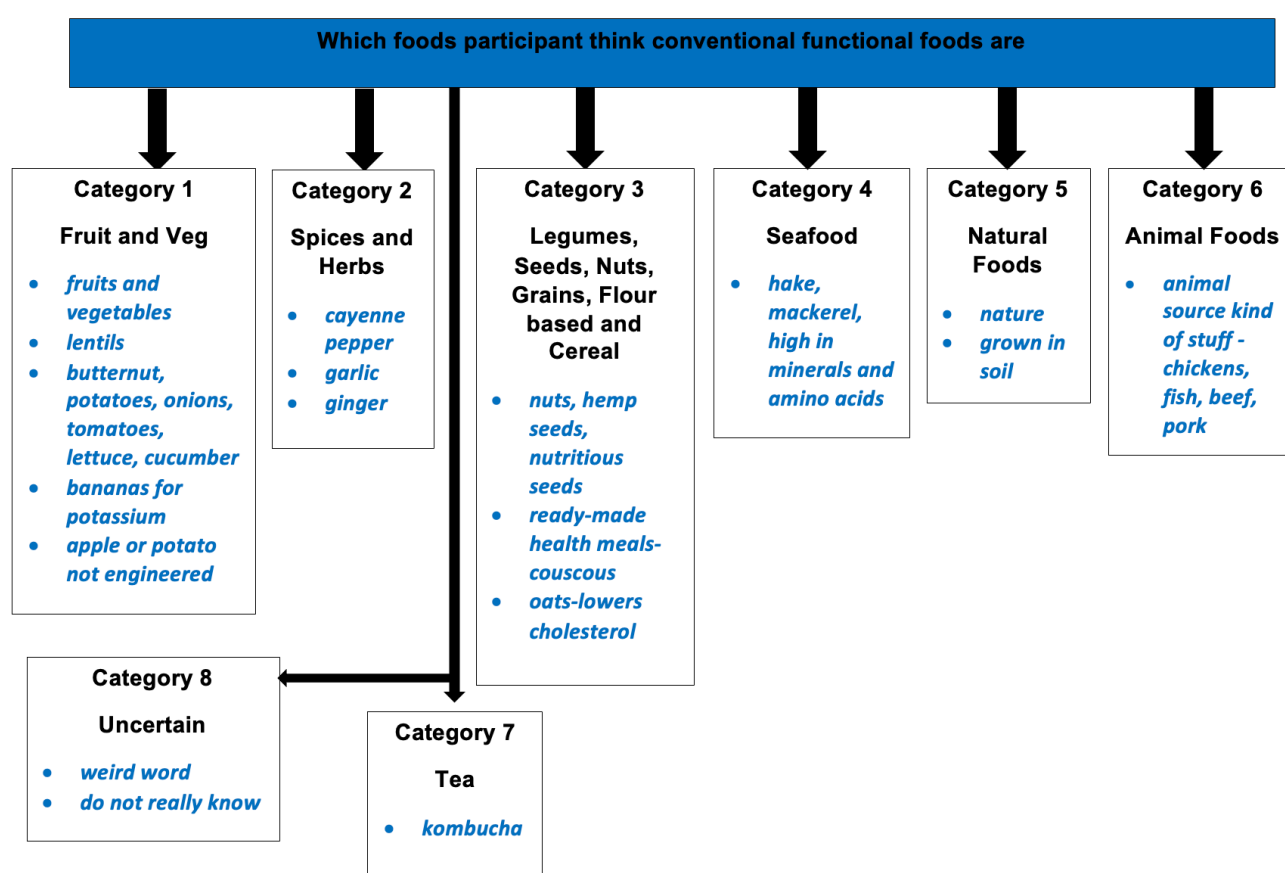


Figure 6.2: Which foods participants think conventional functional foods are

A vast majority of participants conveyed that different types of **fruit and veg** are conventional functional foods, as indicated in these quotes: “*I think lentils would count as well. Those are your conventional kinds of... there are different categories, I mean, it is fruits, vegetables*”, “*Mainly just fruits and vegetables*”. A participant also stated:

“Yes. I think the same as the other participant because that is what you use on a daily basis (So I would say your conventional would be butternut, potatoes, onions, tomatoes... I am just telling you what I get when I go to the shop (laughs) Lettice, cucumber)”.

This claim is in line with Ajmera’s (2020) examples of conventional functional foods being fruits and vegetables. One participant claimed **bananas** were conventional functional foods due to containing **potassium**: *“Banana for potassium. That is basically your fruit and vegetables”*. According to Gul et al. (2016), it may be possible to minimise the risk of certain illnesses by consuming fruits and vegetables that contain biologically active compounds. Functional foods are high in bioactive chemicals, which may have a positive impact on health (Olaiya et al., 2016). Participants mentioned a wide range of fruits and vegetables that they believed to be conventional functional foods despite their lack of confidence in their ability to provide an accurate response. Based on what they used or were exposed to on a regular basis, and as part of their daily routine, these items were deemed healthy food alternatives rather than conventional functional foods.

Some participants were unsure but attempted to answer the question by stating that fruit and vegetables were types of conventional functional foods. A participant said: *“I’m gonna be guessing here. So conventional, I guess fruits and vegetables coz they’re now really genetically modified”*, and another explained:

“I suppose, like an apple that has not been engineered a potato that has not been engineered to withstand frost or the blight or the diseases”.

The second category participants understood conventional functional foods as **spices and herbs**, although not always with certainty. This was noticed in the response that this participant gave:

“I think other forms of functional foods and... I do not know, maybe I am wrong... that is spices. Once spices form part of a... because I mentioned cayenne pepper”.

Sharma et al. (2017) claim that spices have been used to impart antimicrobial characteristics to foods in addition to their flavour and aroma. Participants were more certain of and specifically mentioned ginger being a type of conventional functional food due to the health benefits this spice provides. They conveyed: *“I would say garlic and ginger also helps with immunity”*, and *“I do include the food in my food purchases. Things like ginger”*. According to

Ogbunugafor et al. (2017), spices and herbs are highly prized because of their potential health benefits, particularly in treating chronic diseases.

Legumes, seeds, nuts, grains, flour-based, and cereal were another category of functional foods that participants considered to be conventional, as indicated by this quote *“Nuts would form part, and butter, seeds-hemp, all of the good nutritious seeds that form part of that group of products”*. A participant also claimed that grains, seeds and legumes are considered conventional functional foods as they have not been created with chemicals:

“I would say your grains, your seeds, your legumes... foods as provided by nature without interference from us in terms of GMOs or all those fake fertilizers or pesticides”.

According to Ajmera (2020), nuts, seeds, grains and legumes are types of conventional functional foods, and in addition to providing the body with essential vitamins and minerals, these foods help to promote overall health and wellness. Despite being unsure, participants expressed and recognised **legumes, nuts and grains**, as well as **flour-based and cereal products**, to be forms of **conventional functional foods**. A participant said: *“Okay, I am not too sure hey, I would say nuts”*, and another associated this category of foods to be **ready-made health meals**:

“You know like ready-made health meals... like probably you would find at Checkers. Like the couscous Something like that. If I am not mistaken. Maybe I am wrong”.

Another participant discussed the advantage that oats provide as well as the health element of brown bread in comparison to white bread, which is why it is regarded as a functional food product: *“I said oats lowers cholesterol... maybe brown bread versus white bread... more whole wheat bread. Those sorts of basic foods”*. Legumes, seeds, nuts, grains, flour-based products and cereals (natural) are all examples of conventional functional foods that have several health advantages (Ajmera, 2020). Though participants had little conviction in their ability to provide an accurate response, they listed legumes, seeds, nuts, grains, flour-based and cereals as conventional functional foods. These products were primarily classified as healthy food alternatives rather than conventional functional foods based on what participants were exposed to or used on a regular basis and as part of their daily routine.

The fourth category, **seafood**, was conveyed by a participant's claim: *“Things like seafood, things like your hake”*. One participant also emphasised seafood's nutritional content:

“You are going to find... those are sort of your high in minerals, high in amino acids, high in other beneficial properties, Mackerel”.

Participants thus offered seafood as examples of conventional foods, which is aligned with Ajmera’s (2020) view that seafood (i.e., salmon, sardines, anchovies, mackerel and cod) are examples of conventional functional foods. According to Ashraf et al. (2020), fish is one of the most significant and required items in the human diet because of its remarkable nutritional value. In addition to vitamins A, B and D and Omega 3 fatty acids, seafood is also a great source of protein and other nutrients (Humboldt, 2019). While having little confidence in their own judgement, participants mentioned seafood because they thought it was a conventional functional food. However, this category of food can rather be considered a healthy alternative (and not conventional functional food) because it was what participants used or were exposed to on a regular basis and in their daily routine.

Another category of conventional functional foods listed by the participants were **natural** foods, as explained by this participant stating:

“Foods as provided by nature without interference from us in terms of GMOs or all those fake fertilizers or pesticide”.

According to Arshad et al. (2021), conventional functional foods are made from natural or whole-food components and include functional compounds like heart-healthy fatty acids, antioxidants, vitamins, and minerals. Foods grown in soil were also considered to be conventional functional foods as stipulated by this participant:

“I would say your lettuce, your cabbage, your carrots. Foods that are grown in soil”.

Some participants noted that conventional functional foods are considered natural/whole/organic foods. They are foods from the earth and grown from the soil, a claim supported by Ajmera (2020), who continues that natural, whole-food components constitute the basis of conventional foods, which include a wide range of valuable nutrients. Specific conventional functional foods mentioned by participants were vegetables like cabbage, carrots, lettuce, tomatoes, onions and peppers.

Animal products were next mentioned by the interview session and focus group participants as conventional functional foods. They explained these types of foods to be: *“I would say your animal foods are conventional”* and *“So, your animal source kind of stuff - chickens, fish, beef,*

pork". According to Kausar et al. (2019), soluble minerals, vitamins, vital fatty acids and other elements that have special functions in the body may be found in meat products. Still, there is a rising desire for healthy meats with lower levels of fat, cholesterol, sodium chloride and nitrite. This can be attained by altering meat products and adding particular compounds that remove or decrease toxic substances from the body, which will be important for human health. This results in meat products being classified as modified functional foods if they have been fortified or supplemented with nutrients that have been shown to be helpful to consumers' well-being.

The seventh category mentioned by participants as an example of conventional functional foods was **tea**, as indicated by these participants: "*Kombucha*" and "*We have forgotten the most important one, our kombucha*". Abbott (2018) explains kombucha tea is a fermented beverage that has been lauded as a functional food. When paired with a balanced diet, it has the potential to provide several health advantages serving as a prebiotic and probiotic agent. Since these types of teas include cultures from yeast and bacteria, they would be categorised as modified functional foods as they are fortified or altered with extra functional components that may have health-promoting properties (Sheetz, 2021). Despite the question posed to participants specifically focusing on conventional foods, participants stated kombucha is a conventional functional food product since it is a "health product" even though cultures are added to this product (Panoff, 2020); this classifies this product as a modified functional product. The feedback from the participants leans more towards their understanding of health-related products from a general perspective and not from the distinctive categories of functional foods being either conventional or modified.

Two participants were **uncertain** of what conventional functional foods were and conveyed, "*I don't know that is a very weird word*". Another participant mentioned vitamins, but was unsure whether these are deemed conventional functional foods: "*Again, I will stick with it being your vitamins. I might throw in fibers... other than that.... I do not really know*".

Based on the information participants provided to the previous question reflecting which foods they understood/knew to be conventional functional foods, it was important to determine, "**Do you include these foods in your food purchases?**" The findings are reflected in the following diagram that highlights the most important ideas (indicated by the bulleted words and expressions used in Figure 6.3) and provides an explanation of the specific category.

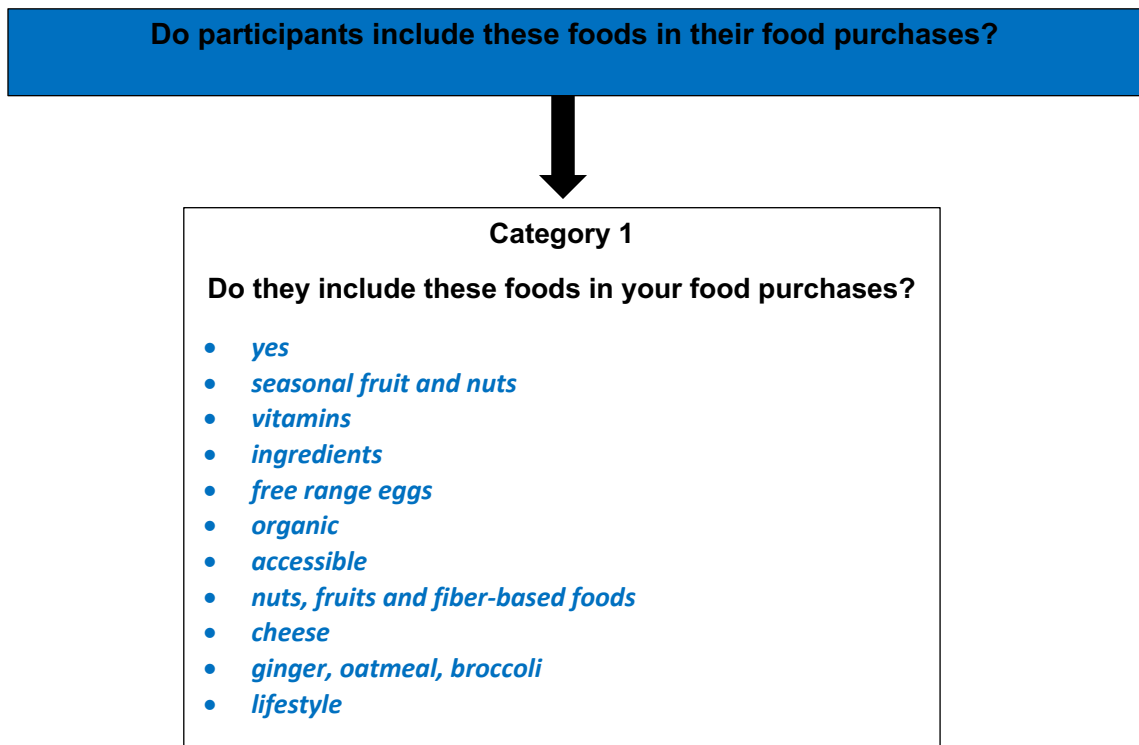


Figure 6.3: Do participants include these foods in their food purchases?

Based on an analysis of the findings, a vast majority of the participants indicated that, **yes, they included these foods in their food purchases**. A large number simply conveyed “*Certainly*”, and “*Yes*”. One participant indicated ‘yes’, but mentioned if they are seasonal, it is difficult for her to purchase: “*Yes. Yes, if there are seasonal, then obviously it is different.*” The following participant viewed functional foods as fruits and nuts, which she consumed every morning: “*Yes, in the morning I start my day off with a handful of a nuts and piece of fruit*”.

One participant indicated that she utilised these foods but equated functional foods as those containing vitamins and fibre: “*Well... if I am right to some extent... maybe, yes. So... if it is your vitamins, then yes. Fiber is in your cereals in the morning... So, yes, to that extent but I am not sure if I am right*”, whereas this participant reported purchasing the ingredients and not the food itself:

“I do not purchase them, but I purchase the ingredients and I make them myself”

According to one participant, she made an effort to include these foods when shopping for food products whenever possible:

“Yes, I try to. Some of them are not always easy to find or some of them are like... for instance, free-range eggs are sometimes ridiculously expensive. So, it depends”.

Miranda et al. (2015) claim eggs are considered conventional foods because they contain nutrients that have essential importance beyond basic nutrition. They are also considered modified functional foods because they are enriched with omega-3 polyunsaturated fatty acids (PUFAs) as a result of hens consuming a diet containing canola, soybean, walnuts and flaxseed. They also have a low cholesterol content, which helps maintain the consumer's health.

Some participants agreed they included conventional functional foods in their food purchases, although some are expensive and difficult to find. Maxim et al. (2019) also claim that the cost of a functional food item may influence consumers' purchase and use of the product. According to this participant, despite it being somewhat difficult to get conventional functional foods, she purchased these types of foods when they were well advertised:

“It is hard to find!, if I can find it and if it can be proven that it is organic as opposed to just being like a marketing sort of word, then of course I will. Yes”.

Nguyen et al. (2019) agree that the availability of functional foods impacts the buying of such foods. Vella et al. (2014) also noted that emphasising the health benefits of functional food items substantially influences consumers' acceptance of these goods. Moreover, if these functional foods are made accessible, participants' tendency to purchase will be significantly influenced.

Nuts, fruits and fibre-based foods were part of this participant's food purchases:

“I am going to say yes because we do. We have fruits and nuts and fibers”.

Cheese was also considered a conventional functional food, which a participant included in her food purchases: *“Yes, well. Yes, yes to cheese”*. However, cheese is a modified functional food; as Bennett (2015) explains, cheese is made by a bacteria introduced as a 'starter culture' to the milk, where the process of converting the lactose to lactic acid takes place. Afterwards, the milk is curdled by the addition of rennet, an enzyme.

Based on one participant's **lifestyle**, she definitely included conventional functional foods in her food purchases; she explained: *“Yes absolutely, As I stated earlier also it is a lifestyle”*.

Another participant agreed: “Yes, I do include the food in my food purchases. Things like ginger, oatmeal, broccoli... and seafood as well – things like your hake”.

Participants’ responses show that they had a broader awareness of health-related items than specific functional food categories that are either conventional or modified.

Participants were then asked, “Of these products, which is the most important conventional functional food item to you?” The following categories emerged: (1) “Natural, fruit and veg”; (2) “Meat and Poultry”; (3) “Spices and Herbs”; (4) “Legumes, Seeds, Nuts, Grains, Cereals and Bread”; (5) “Dairy”; and (6) “Uncertainty”. These are shown using the following diagrams reflecting the most often used ideas (indicated by the bulleted words and expressions used in Figure 6.4) and provide an explanation of the multiple categories.

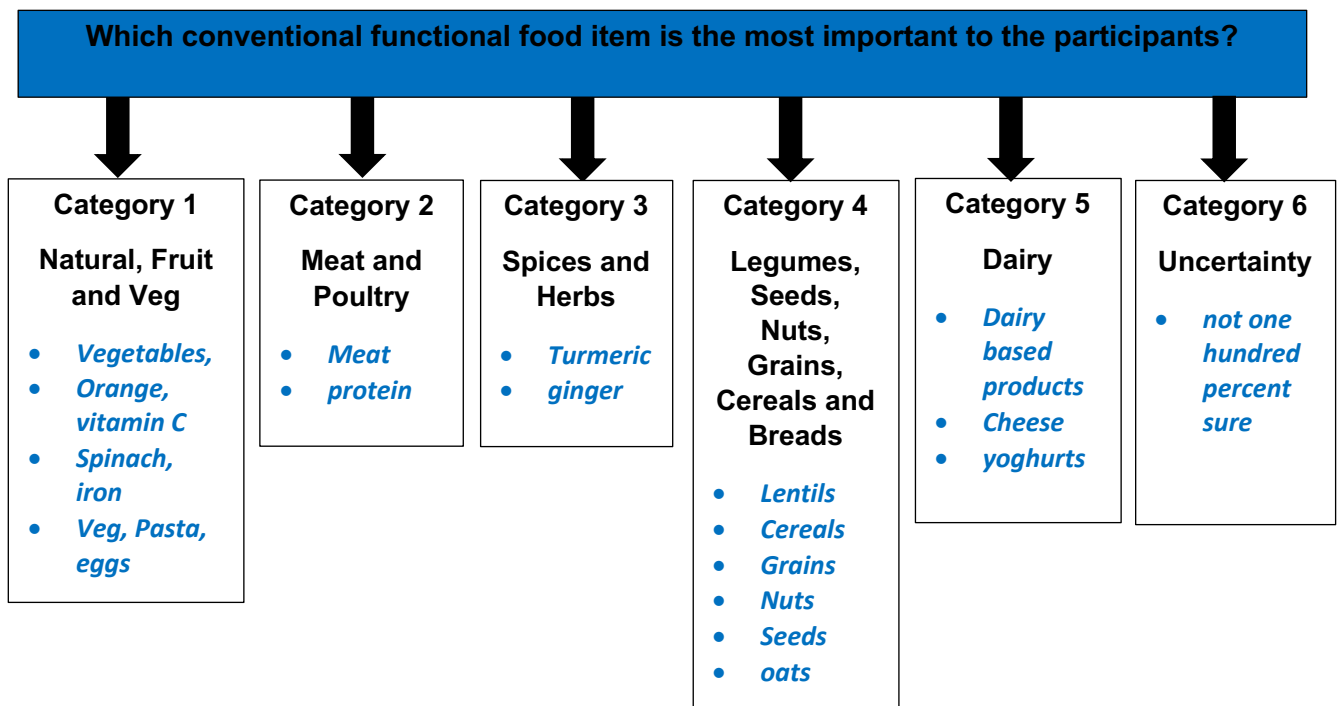


Figure 6.4: Which conventional functional food item is the most important to the participants?

Natural fruit and veg were considered one of the most important conventional functional food items, as explained by these participants: “I would say roasted vegetables or spinach”, “For me it is oranges. Yes, it is oranges because it was something that was actually referred to me for Vitamin C”, and “I do not know but at the moment I would say spinach is the most important one because of the high iron. That is about it at the moment”. According to Spritzler (2019), the antioxidants in berries help to protect cells and may even help lower the chance of

developing illnesses. In addition, kale is one of the most nutrient-dense foods on the globe because of its high nutritional content and low-calorie count (Gunnars, 2018). Bioactive chemicals found in fruits and vegetables, according to Gul et al. (2016), may also help reduce the risk of certain diseases. The bioactive compounds found in these foods may benefit human health (Olaiya et al., 2016).

Vegetables, pasta and eggs were other important conventional functional food items, as shared by this participant:

“There are various, even vegetables and pasta. I try and eat on a balanced basis during the week, including eggs. So, when I do my shopping, I confirm to myself that these are aspects that these are commodities that I need to acquire”.

According to participants, fruit and vegetables were significant conventional functional food items due to the health advantages associated with them. However, their input pertains more to their knowledge of health-related items from a broad point of view than the specific categories of functional foods that are either conventional or modified. As a result, it was difficult for the researcher to establish whether these foods were selected because they were conventional functional foods or not.

Participants also conveyed that **meat and poultry** were other important conventional functional food items, as one explained: *“Yes. I love my meat! So, animals is the product!” “It is a balance between the proteins like a meat and vegetables”* and *“It would be meat as well. Red meat”*. It appeared participants were fond of consuming meat as most reported it was a part of their daily diet. According to Kausar et al. (2019), meat products contain soluble minerals, vitamins, essential fatty acids, and other substances that perform specific roles in the body. The consumption of meat and meat products is thus an essential part of the human diet (Ostaszewski, 2018). While the participants’ contributions were valuable, they focused on their general understanding of health-related food products rather than the particular categories of functional foods, which may be either conventional or modified. Therefore, determining whether these items were chosen because they were conventional functional foods was challenging for the researcher.

Another category considered by participants as important conventional functional food items was **spices and herbs**. Participants rated **turmeric** the most important conventional functional food item, as they were knowledgeable of the health benefits of this spice:

“I am probably not aware of all the different spices that are beneficial that I know but, for example, turmeric is, and I always have it around. It has antioxidants. turmeric I eat quite a lot”.

Another participant considered **ginger** the most significant traditional food item: *“For me it would be ginger. I think ginger is my default functional food”*, and *“It would be ginger”*. Gelski (2020) concurs turmeric and ginger are well known for their immune-enhancing effects, but they have also been shown to have a role in maintaining excellent digestive health and reducing inflammation. Spices and herbs are revered because of their potential health benefits, particularly in the treatment of chronic illnesses, including cancer, diabetes, and CVD (Ogbunugafor et al., 2017). It is worth noting that spices have also been used to confer antibacterial properties to food (Li et al., 2022). This claim is supported by Sharma et al. (2017), who state that spices have been used to impart antibacterial properties to meals in addition to their flavour and scent. Spices were thus regarded as important conventional functional foods among participants based on the health benefits they provide.

The fourth category mentioned by the participants as being an important functional food item was **legumes, seeds, nuts, grains, cereals and bread**. **Nuts, seeds and oats** were common types of conventional functional foods important to participants: *“Nuts would be a small portion of that but always be raw not roasted I believe the roasting changes a lot of the protein, which become less beneficial, and some of the raw foods, like seeds, chia, flaxseeds, that I would always include in my shakes”*. Another participant agreed that not only are nuts an important conventional functional item to her, but also oats: *“I would say at the moment for me, nuts and oats”*.

Gunnars (2019) states that despite their high fat content, nuts and seeds are packed with nutrients that many people do not get enough of, such as magnesium and vitamin E, making these foods a nutritious snack. In addition to providing critical nutrients, seeds and nuts help prevent illness by keeping the populous healthy as time elapses, making these foods crucial in the fight against disease (Tremblay, 2018).

Lentils, cereals and whole grains were the most important conventional functional food items for some participants who indicated: *“The lentil I eat quite a lot”*, *“The cereals”*, and *“I would say whole grain breads. An easy ingredient to make foods from but the meal is also a healthier choice than white bread”*.

Grains and flours contain a common B vitamin known as folic acid, which is vital for a healthy pregnancy (Ajmera, 2020). According to Gunnars (2019), oats are an excellent source of protein and fiber, as well as being a superior source of vitamins and minerals. Another conventional functional food product mentioned by the participants was legumes, a remarkable plant-based protein source (Gunnars, 2019). To these participants, health was paramount, which is why conventional functional foods like legumes, seeds, nuts, grains, cereals, and bread were so important to them.

The last category, **dairy**, was the most important functional food item to some participants, as they explained: *“Dairy based products, just a personal preference. I tend to eat a lot of dairy sometimes, I like my cheese, yoghurts”* and *“Yoghurt – Yoghurt is really big our house”*. Probiotics, prebiotics, mushrooms, and plant food bioactive extracts, including fermented milk, yoghurt, and cheese, are the most extensively used components in the manufacturing of functional dairy foods (Martins et al., 2019). Gasmalla et al. (2017) concur dairy products are widely recognised as natural, healthful foods that include all the essential nutrients needed for a balanced diet.

Ultimately, personal choice had a role in the types of conventional functional foods that participants favoured. Their answers to the question were purely based on their preference, and not specifically related to the products being conventional functional food products. Moreover, dairy is most likely considered a modified functional food (Ajmera, 2020; Arshad et al., 2021).

This participant showed **uncertainty** when this question was posed and responded by stating:

“I agree with that. Vitamins – it is obviously your Vitamin C’s and that type of thing. But again, my answer is a little bit 50/50, because I am not one hundred percent sure what is conventional functional food”.

As Papp-Bata et al. (2018) found, it is critical to increase consumer awareness of functional foods and conserve a growing quantity of information about these foods to promote the success of functional foods.

Further investigation on participants’ knowledge and use of conventional functional foods and modified functional foods continued with a question: **“Which advantages do you think the foods that you mentioned as conventional functional foods hold?”** The following categories emerged: (1) “Health and nutritional benefits”; (2) “Availability”; and (3)

“Uncertainty”. The categories are shown in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 6.5) and provide an explanation of the categories.

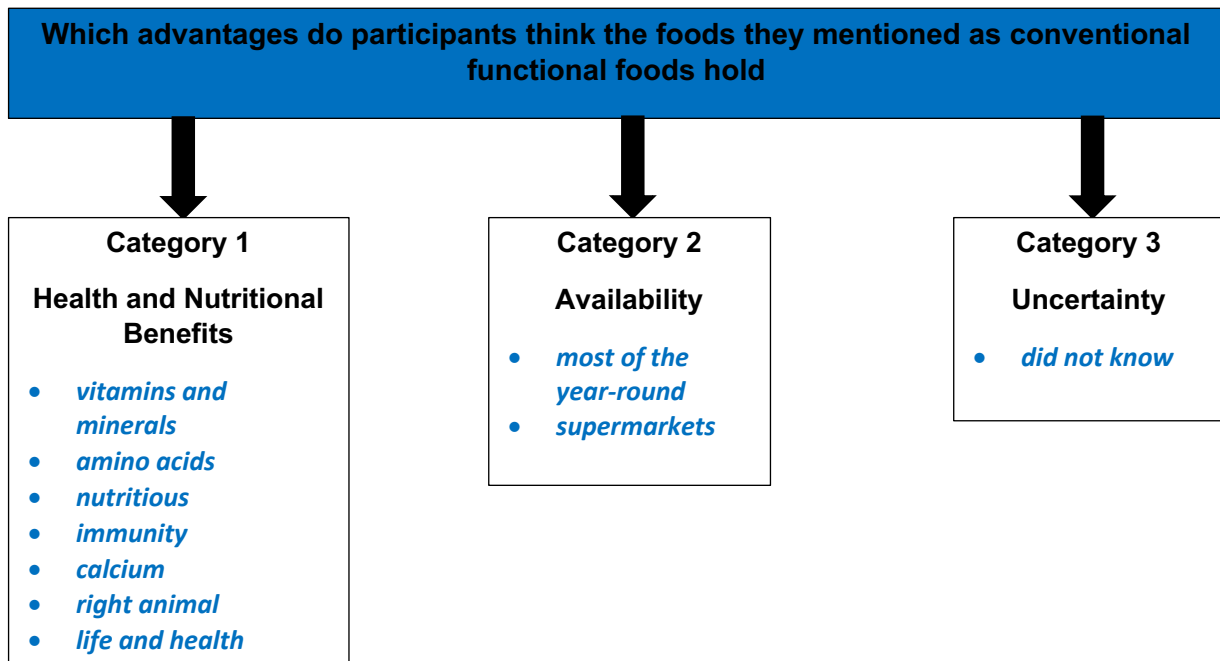


Figure 6.5: Which advantages do participants think the foods they mentioned as conventional functional foods hold?

From the data analysis, three categories emerged that reflected these types of foods' advantages. First, **health and nutritional benefits** were indicated in this quote, where a participant conveyed that these foods contain **vitamins and minerals** valuable for the body: "Yes, it is the health benefits. It aids with digestion and with body minerals and vitamins that you do not get from other foods". Another participant also specifically mentioned the different minerals, amino acids and nutrients these foods contain:

"They contribute to different minerals and amino acids and nutrients to your body which obviously, create healthy blood and the blood circulates throughout your whole body to your different organs".

To avoid nutritional deficiency, Ajmera (2020) suggests adding a wide range of functional foods into a diet, both conventional and modified, to ensure the body receives all the key elements it needs to function adequately. A participant stated that these foods are highly **nutritious** and cooking the food in a certain way will promote the desired outcome: "I think

they hold superior nutritional value, the way that they prepared also makes quite a substantial difference to the outcome you are expecting from the food once its consumed". Gaining **immunity** against certain illnesses was what this participant believed to be an advantage of conventional functional foods: *"The advantage is that there is immunity from illnesses, So one, one feels comfortable"*. Because of the high **calcium** content, these foods were a favourite of a participant, who shared:

"I just personally enjoy dealing with it, so it is very high in calcium, it is good for your bones".

Diets high in functional foods are one of the favourable methods to avoid chronic illnesses like heart disease, diabetes, and stroke (Levy, 2019). A participant mentioned specifically eating the **correct type of animal** and conveyed: *"The right animal would be probably... what I should be eating, what I should not be eating. And also, how much of it. So if I am going to have a steak then I should not have the biggest steak as I would have had and I should have more fish"*. Simply **"Life and Health"** were reported advantages that conventional functional foods hold for one participant. Nutritional and health benefits were significant advantages participants mentioned in relation to conventional functional foods.

Availability was the second advantage participants attributed to conventional functional foods. They explained, *"That I can get them most of the year-round. Yes, my side as well. Yes, the functional foods that I buy mostly are the vegetables that are fresh off the shelves and are readily available most of the year-round"*, and: *"You find this in your supermarkets when you need to go grocery shopping. It is... most of the year it is available. So, availability as well is good, when it comes to conventional foods"*.

Availability was an advantage of conventional functional foods since participants were able to attain these types of foods quite easily. Participants' feedback regarding availability aligned with previous questions posed regarding functional foods, where the availability of these types of foods meant they were easily attainable. The availability of functional foods, according to Nguyen et al. (2019), has an influence on the purchase of such foods. Vella et al. (2014) also emphasise that accentuating the health advantages of functional food items may have a significant impact on consumers' adoption of these products.

Only one participant showed **uncertainty** when this question was posed and responded by stating, *"Advantages... again, it is like mummy said, 'Take your vitamins!' I do not know hey. I would not know that one. I would be lying to you. No, I do not"*. Using her mother's remark

as an analogy, the participant reasoned that the benefits of functional foods would be important to a person's health. This is consistent with Papp-Bata et al.'s (2018) findings that the success of functional foods is dependent on improving consumers' understanding and preserving an ever-increasing amount of information about these types of foods.

After gleaning the participants' understanding and knowledge of conventional functional foods, the next question posed was, **“What do you think modified functional foods are?”** According to Tatke et al. (2018), modified foods are foods that have been supplemented with nutrients or other valuable components in order to improve their nutritional value. Modified functional foods have nutrients added that are not naturally present in the food (Tatke et al., 2018). The researcher found a few interview and focus group participants struggled to answer the question. Hence, the researcher decided to intervene and explained what modified functional foods were. Participants were then better equipped to respond to this and follow-up questions. Three categories emerged from their responses: (1) “Enhanced/modified food”; (2) “Product-like features”; and (3) “Did not know” what modified functional foods were. This is illustrated in the diagrams provided below. The most fundamental ideas are highlighted in these diagrams (indicated by the bulleted words and expressions used in Figure 6.6), and each category is broken down and explained.

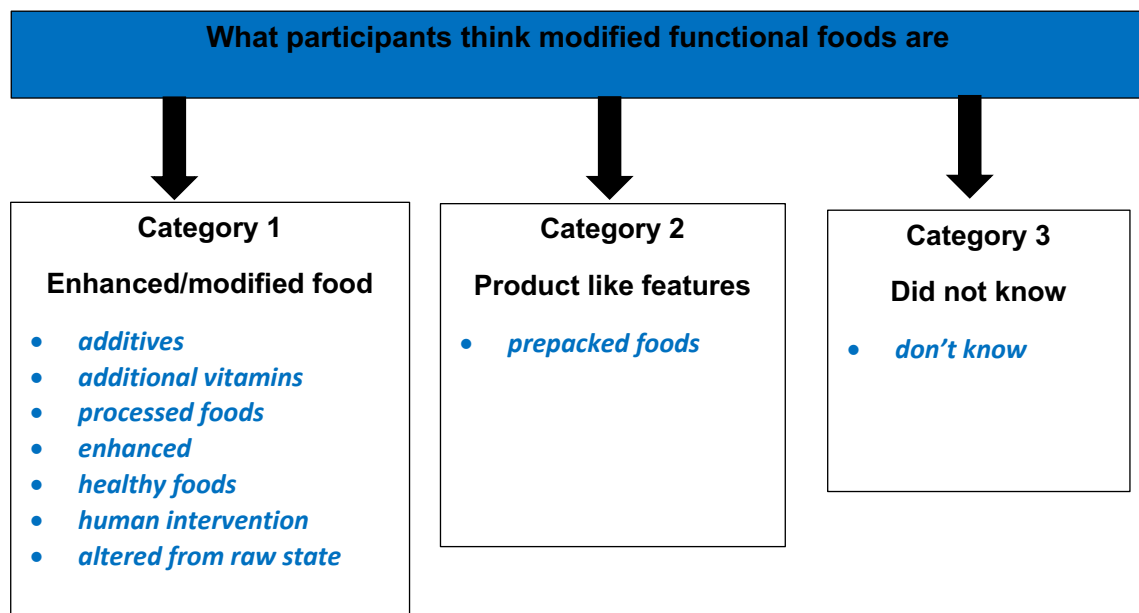


Figure 6.6: What participants think modified functional foods are

Quite a few participants claimed modified functional foods were **enhanced or modified foods** as explained by participants stating: *“Let me think now... so it might be like any sort of functional food that has been cooked into a product. Or maybe it has additives in it. Like maybe additional vitamins or enriched milk”*. Another participant said modified foods are **healthy**

foods, and are, *“things that have been modified a little bit but are still healthy for you, a healthier option”*. The following participant believed this type of food to be enhanced:

“Modified functional foods? Well, that would be more of an enhanced to like... a processed food, basically”.

Conversely, another participant claimed these foods are characterised by **human intervention** to change the products. She explained: *“I would say that it is healthy foods with a little bit of help from us and interference from us. For instance, soy. The soy plant is natural, but soy products are processed”*. Another participant also mentioned these are foods that have been **altered from their raw state** for consumption:

“They have been processed from their raw state into some... into a different form to be consumed”.

Fortified foods are highly prized because of the additional vitamins and minerals they provide, which help prevent illness (Vyas, 2018).

Product-like features were the second category considered by participants under the concept ‘modified functional foods’. A participant specifically said, *“Probably... I would say... some sort of pill? Something you would ingest in a pill form. Modified”*, and another indicated, *“I was going to say frozen, but I don’t buy frozen broccoli or whatever it is, its preference, I prefer healthy fresh products”*. These participants, unfortunately, did not know what these foods were, as explained in this participant’s response, reflecting her belief that functional foods are **repacked foods**: *“Could I say those prepacked salads are modified? Modified functional foods. I do not know”*.

Another participant also said she **did not know** what functional foods were, as she simply explained: *“Yes, I do not actually know either”* as well this participant stating: *“I do not know”*. Increasing consumer awareness and maintaining an ever-expanding amount of information regarding functional foods are essential for their success (Papp-Bata et al., 2018). Even though participants provided a response to this question, their understanding was not based on facts, but rather on the term ‘modified’ in general. They were applying the term to the context of the discussion. This understanding was not factual and thus demonstrated that, despite their efforts, participants may not clearly understand what modified functional foods actually are.

In response to the question, “**According to your opinion, which foods are modified functional foods?**” participants offered the following classifications of modified functional foods: (1) “Dairy and juices”; (2) “Cereals, granolas and breads”; (3) “Eggs”; (4) “Tinned food”; (5) “Meat, poultry and GM foods”; (6) “Did not know”; and (7) “Fermented Beverages”. The categories are shown in the diagrams that follow; these diagrams help explain the various categories (indicated by the bulleted words and expressions used in Figure 6.7) and concepts.

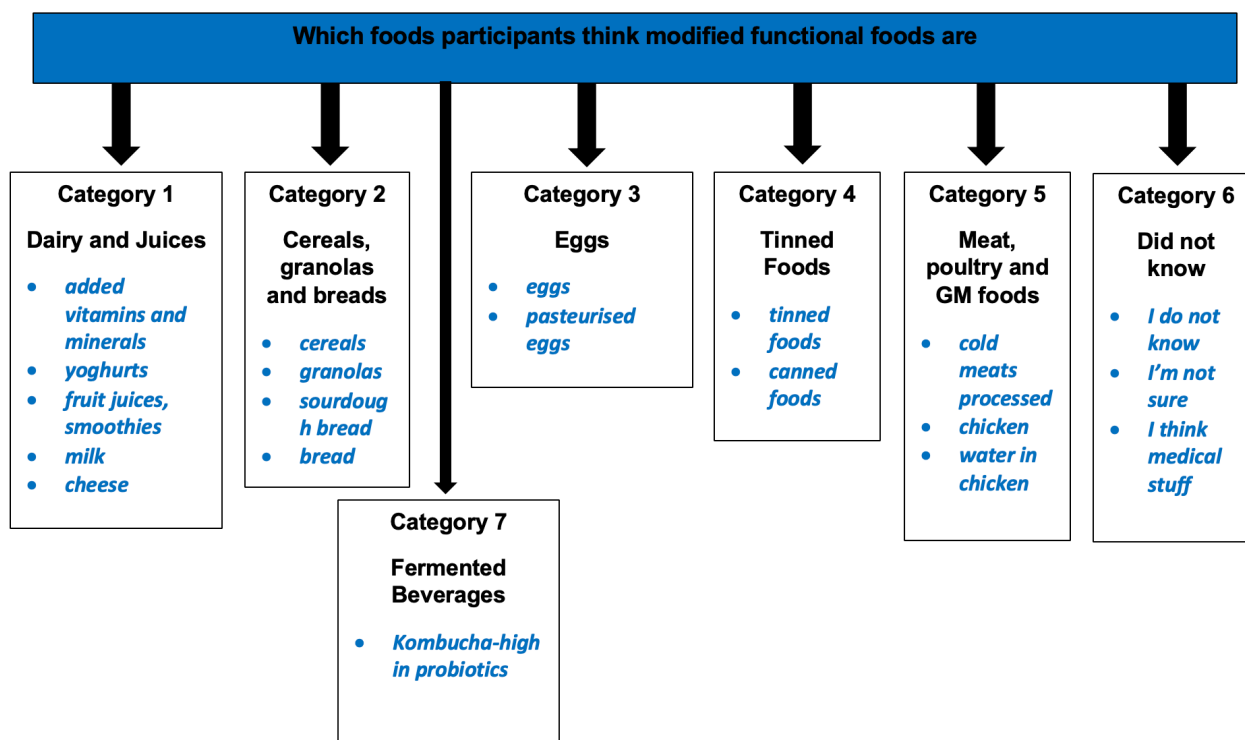


Figure 6.7: Which foods participants think modified functional foods are

The first category considered by these participants as modified functional foods were **dairy and juices**. These participants explained fruit juices contain **added vitamins and minerals**, classifying these foods as modified functional foods:

“Something like a juice – so you can have an apple juice with extra Vitamin C or something like that, something like almond milk could be a modified functional food. There are modified yoghurts and drinks like Capri”.

“Yoghurts, certain dairy products where the calcium and that has been added I also see certain spreads etc that have had additional things added into them to improve them” and “Fruit juice smoothie things, you know the ones with shots of ginger and apple whatever, cause they say they have all these vitamins and goodies”.

Fortified juices, according to Ajmera (2020), are an example of a food product that has had its health benefits increased by the inclusion of additional nutrients such as vitamins and minerals, probiotics, and fiber. Besides **fruit juices, milk, yoghurts and cheeses** were modified functional foods listed by participants: *“Dairy products - milk, cheese, that sort of thing”* and *“I would also say dairy products because some have high calcium, some have lactose removed which is healthier for some people”*. According to Mudgil and Barak (2019), milk supplemented with probiotics, prebiotics, phytosterols, antioxidants, bioactive peptides, dietary fiber, minerals, vitamins, and colostral immunoglobulins are examples of functional dairy drinks, which have a significant impact on an individual’s overall health. In support, participants’ perceptions of modified functional foods, notably dairy and juices, were that they include additional minerals and vitamins intended to promote general health and wellness.

The second category of modified functional foods, according to participants, were **cereals, granolas and breads**. One of the participants mentioned **cereals** and explained, *“Cereals, granolas, (modified to be that way) more health beneficial”*, and *“Some cereals, Like the granola”*. Link (2019) states there are several benefits to eating granola bars that are rich in healthful components, including oats, nuts, seeds, and dried fruit. This participant communicated that Bokomo cereals are modified versions of functional foods:

“Like if you have a look at Bokomo... any of the big South African/American owned like Bokomo... who does the jungle oats? So, they would be... like jungle oats have been genetically engineered. Bread flour has been”.

However, not all of their cereals would be classed as modified (Bokomo, 2020), and Jungle oats are natural wholegrain oats (Jungle Oats, 2020). Future Life was classified as a modified functional food by this participant due to the inclusion of essential vitamins and minerals:

“So you get your breakfast cereals, and everything is also modified to get to include all the vitamins and stuff into it, like I said for the Future Life. You have got the iron and Magnesium and calcium is already included in the cereal”.

In addition to protein, cereals are rich in vitamins and minerals that are advantageous to humans (Yasmin, 2017). The consumption of cereals reduces the risk of cancer and colon problems, as well as high blood sugar (Yasmin, 2017). Fiber-rich oats is one of the most effective foods for lowering cholesterol levels (Tatke et al., 2018). Oats include the active component glucan, “which has a hypoglycaemic impact, a hypocholesterolemic impact, an

influence on malignancies and hypertension” as a functional food that delivers physiological advantages (Ahmad et al., 2014, p. 17).

According to one participant, **sourdough and breads** that have been fortified with vitamins were designated as modified functional foods: “*Sourdough and obviously vitamin enriching breads*”, or this participant simply stated, “*and your breads and pastas*”. Cereals, granolas and breads may have been considered modified functional foods as these products were consumed by participants on a regular basis. They formed part of their diet, they were exposed to these foods, and were knowledgeable of these foods that have been enhanced/fortified with vitamins and minerals.

Eggs were found to be another type of modified functional food conveyed by these participants: “*Yes... they have even modified eggs. I saw that the other day when I got something*” and “*Eggs-pasteurized (modified to be that way) more health beneficial*”. According to Johnson (2016), high-quality protein sources like eggs are essential for growing children and adolescents, as well as for adults who want to stay healthy. As a complete protein source, eggs contain all necessary amino acids (Murphy, 2020). Marengo (2019) concurs that when consumed in moderation, eggs may be a nutritious supplement to a person’s diet. While participants viewed eggs as a modified functional food, their feedback was based on their exposure to eggs as a part of their daily regime.

The fourth category of modified functional foods was **tinned food**, as indicated by these participants: “*Yes. Yes. I do not know if canned/tinned food is also like a modified... They have got preservatives in them*” and “*Even canned foods. You get those canned beans... they contain those... what do you call it? To give them long shelf life*”. Participants’ perception of tinned food being a modified functional was based on the fact that they contain additives that may have potential benefits for human health. Ellis (2022) claims that canning assures a minimum shelf life of one to five years, which may be advantageous for consumers who often discard fresh products due to deterioration. Canned food retains the majority of its nutrients as this method has no effect on protein, carbohydrates, fat, vitamins A, D, E, and K (McDonnell, 2019).

It can be concluded that canned food can be called a modified functional food if it has been supplemented, enhanced, and/or fortified with vitamins and nutrients. Participants cited shelf life as their rationale for classifying tinned/canned foods as modified functional; however, there was no mention of additional vitamins and minerals being added to these foods to be included in the category of modified functional foods. This finding again reflects Papp-Bata et al.’s

(2018) claim that functional foods' success hinges on increasing consumer knowledge and maintaining an ever-expanding quantity of information about these foods.

Meat, poultry and genetically modified (GM) foods were next mentioned by participants as an example of modified functional foods: *“Cold meats are processed”,* and *“Your genetically modified chicken where they add more water into the chicken. It gives it more weight although the nutrition value, some say it increases, some say it decreases”.*

Meat and other animal products are an integral element of the standard person's diet (Ostaszewski, 2018). There are a variety of nutrients found in meat products, including soluble minerals, vitamins, vital fatty acids, and other compounds, according to Kausar et al. (2019). One of the participants said processed foods are an example of modified functional foods. According to Cohen (2019), foods that have been processed include additives that have been employed to retain their original qualities or prevent bacterial growth. Decker (2018) states that throughout history, food has been 'processed' via heating, drying, salting, smoking and pickling, and a product may be made safe or preserved using these methods.

Some participants conveyed that modified functional foods are *“Anything where it says on the packaging ‘GM’”* and where:

“One would find, you know, the labels on them You know, genetically modified or, er, so the labels would accompany the product on the shelf”.

According to Zhang et al. (2016), a biological procedure known as genetic modification affects all living organisms by altering their genetic makeup. The researcher therefore extrapolated that participants' understanding of modified functionals, specifically meats, poultry and GM foods, was that additives were added to alter the product's nutritional value.

A few participants **did not know** what modified functional foods were, as indicated by this participant: *“I don't even know what the categories of modified functional foods are”,* or *“I'm not sure”,* with another stating:

“I think medical stuff like milk of magnesia or something like that. What other things could I add? Oh, Oh! Modified. I would not call it functional food. Modified – I would say something like chips... let me just think of something else... like a sauce?”

These participants were completely unfamiliar with the term 'modified functional foods'. Participants were instructed to attempt to answer the question in a few of the online sessions. When they had difficulties and were unsure how to answer the question, the researcher intervened by explaining what modified functional foods were. Once they understood the concept, it became easier to answer this and the subsequent questions. Consumers are more likely to buy functional foods and incorporate them into their diets if they are educated about what they are and the health advantages they provide. This claim is supported by Vella et al. (2014), who state that increased knowledge about the benefits of functional foods was most often cited as a means of promoting their use.

The **fermented beverage** kombucha is high in probiotics, which are helpful bacteria that may be found in meals and the digestive system, as a result of the fermentation techniques used to create these types of foods (Panoff, 2020). One participant mentioned "Kombucha" being a modified functional food based on this awareness.

After an explanation of modified functional foods was offered, the researcher posed the question, "**Do you include these foods in your food purchases?**" Participants indicated (1) "Yes, they included these foods in their food purchases", (2) "No, they did not include these foods in their food purchases", and (3) "Probably or unknowingly or unsure". The findings are shown in the following diagrams that highlight the most important ideas (indicated by the bulleted words and expressions used in Figure 6.8) and provide an explanation of the various categories.

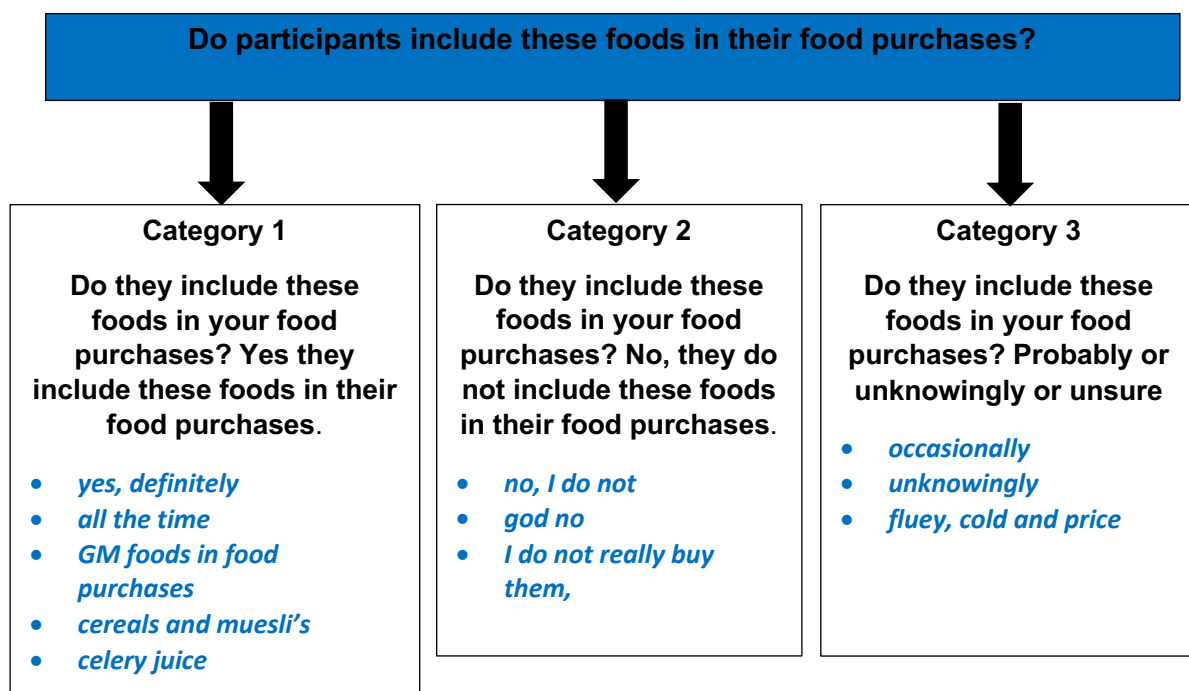


Figure 6.8: Do participants include these foods in their food purchases?

After analysing the data, it was evident a majority of participants agreed, **yes, they include these foods in their food purchases**. A handful of participants collectively stated: “Yes, *definitely*”. One participant conveyed that she included modified functional foods in her food purchases but did not do it **all the time**: “*Uh, yes, I do. I don’t buy it like very often but uhm, I, I mean I do have it sometimes, but I don’t think it is like the most important thing that I purchase*”. Another concurred: “*Yes, but a very small percentage*”.

The next few participants elaborated on including functional foods in their food purchases. A participant associated modified functional foods with GM foods when she said: “*Yes definitely. Genetically modified foods are always included in my purchases*”, and “*Yes, I do have a lot of cereal and certain things like muesli and things*”. Quite a few participants mentioned that they did include modified functional foods in their food purchases; however, based on their feedback, a few mentioned that it was not the most important thing to purchase. Conversely, one participant conveyed that her husband consuming celery juice every day was her reasoning for purchasing modified functional foods:

“I am going to say yes, because my husband has celery juice literally every day, so I am going to say yes”.

According to Davidson (2020), celery juice has a low sugar content, is rich in vitamins and minerals, and has other advantages, such as relieving inflammation and increasing hydration. This type of vegetable, however, is not classified as a modified functional food, as it naturally contains vitamins and minerals.

There were a few participants who understood what modified functional foods were, as their feedback reflected the types of foods classed as modified functional foods. However, a few deemed modified functional foods not a necessity, and this could be based on their lack of knowledge or understanding about these foods. It can be deduced that consumers will be more tolerant of modified functional foods if more information about these foods is made accessible and if they are made more aware of the existence of these foods.

Some participants said **no, they did not include these foods in their food purchases**: “*No, I do not*”, “*God no!*” and “*Shew! I do not really buy them, that is my problem. I do not really buy processed stuff*”. Only a small number of participants claimed they were **probably unknowingly or unsure** of the purchase of modified functional foods. This participant purchased these foods seldomly but preferred whole foods: “*Occasionally. I prefer whole foods if I can find them*”; whereas another participant purchased:

“The modified ones, well I guess unknowingly because I mean do they label foods as genetically modified or modified functional you know, I guess they don’t tell you outright on the package inserts they may, but I think unknowingly I may or may not”.

In terms of purchasing these types of foods, a participant responded ‘yes’ and ‘no’ since her response was based on her sentiments, and she emphasised price being a factor: *“I would say yes and no because yes if I’m feeling little bit fluey, or if I feel like I’m getting a cold then I would go get like a little citrus boost that is high in Vitamin C but also no ‘cause they generally quite expensive, the price is a bit more so I would rather just eat an orange and get the Vitamin C benefits from that”.* According to some participants, they either infrequently bought these types of foods or did so inadvertently. Increased knowledge and comprehension of functional foods was determined to be the most essential factor promoting the consumption of functional foods, according to Vella et al. (2014).

After gaining an understanding of whether or not participants in the interview and focus group sessions incorporated modified functional foods in their food purchases, the participants were asked: **“Of these products, which is the most important modified functional food item to you?”** Two categories emerged from their responses: (1) “Variety of products being fortified juices, dairy products, milk substitutes, grains, cereal and granola and eggs”; and (2) “Unsure”. The findings are reflected in the diagrams that follow; these diagrams help explain the various categories (indicated by the bulleted words and expressions used in Figure 6.9) and concepts.

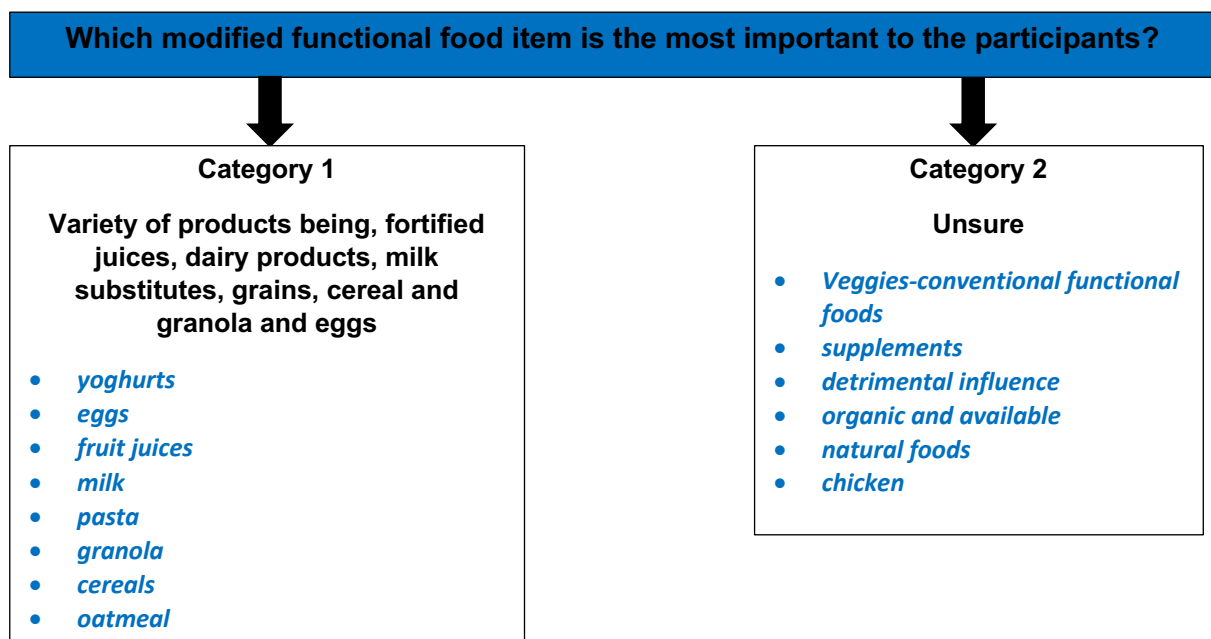


Figure 6.9: Which modified functional food item is the most important to the participants?

Participants listed a few products as the most important **modified functional food** items. **Yoghurt** was deemed an important functional food item; however, the participant did consume much of this type of product: *“Uhm, Shu, I would say maybe yoghurt, but I don’t really eat that much anymore”*. Another participant preferred the plain brands of yoghurts:

“We not big fans of flavoured yoghurts but we definitely stick with the more plain brands like for example my girls like the plain yoghurts but then you add nuts, add the honey to it to give it that granola type yoghurt feel to it so adding nutritional value to that product but it is also still healthy”.

Some participants emphasised yoghurt is important due to the probiotics they contain: *“The yoghurt. Because it is a healthier option. It also has probiotics, and it is a nice snack to have in between especially when you are hungry or you are in a rush”* and *“When you are talking modified I would probably look at probiotics and calcium - anything that has been added in... so dairy products, yoghurts”*. According to Ware (2018) and Uttakar (2021), the protein, calcium, vitamins, and living cultures or probiotics included in yoghurts may help to improve the health of the gut flora, provide bone and tooth protection, as well as maintain a healthy digestive system. Another type of modified functional food mentioned by participants was *“Eggs”*; *“Eggs as well”* and *“It would be eggs”*. Lamas et al. (2016) state that in addition to being a popular food item, eggs are a valuable source of several nutrients, including many vitamins, minerals, omega-3 fatty acids, and vital amino acids. They are also excellent sources of protein.

The other products mentioned by participants as types of modified functional foods were fruit juices (*“It is your breakfast types of things - your fibers, orange juices... that type of thing”*), milk (*“Which is the most important... if I was to choose it would probably be the modified milks, like you know, the lactose alternatives. Those would be the most important. Not because they are modified functional foods, but because they are alternatives to lactose”*), cereals, granolas and pastas (*“Well, I am looking more towards the grains side of it and cereal based. Like the pasta and granola bars... like muesli for the yoghurt and so forth”* and *“Yes, probably cereals because they have a lot of added iron”*). It can be inferred that these participants had an understanding of modified functional foods based on the types of products they listed.

Although a few participants had an understanding of modified functional foods, there were quite a few who were **unsure** about these types of foods. Some stated, *“I would go with veggies”*, which is classified more as a **conventional functional food** than a modified functional food (Ajmera, 2020). *“Soy! I eat a lot of soy products like soya chunks, soya sauce,*

soya beans. I eat a lot of soy products"; condiments were mentioned as the most important modified functional food: *"I would probably say condiments", or, "I would say like canned soups and stuff like that because it obviously has a longer shelf life"*. Participants thus appeared unfamiliar with modified functional foods, and ultimately conveyed what they thought were healthy and considered modified functional foods. One participant used **supplements**, which to her were examples of modified functional foods, but she could not list any other examples: *"Yes, again I would have to say... we do take supplements but other than that I could not tell you other than that... any modified foods"*.

One participant had an entirely different view of modified functional foods and felt they had a **detrimental influence** on her health: *"Not... none of them! Jesus! Why would anybody want to do that? You eating poison"*, whereas another participant preferred **organic** produce as she did purchase "processed foods". She shared: *"To myself, no the organic and the available are sufficient for my needs", "Shew! I do not really buy them, that is my problem. I do not really buy processed stuff"*. Eating **natural foods** was preferential for one participant who explained: *"For the most part I try and avoid modified products. Just because I am a bit more of a naturalistic person. Maybe not necessarily to my own benefit, but yes, I am more of a naturalistic person. So I believe in natural products as best as possible"*. Chicken was also mentioned as a modified functional food, but on the basis of this product being something participants consumed often, and not because it was considered a modified functional food: *"Again, I have to go with the chicken. That is one of the frequently eaten foods in my house. Chicken - all day, every day"*.

Once the most significant modified functional food items for the participants were established, it was necessary to determine, **"Which advantages do you think the foods that you mentioned as modified functional foods hold?"** Participants mentioned (1) "Health and nutritional benefits"; (2) "Availability, accessibility and convenience"; and (3) "No advantages/ did not know". These categories are shown in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 6.10) and provide an explanation of the categories.

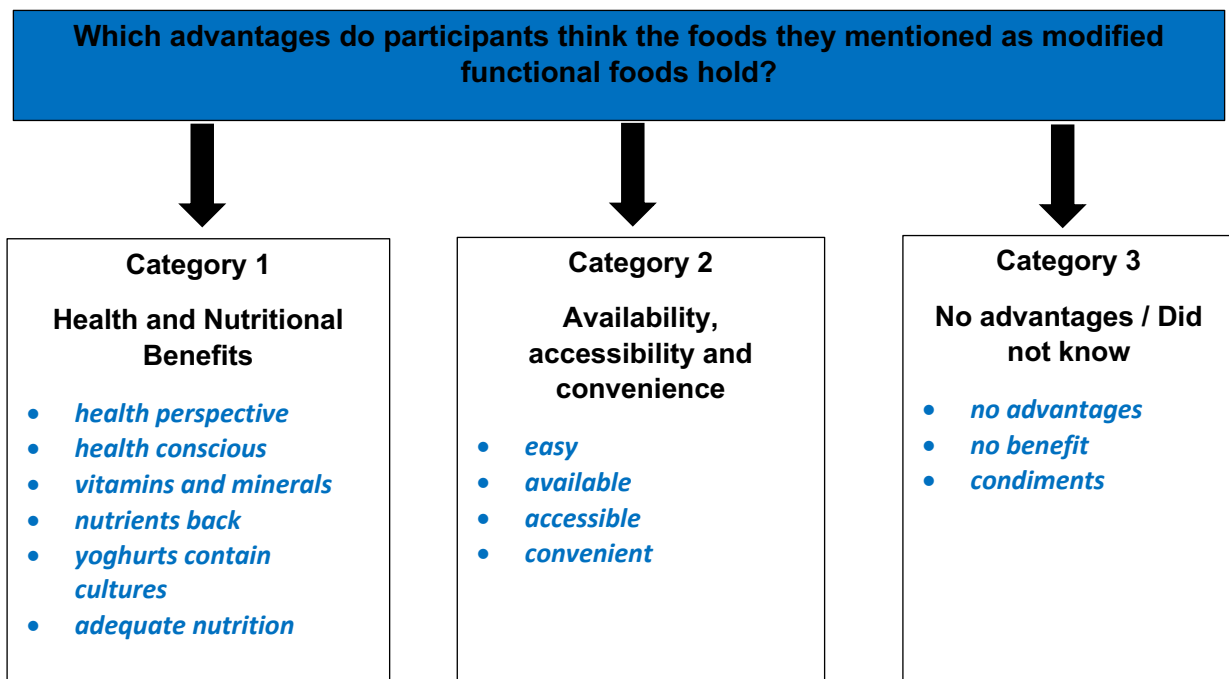


Figure 6.10: Which advantages do participants think the foods they mentioned as modified functional foods hold?

For some participants, **health and nutritional benefits** were important advantages gained from functional foods, as explained by this participant: *“Maybe just from a consumption perspective but I think probably from a health perspective”*. Another participant conveyed that being **health conscious** will promote an understanding of these products’ advantages as she stated, *“There’s advantages if you’re health conscious and understand what you’re eating”*. According to another participant, the hidden **vitamins and minerals** that modified functional foods contain are part of their advantages: *“Well, I think with the hidden minerals and vitamins like we are unaware of, yeah”*. Another participant emphasised foods that contain calcium: *“so I know like, with the dairy products, uhm, has a lot of calcium in it”*.

A participant described modified functional foods as *“I think yes, cause they put those nutrient back into the food for a reason and it just makes it more beneficial”*. According to Ajmera (2020), modified functional foods may supplement any nutritional gaps in a diet and improve health by increasing the consumption of vital elements like fibre, vitamins, minerals, probiotics and healthy fats.

Yoghurts that contain cultures were considered an advantage of modified functional food: *“I think from a dairy aspect, you get the natural cultures in the yoghurt, whilst adding your fresh fruit, nuts or honey you are making quite a nice meal, a healthy meal”* and *“The yoghurt.*

Because it is a healthier option. It also has probiotics, and it is a nice snack to have in between especially when you are hungry". According to Buendia et al. (2018), yoghurt containing probiotic bacteria has been shown to lower inflammation and cardiovascular diseases. A participant said that these foods provide one with **adequate nutrition**: *"It does give you the right nutrition"*. Functional foods, as a whole, may have a positive influence on one's health, as they help to promote optimal health while also decreasing the risk of acquiring sickness due to containing bioactive components (Grochowicz et al., 2021). Participants believed modified functional foods have health-promoting and nutritious attributes, making these types of foods a good choice to incorporate into their diets.

The next advantage conveyed by a few participants related to the **availability, accessibility and convenience** of modified functional foods. The **availability and convenience** for participants were advantages of modified functional foods, as they stated, *"Overall, there's definitely benefits in terms of how often an accessible foods are"*, or *"Easy - you just add water. It is not difficult to make. Convenient, yes"*. Another participant explained: *"I think it is convenience because now you do not have to buy the oranges anymore and press it yourself. It is done already, ready to buy"*. Participants believed these types of foods are always available because they can be purchased at any retail store, they are accessible because they can be acquired easily by the consumer, and they are convenient because the food does not need to be manually prepared since it has already been premade and pre-packaged for the consumer to simply purchase and consume.

Lastly, some participants stated that they **did not know** of any advantages of modified functional foods, and claimed these products did not have **any advantages** as they explained, *"None... Well, I suppose it depends on who... the perspective. For myself as a consumer, none"*, or another who stated *"I think we do not see an actual benefit coming from the food products available with functional additives. That is my opinion"* and, *"I would probably say condiments"*. It is likely that a lack of awareness and understanding of these types of food resulted in the participants' feedback. Their feedback was also associated with their perception of modified functional foods, which was negative. One participant conveyed that she did purchase these products, *"I cannot, because you know, I do not pursue them"*, and another stated: *"I do not know. I do not know"*. One of the most often cited ways to stimulate the use of functional foods is to raise public knowledge and comprehension (Vella et al., 2014).

The findings from the third objective, which was to explore health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods, have been concluded. This study's fourth objective, which was to identify the factors that influence the

health-conscious consumers' intention to purchase and consume functional foods are presented in the following section.

6.1.2 To identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods (Objective 4)

In order to address objective four, the next section of the online focus groups and individual interview sessions identified the factors that influence health-conscious consumers' intention to purchase and consume functional foods. The investigation of factors that influence their decision to purchase and consume functional foods commenced with a question: **“What factors would influence their decision to purchase and consume functional foods?”** From the study's analysis, five categories emerged: (1) “Availability”; (2) “Health and nutritional benefits”; (3) “Price”; (4) “External factors”; with the following subcategories: (a) “Weather”, (b) “Packaging and brand”; (5) “Quality”; (6) “Time”; and (7) “Personal”. The categories are presented in the diagrams that follow; these diagrams help explain the various categories (indicated by the bulleted words and expressions used in Figure 6.11) and concepts.

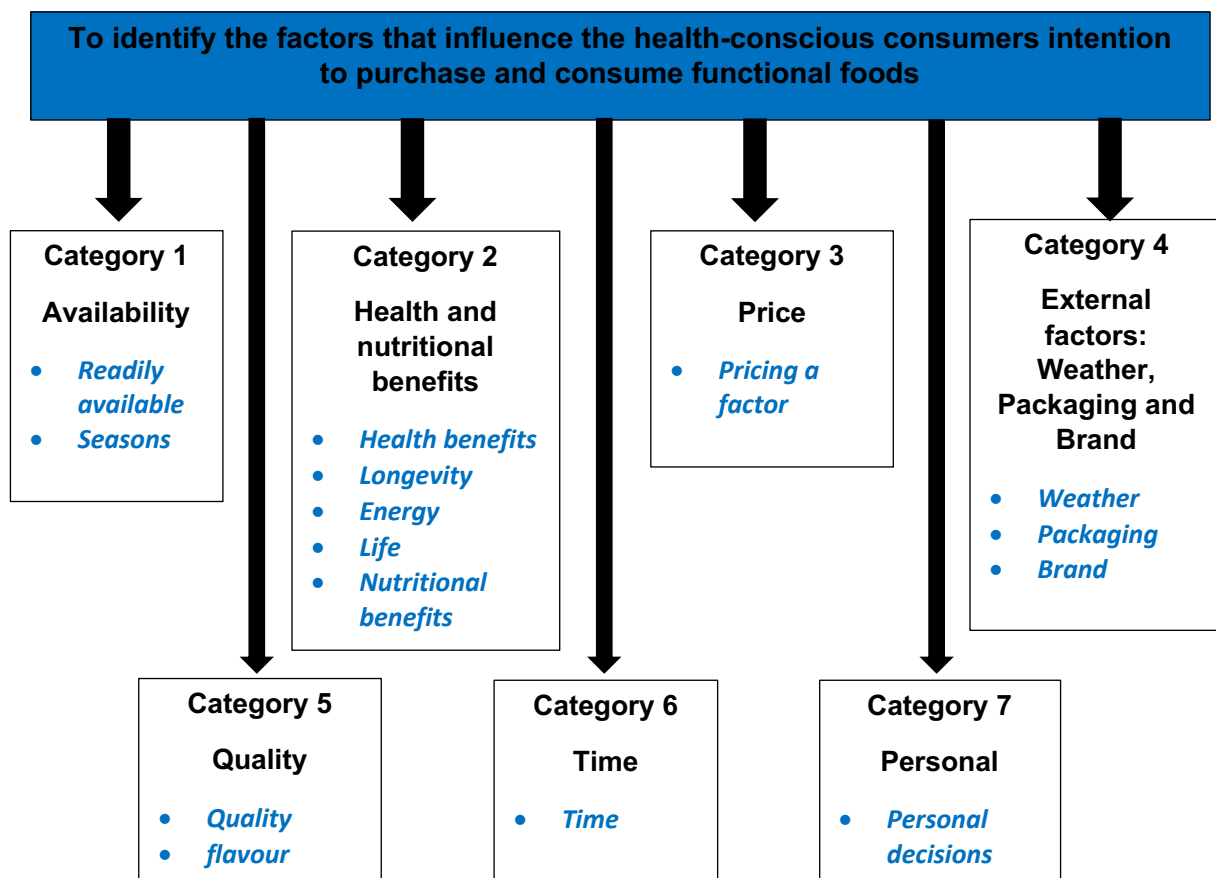


Figure 6.11: To identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods

Quite a few participants indicated **availability** is an important factor that would influence their decision to purchase and consume functional foods: *“The ready availability of functional foods from conventional retail and retail shops”* and *“if it is readily available in stores I already go to and if it is actively advertised so that I am aware of the healthier food options to purchase”*. As stated by Grand View Research (2019), among the many obstacles facing the functional foods industry, concerns related to product availability, along with assertions about inadequate nutrients produced from different functional foods, have been a significant impediment to the market’s expansion. Moreover, certain products, according to participants, are only accessible during certain **seasons**, making them difficult to find. They explained: *“It would be the availability because certain things you cannot get in certain seasons”* and *“convenience of whether it is available, like seasonal”*. According to Nguyen et al. (2019), functional foods’ availability influences consumers’ purchase of these foods. Therefore, participants’ propensity to buy functional food items will substantially increase if they are available.

The second category was **health and nutritional benefits**. Participants felt this was an important factor resulting in their decisions to purchase and consume functional food products; they explained: *“Health benefits, exercise and vitality benefits, longevity, overall health and energy”*. Other important factors resulting in the purchase and consumption of these products related to:

“Life and Health. Well, yes. Food is all about life and health, health and enjoyment of it, I suppose... would be the only domain in which food could be appreciated”.

Ajmera (2020) states that in addition to providing basic nourishment, functional foods may have a positive impact on health. According to its proponents, functional foods serve to promote optimum health while also lowering the chance of developing an illness. For the participants, the **nutritional benefits** they gained from functional foods were a significant factor. They claimed: *“I guess I mean I’m looking at the added benefits that it has in terms of you know, the minerals and vitamins that we don’t usually see”* and *“Nutrition. Well... What is your body actually getting out of the food”*. IFT (2021) concurs that the use of functional foods may aid in the prevention of nutritional deficiencies and the provision of vital nutrients in proportions greater than those required for development in the body. The health and nutritional benefits contained in these functional foods were imperative for participants, resulting in them purchasing and consuming these products. Participants acknowledged it was critical for them to make better food choices if they wanted to maintain a healthy lifestyle.

Some participants found **price** to be an integral factor in the purchase and consumption of functional food products, as indicated by these quotes: *“Price”* and: *“I was actually going to say price. And I think the pricing is definitely a big factor especially with what is going on in the world today”*.

A study by Martins et al. (2020) determined that organic foods are often believed to be of superior quality, generally healthier and more expensive; however, the consumption of these foods might be complicated by impediments such as high pricing. Nguyen et al. (2019) agree that an important aspect affecting consumer behaviour when it comes to food products, including functional foods, is the price. Consumers typically believe functional foods are overpriced, which hinders their adoption and purchases of these items. The researcher therefore concludes that despite the health and nutritional benefits functional food products provide, if the price of these products is uneconomical, it would be a deterrent for participants purchasing these products.

External factors were also found to affect participants' intention to purchase and consume functional food products. The first factor was the **weather**, as conveyed by these participants: *“Weather is also another thing that definitely factors in how I buy, so will I buy more or lemon juice or will I make more curries and all that kind of stuff”*, and: *“Funny enough the weather, so if it is cold I tend to go for more homey foods like soups and stews where if its summer time I prefer more lighter meals where you'd rather have like a plate of ham with cheese, crackers where it is a lot cooler lighter foods”*. They mentioned the weather being a factor, as it influenced the type of foods participants wanted to purchase and consume. According to Halawa (2019), humans' hunger and food intake have been proven to be affected by seasonal weather temperature variations.

The second external factor was **packaging and brand** affecting participants' purchase and consumption of functional foods as indicated by these quotes: *“The packaging”*, and *“I would say... probably brand”*. According to Contributor (2020), product packaging's ability to influence purchasing choices requires meticulous attention to detail and a strong sense of brand image. This claim is further substantiated by White (2019), stating that product packaging may have a considerable influence on a consumer's buying habits. Consumers' loyalty to a brand is an indication of the consumer's favourable opinion of the brand. Thus, having a strong relationship with certain brands encouraged participants to buy these products more often and improved their purchasing experience (Arora, 2018).

The fifth category, **quality**, was found to affect participants purchasing and consumption of functional food products. They shared: “Yes, *quality absolutely*”, and “*I will add quality. If the quality is bad then I would not buy it*”. **Flavour**, for one participant, was also an important factor:

“but for me also flavour that influences, definitely. I would not buy something if it was not functional and tasted nice”.

According to Dolezalova et al. (2016), nutritious and healthful characteristics are the foundation of food product quality. Quality and health benefits are deemed extremely significant for consumers based on their food product preferences (Ali et al., 2018). Therefore, if functional food products are not up to standard in terms of quality, consumers are less likely to purchase such products.

One participant shared **time** is an important factor influencing her decision to purchase and consume functional foods: “*I think you got to plan it some sort of plan as to what you going to have for dinner, time would be a factor*”.

Personal decisions were also mentioned by a participant, who explained, “*I think you got to plan it some sort of plan as to what you going to have for dinner, time would be a factor*”.

6.2 Conclusion

The findings for the study’s third objective, which was to explore health-conscious consumers’ knowledge and use of conventional functional foods and modified functional foods reflected very few participants understood what these kinds of foods were. Although some responses reflected the types of foods classified as conventional and modified functional foods, quite a few participants did not know what these foods were. However, this knowledge was not, in reality, accurate, and despite their best efforts, participants did not comprehend what conventional and modified functional foods genuinely are. It is reasonable to assume that consumers will have a higher level of tolerance for the aforementioned types of functional foods if they have easier access to information on these foods and if they are made more aware of the availability of these foods.

The factors that influenced participants’ decisions to purchase and consume functional foods were also identified. Various categories arose from the findings, namely availability, health and nutritional benefits, price, and external factors, with the following subcategories: weather,

packaging and brand, quality, time and personal choice. While this chapter explored health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods, and the factors that influence their intention to purchase and consume these foods, the next chapter determines the influence that attitude, subjective norms and PBC have on health-conscious consumers' intention to purchase and consume functional foods.

CHAPTER 7

FINDINGS AND DISCUSSION 3

In this chapter, the last section of data are presented and discussed using diagrams to aid in understanding and interpreting the influence that attitude, subjective norms and PBC has on health-conscious consumers' intention to purchase and consume functional foods.

7.1 Introduction

The preceding chapter established health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods. The chapter also identified the factors that influence health-conscious consumers' intention to purchase and consume functional foods. This chapter determines the influence that attitude, subjective norms and PBC has on health-conscious consumers' intention to purchase and consume functional foods.

7.1.1 The influence of attitude on health-conscious consumers' intention to purchase and consume functional foods (Objective 2)

Aiming to achieve part one of the study's second objective, the second segment of the online focus group and individual interview sessions investigated the influence that attitude (one of the elements of the TPB) had on health-conscious consumers' intention to purchase and consume functional foods. Participants' general attitudes towards purchasing and consuming functional foods were examined by asking, **“When you purchase food products, do you specifically look for functional food products?”** From the analysis, two groups of participants emerged. One group (1) specifically looked for functional food, and the other group (2) did not look for these products. These categories are illustrated using the diagrams below that refer to the most often used ideas (indicated by the bulleted words and expressions used in Figure 7.1) and provide an explanation of the multiple categories.

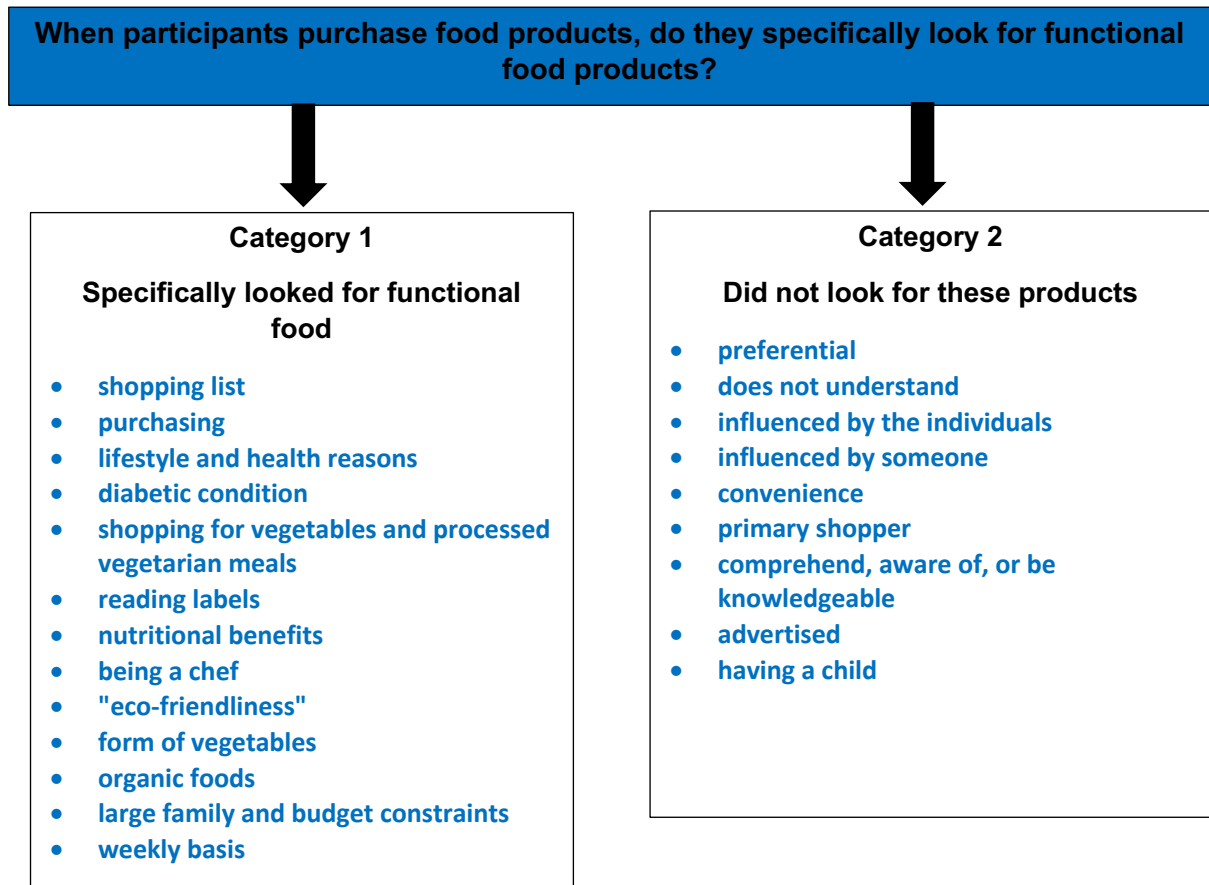


Figure 7.1: When participants purchase food products, do they specifically look for functional food products?

From the findings, it emerged that some participants looked specifically for functional food products. This was expressed by statements such as “Yes... so if I made a shopping list then I put ‘veg’. The veg that I go and search for are my functional veggies”. Another participant confirmed they included functional foods in their **purchasing**:

“Yes I do, so definitely and if there’s something else that looks interesting and is healthy then I would try it just for some variety in the house, as opposed to just buying the same thing over and over”.

According to Topolska et al. (2021), consumers first weigh the pros and cons of a food product’s numerous attributes before making a purchase decision. Although this participant sought functional food products when shopping, she indicated that price might influence her decision to purchase functional food products: “Yes. Because when we do tend to make food we go full out, but yes. It also depends on price range, of course”. In addition, Maxim et al. (2019) assert that pricing is a crucial element influencing the consumer’s choice to purchase

and/or utilise functional foods. Another participant indicated she was looking specifically to purchasing functional food products due to her **lifestyle** and for **health reasons**:

“Yes. Yes, I actually do in a way. I will not say... it is just that, it is my way of lifestyle that actually, I use a lot of fruit and vegetables for health reasons”.

This behaviour can be attributed to the fact that functional foods play an integral part in promoting a healthy diet and preventing certain illnesses (Nguyen et al., 2019). Another participant specifically mentioned her **diabetic condition** causes her to look at specifically purchasing functional food products:

“I think generally. I am actually a type one diabetic, so I try to look at foods that do not obviously have high carbohydrates or preservative influence, that are low GMO, obviously low sugar as well, if not none at all”.

Although it was not essential, participants could provide some explanation as to why they were specifically seeking out functional foods during their purchases, as reflected in the explanations above. A widely accepted consumer source, Wiley (2019), supports this view by stating that consumers want food and beverage products to fulfil a wide range of health and wellness, ethical, and environmental standards. Furthermore, one participant would only consider buying functional foods when **shopping for vegetables or processed vegetarian meals**:

“Yes, I do. So, in my purchases, if it is, let us say vegetables or even if it is processed vegetarian food items, then I will look for functional foods throughout”.

Participants were asked if they specifically look for functional food products to purchase, and the following participants described how they go about this process. One participant stated that **reading product labels** provide information on the nutrient content of the product and whether it is worth purchasing. Therefore, this act was more associated with the health aspect of the product rather than it being a functional food, as she explained: *“I do. I do. I try and get the best value. I often read the labels in a store. Like I said earlier, it is low-fat... high protein and low-fat is sort of what I look at when I am purchasing. And fresh ingredients over frozen. I prefer to get fresh”.* Another participant also misconstrued **nutritional benefits** in her understanding of functional foods:

“Absolutely, absolutely. I am also a very big believer in reading labels. So whichever products I do end up buying at the shops I always look at the labels and I make sure that the fat content is acceptable - so it is not too much added fats, it is not too much added sugars - I tend to go for products that are unsweetened, or no sugar added so it has got natural sweetness to it. Yes, so absolutely”.

This claim is further substantiated by Dowshen (2018), who states food labels are more than a source of nutritional information, which can help consumers make better food choices as part of an overall balanced diet. As a **chef**, the opportunity to learn about a wide variety of foods and their nutritional benefits made it easier for this participant to shop for functional foods since she knew exactly what they are:

“Being a Chef, you learn many things about the different types of food that you work with, and you find out things that you never knew before about certain ingredients and certain food types and stuff. So, going out and buying food, you look for something that is fresh, that is natural, that is pure, because you want the best from it. So functional foods is the way to go because that is something that has the most nutritional value in any product that you purchase”.

As seen by her comment, another participant conflated the concepts of ‘**eco-friendliness**’ with ‘functional foods’, thinking they were equivalent:

“Yes, I do. I do. Absolutely. Yes, I am a very conscious shopper. So I save all the plastic... I... first of all, I try to not buy plastic and prefer to buy glass. And I prefer to buy vegetables and fruits that are not in packaging”.

The following participant purchased functional foods in the **form of vegetables**, as she preferred to have a variety of foods on a daily basis. She explains:

“Yes I do. Because I know my children like it as well, all 3 of us enjoy the foods that I mentioned earlier, so definitely, your spinaches, what I mentioned earlier, so definitely and if there’s something else that looks interesting and is healthy then I would try it just for some variety in the house, as opposed to just buying the same thing over and over”.

Although a participant was unsure about her food selections, she confirmed she bought **organic foods**, which she equated with functional foods: *“I think I do. If I am standing at the counter and there is an organic product and there is another product. I think I would go more*

for the organic". Meanwhile, due to having a **large family and budget constraints**, this participant was unable to do so as she conveyed, *"It is ideal to choose functional foods. Unfortunately, with a large family you often go more on budget than on function. They tend to be more expensive if you are looking for functional foods that have added benefits. If it is just fruit and vegetables and that, that you know can have an effect, then that is an easy one to choose"*. Another participant mentioned no issues with the purchasing of these types of foods and did it on a **weekly basis**: *"Weekly, yes. Not over the weekend. I like chilling and..."*.

The second group of participants, however, stated **no, they did specifically purchase functional food products**. A participant stated it was a **preferential** matter for her as she consumed foods based on how she felt or what she craved: *"No personal preference or you know, what I'm feeling for or what I have, what I've been craving for most of the time, yeah"*. Another participant did not look at functional food items because she **did not understand** what they are:

"Ya I don't think I specifically look at things to see whether they're functional food products because I'm not, I'm not a hundred percent about you know, what the term means and those types of things".

In order to increase interest in functional foods, consumers must have a better understanding of their health benefits (Papp-Bata & Szakaly, 2020). As shown by this participant, the food she bought was **influenced by the individuals** she lives with: *"I would say no, because I live in house with a lot of people, so obviously we shop more on price value, it is more like quantity over quality"*. In another instance, a participant said she would only purchase "healthy foods" if she's **influenced by someone** to do so: *"No, not really. Only if I come across something that somebody told me it is healthy"*.

Buying functional foods has an immediate impact on consumers' purposeful behaviour, according to Rezai et al. (2012). A participant reportedly made purchases due to **convenience** as she indicated: *"Not always. I sometimes just grab the junk food because it is quick, and it is tasty"*. As he mentioned, one participant's wife was the **primary shopper** in their household: *"I would say no, I do not but my wife, does. She definitely does"*. According to another's explanation, she did not buy functional foods because she did not fully **comprehend, was aware of, or knowledgeable** of the term: *"Ya I don't think I specifically look at things to see whether they're functional food products because I'm not, I'm not a hundred percent about you know, what the term means and those types of things"*. If functional foods were better **advertised**, it would entice the following participant to pursue these types of foods:

“I do not specifically look for functional foods if I was to be shopping but if it was in the same display and it was around the same cost but it was advertised that it was better, then I would probably go for that option”.

As a result of **having a child**, this participant considered the nutritional value of particular goods while purchasing food:

“No, not everything, just certain things. So mainly things that I am buying for my baby, then I look up the nutritional value... if it has added sugars and all of that. For me when it comes to like snacks for my work or my breakfast cereals or things like that. That is when I look up, because I know some of them have a lot of sugar in them. So I try and stay away from those ones”.

The participants in this group therefore did not explicitly purchase functional food items as a result of their lifestyle, preference for what/when to eat, quantity, being influenced by other people, and lack of awareness of functional foods. Consequently, it seems from their rationale they did not exhibit any deeply committed functional food behaviour.

Following the evaluation of whether or not these individuals purchased functional foods, the next question was: **“Were you always keen on purchasing functional foods? If not, why, and if yes, why was it important to you?”** Two common categories emerged: (1) “Health-related” and (2) “Not keen/Lack the understanding of functional foods”. The categories are reflected in the diagrams below, making reference to the most often used ideas (indicated by the bulleted words and expressions used in Figure 7.2) and providing an explanation of the multiple categories.

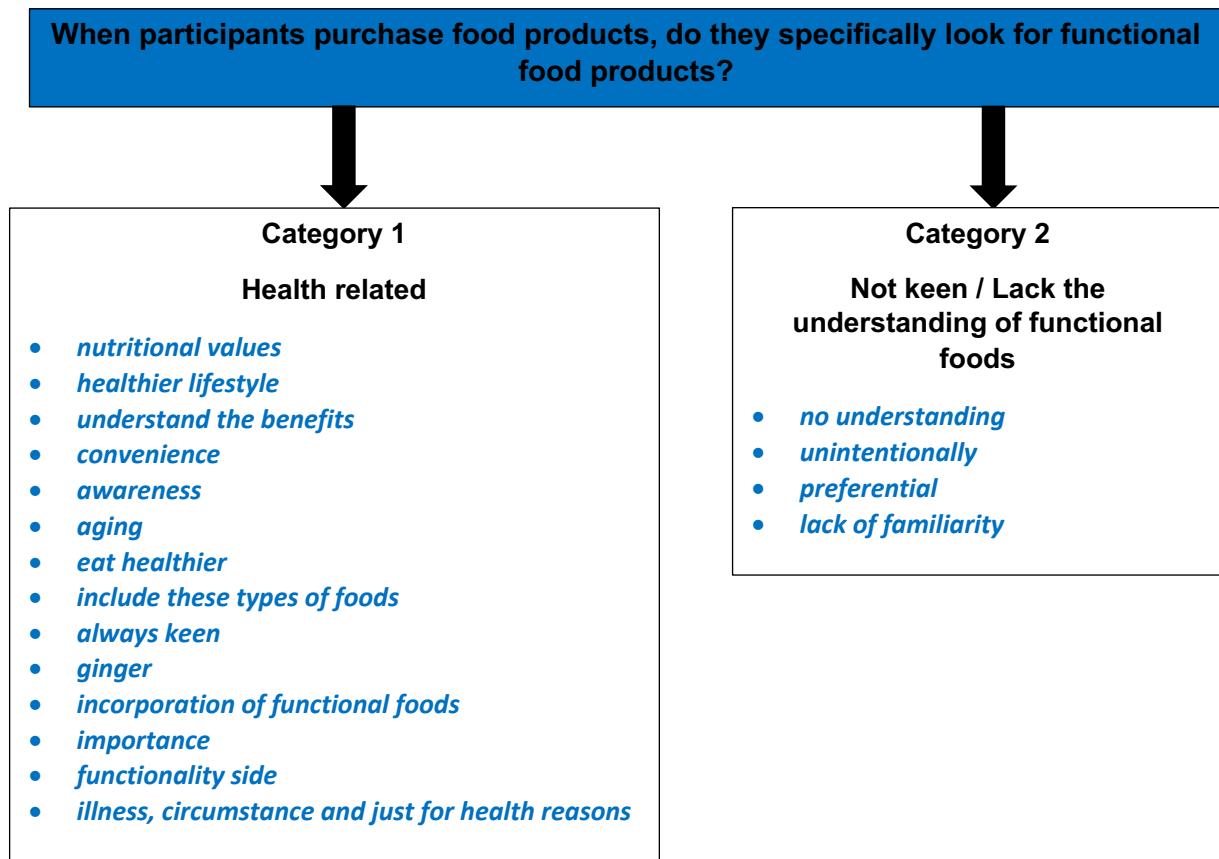


Figure 7.2: When participants purchase food products, do they specifically look for functional food products?

The **nutritional values** that specific foods contained enticed a participant to purchase these: “Yes, I was always told that certain foods had nutritional sources that were important to include in my diet”. Based on this participant’s response, health is a major factor contributing to her including functional foods in her diet. Another participant only made some changes to her diet later on in life due to wanting to lead a **healthier lifestyle**. She indicated:

“I changed my diet sort of midway through my 20’s toward a more healthier balanced diet. Reason being I’m very focused on living a healthy life and into old age and I believe eating the right food products”.

The following participants were exposed to functional foods and **understood the benefits** that these foods provide: “Yes, I’ve always, uh, I’ve always been buying functional foods. I think it is just the way I grew up. I grew up with my granny and they always used to make sure I eat healthy”, and “Yes, I suppose it is your upbringing. I was brought up with the knowledge that it is important to eat healthily”. Based on the participants’ background (influenced by a

friend or family member) and lifestyle, they were interested in functional foods because they wanted to lead a healthy lifestyle. **Convenience**, to another participant, was vital, as well as purchasing “healthy foods”:

“So, at times I try to just find things that will work for me instead of like... making it... decreasing my sugar levels”, “after having had children and as you get older, I have just become a lot more aware of healthy eating and purchasing the right products”.

Having an **awareness** of the health advantages of various foods will make it easier for some participants to buy functional food products. A participant pointed out, *“So, when you eventually understand the whole process of what goes on to food and how it is made and how it can be modified, you immediately move towards functional foods because you want the best quality and the best nutritional value of food”*. According to Kraus (2015), it was determined that the health benefits of good nutrition arising from increased health awareness and health-promoting acts, as well as the pleasure of eating and the enhancement of physical attributes, were the most significant reasons for individuals to consume functional food.

Another participant claimed functional foods become more essential as a result of **ageing**, and she associated these foods with present health conditions: *“But I think the older I have got, the more important it has become. So, I definitely think it relates to your current health issues”*. Whereas this participant said that a person is more likely to seek out functional foods while trying to **eat healthier**: *“I think when you make an effort to improve your eating habits then I think you look for functional food”*. A participant mentioned she was initially not keen on purchasing functional foods, but it became evident that she needed to **include these types of foods** in her diet. She conveyed: *“Initially, no, we were not but it became quite apparent that I need to have a lot more of the functionals in my diet”*. The following participant was **always keen** to purchase functional foods but had no interest in these types of foods until she had her child:

“So I have always been aware of it, but I have not been so interested personally but when I had my baby, then that is when I got more interested in it because I was very interested in what I was putting into her body”.

By being told to give **ginger** a try instead of depending excessively on medication, this participant became interested in functional foods: *“For me it... I was keen just to see if they would actually help because I think our society is so dependent on pills. So, when I was told that, no, instead of relying heavily on pills, why do I not try ginger and that is how I actually got*

keen". Antioxidants included in ginger may help fight chronic illnesses such as high blood pressure, heart disease, and lung ailments, as well as promote graceful ageing (Ratini, 2020). Due to this participant's health problems, her **incorporation of functional foods** became more prevalent as she stated: *"Initially, no, we were not but it became quite apparent that I need to have a lot more of the functionals in my diet. So, it became a point of we need to have this to keep my heart and my weight down"*. Another participant explained:

"Well, I would not say not always keen... I always wanted things that taste nice. And I never realised... all the... how can I say? The admin, for lack of a better word, of buying food or eating. I was not conscious. I would just eat what tastes nice before I was more informed. I would say maybe when I was younger but as I read more, started studying more, reading more books, I became more enlightened on diseases and stuff like that. And then I became more health conscious. So actually, reading actually helped me in that".

As another participant got older, she started to realise the **importance** of incorporating these types of foods into her diet: *"No, it hasn't been, but it is become, er, I've become aware of it as one matures, and one engage and one sees the benefits from it"*. This participant, conversely, relayed that her understanding is more focused on the **functionality side** of the product rather than what these products actually are:

"I have to go with a yes and no, on that one, for functional foods but some of them are just to make much easier purposes. Just buy whatever you can get. For example, that pre-made sources. (laughs) So that is not exactly the most healthy or functional, but it works".

The next few participants were not always interested in purchasing functional foods, but **illness, circumstance and just for health reasons** enticed them to buy these foods: *"No, I was not all the time conscious or keen on always purchasing it. We were young and stupid, so nobody cared about eating healthy. And we have grown up and are getting older (laughs) and the joints are starting to pain (laughter) and we tend to lean towards the healthy stuff"*. Being a diabetic changed a participant's perspective of the types of foods she consumed, and she stated, *"I am not... I have been keen on it since I became diabetic. I watch... because by speaking to dietitians, they tell you what is high in salt... I mean in sugar... and for me the foods that I like is the highest in sugar. So, at times I try to just find things that will work for me instead of like... making it... decreasing my sugar levels"*. Moreover, maintaining a healthy lifestyle was imperative for this participant, *"I was not always keen, just two years ago where*

I really gave attention to the health that I kept and the type of foods that I ate. It has only been for the past two years”.

The next few participants were either **not keen or lacked an understanding of functional foods**, as conveyed by this participant: *“uh, I think just to reiterate, no, I haven’t been very aware of buying just functional foods because I haven’t been exposed to what the, you know, what functional foods really are, and how they benefit you. So, I don’t think I’ve ever used, like uhm my shopping or, or shopped for functional foods specifically”.* **Not having an understanding** of functional food was ultimately a deterrent for participants purchasing these foods. In one’s opinion, she most likely bought these items **unintentionally**: *“So unintentional I guess but I have to be honest, when I’m purchasing it is not that I’m looking out to, you know, get the functional food basically”.* Another participant mentioned she makes **preferential** choices, and she equated functional foods to health foods when she said: *“Okay for me it is a no because it is actually a personal choice for me. Because I do not eat a lot of things, so I actually buy just things that I actually eat and sometimes it could be healthy and sometimes it could not be healthy”.* A **lack of familiarity** with these foods was the primary reason one was unable to make a purchase:

“Probably not something that I have been aware of doing and as the other participant said, it is probably because I am a bit young, and I have not thought of the health implications of food. It is something I have thought of but not in-depth”.

For this study, participants were informed about the inclusion criteria, such as “having heard about functional foods, been exposed to functional foods, or perceived themselves to be knowledgeable about functional foods”. This group’s responses to this question on functional foods may be superficial and not as thorough as other participants who were deeply engaged in functional foods.

Once the researcher determined whether participants were always keen to purchase functional foods, she further explored health-conscious consumers’ intentions to purchase and consume functional foods with the question, **“Has your idea about functional foods changed in any way? What do you attribute it to?”** From the data analysis, two categories emerged reflecting participants’ reasons: (1) “Health and lifestyle-related” and (2) “Media content influence”. These are shown in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 7.3) and provide an explanation of the categories.

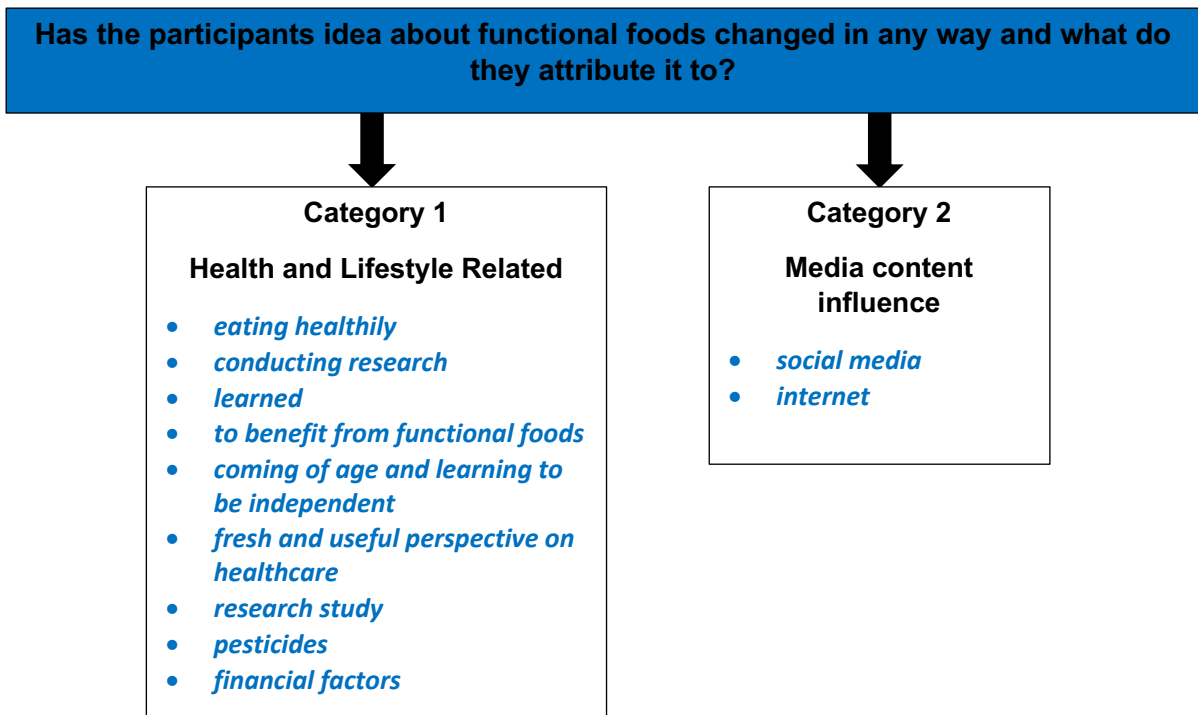


Figure 7.3: Has the participants’ ideas about functional foods changed in any way, and what do they attribute it to?

For some, the concept of functional foods was centred around **health and lifestyle**, as expressed by this participant, who explained that she simply believed **eating healthily** makes her feel better about herself. This was the catalyst that moved her in the direction of purchasing functional foods: “Uhm, I just think if you eat healthy, you feel better about yourself. You actually function better you feel more awake”. It has been determined that the consumption of a nutritious diet provides several health advantages, including the development of strong bones, heart protection, illness prevention, and mood enhancement (Crichton-Stuart, 2020). In another case, a participant was introduced to the phrase ‘functional foods’ after **conducting research** and acquiring information on these types of foods, which changed her opinion in terms of her own health:

“Well, I guess now coz I’ve read up on it and I’ve gained my knowledge, the little that I’ve gained on so I would say now it is changed, Again, I would say that it changed from a point of my health as I got older, I tend to realise that things had to change”.

According to Pradani (2021), reading is significant since it is used to gain information and facts, promoting the reader’s development. According to a participant’s assertion, she **learned** about ‘health foods’ and gained a better understanding of their functions and benefits:

“Well, yes. I have learnt... even though I have been in kitchens and using foods my whole life, I have learnt the nutritional value and what value certain food groups... or functions certain food groups have in your life. It actually has a function to fulfil in your daily lifestyle for health reasons”.

The responses from this group of participants suggest that in order **to benefit from functional foods** they made certain decisions about their diet and leading a healthier lifestyle: *“Yes, most certainly. I think, my years because I am not getting any younger and obviously, I want to ensure... more better longevity”,* and *“Definitely a positive perspective, I just... like you can feel that your lifestyle is better. You feel healthier. You feel like you can get things done”* and this participant stated, *“Again, I would say that it changed from a point of my health as I got older, I tend to realise that things had to change”.* This view is in line with Hickman’s (2021) assertion that by eating healthfully on a daily basis, one’s bodily processes and functions improve greatly, resulting in a general feeling of well-being. **Coming of age and learning to be independent** also resulted in participants having a choice in the types of food to consume. They stated: *“It has changed, yes. Because with this... I only recently came of age to do everything on my own. I always had the mother to do everything. So starting when I have to try and finalise everything I started... the choices I made started to differ from what was used to be made for me, so yes”* and:

“Yes, it has. A while back my son... about a year/a year and a half ago, my son moved out... my youngest son and he did not like a lot of the things that I would now be eating... like I would make a lot of roasted vegetables and stuff like that. He did not like to eat that. He was always into the potato and meat and stuff like that. Whereas now I have changed. I have actually got a lot of more variety in my diet”.

One participant claimed that going through the COVID-19 epidemic provided her with a **fresh and useful perspective on healthcare**. She said: *“So, from my perspective, I actually think that with Covid and being in Lockdown and realising how important your health is, I have started making more conscious decisions. Most of my friends are very health conscious so I do get picked on. And after this conversation I think I am going to land up having to spend a lot more money on food! (laughs)”.* On the other hand, another participant conveyed that her idea of functional foods had changed, but she attributed this to the **research study**. She mentioned: *“It has changed quite a bit. Like as I said I had a terrible sort of before but going through these questions I have a slightly better understanding of what functional foods actually are”.*

All participants in the research were informed of the inclusion criteria, which included factors like “having heard of functional foods, being exposed to functional foods, or perceiving themselves to be knowledgeable about functional foods”. It is possible that some answers to this question on functional foods might be shallow and not as comprehensive as the responses of other participants fully involved in functional foods for a longer period.

By no longer using **pesticides** in her garden, a participant changed her opinion about functional foods. She now cultivates organic produce, which she likely equates to functional foods:

“Yes, we constantly learning about new things. I have recently only stumbled on permaculture because I stopped using pesticides in the garden. So that would not have changed my way, I would have lived and done gardening as... because you just normally spray the pesticides on without thinking what it does”.

Financial factors also had a significant influence on one participant’s views and understanding of functional foods: *“Yes, I have to say my ideas and my understanding of functional foods had been greatly influenced financially”.*

The second aspect that participants attributed to their idea about functional foods changing was **media content influence**. They explained, *“More positive, I mean you can see that it is becoming more socially acceptable. There are videos out there these days where people are saying ‘Oh, if you eat kimchi you will live until 100’”, and “Yes, a lot. The more I read, the more I actually research and watch and whatever... and even observe how my body reacts to certain foods”.* According to Folkvord et al. (2020), following others on social media has become a major part of everyday life for millions of people across the globe. In order to reach followers, food marketers have begun working with well-known ‘social influencers’ who use their online platforms to promote food items and services to their audiences. In another case, a participant concurred that **social media** has an influence on a person, based on what she inferred: *“Yes, you get people who believe in intermittent fasting, where it doesn’t matter what you eat you just can’t eat in certain periods of time, so think social media especially is very big impact on it cause you always get these videos of how to lose weight very quickly / do you want to bulk up and go to gym”.* Another participant felt the **internet** is the most convenient and powerful source of deriving any information at a given time:

“I would say, yes. I think with knowledge being at our fingertips, such as Google and that, we have basically more access and more awareness, especially because it is about something that I am interested in”.

Qutteina et al. (2019) found that using social media influencers for food marketing seems to have a positive effect, at least in terms of eating preferences and habits. This view is further substantiated by Lynn et al. (2020), who reported that, as a significant source of health information, social media has emerged as a powerful tool.

Having demonstrated all the participants' ideas about whether their view of functional foods has changed in any way and what they attributed this to, it was then necessary to determine, **“What role has your health consciousness played in your purchase and consumption of functional foods?”**. Through the participants' responses to this question, two categories emerged from the data analysis: (1) “Health consciousness did play a significant role in the purchase and consumption of functional foods”; and (2) “Health consciousness did not play a significant role in the purchase and consumption of functional foods”. The categories are presented in the diagrams that follow; these help explain the various categories (indicated by the bulleted words and expressions used in Figure 7.4) and concepts.

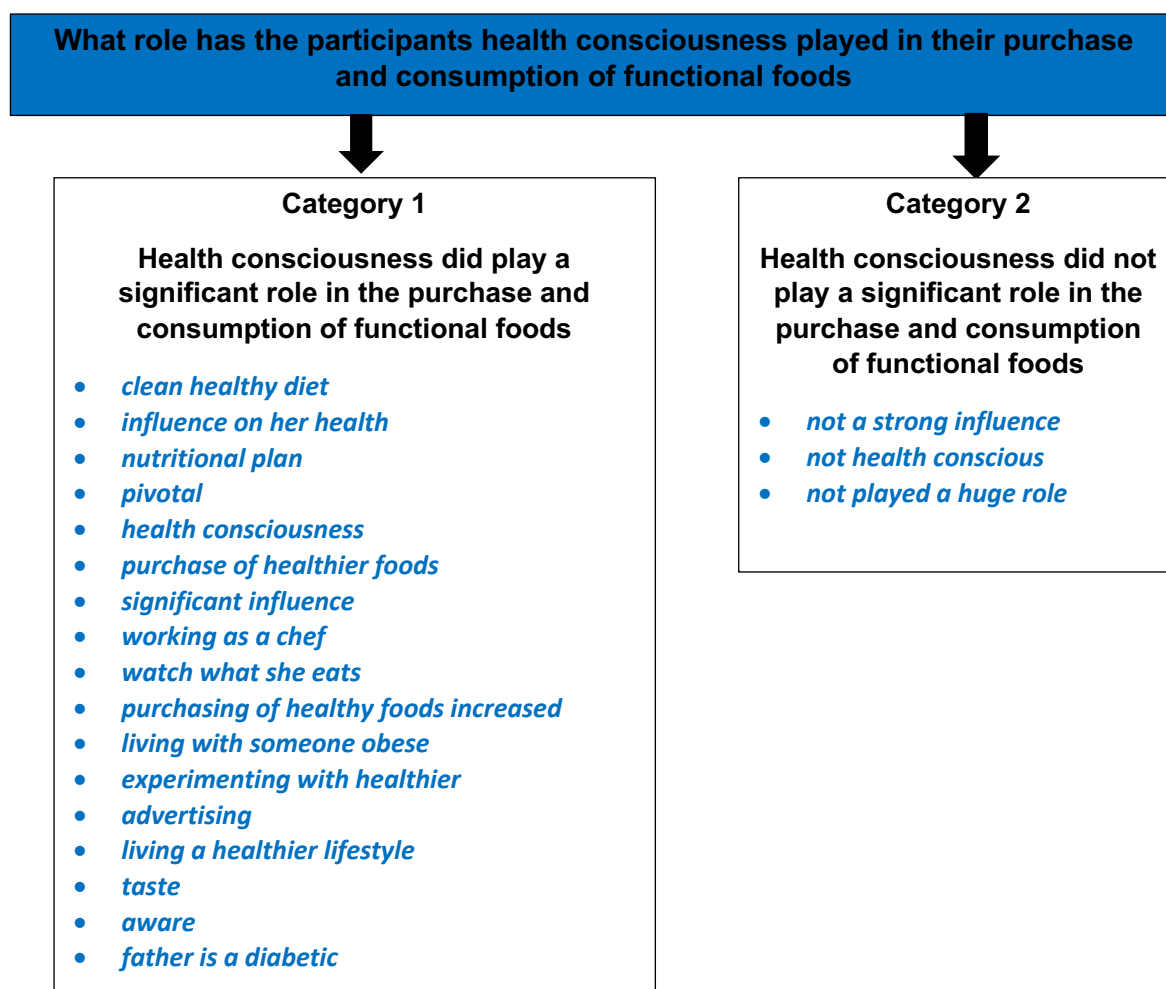


Figure 7.4: Which modified functional food item is the most important to the participants?

In some instances, **health consciousness did play a significant role in the purchase and consumption of functional foods**. A participant explained that in her early teens to mid-20s, she did not think food would have any influence on her until she switched over and kept a **clean, healthy diet**. She conveyed,

“Yes... I mean it is important, it has played a significant role in you purchasing and consuming these types of foods”, “I think when your early teens to mid-20s you kind of don’t have any effect on food or any noticeable effect until you actually only change over and keep a clean healthy diet”.

Another participant claimed that a substantial **influence on her health** related to the types of foods she consumed as well as her family’s concerns:

“I would say quite, quite, drastically actually. We have had to really have a look at and exactly see what I am eating and also with my family issues”.

This finding is supported by Arshad et al. (2021), who believe healthy food items that claim to improve health beyond delivering essential nutrients are passionately supported by consumers, which is likely to result in lower mortality and general well-being. According to one participant, it played a significant part in forming the foundation for her **nutritional plan**, and her family adopted a new way of eating: *“A big role. It defines my diet. It defines what I eat and even in the house, they have changed their way of eating”.* *“I think just living a healthier life and feeling better”* is simply the role her health consciousness played in her purchase and consumption of functional foods. Consuming foods that were **pivotal** for this participant reflected the role her health consciousness played, as she explained:

“if anything, I’d, I’m, I am pretty uhm, strict when it comes to, especially because I live alone. I try my best to stay as healthy as possible so, in that sense then I think it is played quite a large role In me trying to find foods that are as beneficial as possible for me”, and this participant stated, *“100% Er, I think about the things that I eat, the things that will digest, the things that, er, are not bulky. So, I look at it from an overall, er, awareness point of view”.*

When it came to purchasing and consuming functional foods, **health consciousness** was very important to participants who stated: *“The role it has played... it has just made me think a little bit more about what I am putting in my body. It has played a significant role”* or *“My health - I recently went to hospital due to a gallbladder operation. So, everything consists for*

my body. I need to eat in a way to try and prevent getting pains because those pains are not the most wonderful to have. So with that, I had to cut off on a lot of stuff that I used to eat. So, my health precaution became a lot better after that, because I tend to cut out like the bread and everything now because it has a different effect on the body”.

The next few participants emphasised how their health consciousness prompted them to **purchase healthier foods**: *“It definitely got me to purchase more healthier foods and the whole foods, fresh vegetables, fruits. Not food that have a lot of preservatives in them, I try and stay away from them, so it changed my shopping list a bit”* and make better food choices: *“Well, I definitely make better choices now than I would before. We definitely get a lot more raw foods in our diet. As opposed to snacking on things like chips and chocolate since we definitely buy more healthy alternatives like nuts and biltong and drink more water and all those things”*. A participant reported the significant role health consciousness had played, due to her mom having diabetes:

“Okay, I will say it has a huge role on my health consciousness. So, my mom was diabetic and of course diabetes is hereditary so down the line, eventually, I might get it if I do not take care of what I eat and my lifestyle. Also, that alone played a major role in changing what I do eat”.

Health consciousness had a **significant influence** on this participant’s life, as seen by her expressions: *“Yes, it has played a really significant role in my consciousness. Regarding my purchases and the type of stuff that I buy, and I am conscious all the time of trying to understand what I am eating, and I try to visualise (laughs) what it is helping with”*. Another this claimed that **working as a chef** exposed her to a wide variety of meals, making it difficult to make healthy choices. Yet, at home, she followed a rigorously healthy diet:

“A huge role. Yes, so being a Chef, it is very, very easy to just eat the wrong foods. I mean we are in a kitchen all day long, we are cooking very nice foods, not necessarily healthy foods, because face it, that is not what people want when they go to a restaurant... at least most people go to a restaurant and they want a giant steak and chips and you know, not the healthy stuff. So as a Chef it is very, very easy to pick, you taste here, and you taste there, and you taste here and you taste there. Whereas at home, for me, it is important that I concentrate on the healthier foods because at work there is very little healthy food”.

Because she enjoys working out, one participant opted to **watch what she eats** as she explained, “So, for me, I have been... the role it has played is that I chose being cautious regarding the things I eat because of my love for gym. I am always trying to be in good shape and having the perfect body”. The role health consciousness played included: “When... I have gone and purchased food. It has been something that has been there in my mind. Most of the time I make sure that I do not get just junk food, as I was saying earlier. But I normally get things that I find that I enjoy and make sure that our house has enough of it. Like, the health factor would be ... like, I would still think about it but it will be second to, if I enjoyed the taste of it”. One participant’s **purchasing of healthy foods increased** as she conveyed:

“I would say that my ability to purchase more healthy foods... like I said, I am subconsciously always thinking about it. Because obviously you start getting to an age where you start worrying about your longevity and if you are going to be around long enough. So... your mindset does change as you get older”.

Research conducted by Hoque et al. (2018) revealed a link between consumers’ health awareness and functional foods, and health consciousness appeared to influence their preferences, leading to their buying intentions for foods. **Living with someone who is obese** thus had an impact on one participant, helping her think about the types of foods she consumes:

“For me personally I live with someone who is obese, and I think when I look at her and I see her food habits on how she eats excessively, its very glutinous, the types of food that she eats and the quantities, and I think personally I don’t even want to get to that point, where I’m glutinous with food. I think I try and eat less quantity of what they eating and more veges greens nutritious food which is also a little bit detrimental because I get to the point where the meal that is prepared is very fatty and groce and I’m not going to eat that, because I don’t want to end up looking like this person for example”.

Another participant showed an interest in **experimenting with healthier** dishes to see if she was in favour of them: “Yes, I would say I agree. And also, when you have the opportunity to look up healthier recipes and see those certain products, then obviously that would play a role in going for that particular product because ‘Maybe it would taste good? Okay, it does not, so let us try another one next time’... you know”.

Advertising played an integral role in leading to a participant’s consumption of functional foods. She mentioned: “Healthwise, consciousness has not really played on it. It was just a

matter of trying. And I mean, there is a lot of advertising now going around somewhat to us... (to an) extent. So, it plays on your mind in that sort of role. To purchase? Again, if it is stuff that looks good out there then you tend to... you know, it plays on your mind to purchase it and try it". Another participant shared that she had become accustomed to **living a healthier lifestyle** as she said, "I grew into that lifestyle where, if I am going to cook something, it is fresh. I do not get it out of a packet. Or I do not use it out of a can, it is all fresh. So that is what I would say contributed to this". **Taste**, to this participant, was more essential than health, as she expressed:

"I would say... like I said when I was vegan that I would keep it in mind but it does not determine exactly what I would buy. I would still buy foods that taste good. So I would say I rather just base what I buy on taste instead of how healthy and functional it is in your body".

One participant was mindfully **aware** of consuming healthy foods. However, she did not necessarily follow through with it, and she stated, "I would have to do the grown-up choice and say that I would be more concerned about the health factor but unfortunately, I think that food is often an emotional purchase as well. So you wanting things that will bring some joy to the day and not be in Lockdown all the time. So... Yes, you are aware more that there is health consequences to your food and that you should be doing it but often the will is not as strong as what you want it to be". For another, the motivating factor that enticed her to consume healthier foods was the fact that her **father is a diabetic**. She mentioned, "My dad is a diabetic so... yes. It makes you especially... I think if you eat more healthier, you feel healthier... so it does change your mindset a bit".

The second category showed that just three participants in the interview and focus group sessions found **health consciousness did not play a significant role in the purchase and consumption of functional foods**. One participant felt it **did not have a strong influence** on her life so far but believed it would have a substantial impact later on, and at that time will persuade her to modify her eating habits: "Yes, okay so for me, right now it has not really played any role as yet, but I do think it is going to affect me later on, which I will have to sort of try and come up with a way of eating these healthy products". A participant also stated they were **not health-conscious** people so the purchase and consumption of these foods would not have an impact on them: "I am not really health-conscious. So that does not have any influence on whether or not I would buy functional foods". Another participant claimed she was health conscious, but it has **not played a huge role** in her consuming these types of foods:

“Mmm. Well, I guess I mean, you know, I’m health conscious. I mean everyone wants to be but at the same time you wanna give in to those binge days I guess but, uh, mmm, it is not really played a big role in my consumption of functional foods. Like I’m saying, it just happened you know that I like certain things, and it has an added benefit of being a functional food”.

For these participants, the consumption and purchase of functional foods did not play a significant role in their lives. Some were health conscious, but it had no impact on their behaviour yet. They agreed they would have to reconsider including these foods in their diet to ensure a healthy lifestyle. Some attributed their purchase decision to personal preference, where food is eaten based on choice. It was clear from their responses that these participants were not being truthful about meeting the inclusion requirements for involvement in this study, as outlined on the participation information sheet and re-emphasised throughout the interview and focus group sessions.

The investigation of the influence that attitude had on health-conscious consumers’ intention to purchase and consume functional foods continued with a question: **“What does it mean to you to be health-conscious?”** From the data analysis, one main category emerged: (1) “Health-Related Aspects”. It reflected what it meant to be health conscious, as shown in the diagram that follows. This diagram helps explain the specific category (indicated by the bulleted words and expressions used in Figure 7.5) and concept.

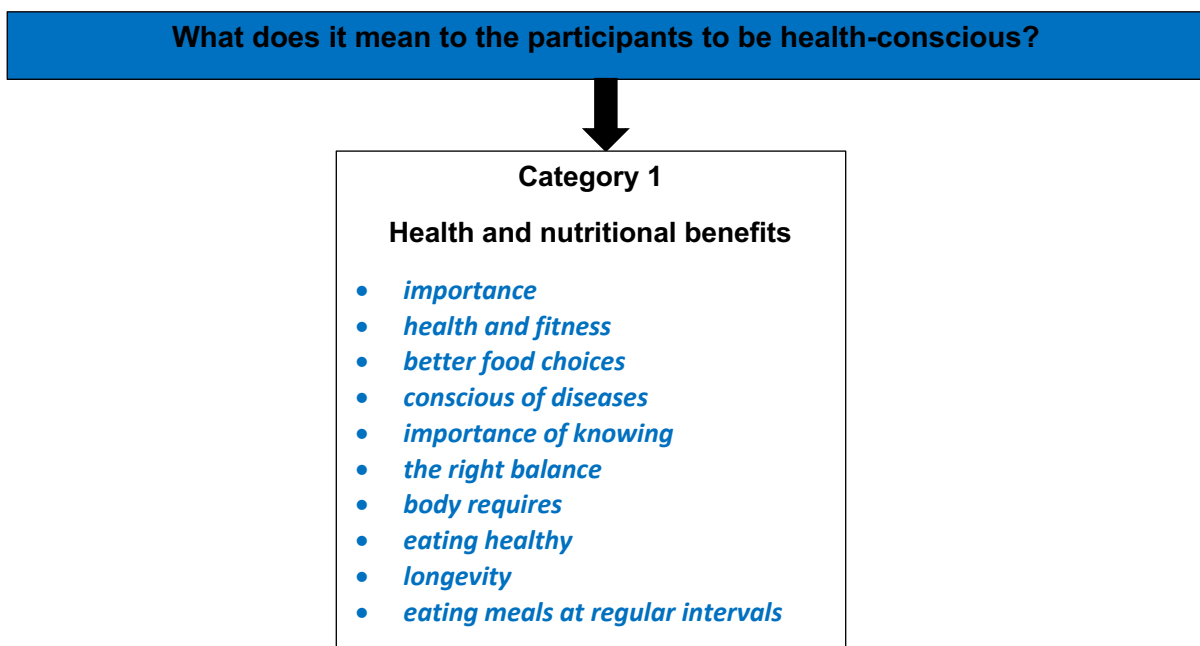


Figure 7.5: What does it mean to the participants to be health conscious?

The majority of participants said that **health-related aspects** are a significant consideration that would affect their decision to buy and consume functional foods. Participants' quotes indicated that *"To be health-conscious means eating a balanced diet comprising vegetables, fruits, legumes, protein"*, or the **importance** of being health conscious, which to her is, *"Probably one of the highest-ranking priorities in my life. Every day when I wake up I got some sort of ambition and drive towards changing lifestyle habits, towards a healthier lifestyle"*. Another said: *"To have like a balance so, I'm getting to eat healthily"*. According to a study conducted by Hoque et al. (2018), a person's level of health consciousness may be measured by how often they engage in health-related activities. As this participant pointed out, being health conscious helped in maintaining a **health and fitness** regimen, *"So, we find that we are eating a lot healthier to keep our minds clear. And then also, secondly, it helps us to stay focused with regards to health/fitness"*. A participant with a young child believed that if she made **better food choices**, her child would follow suit:

"Well for me I feel like when I also eat healthy, my little one eats healthy, you feel, you feel better about yourself".

As a result of an increased understanding of nutrition and health-promoting activities, Kraus (2015) discovered that individuals are more likely to eat functional food because of the benefits it provides to their overall health. This finding was supported by a participant stating: *"So, you need the functional foods to give you the strength physically and it keeps your mind physically strong"*. Being health conscious for these participants meant eating healthy, purchasing certain healthy foods, dieting and exercising. Being **conscious of diseases** was another important factor for one participant and resulted in her being health conscious: *"To be mindful. That there are diseases in the air, diseases in the environment and one needs to...them off. By miti... by taking things that could mitigate or ameliorate the catching thereof"*. The next few participants believed that being health conscious to them meant being: *"Healthier. To be more healthy... that is what I would say. Just in general on your normal well-being for yourself"* or *"To me it means like watching everything that you eating, which sometimes we do not want to do, we just want to get what we want and move along"*. A participant also conveyed:

"Well for me the aspect of being health-conscious is obviously a lot closer to home, considering my diabetes. I find that if I eat certain foods, especially... even at certain times, it can affect me negatively. But I have tried to obviously stay away from those types of food, eat at the correct times of the day. And I actually got into a routine of when I eat, what I eat, how much of that I eat and it actually helps me just to keep going throughout the day".

This participant was able to provide a comprehensive definition of what it means to her to be “health conscious”:

“Okay so being health-conscious is of very important. Like... as I was saying knowing there is a chance of you becoming diabetic, that just changes your whole lifestyle, changes your mindset of everything. As much as I love sweet stuff, as much as I want to eat it, at home we do not buy sweet stuff anymore. So that changes everything because... from a certain time you have, every day, you know there is a chocolate in the drawer that you can have. It is there waiting for you after work but now that changed. So I have become a lot more health-conscious in terms of that. And yes, it is scary to think that diabetes can be such a dangerous thing - at one point, if you let it go, if you do not look after yourself, knowing that there is a possibility that you might get it because it can get really bad. From what I have seen with my mom and stuff, I do not want to get to that point. So, health-consciously I am a bit extreme at home, yes, so that is it for me”.

The **importance of knowing** what products you purchase was an important health-conscious factor for this participant, who said:

“I think for me, what it means to be health conscious is to actually know what it is what you buy. Understanding when you read a label, what does it mean? What does all those things mean that you see on the back of a label? What does non-GMO or GMO products mean? What does organic mean? Knowing what those mean and knowing what the products are that you should try and avoid, that to me is important. And I think that is what health-conscious to me means - is knowing the product and knowing what the right decision is to buy”.

According to Humbert et al. (2012), a primary concern for many individuals is eating healthfully, which may explain why obtaining nutritional information is among the most often cited reasons for examining product labels. The next three participants found having **the right balance** is part of being health conscious as they explained: *“I think it is finding a balanced lifestyle. It always tastes better. It is interesting that you say that as well”*, and *“I think it is a balanced lifestyle. I think being health conscious is making sure that you exercise... everything in moderation, I think. That is to exercise on a regular basis, to get good sleep, and I believe vitamins are important”*. Another explained:

“I think it means to have balance. So not to just go all out and just eat complete junk food and the same with the scale of not just eating healthy all the time just to treat yourself.

But to enjoy the food that you are eating and make sure that you are nourishing your body as much as you can”.

Knowing what the **body requires** was another health-conscious factor considered by these participants: *“I would say that you need to know what your body wants, like, what are the key things you need if you are feeling down and probably have a fruit or a juice or a fruit juice... Or at night if you feel you do not want to eat something so heavy, you eat something just nutritious but light”* and *“Just being aware of your body’s health status and what choices you can do to improve it or just maintain the general healthiness of your body”.*

For one participant, being health conscious simply meant **eating healthy**: *“Obviously it means eating healthy, being healthy, eating food that has high nutrition value... like... fulfilling. Yes, it makes you feel healthier as well. You feel better”.* Another wanted to acquire **longevity** by following a healthier lifestyle: *“And like I said earlier, I want to get longevity out of my life, and I have realised how fatty foods are not agreeing with me. So, it is just tending to go a little bit healthier”.* For this participant being health conscious entailed **eating meals at regular intervals**, but it was also something that she did not practice regularly and believed should be more mindful of: *“It means that, and I don’t actively follow it, so I’m actually saying something that I should do, but I skip breakfast for example I don’t eat, that is wrong I do believe that I should be having something for breakfast, because at 11 o’clock I can eat anything that I can put into my mouth sort of thing”.* The participants in this study each had their own unique perspective on what it meant to be health conscious. For example, some participants believed being health-conscious means making specific purchases of healthy foods, maintaining a healthy way of life, and getting regular exercise.

It was important to establish **“What important things does your health consciousness include?”** Through the participants’ responses to this question, three categories emerged from the analysis of the data: (1) “Certain ingredients/foods used”; (2) “Exercising”; and (3) “Eating healthy”. Each category is shown in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 7.6) and provide an explanation of the categories.

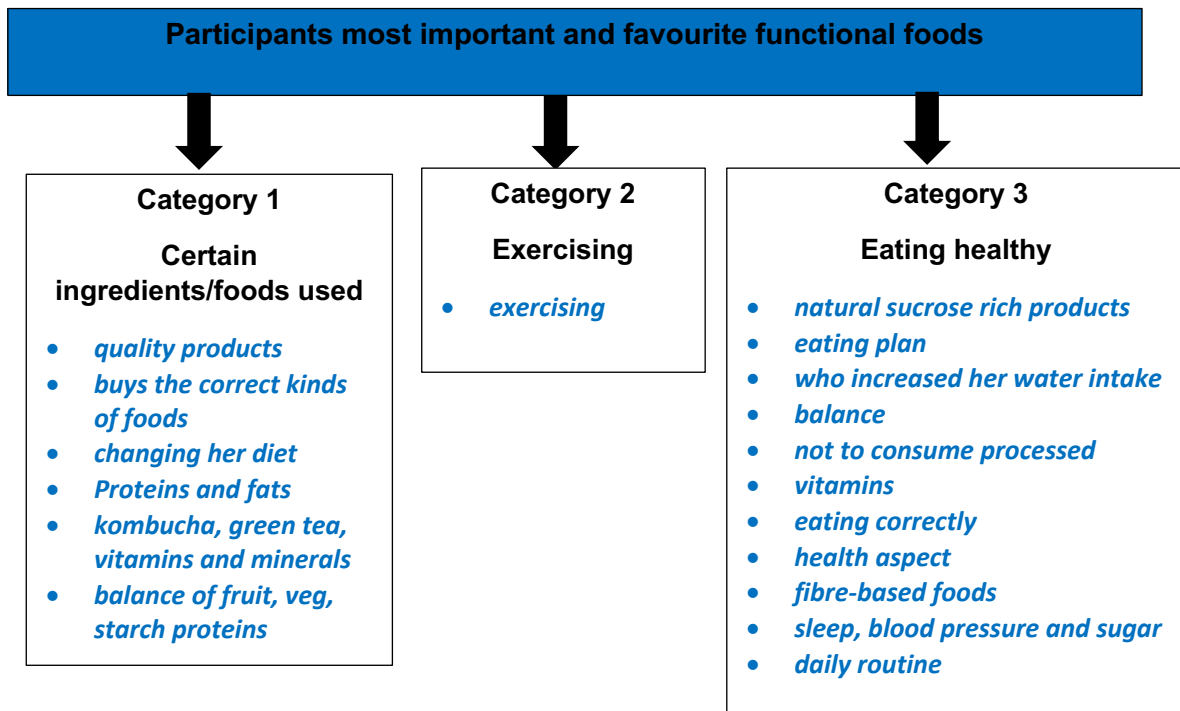


Figure 7.6: Participants’ most important and favourite functional foods

Participants shared one of the important aspects their health consciousness relates to is **certain ingredients/foods used**. For this participant, her health consciousness included using **quality products**: “It means cooking the food that I eat and using high-quality ingredients”. In the opinion of another, maintaining a healthy lifestyle will benefit her overall health if she uses or **buys the correct kinds of foods**: “I think it definitely helps me to look for the correct products that I am going to be using”. Another participant had a skin condition that resulted in her **changing her diet** to reduce these concerns. She explained:

“the cause of the pimples was because of the oily foods and fatty foods that I had been eating and it was not healthy. So, because of that, I had to really decrease the amount of oils I consumed and how much of oil I use in my cooking”.

Proteins and fats were considered important for some participants who were health conscious. One conveyed: “Yes, sure. I think from my understanding, important things would include like what you take in, in the day - your proteins, your fats, your healthies”. Another stated a **balance of fruit, veg, starch and proteins** are important factors related to her health consciousness:

“And I think that having a balance of fruit and veg, starch, proteins... because you feel better when you have got that balance”.

This view is supported by Skrovan (2017), stating that consumers are actively turning to products that not only help them remain healthy, but also assist them in dealing with specific health disorders and diseases more effectively.

For one participant, **kombucha, green tea, vitamins and minerals** were important. She explained: *“So yes, I am going to say ‘snap’. Yes, Kombucha also... I am big into taking (along with trying to eat whole foods and functional foods) supplements. So my vitamins and minerals and that kind of stuff, big. Green tea at this point. Yes, those are two important... or three important things”*. Another was also fond of kombucha and mentioned, *“For me, a very important thing for me is my kombucha... I have found that with the use of kombucha, it does boost energy levels and that has got to do with gut health”*.

The second category indicated **exercising** as one of the important things participants' health consciousness includes. As explained: *“My health-consciousness also includes exercising as well”* or this participant who says *“So prior to COVID time, it involved a lot more exercise. I was a part of a gym”* and *“I would say... getting enough exercise”*. In order to maintain a healthy lifestyle, regular exercise is essential as it aids in preventing health issues, building strength, increasing energy, and relieving stress, as cited by a widely accepted source (familydoctor.org, 2021).

The third category participants mentioned was **eating healthy**, as implied by one of the participants who incorporated **natural sucrose-rich products** in her diet:

“we try and include more of a natural sucrose rich product, nartjies, oranges, apples etc. Just replacing some of the non-healthy elements with more healthier elements with regards to food”.

A healthy **eating plan**, for this participant, was a necessity as she described: *“it is definitely a healthy eating plan that you have to maintain”*. Another **increased her water intake** to aid in the healing of her skin:

“I had to increase my water intake. And also eat a lot of fruits because that really helps your skin to heal”.

According to Skrovan (2017), more consumers are striving to lead a healthy lifestyle and want products that target their individual health demands with enhanced functionality and credibility. In addition to preventing malnutrition, a balanced diet may also help prevent a variety of

noncommunicable diseases and disorders (WHO, 2020). This participant indicated the importance of having a **balance** when she said: “*The balance between the two definitely. You cannot just do one without the other. You have got to have both*” and another explained:

“To a certain extent. But it is a half and half. So, half of it is playing on your health conscience that yes, I want to be healthy, and I want to be... etc. But it does not really play on my mind or my conscience to that level... that I need to watch what I am eating, when and how and who and what. So, it is a 50/50 thing for me.”

One participant’s health consciousness included ensuring her child gets supplements and eats healthy food. She conveyed: “*So I have to make sure that he also gets his health supplements or the food that he eats. So it plays an influence in that way, I would say*”.

Another tried **not to consume processed** or hot food, as she stated: “*Uh, try my best not to eat like processed foods or hot food*”, and one ensured that she took her **vitamins**: “*Multivitamins, so, er, taking, you know, vitamin B12 injection ensuring that I get vitamin C, I take vitamin D by even walking in the sun. So, these things are germane to my existence*”. Simply just **eating correctly** was important for one participant, who mentioned, “*Okay, obviously eating properly*”, as well as this participant who also said, “*I feel the same. Yes. If you do eat, you eat healthy*”.

The **health aspect** of participants’ health consciousness is further explained by a participant who relayed: “*Sleep is a big one, moods, exercising regularly, eating a balanced diet, and also mental space, your mental space is a big impact on your health*”. Another participant seemed knowledgeable about **fiber-based foods** and the advantages they provide:

“We tend to understand fibre as a single thing and it helps your tummy and it makes you regular. But there are certain types of fibres which are more important, which actually work in the lower gut. And that is where kombucha comes in as well. Although it is not a fibre-rich product, it does have a lot of beneficial bacteria. And those beneficial bacteria settle in the lower gut and that is what helps you to absorb more nutrition’s from foods that you eat. So I have to go with, yes, with my kombucha in that one”.

Sleep, blood pressure and sugar and bone density are important aspects that one participant took care of through “*sleep... keep watching blood pressure as well and blood sugar. Food that is good for bone density because relate... to me, I can see those things are starting to go downhill with my age*”. Losing weight and **eliminating sugar intake** was also

important: “Yes. So for me, it is all about cutting down the fat in my body. So I will consume... So these days I do not take coffee with sugar and I am a huge coffee lover”. One participant shared she simply tried to go through her **daily routine** without collapsing from hunger: “I just need to get through my day-to-day basics without fainting due to a lack of food, so at this stage it is just trying to function during the day”.

After establishing all the participants’ understanding of health-consciousness factors, it was then important to determine, “**How has your health-consciousness influenced your purchasing of functional foods?**” From the data analysis, two groups of participants emerged: (1) “Health-consciousness had an influence on their purchasing of functional foods”, and three sub-categories emerged from these participants. They claimed their health-consciousness had influences on (a) “Buying and eating healthy foods”, (b) “Promoting health”, and (c) “Creating Awareness and being more health-conscious”. The second group of participants claimed (2) “Health-consciousness had no influence on their purchasing of functional foods”. The categories are shown in the diagrams that follow; these diagrams help explain the various categories (indicated by the bulleted words and expressions used in Figure 7.7) and the concepts.

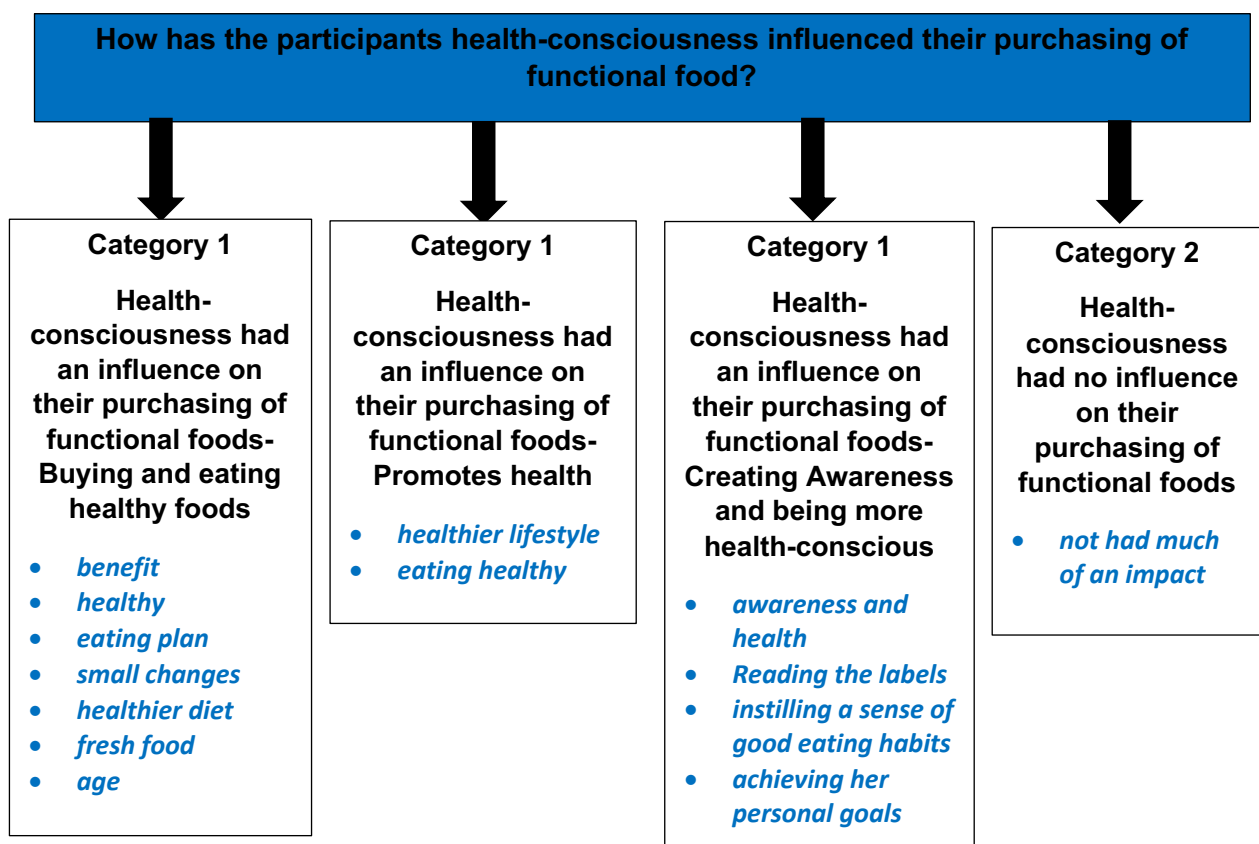


Figure 7.7: How has the participants’ health-consciousness influenced their purchasing of functional food?

In particular, the findings revealed that for one group of participants, being health conscious influenced the purchase of functional foods by ensuring that they are **buying and eating healthy foods**. This participant indicated that she ensures exactly what she requires will be of **benefit** to her health: *“Because now I do not just buy... I make sure it is calculated. I make sure I know exactly what it contains, what it does to my body”*. Another similarly tried to make an effort to purchase foods that are **healthy**, as she explained: *“I definitely tried to buy, uhm, especially now moving out of home, I try my best to purchase uhm, good food and stuff that is considered healthy”*. A change in this participant’s **eating plan** prompted her to purchase foods that would be of benefit to her health: *“It influenced me quite a lot because everything that I used to buy... my whole shopping list changed... like in 180%”*. Another participant said **small changes** made a huge difference to her as she conveyed: *“changing from normal sunflower oil to olive oil and changing from drinking tap water to bottled water and then just those small, subtle changes that actually end up making a difference in the long run to my health”*. This is in line with the findings of Skrovan (2017), who says consumers are actively seeking items that not only help them maintain their health but also aid them in dealing with particular health conditions and illnesses more efficiently.

Maintaining a **healthier diet** resulted in one participant not purchasing unhealthy foods: *“So it influenced the purchasing of functional food in the sense that I tried not to include junk in my groceries”*. Walker (2022) agrees that unhealthy food is typically low in nutrients and high in unhealthy elements like sugar, salt, and saturated fats. For another participant, *“Functional foods are included more or less in what I consider to be the health-conscious category or healthy food category”*. This was her perception of what these foods were. A participant incorporated the consumption of **fresh food** into his regimen as follows:

“I try to eat fresh most of the time unless it is something like pulses and dahls and rice. But I try to eat fresh, whatever it is”.

A simplistic response was provided by two participants who conveyed: *“To a significant degree”* and *“Probably 90%. They are around my health”*. This is how these participants’ health consciousness influenced their purchasing of functional foods: *“It has influenced it in a big way. As I said, when you are trying to do your shopping or preparing your meals, you try and purchase the right things to prepare your food and to just make sure that you are eating healthy”*. A participant also contributed the change to **age**, as she shared: *“Well I think it is defiantly related to age and the more like your body you become. So, I just find that the way I am purchasing my foods... I have specific shops that I know that I go to and I kind of... I do like a menu planner, the more organized... It has made me more organised in the way that I*

purchase foods. So I try to plan a meal... and the food and everything that goes with it. I do not know if that is the answer that you are looking for, but, yes". Even though this question primarily focused on functional foods, the participants' responses were based on their perceptions of healthy foods in general, which they considered to be functional foods. This demonstrates that these participants felt healthy foods are equivalent to functional foods in terms of health value.

Functional foods **promote health**, which became another factor in health-conscious participants' decision to purchase these foods: *"the functional foods are giving you that added benefits, here you've got food that has the added benefit of lowering cholesterol, lowering, lowering your you know, your insulin levels, your diabetes... sugar levels and stuff"*. One mentioned the importance of leading a **healthier lifestyle** and disclosed: *"I definitely say it has influenced because we want to live a healthy lifestyle"* and *"making sure that everything that you are getting is what your body needs"*. This finding is supported by Dixit et al.'s (2023) claim that various health advantages have been linked to the use of functional foods. In addition to protecting against illness and promoting appropriate growth and development, they may help avoid nutrient inadequacies. In this instance, a participant explained the benefits of **eating healthy**:

"when you actually get those goals and you are getting the benefits of it, it gives you that kind of kick up the butt to say 'okay, there is actually good that comes from the blood, sweat and tears'".

It has been determined that functional foods are critical, not only for human nutrition, but also for their ability to prevent certain illnesses (John & Singla, 2021).

Creating awareness and being more conscious was how consumers' health-consciousness influenced their purchasing of functional foods. Some participants attributed it to **awareness and health** as they explained: *"you've just become more aware"*, and *"Yes, it has got a huge influence. My health... I am very health conscious"*. For these participants, the goal of maintaining their health prompted them to purchase these types of functional foods as health and well-being may be improved significantly by eating a diet rich in nutritious foods (John & Singla, 2021). **Reading the labels** of food products also helps in selecting food products that are considered to be healthy, as these participants conveyed: *"Yes. Definitely reading food labels, with added sugar, preservatives and GMOs. It has definitely influenced mine"*. Another said: *"because you just grabbed whatever from the shelves that you think you need, you spend a bit more time and look at the labels and see whether or not you actually*

are willing to eat the product that you just bought”, and “I tend to read labels a lot more. I tend to investigate a bit more”.

This claim is further validated by Gonzalez-Diaz et al. (2020), who reported that one of the best ways to convey a food's attributes is through its packaging or labelling, as this is a significant tool facilitating an understanding of the product.

A participant felt strongly about the need to **instil a sense of good eating habits** in her children, which she attributed to her efforts to educate them about the importance of eating nutritious foods: *“And I try and educate my children to eat foods that they may not like necessarily to eat because of the benefits associated”*. As stated by Vella et al. (2014), by highlighting the advantages of functional food items, nutrition and health information may have a significant impact on consumers' adoption of these products. **Achieving her personal goals** prompted another participant's health consciousness to influence her purchasing of functional foods:

“Yes, I agree with that. It is those feel-good moments. It is achieving the goals you set out, that type of thing. You want to lose weight. You want to be healthier... type of thing. So, it is achieving those goals that influence the purchasing of it”.

The second group indicated that their health consciousness had **no influence** on their purchasing of functional foods, as mentioned by this participant, *“It hasn't really, as I'm not the person that usually buys the food in my house, doesn't really personally influence my shopping that I do”*. A possible explanation could be the fact that this participant is not the one who primarily shops for groceries, so it has **not had much of an impact** on her purchases. Another stated *“Now not really.... It has not”*, since the participant was not specifically eating foods that are appropriate simply because she did not consider these factors.

This concludes the findings of part one of the second objective, to understand the influence that attitude has on health-conscious consumers' intention to purchase and consume functional foods. The next section presents the findings of part two of this study's second objective. It explores the influence that subjective norms have on health-conscious consumers' intention to purchase and consume functional foods. Subjective norms are supposed to represent the societal constraints exerted on a person to adhere to a certain behaviour (Botelho et al., 2019).

7.1.2 The influence of subjective norms on health-conscious consumers' intention to purchase and consume functional foods (Objective 2)

In order to address part two of the study's second objective, the next part of the online focus group interviews and individual interview sessions explored the influence that subjective norms had on participants' intention to purchase and consume functional foods. The exploration began with a question: **“Do you feel pressured socially to purchase or not to purchase functional food products? If so, why? and If previously answered yes, from who does the pressure originate?”** From the data analysis, two distinct groups of participants could be identified: (1) “Do feel socially pressured to purchase or not purchase functional food products”, (2) “Do not feel socially pressured to purchase or not purchase functional food products”. The categories are illustrated in the diagrams below, which highlight the most common ideas (indicated by the bulleted words and expressions used in Figure 7.8) and explain the categories.

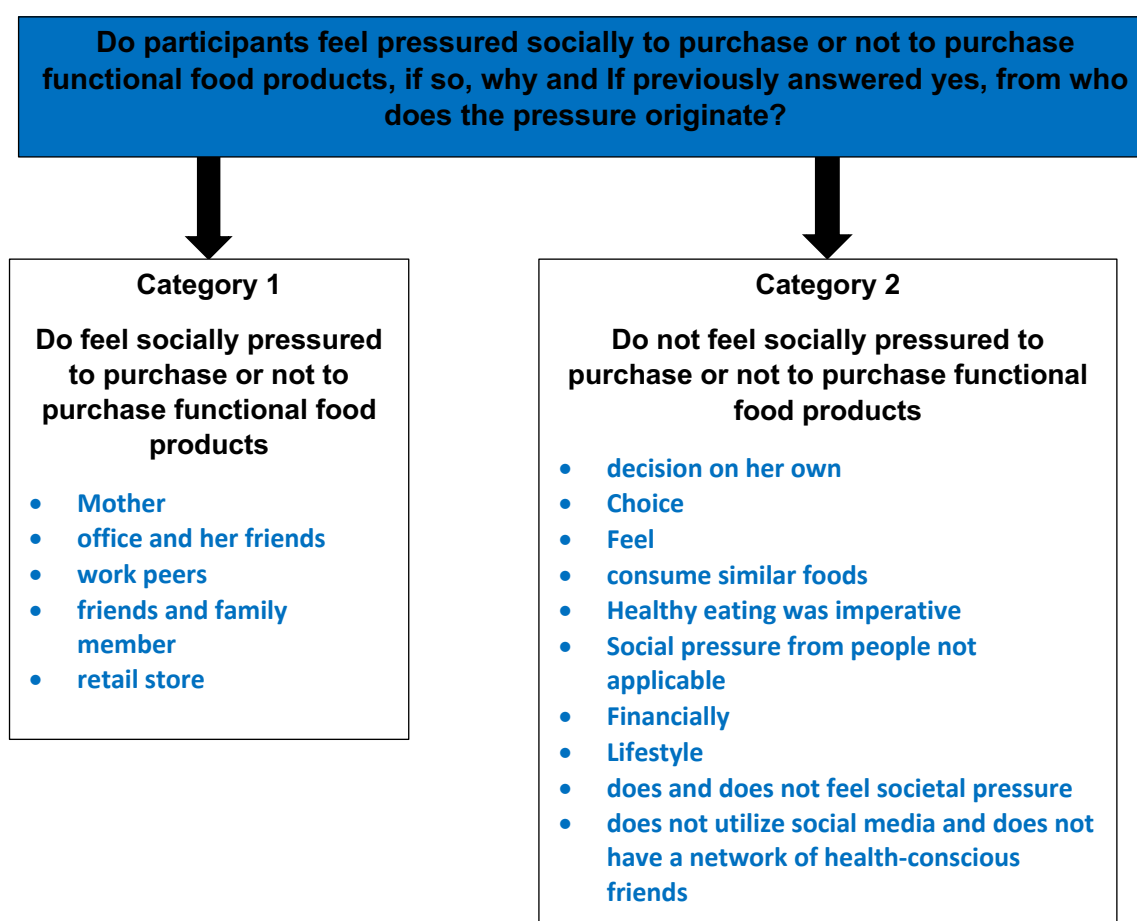


Figure 7.8: Do participants feel pressured socially to purchase or not to purchase functional food products? If so, why and if previously answered yes, from who does the pressure originate?

Participants who **did feel socially pressured to purchase or not purchase functional food products** identified different influences caused this pressure. One participant explained she was socially pressured by her **mother** due to her weight concerns. She described: “Yes, my mother- she doesn’t really put pressure on me I think it is more because I’m not a very healthy weight at the moment”. Whereas for this participant, it was the people from **her office and her friends**: “For me... the people at work, especially because I have a lot of friends that are vegetarian and also a lot of people that like to eat organic food”. Another participant experienced social pressure from his **work peers**: “I sometimes do. So definitely at work because I am in the beauty industry, and everyone is always health conscious and worried about what they are eating and what is going into their bodies”. The **friends and family members** of some participants also had a social impact on their intention to purchase functional food items: “Yes, sometimes I do feel pressurised socially to purchase. Because of, you know, the type of friends and my children and my grandchildren” and: “I sadly still have social pressure. My friends who are very healthy”. These participants felt socially pressured to purchase functional food products due to their friends and family members being health conscious, as stated by this participant:

“I think definitely. Because you see Influencers posting their healthy breakfasts and their body looks a certain way and you think to yourself”.

This view is substantiated by Nystrand and Olsen (2020), who also found that consumers’ intention to eat functional foods was substantially affiliated with societal pressure to do so. In contrast, one person claimed to have been subjected to social pressure from a **retail store**, as she indicated:

“I find that there is a slight pressure. I find Woolworths...I find Woolworths... because I read the Taste Magazine and eight out of ten times, we will try at least three of the recipes. And generally, it is either vegan-based or... I know the last couple of months it has all been. And they have all been very tasty. We have enjoyed them. So yes, I would say Woolies is the one that influences me”.

It can be deduced that friends and family members do have an influence on participants’ intention to purchase functional food products. Thus, from these findings, it is evident that participants were encouraged through social pressure to purchase functional foods. This suggests that a person’s eating habits are heavily impacted by their social environment (Higgs & Thomas, 2016).

The group of participants who **did not feel socially pressured to purchase or not purchase functional food products** indicated they had taken the **decision on their own** and were already including functional food items into their diet: *“I definitely don’t feel pressure, I think it is a personal choice”*. Other participants indicated that: *“no, definitely not because like I said I normally I purchase functional foods in any case”* and *“I do not necessarily feel pressured, It has become like a conscious way of living right now”*. **Choice**, for these participants, enticed them to purchase functional foods and not social pressure. They implied: *“No, I’m not pressured. But I do it out of choice”* and *“No, I do not feel socially that I have to. It is my own self-will and my own desire to do that”*. A participant also said:

“I would not say I feel pressured... but I like what I like... kind of (thing). I am not going to get what you like just because you sold it to me. Yes, I will try it. I do not mind trying it, but I like what I like, and I am a creature of habit. So, yes, I do not think I feel pressured at all”.

Due to how functional foods made this participant **feel**, she was more likely to buy these kinds of foods, as she explained: *“No, I do not. It is just my own self. How I feel. So, no, I do not feel that I am pressured by anybody”*. This participant and her daughters **consumed similar foods**, so they therefore do not feel social pressure. She conveyed: *“The girls and I think the same, like the same food so its actually no pressure at all”*.

Healthy eating was imperative for a participant, and she felt no one could influence her: *“No, for me not really. I look at healthier options, but it is not influenced by anyone. It is what I want to purchase basically”*. **Social pressure from people** trying to convince her to purchase foods was **not applicable** to her as she expressed: *“I think not socially pressured in so much as like people making me buy stuff that I do not want to know about or that I have not bought before”*. On the other hand, another participant indicated that she is not socially pressured but **financially**; she explained: *“Okay so socially no, financially yes. It is the willingness you have to want to be healthy and to purchase the functional foods”*. The next few participants’ purchase decisions were based on their **lifestyle** and what they chose to eat: *“Same from my side, no pressure at all. So I just buy because of the lifestyle I have adopted”* and *“No, I do not feel pressured to buy functional foods. It is more of a decision that I made and me speaking to it but I do not feel pressured in any way”*. Interestingly, one participant **did and did not feel societal pressure**; she explained in great detail why she felt this way:

“Uh, I think a little bit of both being a student. I think it is very easy or like being fresh out of university it is very easy to fall into that, that category of, you know, just buy the cheapest thing and just buy all the fast food because. It is kind of what students do but

then also wanting to be as healthy as possible and you know, the, like, having fast foods and all of those things is quite frowned upon in society so, uhm, I think that pressure of, you know, trying to be as healthy as possible to fit in with society and be you know, be part of that group that, you know, is doing good for yourself and what not. But also, on the other end my age group there's a lot of you know, slackingness when it comes to trying to you know, be healthy and just like, oh you're young, you know enjoy your life, have all the processed stuff that you wanna have. So, there's just there's both, I guess”.

One participant claimed that she did not feel social pressure since she **did not utilise social media** and did **not have a network of health-conscious friends**: “I do not use social media actively and I do not have the most health-aware group of friends, so I do not really feel pressured at all.” Due to their own decisions or preferences, the majority of participants stated they did not feel socially pressured to purchase or not purchase functional food products. Therefore, since these participants already included functional food products in their diet, it may suggest that social influences will not have an effect on their current behaviour.

After determining whether participants were socially pressured to purchase or not purchase functional food products, the researcher then sought to determine: “**In which way do friends and family influence your decision to purchase functional food products?**” The following categories emerged from their responses: (1) “Health-related”; (2) “Food Preparation and Consumption”; and (3) “Have no influence”. These are shown in the diagrams that follow; these diagrams help explain the various categories (indicated by the bulleted words and expressions used in Figure 7.9) and concepts.

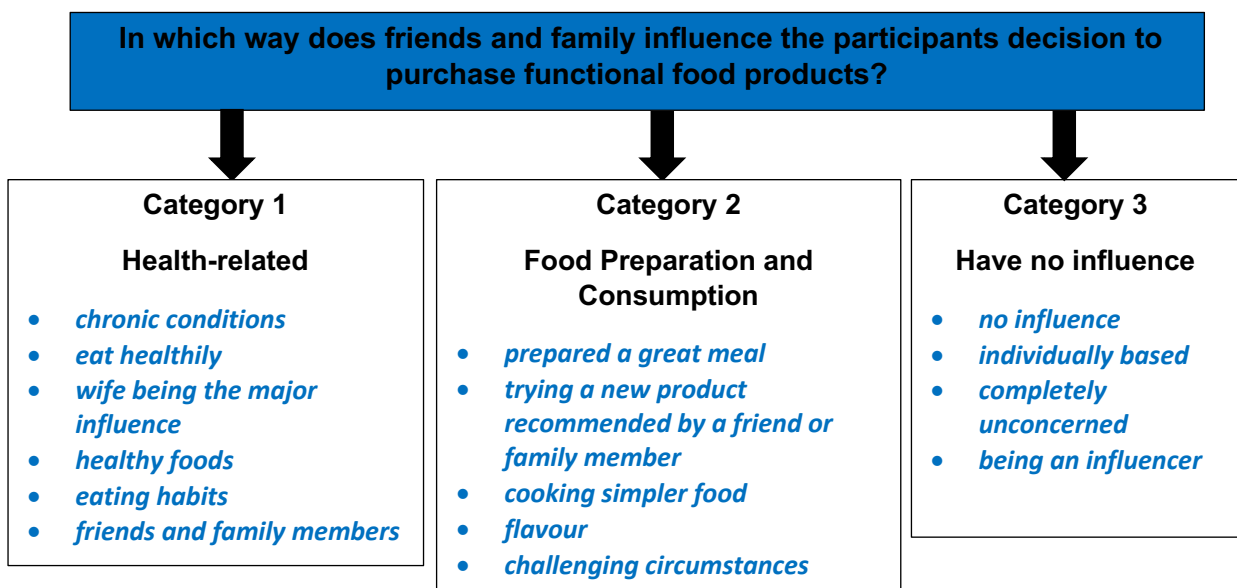


Figure 7.9: In which way do friends and family influence the participants’ decision to purchase functional food products?

The decision to purchase functional food products being **health-related** was indicated by a participant sharing her parents had **chronic conditions**. This influenced her decision to purchase functional food products: *“I guess coming from parents with chronic conditions such as cholesterol, diabetes, hypertension. So, I guess also to benefit them as well as the family, why not. Let’s consume stuff that is gonna be good or all of us”*. Another participant’s parents influenced her to always **eat healthily**, as she claimed: *“my parents have always tried to be, tried to influence us to, to be as healthy as possible”*. This participant reported his **wife being the major influence** as he explained: *“My wife has a big influence on that where she... the influence of looking after us as a family is very high”*. Another claimed she had always eaten **“healthy foods”** as she said, *“We as a family have always eaten healthily”*. One’s grandfather’s condition prompted her to change her **eating habits** as she expressed: *“My grandfather he had a brain aneurism and a stroke so that caused him to change his eating habits, so I think friends and family kind of learn from their habits on what their eating and how they look and then you can take a little bit of that information and then you can see”*.

A participant said her sister’s role as a mother inspired her to eat more healthfully, owing to the types of foods her sister would give her child, *“I will guess my sister. Because ever since she started feeding her baby all of these very nice things and healthier aspects and that also opened up your eyes a bit where you can see okay maybe this is actually better for you”*. **Friends and family members** thus influenced some participants’ decision to purchase functional foods: *“Yes, my family and friends do influence my decision because we all seem to be much more functional foods focused”*. For this participant, her dad is a very healthy person and as such has influenced how she eats:

“I think it is their health and health issues. If I look at my dad, he is an extremely healthy person and he lives off fresh ginger, he only eats boiled food and boiled vegetables. And he is a very healthy person and I believe that has influenced the way that I am”.

Living with family greatly influenced these participants, stating: *“This one is actually funny because I live alone, but now I have family living with me, and they love meat and I am not really a meat person. So now I actually found myself eating it more regularly, but I actually... so I found myself buying it for them”* and *“it depends. If you are invited Er, to family and friends, and they serve particular meals and they exhort the benefit there from. So, one takes that into account”*. It may be determined that these influencers are role models who advocate for healthy eating, which the participants were subsequently following.

The second category was **food preparation and consumption**. A friend or family member’s effect on a participant’s intention to purchase functional foods was indicated while they

prepared a great meal: *“The only influence that I get is basically when they make a dish that is so delicious that I need the recipe”*. One participant agreed they would be **willing to try a new product** only after it has been **recommended by a friend or family member:** *“Okay. It is usually that they buy something, and they try it out first and they get me to try it out”*. This participant, however, preferred **cooking simpler food**, as she stated:

“we cook differently when we entertain compared to when we normally cook – vegetables, gravy. So, we look for more thyme food and simpler food”.

Flavour was a significant factor for this participant who indicated: *“So mine would be influenced by the flavour, of course. I think... just... how tasty food is, I would say. The flavour of good food”*. Moreover, living in **challenging circumstances** because of the coronavirus epidemic helped consumers pay more attention to their health. This view was supported by a participant reflecting: *“I would say... especially now being at home, with Covid, it is more family that influences what I eat but we tend to eat the same things for dinners”*. It can therefore be inferred that these influencers play a significant role in how participants prepare foods and their consumption of these types of functional foods.

Certain participants felt friends and family members had **no influence** on their decision to purchase functional food products, as explained by them: *“They do not actually... that much. Let me just see... They do not... they just... because we just have different diets”*. Some said their decisions were **individually based** and not influenced by anyone: *“I would not say that they really influence... it is my own decision to ensure that I am influencing them to eat better... if that”* and *“They do not really influence me to purchase anything, yes, they do not really”* and *“I would not say that my family or friends influence me really in any way, as far as functional foods are concerned”*. In another case, a participant seemed **completely unconcerned** as she conveyed: *“then the other ninety percent just do not care”*.

A participant viewed herself as an **influencer** and shared: *“Well, unfortunately, I am the influencer in my family”*. This confirms the previous findings of participants claiming not to be socially pressured to purchase or not purchase functional foods. They shared that their decision to purchase functional food products was more individually based, as they clearly stated friends and family do not influence them. Instead, it is actually them having an influence on their friends and family members.

After concluding in which way friends and family influence the participants' decision to purchase functional food products, the researcher then posed these questions to all

participants: “Are there any individuals or groups of people who would influence your purchasing decision and consumption of functional food products? and What influence do any individual or groups of people have on your purchasing decision and consumption of functional food products?” From the data analysis, three distinct groups of participants could be identified: (1) “Participants who were predisposed by these influencers, which were (a) “Friend, family, colleagues, retail”, (b) “Media personnel and content”, and (c) “Medical professionals”, (2) Participants who were influenced by “health-related factors” and (3) Participants who were “not influenced at all”. The categories are outlined in the following diagrams. These diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 7.10) and provide an explanation of the categories.

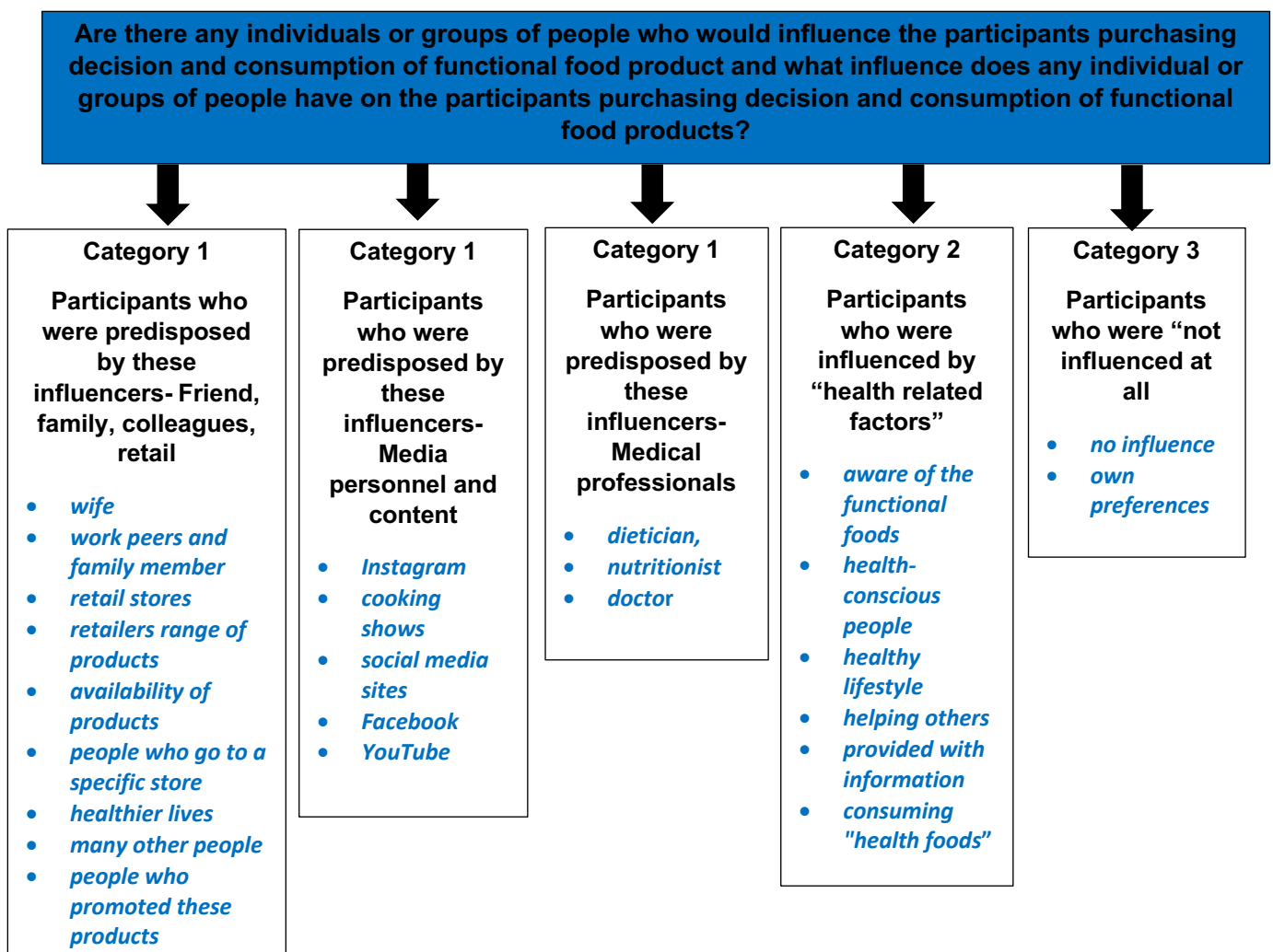


Figure 7.10: Are there any individuals or groups of people who would influence the participants’ purchasing decision and consumption of functional food products, and what influence does any individual or groups of people have on the participants’ purchasing decision and consumption of functional food products?

Interview and focus group session participants found that **friends, family, colleagues, and retail** had an influence on their purchasing decision and consumption of functional food products. A participant stated: *“My direct family. Predominantly just them”,* or *“I guess my parents”,* and another’s **wife** was an influence: *“Well definitely my wife does influence”*. The TPB asserts that if there is a social norm in place regarding the consumption of functional foods, consumers are more likely to do so (Bakti et al., 2020). Some participants were influenced by **work peers and family members** as indicated by them: *“I think my friends at work, like, all of my colleagues at work and my sister would be those people that would influence me”,* and *“people at work, sometimes our clients as well, health-conscious clients that tell us what new options are on the market and then we try those things out”*.

Retail stores influenced some participants to purchase and consume these types of foods, as stated by this participant:

“As I said, there are friends... not really social media things. Every now and again I will look at e-mails that have come out from... there is the Big Breakfast Debate where they have Keto-type diets. And also if I see something from Woolworths which will have e-mails because I have online shopping, so they have e-mails with recipes and things like that. So I would go through and have a look there. And they actually do have quite a few functional food products on their shelves”.

Others were simply impressed by some **retailers’ range of products** when they conveyed, *“Yes, I am very impressed actually with Checkers, Pick ‘n Pay and Woolworths at the moment. They have got some amazing ranges”* and *“Yes, yes. So I suppose organisations like supermarkets influence me in that as soon as everything is in polystyrene or in plastic or with an elastic sort of band... they influence me not to buy it. They have got some amazing ranges”*. The **availability of products** in the store influenced a participant, as she explained: *“So what is available at that shop at that time and if it is not there then... and you know it is more expensive at another shop, then I think wait until it is in stock...”*, whereas another was influenced by the **people who go to a specific store** as she claimed: *“I would say that most people tend to go to the same store. You do not want to be going to multiple different stores to buy things”*. The following participant shared:

“You take people’s advice, so yes, there is some influence but at the end of the day it all depends what is available within the stores and what is available online 90% of the time and budget. So that is where my criteria would come from, more”.

Just seeing other people leading **healthier lives** influenced one participant: *“I feel like just uhm, when you see other people living a healthier life and looking good, uh, it kind of motivates you to, to lead that same way”*, and another agreed: *“Yes, I would take influence from what people have been telling me... what are healthier options and foods to buy. And then I would take that to the shopping I would do and then if it meets my price range and availability in the store the I will... like... more actively look for functional food products”*. Living in a house with **many other people** also influenced a participant’s eating habits:

“I would say yes cause I live in a house where I don’t control the type of food so its not so much that they force me to eat a certain type of food group but more what’s available in the house, so for eg if its lunch time and u hungry and all there is to make a toasted cheese, then you make a toasted cheese for lunch otherwise you go hungry”.

People who promoted these products enticed and influenced one participant to purchase them, as she explained:

“Yes, I suppose if anybody came out. There are a couple of organisations now that actually deliver fruit and veg baskets to your door. So I suppose they would influence me because they... I think there are a lot of these independent polytunnel chaps, so they would grow the vegetables and then you buy a box of seasonal veg. And they would influence me in the sense that if that is the seasonal veg on offer then I would buy”.

Based on the participants’ responses, it is evident that friends, family members and colleagues have a direct influence on their purchase and consumption of functional food products. In support, a study by O’Connor and White (2010) reflected that subjective norms had been proven to influence behavioural intention with respect to functional foods.

In the second category, **media personnel and content** were found to have an influence on participants’ purchasing decisions and consumption of functional food products. According to one participant, **Instagram** influenced her:

“a lot of the health people on Instagram and just there you get some ideas of functional foods and new recipes”.

Food marketers are collaborating with prominent social influencers to promote their goods or services using online social media platforms, such as Facebook, Instagram, and Twitter

(Folkvord et al., 2020). Similarly, **cooking shows** influenced one participant to purchase and consume more functional food products:

“Maybe some like cooking shows that I am watching, and I see something nice that cooks nice or looks nice when it is cooked then I would like to try that out sometime”.

Folkvord et al. (2020) claim it is a regular occurrence for millions of individuals across the globe to follow other people on **social media sites**, which is emphasised by the next few participants who conveyed: *“I just, always Google to see or YouTube... and just see what there is out there. Maybe that recipes that I can use to add...”*, or followed a specific person on **Facebook**: *“Okay, like I said I am really thin so there is a guy that I actually follow-on Facebook... He is always posting stuff on the diets and stuff... in order to get a good built”* and **YouTube**:

“I am going to go with again with YouTube. With a couple of the people that I follow on YouTube, they constantly come up with new ideas and information about certain food products or food groups”.

According to Betts and Rosemann (2023), YouTube is the second-most visited website on the internet. Kontos and Bomba (2021) concur customers are more likely to interact with a brand after seeing an advert on television since it is seen as the most trustworthy and relevant form of advertising. This claim was supported by a participant who stated: *“If it is advertised on TV then I will give it a go. I often check the shelves at the store to see if anything is new”*. The researcher therefore ascertained that social media platforms do entice participants to purchase and consume functional foods, whether it is a health video, information pertaining to healthy/functional food, or a social influencer promoting healthy/functional foods.

Some participants said **medical professionals** such as a **dietician, nutritionist and doctor** influenced their purchasing decision and consumption of functional food products. This is reflected in these participants' quotes: *“I think if it was not directly from a dietician, you know, I do have one. I think if it was not directly from a dietician, then I would not really mind what other people think or say about what I purchase”*, or *“Yes. Also influenced by my nutritionist”*, and *“The only person would be a doctor that could tell me, and I would listen but other than that”*. As stated by PVHC (2019), a person has the greatest chance of receiving effective treatment and enjoying a better, longer life when medical professionals can discover health issues or illnesses early. Participants were likely to seek a medical professional's advice since

they have the required knowledge and expertise to provide consumers with health information specific to a particular medical situation.

Participants mentioned functional foods are **health-related**, and one shared she was **aware of the functional foods** that need to be included in her diet: *“It would simply to be aware of additional functional foods or functional foods that I may or may not have included in my diet”*. Another participant was motivated by **health-conscious people** who exercise, as she explained: *“when you exercise and spend time with very health-conscious people they sort of motivates you to bring about this change from who you sort of react with and mingle with”*. For some participants, the purchasing of healthy foods was integral to maintaining a **healthy lifestyle**: *“to buy more healthy foods to put into my body and try to stay away from, you know, the, uh, the processed stuff and the unhealthy stuff”* and **helping others** to live a healthier lifestyle was another major influence:

“Like if I feel that there is something that I need to get for them, that would be more healthier or would help them in a situation like, with regards to illness or something... that I can get to them that will help them with that... That is the only thing that would influence me”.

Two participants reported that when they are **provided with information** from individuals or groups of people, it will entice them to purchase and consume functional food products: *“they give me information, so it makes you curious to see whether that is as good as it could be for you know, so you try out a new thing”*, and, *“Just information that you get from people that you did not know before that can help you make healthier choices”*.

As described by this participant, she felt **consuming ‘health foods’** would help her reach her objectives: *“So again your greens and your vitamins and whatever else it is that you wanting to achieve”*. These individuals have been persuaded to buy functional food items by either a friend or a family member because they are health conscious and sustain a well-balanced, healthy lifestyle. As a result of this influence, these participants made better eating decisions and adopted a more active lifestyle.

In the fourth category, a large number of participants were **not influenced at all** in their purchasing decision and consumption of functional food products. As stated by these participants: *“I do not think so. I would not say that I would actually be influenced as such, it would be more what we feel is right for us”*, and *“So, no, I cannot even think of anyone right now”*. Participants’ culinary preferences were also based entirely on their **own preferences**,

as they indicated: “No, nobody is going to influence me to eat something, and I will say no thank you that is not for me”, and “My side, no, not really. Yes, it is because it is my choice to choose healthy” and “Again, I don’t think anybody could influence me to eat something that I’m not happy to eat”. Because they shared that friends and family did not affect them, their choice to buy functional food items appeared more personally driven. In fact, participants stated they are the ones impacting their friends and family.

The inquiry into the effect of subjective norms on participants’ intentions to purchase and consume functional foods was furthered with a question: “**How important is it that you are seen to be using or including functional foods in your food purchases?**” From the analysis of the data, two distinct groups of participants could be identified: (1) “It is important to be seen to be using or including functional foods in your food purchases”, and those for whom (2) “It is not important to be seen to be using or including functional foods in your food purchases”. The following diagrams reflect the categories, making reference to the most often used ideas (indicated by the bulleted words and expressions used in Figure 7.11) and providing an explanation of the multiple categories.

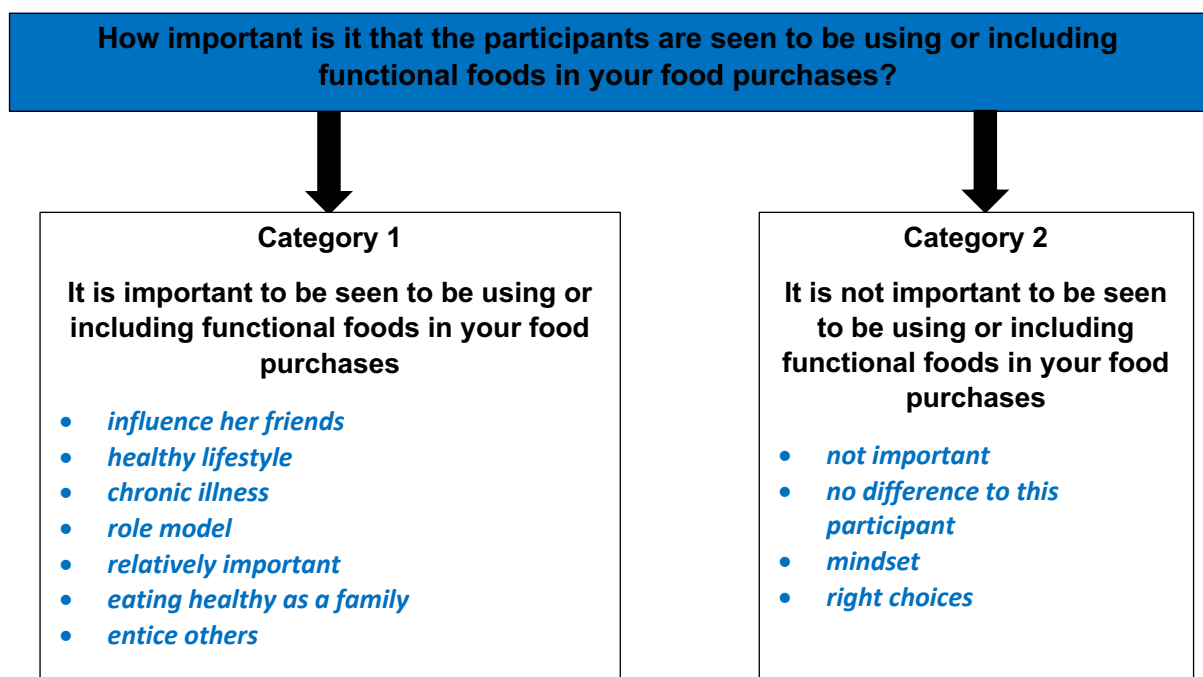


Figure 7.11: How important is it that the participants are seen to be using or including functional foods in your food purchases?

For a few of the participants, **it was important to be seen using or including functional foods in their food purchases**. Various reasons were offered to explain why it was important to these participants to be seen using functional foods. One wanted to **influence her friends**

into purchasing certain foods, as she recounted: *“Definitely very important aspect of my purchasing decision, I try and influence friends and people around me as much as possible”*. According to another, maintaining a **healthy lifestyle** was important, and she wanted others to realise that too. She therefore explained that *“Well, For me, important for them to realize the need to live healthier”*. In contrast, a participant’s **chronic illness** motivated her to consume the proper nutrients, as she indicated in her response: *“Well, for me, it is very important. I get a lot of flak from my family if I do not eat the right stuff, being a diabetic”*. Another ate functional foods, not just for their health advantages, but also to serve as a **role model** for others, as she affirmed:

“I would say it is a little bit important because often at times you lead by example and sometimes it is easier for someone else to eat healthier if they see you eating healthier”.

“Relatively important” was how one participant felt about being seen or including functional foods in her food purchases. For this participant, **eating healthy as a family** was important, and she indicated: *“Again, for us as a family it is important that we eat the right foods, I’m not trying to impress so and so to include broccoli and whatever protein is, so we do it because it is healthy and that is the way we should be in our world eating, again it is not a case of trying to please anybody, we eat that because we want to eat that”*.

It was important for this participant to be seen using or including functional foods in her food purchases based on her belief that if she purchased these types of foods, she could **entice others** to do so as well:

“I think it would be important if people had to see me buying stuff because they would be motivated to also buy it. Because they would feel a little bit more confident in trying products that I try if they are health-conscious”.

The consumption of a good diet has direct effects on health, providing several benefits and allowing for the avoidance or treatment of many diseases and conditions (Familydoctor.org, 2020).

The second group of participants stated **it was not important to be seen using or including functional foods in their food purchases**, as remarked by this participant: *“Not that important”*, or another who stated: *“Not really. I mean no one’s really keeping an eye on that so I don’t think it is considered that important”* and another claimed: *“Other people would have no influence on whether I would buy functional foods or not”*. It made **no difference to this**

participant whether or not other people noticed that she was utilising or including functional foods in her food selections as her health was her first concern: *“It does not really worry me if other people see or not... it is just my... like I said, it is for me, for my health benefit”*. Another participant emphasised: *“No, it is not really important for me to be seen purchasing or being influenced by the people”*.

This participant believed it is more her **mindset** that influenced her than what others think as she stated: *“Yes, I would agree with that. It is more so on my mindset versus what... I do not care what anybody else thinks about what I am purchasing... so”*. Making the **right choices** of foods to consume was also more important to some participants than what other people thought; as they explained: *“It is not really important to me, I think it is more important for me to know that I made the right choice and that my family is getting a healthier meal or healthier snack, because of the choices I made”*, and *“Yes, exactly the same sentiments as the other participant. I am not fazed by who says what”*. While most participants agreed it is not important to be seen as a functional food consumer, they also agreed it is a personal choice, and they can only influence their own decision. This view is attributed to the fact that it was part of their lifestyle, and they were the only ones who could change it. This suggests participants' may be receptive to more information on functional foods as it was their decision to purchase these items.

When asked, **“Who introduced you to functional foods or how did you become aware of functional foods?”**, three categories emerged from the responses: (1) “Social influencers”; (2) “Media and Literature”; and (3) “Circumstances”. These are reflected in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 7.12) and provide an explanation of the categories.

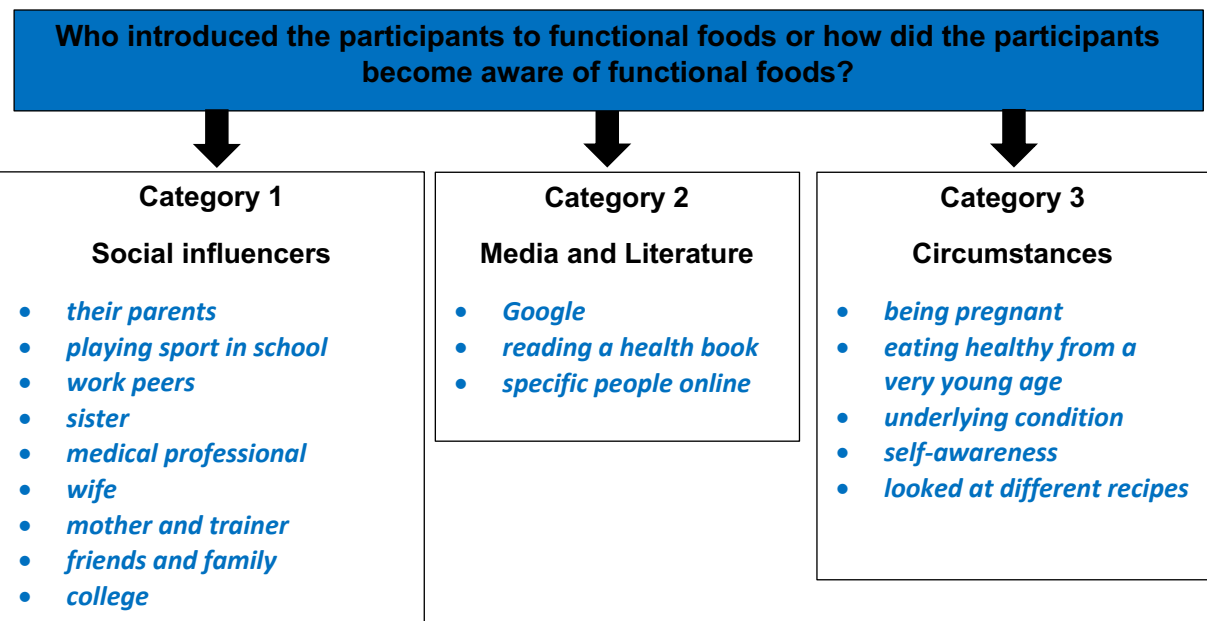


Figure 7.12: Who introduced the participants to functional foods, or how did the participants become aware of functional foods?

Social influencers introduced some participants to functional foods or made them aware of functional foods. Some participants indicated that **their parents** introduced them to functional foods, as this participant confirmed: *“My mother”*, or another said, *“When my dad was diagnosed with a liver problem we became very aware of the fact that we need the correct foods in our diet”*. The next few participants became aware of functional foods through their **work peers** as they expressed: *“There’s a gentleman at work, he was a very health-conscious person”*, or *“For me, I was introduced by the health clinics in the workplace”*. Another’s **sister** and work colleagues made her aware of functional foods: *“I think it was a combination of my sister and also people at work. So, where you notice... certain people that lead healthier lifestyles and then with my sister who had started buying healthier things for the baby and telling us everything that is in that”*. **Playing a sport in school** informed one participant about functional foods as she explained: *“I think been very sporty in high school, they very big on nutrition and something is were I’ve kind of learnt you know what your body needs”*.

Medical professionals exposed the following group of participants to functional foods, with one participant stating, *“I think on a technical term of functional foods, my dietician”*, another claiming: *“I think over the years, just going to different health specialists and nutritionists”*, and this participant confirming: *“first off from a dietician who told us what you should or should not be having for weight management and high blood pressure and cholesterol ideas”*. One participant was introduced to functional foods through a book given to him by his **wife**: *“My*

wife introduced me by buying the book and giving it to me while I was in hospital”, whereas the following participant was introduced to functional foods by her **mother and trainer**: “I would say initially my mom had a lot to do with it. And then my gym instructor/my trainer. My trainer was always quite clear about what you need to put in your body. I think mainly more focused on dietary but yes, I would say my mom and my trainer”. **Friends and family** were a major contributor introducing functional foods to participants who confirmed: “Also the same with friends and family and my daughter after having a baby, and as I said I did speak to dietitians as well with regards to my illness, so that is where I have heard of it”, and “Yes, I think my influence will always come from my family. And then obviously my husband is always eager to try healthy recipes”.

College, for these two participants, was where they first became familiar with functional foods:

“Okay, so like I said before it is college. Studying to become a Chef was when I was introduced to functional foods”

and

“Yes, for me definitely it was through college as well, studying to be a chef. But I think the biggest influencer would have been, at that time, my personal trainer who was very adamant about the things that I eat and the diet and how and when and what”.

Some participants were inspired to buy functional food items by either a friend, family, or colleague who had health difficulties or maintained a healthy lifestyle. It was because of this effect that these individuals began buying and eating healthier foods. Participants also learned the lifelong value of eating healthfully in school. Most also agreed they would seek the advice of a medical professional because they have the necessary knowledge and skills to deliver health information that is relevant to a person’s own medical circumstances.

Media and literature was the second category found to influence participants’ awareness of functional foods. As explained by this participant, **reading a health book** on diseases increased her awareness of functional foods: “Reading. Reading a health... I read a book years ago about keeping disease away”. When looking to obtain inspiration or seek facts, Grady (2017) found that many people turn to **Google** as a primary source of information. This claim was supported by the following participants: “I google a lot about functional foods and healthy foods, uhm and I’ve just always been eating very healthy” and “Googling different stuff... how to be healthy, how to eat healthy, how to lose weight, how to maintain your current

weight". Another participant followed **specific people online** that helped her form a health perspective: *"Mine started out with Tim Noakes and that crowd... with The Real Meal Revolution and then low carb and then eventually a Mediterranean lifestyle"*. Folkvord et al. (2020) provide evidence to support this claim, noting that millions of people throughout the world follow others on social media networks on a regular basis. According to the participants, they learned about functional foods from books, the internet, YouTube, and other social media sites. It is possible to infer that social media affects individuals' decisions to purchase and consume functional foods, whether it is a health video, information on healthy/functional foods, or a social influencer advocating for healthy/functional food.

Circumstances were an interesting factor that led to participants' awareness of functional foods. **Being pregnant** helped one participant become aware of functional foods as she conveyed: *"I think I became more prominent to me when I actually fell pregnant and that was dawning on me"*. A participant who had been **eating healthy from a very young age** and understood the benefits that these foods provide said:

"Well, I think we have been doing this all our lives, to a certain extent. Eating... growing up with fruits, eating fruits, etc. You know, I mean, we cook with all the spices that have benefits... from your cinnamon's etc. etc. It has been there all the time".

According to Ali and Rahut (2019), functional foods are becoming more popular, and their demand is expanding even in impoverished countries. Having an **underlying condition** prompted one participant to become aware of functional foods: *"Yes, I think it is obviously with my condition, I have had to be self-aware of everything"*. Another became aware through **self-awareness** as she confidently said, *"I am alive, breathing and thinking!"* while another conveyed that she **looked at different recipes**: *"Also, just looking for different recipes. I think you also get tired of your own style of cooking. So, you always trying to introduce something new"*. These participants were made aware of or exposed to functional foods as a result of their own experiences and circumstances. Their own self-awareness also led them to learn about functional foods, as well as their upbringing and health concerns.

The findings from part two of the second objective, to explore the influence that subjective norms has on health-conscious consumers' intention to purchase and consume functional foods, have been concluded. Part three of this study's second objective, which is to determine what influence PBC has on health-conscious consumers' intention to purchase and consume functional foods is presented in the following section.

7.1.3 The influence of PBC has on health-conscious consumers' intention to purchase and consume functional foods (Objective 2)

Aiming to achieve part three of the study's second objective, the third section of the online focus group interviews and individual interview sessions investigated the influence that PBC has on health-conscious consumers' intention to purchase and consume functional foods. Consumers' perceptions of the ease or difficulty of eating functional foods have a major influence on their behaviour, according to Bakti et al. (2020), who found that PBC was an important factor affecting consumer behaviour. The exploration of the PBC's influence on participants' intention to purchase and consume functional foods commenced with a question: **"Are you easily able to include functional foods in your food purchases or not? Explain your experience."** According to the researcher's analysis, two distinct groups of participants could be identified: those who thought it (1) "Easy to incorporate functional foods", which they attributed to the (a) Availability and location of such products and that it was (b) Part of a shopping list". The second group indicated that it was, (2) "Not easy to incorporate" functional foods in their purchases. The categories are depicted using diagrams that reference frequently used concepts (indicated by the bulleted words and expressions used in Figure 7.13) and explain numerous categories.

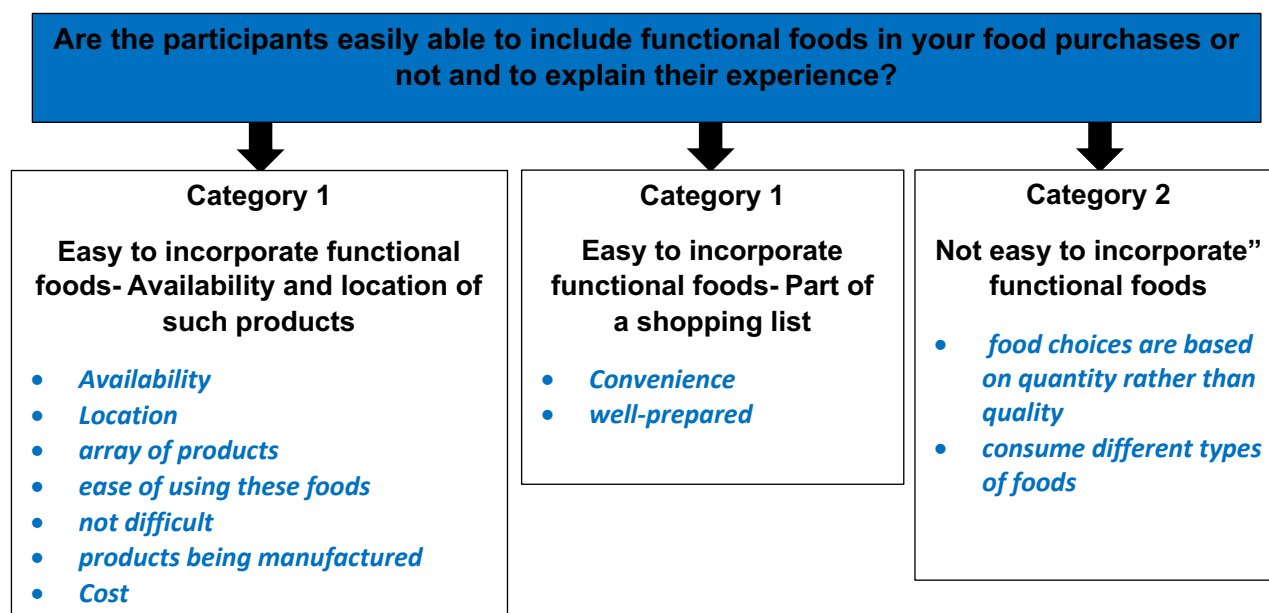


Figure 7.13: Are the participants easily able to include functional foods in their food purchases or not and explain their experience?

A vast majority of participants felt that it was **easy to incorporate** functional foods in their purchases due to the **availability and location** of these products in stores surrounding them. This participant explained, "It is easy for me and mostly because I have direct access to

functional foods in my business, but I guess I also live in developed areas which have an abundance of supply/shops". Another participant's **location** also made it easier to purchase these types of foods as she explained, *"I mean we've got an array of shops and grocers and stuff to purchase from"*. The availability of functional food products in retail outlets in the vicinity where participants reside may positively influence their purchase of such products. Nguyen et al. (2019) concur that the purchase of functional foods is influenced by their accessibility.

Having an **array of products** to choose from was pointed out by this participant, who claimed it made it easy to include these products in her food purchases: *"I think when you go to the stores there is a lot of variety and a lot of options"*. This participant shared the **ease of using these foods** prompted her to purchase functional food products: *"It is fairly easy to use functional foods. They pretty much go with anything. It is just a matter of how you decide to do it"*. Adding these foods was **not difficult** for another participant, who said she was doing so in order to maintain a healthy lifestyle:

"Yes, I am. Experience is... like I said before... I never really did, but now I do. And the reason is because it is healthier to eat that way, for me".

This participant stated that **products being manufactured** nowadays are healthier: *"I am going to say yes because some of the products that they are making now, they are trying to make it even more and more healthy and they always coming up with new things every single day"*. **Cost** was also a contributing factor for a participant who explained:

"If I am buying for myself, as I said, it is very easy to do. It is more difficult to pander to a family who has different tastes and different wants. And quantity and costs associated with it. So yes, if I am buying myself something specific, which I do from time to time, then it is easy".

Important factors that made purchasing functional foods efficient and accessible for these individuals were availability and proximity. However, cost also featured as a contributing factor as many participants believed these types of foods to be expensive. Ultimately, if consumers have easy access to functional food items, they will be more likely to buy and consume these foods.

The participants found that the easiest way to include functional foods in their food purchases was by it being **part of a shopping list**, as they stated, *"I include them when I go shopping"*. Another participant mentioned the **convenience** of purchasing functional foods *"It is easy for*

me. It is literally part of my shopping list”, “it is easy to incorporate it because it is really stuff that you can see every day when you are going shopping”, and this participant said it is like “second nature” to her.

This group of participants claimed to be very **well-prepared**, since they always made a list of the items they would need before going to the store. They shared: “Well like I say, for me I have shopping lists. I am quite organised I like to plan; I do a meal plan per week because I find the less you plan that is when you go home and look for whatever is in the deep freeze I have shopping lists. So... I think... yes... I am, no definitely, because if I have a list then I also, you know, stick to a budget and I work with it” and “Yes, I am. As I said, without a list you will not get the functional foods. So I make a list of exactly what I am looking for and I go in to where I am purchasing from and specifically go looking for that particular item”. Functional foods were thus included as part of these participants’ shopping lists, suggesting there is forethought into what these consumers choose to consume as they want to lead a healthy lifestyle.

A few participants stated that it is **not easy to incorporate** functional food items in their purchases due to the number of people living in their homes. A participant’s **food choices are based on quantity rather than quality**: “home living situation I don’t really have a big say in the food that we are eating like I said for us its quantity over quality”. Another participant indicated her difficulties in purchasing functional foods were attributed to the people she lives with wanting to **consume different types of foods**. She expressed:

“It can be a bit difficult. Sometimes things that I want to eat or that I need to be eating are not exactly what other people want to be eating, especially if you are cooking a meal for multiple people you might have to consider all their individual wants and likes”.

A study conducted by Nguyen et al. (2019) assessed several key factors that affect consumers’ attitudes and intentions with respect to purchasing functional foods in an emerging market economy. An expansion of the Theory of Reasoned Action was also created and then validated using interviewer-administered questionnaires to collect data from Vietnamese participants who were interested in functional yoghurts. Health consciousness and subjective norms (an expansion can be observed in 7.1.2) were found to considerably enhance consumer attitudes towards practical yoghurt purchases, and subjective norms and attitudes seemed to be fundamental for the consumers’ decision to purchase practical yoghurts (Nguyen et al., 2019). Nguyen et al. (2019) reported on some key factors affecting consumers’ intentions to purchase functional foods and found a favourable relationship exists between

subjective norms and the propensity to buy functional 200 foods. This claim is in line with the participants' feedback. It was difficult for these participants to include functional foods in their food purchases due to their own eating habits and other people's eating patterns, which may not particularly support functional foods.

After determining the ease of including functional foods in the participants' food purchases, it was then paramount to determine, **“What has been your main hindrance in purchasing or using functional foods?”** From the data analysis, two groups of participants emerged. The first group of participants experienced (1) “Hindrances in purchasing or using functional foods”, and eight criteria emerged, namely (a) “Education”, (b) “Price”, (c) “Availability”, (d) “Lifestyle”, (e) “Shelf life and flavour”, (f) “Time”, (g) “Social influencers”, and (h) “Plastic”. (2) Other participants experienced “no hindrance in purchasing or using functional foods”. These findings are reflected in the diagrams below; these diagrams emphasise the most common concepts (indicated by the bulleted words and expressions used in Figure 7.14) and provide an explanation of the categories.

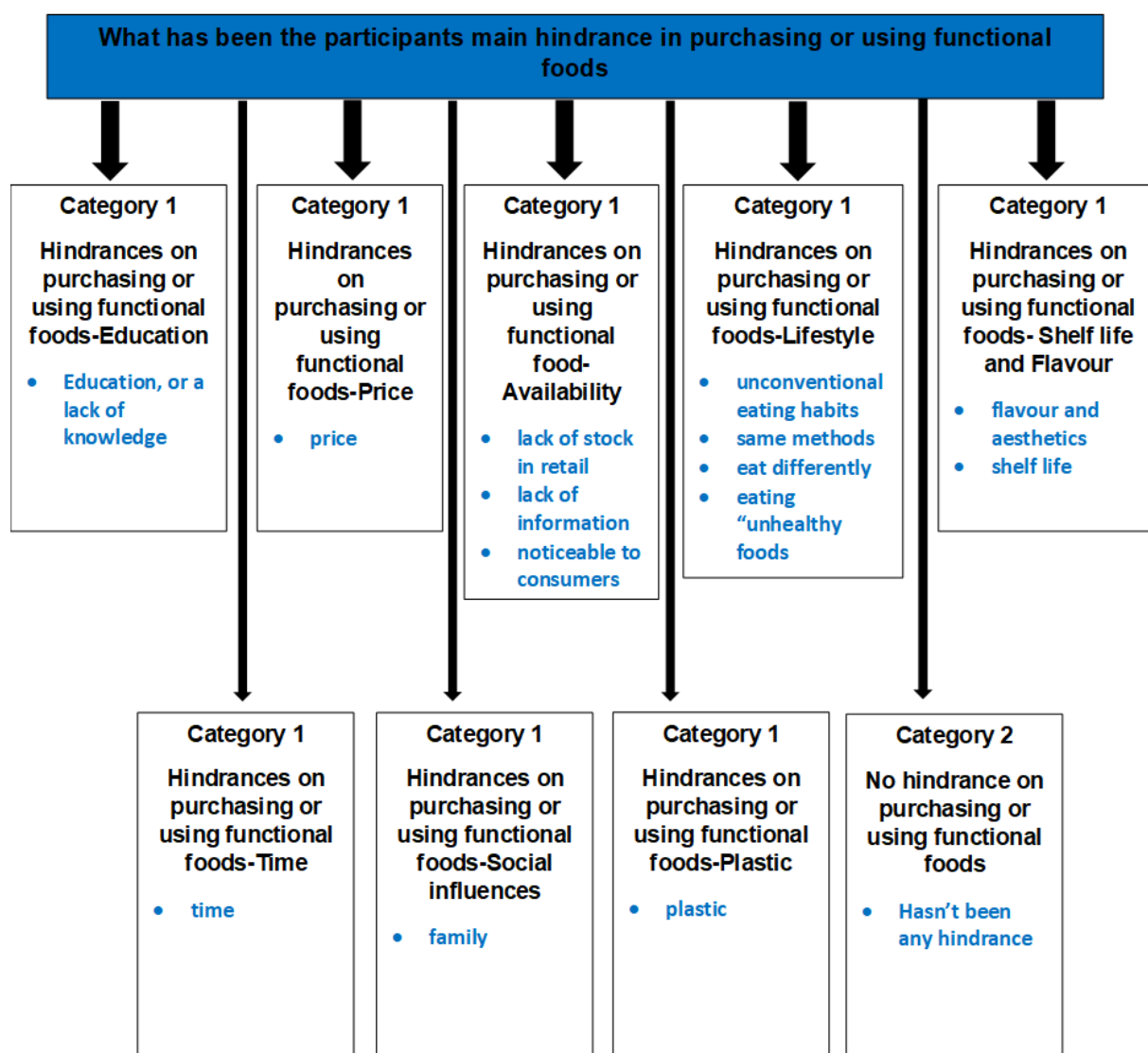


Figure 7.14: What has been the participants’ main hindrance in purchasing or using functional foods?

Some participants reported **education** or a **lack of knowledge** about functional foods was one of the hindrances that prevented them from purchasing or using functional foods. Participants highlighted: “*Knowledge of how to use the foods*”, *Is the lack of an understanding out there... or the people supplying it, what is functional foods*”, or “*I think it might be the way people perceive the food. So if you might buy something that you would like that is necessarily healthy and other people might not like it, that might be a hindrance in purchasing*” and “*Understanding... the values of it*”. A study conducted by Nguyen et al. (2019), on some key factors affecting consumers’ intentions to purchase functional foods in Vietnam, reported that the success of these functional food products is determined by the effectiveness of education and communication campaigns. These attempt to raise consumers’ health consciousness and

understanding of the health advantages of functional foods. The researcher agrees that providing participants with accurate information on functional foods will motivate them to acquire these products.

A further hindrance to the purchase of functional foods was identified as **price**. According to Maxim et al. (2019), one of the elements that might impact the purchase and use of functional food items is the cost of the product. This claim was supported by participants who indicated that *“I think just the price of the functional food”,* or *“I think just maybe sometimes the cost of getting more like organic uhm, healthy food coz the cost of it is a bit higher”*. This participant went on to emphasise the importance of price by explaining that the high prices of functional foods made it possible to buy other unhealthy foods when she said, *“I would say price cause it is a lot cheaper to eat unhealthy than to eat healthy”*. Other participants reported *“with COVID it is even more difficult with price changing”,* and *“I would say that the main constraint would just be budgetary”*. This claim was further validated by Albari (2020), stating that perceived price has a dramatic impact on a consumer’s purchasing choice, which may, in this instance, influence the purchase of functional food items.

Another category found to stop participants’ purchasing and using functional foods was the **availability of products** or the availability at different stores. This was attributed to the **lack of stock in retail** outlets as a participant indicated: *“At times a lot of the mainstream food outlets do not always have it and you have got to look around”,* and another who said, *“Availability in the shops but I do find that most of the shops have everything”*. According to Nguyen et al. (2019), availability impacts the buying of functional foods. Participants’ propensity to buy functional food items will be substantially impacted if functional food products are made accessible to them.

Finding the proper product was a challenge for one participant, exacerbated by a **lack of information** about the product in question: *“There’s a very difficult process to find the right product, so in a lot of cases, there is some hindrances to purchases but that would be the main thing”*. This participant stated that stores should arrange these products so that they are **noticeable to consumers**: *“Yes... I would also say that they would be in the store, but stores can be arranged to have the more unhealthy options more obvious to where you can go... you know, they make those more available to you”*. Ali and Rahut (2019) concur that when functional foods are portrayed as healthy and conducive nutritional data are provided, consumers show positive attitudes and increase their readiness to purchase.

Lifestyle was the fourth category deemed to be a hindrance when purchasing functional food items. For one participant, her **unconventional eating habits** and binge eating may hinder her inclusion of functional foods. She explained: *“I’m gonna say lifestyle coz I’m often a binge eater”*. Smith (2021) agrees that binge eating is defined as the consumption of enormous amounts of food in a short period of time, even when not famished. Another participant mentioned preparing food using the **same methods**, which becomes monotonous: *“I think it would be the methods that we have to prepare them. I mean eating the same thing in the same way every day is boring. So, if we had different ways to prepare them that would be nice”*. In another scenario, a participant tended to **eat differently**, which she ascribed to hormonal changes. She mentioned: *“I think when you are a bit hormonal, Yes, you tend to eat more sweets and fatty foods”*, and therefore did not focus on functional food products. Instead, she chose **“unhealthy foods”**.

Shelf life and flavour were also considered hindrances in the purchasing and use of functional food products, as conveyed by this participant: *“I would say... on the food that can go off, it should be shelf life on certain kinds of fruits or that it is... that is my only hindrance”*. According to Pecorino et al. (2016), the consumption of functional foods is affected by their **flavour and aesthetics**, and participants agreed: *“So sometimes just the taste”* and *“Somewhat certain products or taste. It depends on what tastes nice. Sometimes organic foods are not as nice, and you do not want to eat it as much as you want to eat the other one”*. It is unlikely that the consumer would be willing to give up the product’s pleasant flavour in exchange for advantageous health properties (Temesi et al., 2019).

For this participant, **time** was a hindrance as she said: *“I do not think there is much of a prevention towards it ...just about the time, just time consuming - it does not make everything possible to an extent that we would like it to be... but we manage around”*. Moreover, **social influencers** were a hindrance to another participant who simply stated: *“My family”*. One participant also mentioned **“Plastic”** is a hindrance in purchasing or using functional foods.

A few participants felt there was **no hindrance** in the purchase and use of functional foods, as indicated by these quotes: *“There isn’t, there hasn’t been any hinderance”* and *“I do not really think there is”*.

When asked, **“How does it make you feel to be able to purchase functional foods? Explain your feeling”**, (1) “Content”, (2) “Comfort and Relief”, (3) “Fortunate”, (4) “Unsatisfactory” were reported by participants. The information is outlined in the diagrams presented below; these diagrams emphasise the most common concepts (indicated by the

bulleted words and expressions used in Figure 7.15) and provide an explanation of the categories.

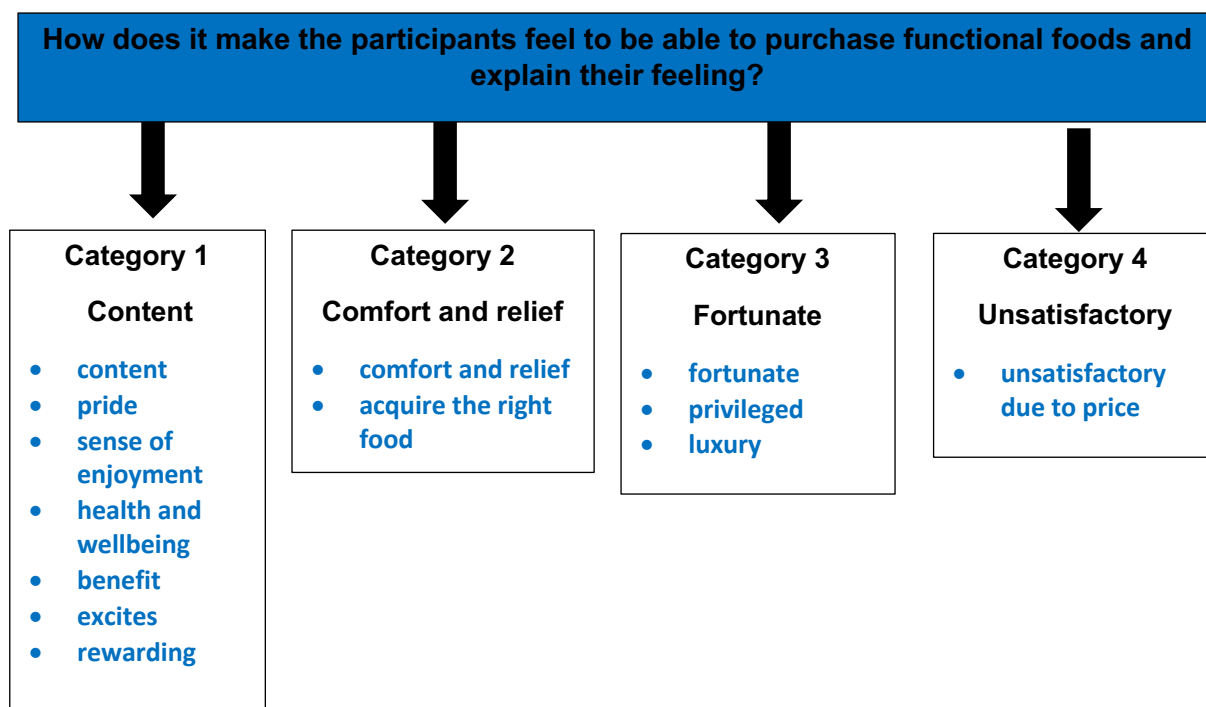


Figure 7.15: How does it make the participants feel to be able to purchase functional foods and explain their feeling?

Content was one of the reasons participants felt able to purchase functional foods. Some explained: “Satisfied because it makes me feel that I am looking after my health”, or “It feels great when you buy the food. You got a sense of well-being”, and “I think it would be great because its easily available”. The benefits of using functional food products also led to participants experiencing **pride** in taking responsibility for their eating habits. A participant shared that “I think it makes me feel proud and responsible because it is like I am taking ownership of eating right”. The **sense of enjoyment** of the nutritional benefits obtained from using functional foods was also mentioned by a participant: “I enjoy it because I know that I am going to get the benefit of the nutrition”. The consumption of these foods for **health and wellbeing** made some participants feel content: “Yes, I do. You know, it is a funny thing... Sometimes when you know that something is good for you”, and “Well, if you know that you are doing the right thing for yourself and your family and your dietician tells you that you have to otherwise you are not going to lose weight... (laughs) so... that is a big thing for us, You feel healthier. I would not say maybe as full as junk food, but you do feel better”.

Living alone gave a participant the ability to purchase and consume foods of **benefit** to her. She confirmed: *“So at least now that I am staying alone and I have the opportunity to buy my own stuff I really feel that... it is a good feeling. You feel like you are independent”*. Trying new recipes with new raw material products also **excited** another participant who reported: *“I think it is kind of exciting because then you get to try new recipes and see how it makes you feel and see how much it betters your life”*. Moreover, being able to provide healthy foods for her children was very **rewarding** for a participant; she explained: *“I would say, from being a parent, it would make me happier to be serving food that is good for the children”*. This finding is supported by Ajmera (2020), who claims in addition to being very nutritive, functional foods have been linked to a variety of important health advantages, including the potential to protect against disease and sickness. However, one participant wanted to purchase these types of foods but conveyed: *“Yes, I would love to do it but I just cannot”*.

Other feelings that participants obtained from the purchase of functional foods were **comfort and relief**. As explained by this participant, *“I feel comfortable and relieved that I’m in a position to afford makes sense and that are attractive to me”*. The ability to **acquire the right food** also provided a participant with relief as she conveyed, *“To be able to get what you needed... it is a feeling of relief that you know that you getting the right food. There is definitely a clear and conscious decision to do it correctly and it is a big sense of relief”*. Another stated: *“Okay so, to be able to purchase functional foods, is pretty relieving honestly. Knowing that the food you will be buying is going to be helping you out...mentally, physically... it is really a good feeling to know that you can go to a store and purchase functional foods”*.

Participants shared they felt **fortunate** to be able to purchase these types of foods: *“I’m going to go with that word again, also definitely we are so fortunate to be able to walk into any shop and purchase exactly what we want, and its good quality foods”*. Having the ability to acquire functional foods made participants feel **privileged**; one noted that she lives in an uninformed environment in which people are not aware of the advantages that these sorts of foods may provide:

“Privileged I think like the other participant said there’s so many people out there that don’t have money or the resources to go and get those functional foods but also we live in such an uneducated society that people don’t actually know what a functional food is, they eat the food because they are hungry they don’t eat the food because they know what it is doing”.

Another participant believed the ability to purchase these foods is a **luxury**; to her, health foods are not the cheapest: *“Look, health food is not the cheapest. So, I think I would definitely say for me it is a luxury. Look, I think even consuming vegetables alone does not have to be expensive, but I guess if you go for weird and wonderful stuff it does become expensive, yes, but I am happy to be able to think different and purchase different”*.

Unsatisfactory experiences were shared by a participant who specifically felt **price** was a deterring factor in the purchase of health food products. She shared: *“The depressing part is that there might be a product that you include in your diet on a regular basis and when the prices got to such an extent that you actually cannot afford that product, it does not make you feel very good”*. According to Maxim et al. (2019), cost is a critical factor influencing a consumer’s decision to acquire and/or use functional foods.

Based on participants’ sentiments regarding their ability to purchase functional foods, it was then necessary for the researcher to ask: **“If you had to share your belief about functional foods with someone, what would you say those beliefs are?”** From the data analysis, two categories emerged that indicated two aspects participants would share of functional foods with someone: (1) “Health Benefits” and the second aspect being they would make an attempt to provide some (2) “Educational information” to the person. The categories are illustrated in the following diagrams, which highlight the most common ideas (indicated by the bulleted words and expressions used in Figure 7.16) and explain the categories.

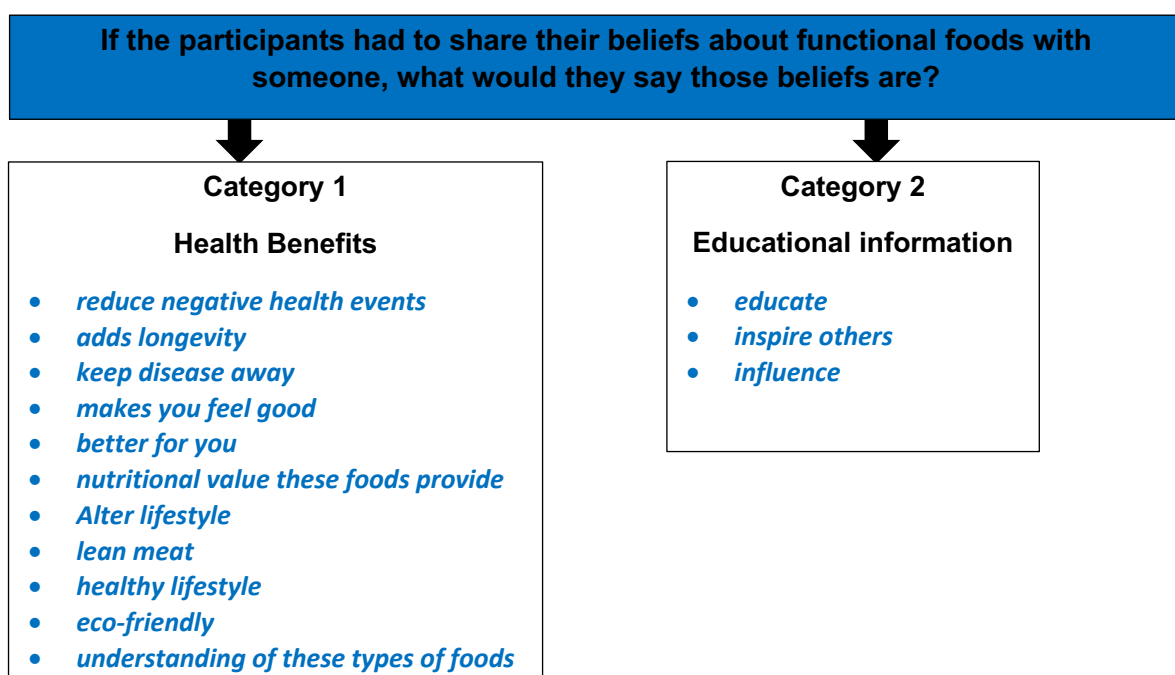


Figure 7.16: If the participants had to share their beliefs about functional foods with someone, what would they say those beliefs are?

Participants stated that one of the beliefs they would share with others about functional foods pertained to their **health benefits**. They mentioned it could **reduce negative health events, add longevity, keep disease away, make you feel good, better for you and the nutritional value these foods provide**. This participant conveyed, *“could reduce negative health events in your life and could add longevity to your life”*, and another stated, *“I would obviously like tell them the benefits of having it I mean in terms of seeing the benefits”*. One shared her beliefs about functional foods are *“to keep disease away for the most part, to keep disease away. And to prolong life”*. As Ajmera (2020) points out, the use of functional foods has been related to a variety of health benefits, including the prevention of sickness and the promotion of healthy growth and development, as well as the prevention of nutritional deficiencies. A participant claimed that *“functional foods makes you feel good. It is uhm, it is healthy”*, and another suggested, *“maybe just trying to tell them that eating healthier is better for you in the long run”*. One participant believed *“one needs to ensure that one preserves them so that the maximum nutritious benefit can be derived there from”*, and the nutritional value that functional foods contain was mentioned by another: *“Well I would tell them that it is more nutritional, and it is actually better for us”*. In addition to their nutritional value, John and Singla (2021) state that functional foods may also help prevent certain diseases.

A suitable recommendation to **alter lifestyle** through functional foods was made by this participant: *“functional foods are in a way a better lifestyle change”*. Ellis (2021) concurs that, when ingested on a regular basis and at a specific level, these foods may have a positive influence on health. Consuming more **lean meat** was vital for one participant, and she claimed she would share this view with others: *“Yes, I would say eat more lean meat. Eat more chicken than bacon and pork and stuff like that because that is quite unhealthy”*. This participant explained that people need to have an **understanding of these types of foods** in order to best utilise them and reap their benefits:

“On beliefs, I would say you would have to look at the reasons why you should have functional foods. It is quite apparent that it is a big issue in that country, never mind the rest of the world, where functional foods are not being used because it is just not easy. You have got to cook up literally faster than fast food. So... it is to be conscious of your body, of the people around you and what is needed to keep going. The people have to think. As simple as that”.

As stated by another participant, her goal was to lead a **healthy lifestyle**: *“My belief is... live a healthier life. How it will make you feel. It will make you feel like you have got more energy. It will make you feel... you know, those type of things are what I would share with them. Yes”*.

Sharing their beliefs of functional foods with other people would entail: *“My beliefs of functional foods are foods that have not been over... what is the word... processed. So try and avoid process foods as best as possible, because those foods tend to include added sugars, added preservatives, added facts”*.

Two participants definitely believed there are benefits from functional foods as they indicated: *“There is definitely a benefit for it. I always learnt that the nice thing is always everything in moderation in health”* and *“They add benefits. You should try to do them. And... in the long run it will probably save you money due to the fact that you will not have health issues”*.

As this participant expressed, she avoided purchasing products packaged in plastic bags, which leans more towards being **eco-friendly** than an understanding of functional foods and their purpose:

“Oh, I would and I do it all the time! I have got... at the office prior to COVID times, there was... so we have got a coffee place downstairs, right... and they supply the coffee which is in polystyrene.... I think it is polystyrene or it could probably be cardboard coated with plastic and then it would have a plastic lid. So I have... Everybody that I chat to and all the colleagues, they have all started to take down their own cups to that and about two... And I have always chatted to the CEO and the COO because I deal a lot with them and three months ago, they have now banned plastic spoons, knives, cutlery, plastic tops for the coffee and I am sure that it was not myself... but I do think that the conversations that I have had with them about how as a global organisation, we actually have to take the lead and we have got to do things. So, I am sure that all of those conversations sort of played a part”.

According to participants, the benefits that functional foods provide in terms of health were positively associated with their perception of these foods. They agreed that consuming these types of foods could prevent certain types of diseases, illnesses and provide health benefits for longevity.

Another belief posed by participants was the importance of providing others with **educational information**. Some participants stated that: *“It is just explaining to people the basic food groups and what mixes with what and so on”* and *“I think to educate I thinks just like the nutritional value and what’s in your food so like if u have I would go back to eating spinach for iron, citrus for vitamin C eating protein for feeding your muscles eating you know stuff that*

helps your brain functionality, educating what food does for your body not necessarily what you should be eating or shouldn't be eating".

According to Grebow (2014), since these foods are deemed to positively influence health and well-being, consumers' views on functional foods are contingent on their understanding of the health benefits these products provide. Using their own personal experiences and knowledge of healthy eating, participants believed they could **inspire others** to do the same: *"I think personal experience is a very strong way to be able to influence somebody or something. If you give them personal occurrences and stuff that you have experienced then they would definitely feel more, more inclined to listen to what you have to say".* One participant reportedly used her **influence** to entice people to purchase functional foods:

"I would just try and influence people to believe what I believe and just try to get people to understand that feeling of just feeling so good when you know what you are putting into your body and that you are eating the right foods".

Participants shared that by educating people on the advantages of functional foods, they could become more inclined to buy these items. It is thus necessary to explain their experiences and help them comprehend the health-related advantages that these products offer in order to convince others to include them in their diet.

7.2 Conclusion

The primary objective of this chapter was to explore the influence of attitude, subjective norms and PBC on health-conscious consumers' intention to purchase and consume functional foods. Findings showed positive and adverse attitudes toward these kinds of foods among the participants. The positive attitudes were centred around health-related topics such as promoting health and raising awareness, as well as physical activity and the impact of social media on participants' intentions to purchase and consume functional foods. The disadvantages some participants mentioned included that they did not explicitly observe functional foods since they had no interest in the topic. Others did not fully understand what these foods were, and some claimed these foods did not have any influence on their health and well-being.

When it came to the influence that subjective norms had on the participants, it was found that some were socially pressured to purchase and consume these types of foods by a parent, work peers, social influencers, media personnel and content, medical professional, friends,

family members and retail stores. Participants were mainly influenced by these types of people and retail stores from a health-related, food preparation and consumption perspective. Other participants said they were not socially pressured.

With the third component of the TPB being PBC, participants found that they were easily able to include functional foods in their diet due to these products being available, within close proximity to them, and part of their shopping list. Some conveyed that these products' availability gave them with a feeling of content, comfort and relief and being fortunate. The researcher also found there were hindrances encountered by some participants in purchasing or using these types of foods. These included education, price, availability, lifestyle, shelf life and flavour. Participants believed functional foods provided them with health advantages, and teaching others about these foods would give them the information and rationale required to use functional foods in their daily diets and lifestyles.

The study's aim and objectives were to conduct an exploratory study of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. The researcher examined the numerous aspects of functional food items that would impact participants' consumption, understanding, and the variables that impact their purchasing and consumption of these foods in detail. The study's aims and objectives required the use of a qualitative research approach. Focus groups and one-on-one interviews were used as data collecting methods. Similarities and contrasts between participants' perspectives and experiences were revealed through an examination of data pertaining to several acceptable attributes. The study's findings created an extensive awareness and perspective into health-conscious participants' consumption, knowledge and the factors that influenced their intention to purchase functional foods.

The last chapter concludes the findings and reports on the finding's implications. It also outlines future research prospects that pertain to health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods.

CHAPTER 8

CONCLUSION OF THE STUDY

The main findings, contribution and implications of the study, as well as future research prospects pertaining to health-conscious consumers' consumption, knowledge and factors that influence their intention to purchase functional foods are presented in this chapter.

8.1 Introduction

Chapters 5-7 presented the findings on health-conscious consumers' consumption, knowledge, and the factors that influence their intention to purchase functional foods. As a theoretical framework for the research, the TPB was used to explain health-related behavioural intention in relation to functional foods. The findings were examined in light of the research objectives that served as the basis for this study. Additionally, the research methodology that best supported the study's objectives was detailed, followed by a discussion of the findings gained through focus groups and individual interviews. This chapter concludes the exploratory investigation of health-conscious consumers' consumption, knowledge and the factors that influence their intention to purchase functional foods. It provides short comments and interpretations on the study's key findings, as well as a conclusion to this chapter. The participants' demographics are briefly summarised to ensure the findings are interpreted in the context of the research. The contribution of the study, limitations of the study, as well as recommendations for further research are also presented.

8.2 Demographic profile of the participants

Participants who took part in this study were mostly female, residing in Gauteng. They were educated and permanently employed.

8.3 Overview of the research problem

Despite the growing popularity of functional foods, consumers in the South African market are seldom exposed to advertisements for these products; even those that are readily available are rarely labelled as pertaining to the functional-foods category. As the market for functional foods expands, it is imperative to identify health-conscious consumers' consumption, knowledge, and factors that influence their intention to purchase these foods in South Africa.

There are also many unsolved concerns regarding consumers' comprehension of conventional and modified functional foods and its impact on their intent to purchase these food products. Since relatively few studies looked at functional foods, in general, using a quantitative methodology, prior research in South Africa did not explore health-conscious consumers' consumption, knowledge, and factors influencing their intention to purchase functional foods in depth. A qualitative investigation enables researchers to better comprehend topics that are presently obscure. In this study, the qualitative methodology helped the researcher gain insight into South African health-conscious consumers' intent toward purchasing these foods. An investigation of this nature has as not been applied before, thus leading to little consumer insight into this phenomenon.

In the next section, a discussion is provided highlighting the main findings of the study in relation to the research objectives. Certain objectives were combined to obtain a more precise and concise understanding of them.

8.4 Conclusions

8.4.1 Objectives 1 and 5: To determine health-conscious consumers' understanding of the term 'functional foods' and explore health-conscious consumers' use of functional foods

The key objective was to gain an understanding of how consumers who are concerned with their health understand the term 'functional foods' and use these types of foods. The findings revealed that participants mainly focused on health and nutrition as the primary advantages these functional foods provide. Other factors contributing to their understanding included reading, friends and family, influential people, content found on social media platforms, types of foods purchased, being part of a shopping list/meal plan, and being part of a diet. Some participants were uncertain of functional foods and lacked the understanding and knowledge to be able to comment on functional foods, despite potential participants for the research being informed of the inclusion criteria.

Considering the overall findings, it can be deduced that in this particular case, women who took part in the study were the primary food shoppers in the household and understood the significance of the types of foods they were purchasing for themselves and their families. According to the participants, the most important notion of functional foods is that they are 'good for you'. Functional foods, for some participants, were described as providing nutritional benefits in addition to giving health benefits. They also mentioned that functional foods support the body in functioning at its optimum. Others showed uncertainty and a lack of understanding

of what these types of foods were. It is possible that the participants' lack of awareness of functional foods is attributed to their generalised idea of health foods.

There was a strong association between functional foods and health-related food products or food products that provide a specific function among most participants. Participants described health-related food products as fruit and vegetables, meat, poultry, eggs, spices, seafood, legumes, nuts, grains, seeds, cereals, dairy, oil products and fermented beverages. Besides having health-related properties, these were also the types of foods that participants consumed and used on a daily basis. A detailed analysis was provided on the health and nutritional aspects that these foods offer; however, these were not specific to functional foods. Individual considerations led to their choice to employ these types of food products.

Prior to their participation, potential participants received information about the study in advance. It outlined inclusion criteria like "having heard of functional foods, being exposed to functional foods or perceiving themselves to be knowledgeable about functional foods". However, based on feedback related to objectives 1 and 5, participants primarily linked functional foods with 'health foods'; when it came to the term 'functional foods', they had a limited understanding of its meaning which showed in their response. The participants' perception of functional foods (which for them were aligned with health foods) made it difficult for them to answer the questions posed in relation to functional foods. This could also be due to some not having any idea of what functional foods really are.

When it came to the use of functional foods, participants again associated these types of foods with having health and nutritional benefits, conveying the importance of including these foods in their diets. To them, functional foods were equated to health-related food products as well as foods that they used and consumed on a daily basis. Some participants indicated that no specific rules or processes were followed to include functional foods in their diet, and their decision to add functional foods into their diets was solely based on personal preference. In addition, these participants felt that a lack of knowledge inhibited them from making informed decisions regarding the purchase and consumption of these foods.

It can be concluded that if functional foods and their health advantages are made more widely known, more people will be encouraged to purchase and include these foods in their diets. They will then be aware of the benefits of the foods they are presently eating, enabling them to make healthier dietary choices. Participants consumed foods they did not realise were classed as functional foods; most are relatively common foods that have been consumed for centuries. Therefore, they consumed them without realising they were classified as functional

foods. The assumption is that people may recognise them as fruits and vegetables, which they already know should be included in their diet, but they do not recognise them as functional foods since they have not been introduced in this way. The main findings related to the objectives that explored health-conscious consumers' knowledge and use of conventional and modified functional foods are discussed next.

8.4.2 Objectives 3 and 4: To explore health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods and identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods

Objective three explored health-conscious consumers' knowledge and use of conventional functional foods and modified functional foods, while objective four identified the factors that influence health-conscious consumers' intention to purchase and consume functional foods. Most participants described conventional functional foods as natural, available, fruits and vegetables, spices and herbs, legumes, seeds, nuts, grains, flour-based products and cereal, seafood, animal foods and tea. A few were uncertain of what these types of foods were. These listed foods were mentioned by those participants who had a surface level or deep understanding of functional foods. Conversely, modified functional foods were described as enhanced foods with product-like features, dairy, juices, cereals, granolas, breads, eggs, tinned foods, meat, poultry, GM foods and fermented beverages. Quite a few participants did not know what modified functional foods were. The factors most influential to the participants that enabled them to purchase and consume functional foods were also described in detail.

A majority of participants perceived conventional functional foods to be 'health foods', namely foods that provide health and nutritional benefits. They also said these were the types of foods they were exposed to and utilised on a frequent basis. Other participants described it as consuming the correct type of animal, found in supermarkets, made available all year round, promoting health and well-being, just to name a few. The concept of modified foods was more challenging to grasp, as quite a few participants had trouble understanding what the term meant. They equated it to what they perceived 'modified' meant, which were foods characterised by human intervention, pre-packaged foods, enhanced foods, canned foods containing preservatives, and meat products, to name a few examples. These were also foods that participants were exposed to and used on a regular basis. They utilised the word 'modified' and made something of it, and their answers did not originate from a clear comprehension of the concepts. Rather, their feedback was based on possible conjecture and what may be logical assumptions for the consumer to make instead.

Participants felt it was important to include conventional functional foods and make them a part of their everyday diet, as these types of foods were positively viewed. However, some had differing perspectives when it came to modified functional foods. They indicated they do not purchase modified foods, and their feedback was attributed to their lack of understanding of what these foods really are. Conventional functional foods were perceived more favourably than modified functional foods, which the participants perceived adversely as being enhanced and inherently unhealthy. Only a few participants had a basic idea of what modified functional foods were, but there were also a few participants who did not think they were necessary because of their lack of information or comprehension of these foods.

The fourth objective addressed the factors that influence health-conscious consumers' intention to purchase and consume functional foods. The findings generated several distinct categories, including availability, health and nutritional benefits, price, external factors (with the following subcategories: weather, packaging and brand, quality, time), and personal factors. These were the most prevalent themes that resonated with the participants, but these are general factors relevant to all products, and there was nothing particularly unique about them.

It is reasonable to assume that if consumers gain more awareness of the availability of conventional functional foods and foods with modified functional properties, they would be more accepting of them and make informed decisions to purchase and consume these types of foods. Ultimately, these are already well-known products and not unfamiliar.

8.4.3 Objective 2: The influence of attitude, subjective norms, and perceived behavioural control on health-conscious consumers' intention to purchase and consume functional foods

It has been shown that the TPB may accurately predict healthy eating behaviours. According to this theory, participating in healthy behaviours is more likely to occur when there is a combination of a good attitude, subjective norms, and a high degree of PBC. The amended framework in Figure 8.1 suggests that the participants had both a positive and negative attitude toward functional foods. Positive views were centred on health-related themes. They mentioned these foods encourage health and promote awareness, physical activity, and the influence of social media on the participants' intentions to purchase and consume functional foods. The fact that certain participants did not specifically observe functional foods was one of the disadvantages. This was due to these participants' lack of interest in the study's topic,

as well as their inadequate comprehension of what functional foods were. They perceived these foods did not have any impact on their overall health.

When it came to the influence that subjective norms had on the participants, it was discovered that some participants were subjected to social pressure to purchase and consume these types of foods. This pressure originated from a parent, work peers, social influencers, media personnel and content, medical professional, friends, family members, and retail stores. These participants were most impacted by these sorts of people and retail stores based on associated health, food preparation and consumption standpoints; other participants were not subjected to any form of social pressure. These participants claimed they were not affected by the opinions of other people regarding the products they purchase and/or consume. Rather, the participants made decisions based on individual preferences and tailored their eating habits and lifestyles.

The third component of the TPB was PBC, and participants indicated they were able to incorporate functional foods into their diet since these products were available, within close vicinity to them, and part of their shopping list. Some who were able to obtain these products said having access to them gave them a sense of being privileged; they felt contentment, relief, and comfort. This is due to the fact that these goods were readily available to them. However, the researcher also observed that some barriers were experienced by participants when buying or utilising these types of foods. These barriers included knowledge, price, availability, lifestyle, shelf life, and flavour. Ultimately, participants stated that functional foods offered them health benefits, and educating others about these foods would give them the knowledge and justification they need to include functional foods into their everyday diets and lives. If awareness is created around these types of foods, it will make it easier for consumers to purchase functional foods as they will have an understanding and knowledge of the benefits these foods provide and make informed purchasing and consumption decisions.

8.5 Contribution of the study

The study addressed a consumer-related problem based on the phenomena of conventional and modified functional foods. As a result, the study's contribution can be considered in relation to its contribution to methodology, theory, and the body of literature.

8.5.1 Contribution to methodology

Based on the study's findings, it is clear that adopting online focus group and individual interview discussions was an effective way to have studied health-conscious consumers' consumption, knowledge, and the factors that influence their intention to purchase functional foods since rich and thick data were obtained. By using focus groups and interviews, data were gathered, and consumers' experiences could be established, giving participants the opportunity to express their thoughts and views on the phenomenon. Since no prior consumer studies of this nature had been conducted in South Africa, the qualitative paradigm gave the researcher an opportunity to interrogate and further investigate participants' understanding and probe until clarity was reached.

The use of a combination of focus group and individual interview sessions illustrated that both interviewing techniques resulted in data that showed similar findings. This may suggest that if focus groups or individual interviews are used, these techniques do not necessarily result in different data, especially where functional foods are concerned. The use of both focus groups and individual interviews in this study therefore contributed to a better understanding of the similarities in data that can result from these techniques. This can potentially give qualitative researchers confidence that in selecting either of these data gathering techniques, their findings will not be limited.

8.5.2 Contribution in theory

The study has made a contribution to the TPB by applying the theory's three components to the context of functional food; specifically, the health-conscious consumer and not general consumers. The study has thus provided some insight into the context of each of the three components in relation to the health-conscious consumer's intention to purchase functional foods, which has not been researched before. The study also provided evidence of the successful application of the TPB to study the phenomenon of functional foods concerning the health-conscious consumer and the theory's application in a nutrition and health-related field.

8.5.3 Contribution to the body of literature

This study has made a contribution to the body of literature by adding to existing studies on functional foods specific to the South African context. Through this research, a consumer perspective has been added to the body of functional food studies that explain consumers' behaviour in more specific terms. As most functional food studies were conducted

internationally, the study contributed findings from an African context. These may provide different insights into consumers' knowledge, use and intention to purchase functional foods than what international studies suggest. More specifically, this study shed light on the health-conscious consumer, adding a better understanding of their dietary behaviour and knowledge. The study also expanded interest in the dietary behaviour of health-conscious consumers by exploring their approach to functional foods in more detail. Therefore, this study has contributed to already existing knowledge, not only in the field of functional foods but of a specific consumer group representing the health-conscious consumer in South Africa.

8.6 Amendment of the conceptual framework

The TPB served as the foundation for the proposed conceptual framework presented in Figure 3.2 (Chapter 3, Section 3.6) that was suggested for this research. The TPB provided a simple yet logical framework for analysing the attitude, subjective norms, and PBC of health-conscious consumers in relation to functional foods. In the conceptual framework, it was proposed that three health-conscious-related influencing concepts (i.e., consumer factors, subjective knowledge and consumption), as well as the organoleptic attributes (taste), sociodemographics (gender, age, income, education level) and pricing form an integral part of this study when intention to purchase functional foods is determined. It was also established in Section 3.6 that these might be important influencers in consumers' intention to purchase and consume modified and conventional functional foods.

The initial conceptual framework suggested that the influencers may have an effect on the attitudes, subjective norms, and perceived behaviour control of consumers, and that this may affect the behaviour towards their intention to purchase and consume functional foods. It was also suggested that this might result in the purchase or non-purchase of functional foods, either of which may directly impact the intake of modified and conventional functional foods, respectively. Based on varied influences on the consumption and use of these two types of functional foods and the resulting behaviour of purchasing or not purchasing these functional foods, good health and well-being, as proposed in SDG 3, may be compromised.

In light of the findings emerging from this study, an amendment to the conceptual framework presented in Chapter 3 (Section 3.6) is suggested. Therefore, the blocks in Figure 8.1, which are highlighted in blue, as well as the context stated in blue writing, emphasise the revisions made to the initial conceptual framework (Figure 3.2). The amended conceptual framework presents details on the key issues pertaining to each of the influencer concepts related to the research phenomenon. To that effect, the amended framework proposes that due to the lack

of specific knowledge about conventional and modified functional foods, the current health-conscious consumer's understanding of functional foods may be a forceful influence on their intention to purchase and consume these foods. Therefore, an understanding of functional foods based on health-conscious consumers' knowledge potentially affects the three influencing concepts. They may have a determining influence on the attitudes, subjective norms and PBC components of the TPB. Through this influence, attitudes may not necessarily have been developed from an established objective knowledge of conventional and modified functional foods.

The findings have also revealed that subjective norms are influenced by various role players who may have an effect on consumers' attitudes towards conventional and modified functional foods or functional foods in general, as this distinction was not clear to participants. Subjective norms represent others' influence, which, in relation to this study, means other role players' knowledge base may influence what the consumer knows about functional foods. It also affects how they are directed to behave in terms of their consumption and intention to purchase these products. Therefore, the influencer concepts may direct the role players' understanding of functional foods, which is then transferred to the consumer they influence, resulting in their knowledge and behaviour.

Conversely, PBC resembles the ease or difficulty with which functional foods, in general, can be obtained. As a component of the TPB, PBC may independently have an influence on intent to purchase and consume functional foods (conventional and/or modified). Consumers may have intent but may not be able to realise their intent if there are other deterring factors influencing the purchase and consumption of these foods.

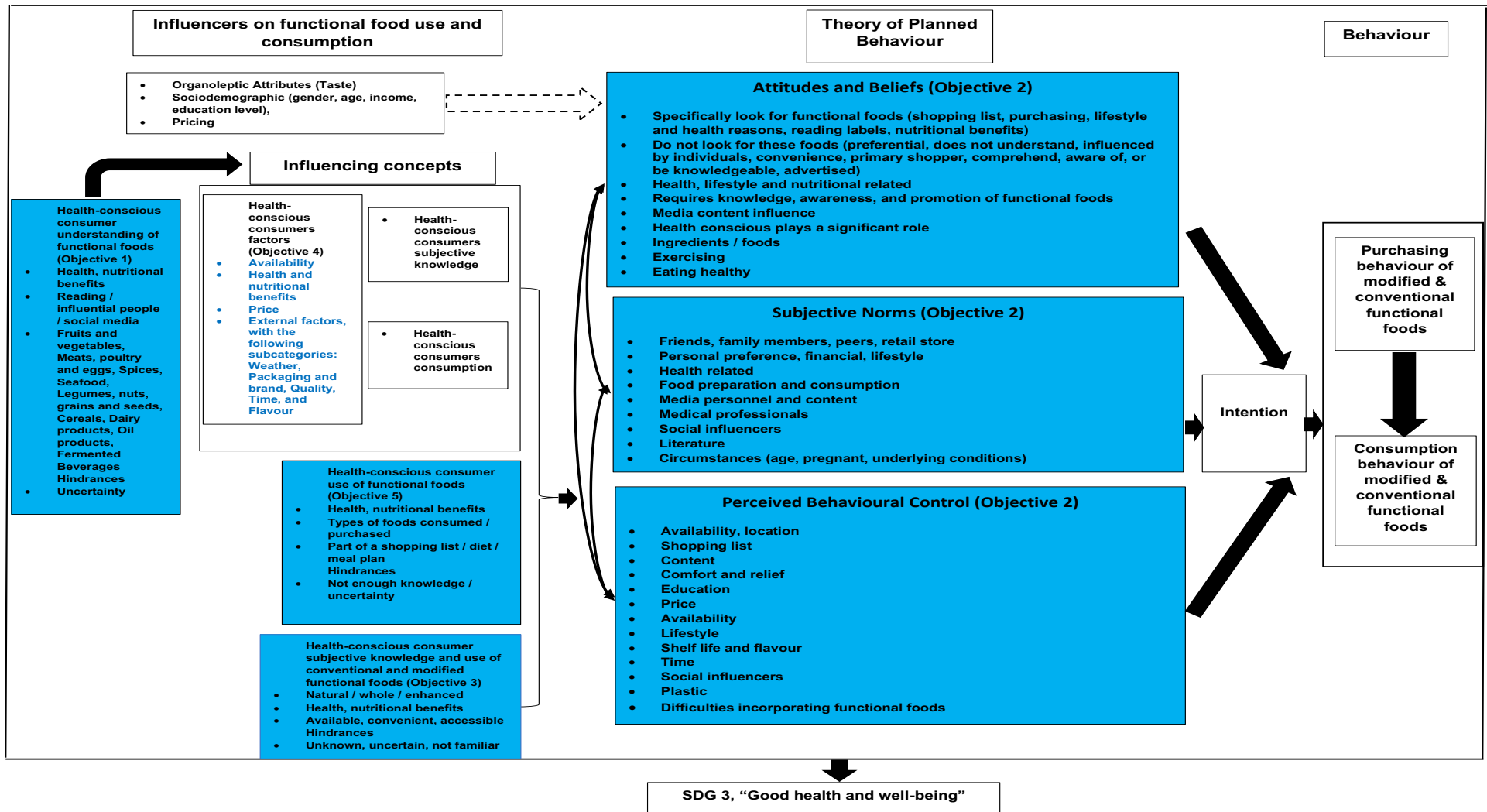


Figure 8.1: Amended conceptual framework

In this instance, consumer knowledge about conventional and modified functional foods may be a direct barrier if their lack of knowledge prevails. The awareness and importance of functional foods may not stimulate consumers' intention to purchase and consume such foods. Therefore, the amended conceptual framework proposes that consumers' knowledge about functional foods may be the catalyst required to influence their intention to purchase and consume these products. Without a factual and objective knowledge base of functional foods, the influencing concepts and components of the TPB are directed by subjective understanding, which may not be useful to stimulate the purchase and consumption of functional foods. This may negatively impact SDG3, as good health and well-being do not include informed decisions about the use and consumption of functional foods.

8.7 Limitations of the study

An exploratory study was designed to gain a deeper level of comprehension and take the opportunity to explore health-conscious consumers' consumption, knowledge, and factors that influence their intention to purchase functional foods. The exploratory nature of the study limited the scope to specific types of functional foods (conventional and modified) and a specific study sample, namely health-conscious consumers who adhered to specific inclusion criteria. Therefore, the exploratory design limits the transferability of the findings to other study populations who are different from the participants who took part in this study.

A further limitation to the study lies in the inclusion criteria that were used to recruit participants for this study. It was specified that participants should perceive themselves to be health-conscious, over the age of 18 years, conscious of purchasing health-related food products, conversant in English, had a disposable income to purchase health-related food products, able to make their own purchasing decisions, had heard about functional foods, been exposed to functional foods, or perceived themselves to be knowledgeable about functional foods. Through the use of this criteria, the extent of functional food knowledge is not certain as some participants thought themselves knowledgeable but were, in fact, not. This became evident when questions were posed, such as "what is conventional and modified functional foods?" Therefore, this study may not have included consumers with factual functional food knowledge, only perceived knowledge, which may have differed for many participants. Some consumers did not have factual functional food knowledge, which only came to light during the interviews. This can result in guessing and making inferences and deductions from questions about functional foods, rather than basing the response on objective knowledge.

It is also suggested that due to the non-probability sampling methods (convenience, purposeful and snowball) used in this study, participants' recruitment was restricted to those who were easily accessible and adhered to the inclusion criteria. This sampling strategy limits the diversity of participants as they were only recruited within a limited geographic area in South Africa, thus limiting the findings to the specific study sample.

8.8 Recommendations for future research

It is recommended that the study be repeated with non-health-conscious consumers to determine if their consumption and knowledge of functional foods are the same and if the same factors influence their intention to purchase functional foods. This will allow researchers to find common elements within the consumption and use of conventional and modified functional foods and the factors that influence both groups' intentions. Future research should also focus on determining consumers' objective knowledge in terms of conventional and modified functional foods in order to establish which aspects of these two groups of functional foods are known. This will also enable more specific educational programmes to be created that address factual shortages in relation to conventional and modified functional foods.

8.9 Recommendations in relation to the methodology

It is recommended that the inclusion criteria be amended to not include perceived knowledge or awareness of functional foods, but a knowledge test should be given to determine the level of knowledge before participation. This will ensure that participants provide responses based on their factual knowledge and experience, allowing a better understanding of their real position regarding conventional and modified functional foods. A further recommendation is to also conduct this study through means of a quantitative methodology where a cross-sectional design can be applied to include a larger sample of consumers. By applying a quantitative methodology, probability sampling strategies may be used, potentially promoting the findings' generalisation.

8.10 Recommendations for the food industry

In light of the participants' comments and perspectives, it is evident that consumers are increasingly conscious of what they consume and what they expect from their food items. In order for a food manufacturing company to produce a product containing functional foods, it is important to initiate a marketing campaign aimed at promoting the product and enhancing

public knowledge of the merits and substantial advantages associated with functional foods. This will provide consumers with the necessary information and comprehension to make informed decisions when purchasing these particular food items. Promoting a product with the aim of educating consumers is an essential aspect to explore in order to enhance the efficacy of functional food products, since consumer acceptance is closely linked to the effectiveness of marketing efforts. Ultimately, functional foods have the potential to provide several advantages to consumers, including improved quality of life, prevention of chronic illnesses, and optimisation of overall well-being.

In order to effectively introduce conventional and modified functional foods, it is crucial to possess a thorough understanding of consumer requirements and purchasing behaviours in relation to nutrition and health. The establishment of reliable and efficient strategies to advertise these functional food to consumers is of utmost importance.

8.11 Conclusion

In this chapter, key findings were provided on each of the objectives formulated to better understand and observe health-conscious consumers' consumption, knowledge, and factors that influence their intention to purchase functional foods. The results were examined based on their contribution to functional food research, methodology, theory, and the conceptual framework of this study. The limitations of this research were also discussed. The existing results were expanded upon with novel concepts for future research.

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APPENDIX 1: CAES APPROVAL



UNISA-CAES HEALTH RESEARCH ETHICS COMMITTEE

Date: 09/06/2021

Dear Ms Ramdut

NHREC Registration # : REC-170616-051

REC Reference # : 2021/CAES_HREC/072

Name : Ms A Ramdut

Student # : 51162776

Decision: Ethics Approval of Amendment

Researcher(s): Ms A Ramdut
51162776@mylife.unisa.ac.za

Supervisor (s): Prof EL Kempen
kempeel@unisa.ac.za; 083-302-7059

Working title of research:

Exploring health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods

Qualification: M Consumer Science

Thank you for the submission of your amendment request to the UNISA-CAES Health Research Ethics Committee for the above mentioned research. The following amendments are approved:

- Change in participant recruitment strategy from the Facebook platform to snowball sampling.
- Change in the incentive reward from 2 GB of data to a R100 Takealot voucher.

Due date for progress report: 31 March 2022

*The **low risk application** was **reviewed** by the UNISA-CAES Health Research Ethics Committee on 03 June 2021 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*



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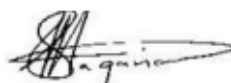
The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
8. No field work activities may continue after the expiry date. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **2021/CAES_HREC/072** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,



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APPENDIX 2: CONSENT FORM

PARTICIPANT INFORMATION SHEET

Ethics clearance reference number: 2021/CAES HREC/072

Research permission reference number: UNISA Staff and Students data will not be used

29 March 2021

Title: **Exploring Health-Conscious Consumers' Consumption, Knowledge and Factors that Influence the Intention to Purchase Functional Foods**

Dear Prospective Participant

My name is Avilasha Ramdut, and I am doing research with Professor Elizabeth Kempen a professor in the Department of Life and Consumer Sciences, in the College of Agriculture and Environmental Sciences towards a Master's at the University of South Africa. We are inviting you to participate in a study entitled exploring health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of this research is to explore health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods. The lack of research regarding consumers viewpoint on functional foods warrants the need for this research to be conducted as it will improve health-conscious consumers awareness, obtain a better understanding of functional foods in their diet, would have a more meaningful inclusion of the health-conscious consumers daily lifestyle, and provide more information to manufacturers of functional foods.

WHY AM I BEING INVITED TO PARTICIPATE?

The reason you have been selected to participate in this study is because you have met the inclusion criteria requirements which are:

- perceive themselves to be health-conscious,
- over the age of 18 years,
- conscious of purchasing health-related food products,

- conversant in English as the interview will be conducted in English,
- disposable income to purchase health related food products,
- participants must be able to make their own purchasing decisions,
- have heard about functional foods or exposed to functional foods or perceive themselves to be knowledgeable about functional foods.

This study also comprises of a detailed interview guide which has been created to explore health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods. Through participating in the focus group, you accept that the knowledge you present can be used for academic purposes. There will be between 10-15 focus groups, of which each focus group will include 3-4 participants, this number is subject to achieving data saturation.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

This study involves audio taping and online focus groups. Online focus groups will be conducted, 3-4 per group, 90 minutes a session and about 10-15 focus groups will be conducted until data saturation has been achieved. The following questions will be asked during the focus group session:

1.1 What are the health-conscious consumers' understanding of the term "functional foods?"

1.1.1 What do you understand when you hear the term "functional foods"?

1.1.2 How did you become familiar with this term?

1.1.3 What do you know about functional foods that is important to you?

1.1.4 What do you think is the purpose of functional foods?

1.1.5 Can you name some of the products you include in your shopping list that are important functional food items to you to consume?

1.1.6 Which are your favourite functional food products and why?

1.1.7 Are there any particular sources you consult on functional foods? Which are they and why do you consult these sources?

2.1 What is the influence of attitude on health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods.

2.1.1 When you purchase food products, do you specifically look for functional food products?

2.1.2 Were you always keen on purchasing functional foods? If not why, and if yes, why was it important to you?

2.1.3 Has your idea about functional foods changed in any way? What do you attribute it too?

2.1.4 What role has your health consciousness played in your purchase and consumption of functional foods?

2.1.5 What does it mean to you to be health-consciousness?

2.1.6 What important things does your health consciousness include?

2.1.7 How has your health-consciousness influenced your purchasing of functional foods?

2.2 What is the influence of subjective norms on half-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods.

2.2.1 Do you feel pressured socially to purchase or not to purchase functional food products, if so why?

2.2.2 If previously answered yes, from who does the pressure originate?

2.2.3 In which way does friends and family influence your decision to purchase functional food products?

2.2.4 Are there any individuals or groups of people who would influence your purchasing decision and consumption of functional food products?

2.2.5 What influence does any individual or groups of people have on your purchasing decision and consumption of functional food products?

2.2.6 How important is it that you are seen to be using or including functional foods in your food purchases?

2.2.7 Who introduced you to functional foods or how did you become aware of functional foods?

2.3 What is the influence of perceived behavioural control on health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods.

2.3.1 Are you easily able to include functional foods in your food purchases or not? Explain your experience.

2.3.2 What has been your main hindrance in purchasing or using functional foods?

2.3.3 How does it make you feel to be able to purchase functional foods? Explain your feeling.

2.3.4 If you had to share your belief about functional foods with someone, what would you say those beliefs are?

3.1 What are health-conscious consumers' subjective knowledge and use of: Conventional functional foods and Modified functional foods.

3.1.1 What do you think conventional functional foods are?

3.1.2 According to your opinion which foods are conventional functional foods?

3.1.3 Do you include these foods in your food purchases?

3.1.4 Of these products, which is the most important conventional functional food item to you?

- 3.1.5 Which advantages do you think the foods that you mentioned as conventional functional foods hold?
- 3.1.6 What do you think modified functional foods are?
- 3.1.7 According to your opinion which foods are modified functional foods?
- 3.1.8 Do you include these foods in your food purchases?
- 3.1.9 Of these products, which is the most important conventional functional food item to you?
- 3.1.10 Which advantages do you think the foods that you mentioned as modified functional foods hold?

4.1 What are the factors that influence the health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods.

- 4.1.1 What factors would influence your decision to purchase and consume functional foods?

5.1 What influences health-conscious consumers' use of functional foods.

- 5.1.1 As a health-conscious consumer how important is it to you, to include functional foods in your diet?
- 5.1.2 Are there any specific rules or processes that you follow to make sure that functional foods are included in your diet? Explain these rules or processes.
- 5.1.3 How do you make sure that functional foods are present in your diet?

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

In this study participants will be conveyed that they will be able to leave the focus group discussion at any time if they felt overwhelmed or exhausted. The protection of participants from possible harm is an important factor in anonymity and privacy. Consent will be given freely (voluntarily), will be easily understood by the participants, mitigating the chance of intimidation or undue influence. Participants included in this research study, will be properly informed of the nature of the study and have the right to choose whether to participate or not. You will be under no obligation to participate in the focus group session and can withdraw prior to the scheduled TEAMS meeting.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

This study will aim to provide a better understanding of health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods. This study will also contribute to provide evidence if South African health-conscious consumers' do benefit from functional foods in general. South Africa has been found to be an emerging market for functional foods as there has been great interest shown by consumers'

with regards to functional foods. An indirect consequence of this study can help benefit the health-conscious consumer and consumers' in general in managing comorbidity's' and ultimately help the population lead healthier lifestyles through improved food choices. The mini focus groups that will be conducted in this study will contribute to this study by gaining value and insight by drawing on participants experiences, beliefs, and attitudes with regards to health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

We do not envisage any negative consequences by you taking part in this focus group study, however the following consequences might arise during a focus group session, infringement of anonymity and/or confidentiality may cause social or psychological harm. Information revealed can be embarrassing, deplorable and or stigmatizing. It is also likely that discussion of especially a sensitive matter within the group may lead the participant or group to feel fragile as well as there being a slight inconvenience on the use of your time and data usage.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to demand that your name will not be recorded and that is kept separate from everyone other than the members of the research team. Your answers will be alluded by a code number, or a pseudonym. The data will be accessible to the transcriber, but a confidentiality agreement will be required to keep it private. Your answers can be checked by people who are entrusted with ensuring the research is conducted appropriately, including the researcher, coder, and the Ethics Review Board. The anonymous data provided by you will be utilized for other purposes such as journal articles, research report and/or conference proceedings. Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality or anonymity, e.g., when focus groups are used as a data collection method. A focus group are interviews with a small group conducted within six to ten participants that are unstructured and free flowing, its generally described as a group discussion on a subject led by a qualified group moderator/researcher. While every effort will be made by the researcher to ensure that you will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason, I advise you not to disclose personally sensitive information in the focus group.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Electronic recording of your responses will be stored by the researcher for a period of five years in a locked filing cabinet for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software program.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participants will receive a R100 Takealot voucher via email when participating in the study as a compensatory gift from the researcher for the data used to participate in the focus group.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has not yet received written approval from the Health Research Ethics Committee of the College of Agriculture and Environmental Sciences, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Avilasha Ramdut on email at avilasha.ramdut@gmail.com. The findings are accessible for a one-month period after the dissertation has been completed. Should you require any further information or want to contact the researcher about any aspect of this study, please contact Avilasha Ramdut via email at avilasha.ramdut@gmail.com.

Should you have concerns about the way in which the research has been conducted, you may contact Professor Elizabeth Kempen, via email kempeel@unisa.ac.za. Contact the research ethics chairperson of the CAES Health Research Ethics Committee, Prof MA Antwi antwima@unisa.ac.za if you have any ethical concerns.

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

A. Ramdut

Avilasha Ramdut

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the <insert specific data collection method>.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname..... (please print)

Participant Signature.....Date.....

Researcher's Name & Surname.....(please print)

Researcher's signature.....Date.....

APPENDIX 3: TURNITIN RECEIPT & COLLEGE REPORT

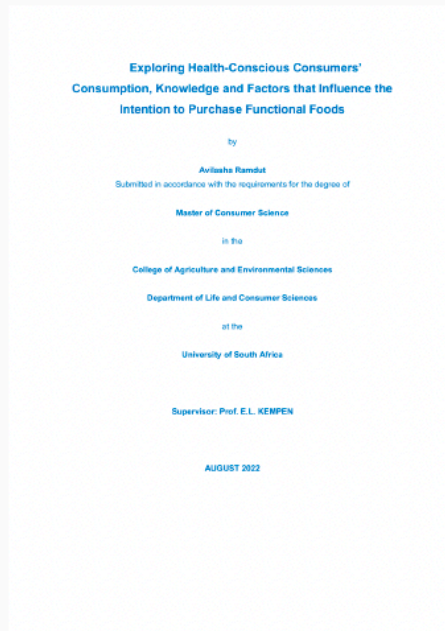


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APPENDIX 4: DEMOGRAPHIC QUESTIONNAIRE

ONLINE DEMOGRAPHIC QUESTIONNAIRE

Research Project: Exploring Health-Conscious Consumers' Consumption, Knowledge and Factors that Influence the Intention to Purchase Functional Foods.

Dear Respondent. The aim of this study is to gain some understanding on health-conscious consumers' consumption, knowledge and factors that influence the intention to purchase functional foods. The lack of research regarding consumers' viewpoint on functional foods warrants the need for this research to be conducted as it will improve health-conscious consumers' awareness, obtain a better understanding of functional foods in their diet, and would have a more meaningful inclusion of the health-conscious consumers' daily lifestyle. This would help increase the knowledge and the intent to purchase by South African consumers of these functional foods and inform them of the aspects of functional foods that need to be brought to their attention. By the food industry including functional foods that promote optimal health and help reduce the risk of disease will give the consumer trust and entice them by purchasing these products which is the condition for success to the benefit of both human health and the food industry. For any queries, please feel free to contact Avilasha Ramdutt, 51162776@mylife.unisa.ac.za.

Please note: ALL INFORMATION WILL REMAIN CONFIDENTIAL.

Please answer the questions, by ticking the most appropriate box from the options listed, or by filling in the blank space. This questionnaire consists of one part, being Section A- Demographics and should take about 5-10 minutes to complete. Your honest opinion will be appreciated.

Thank you for your participation in this research project.

Demographic Information

Please select your age group:

- Younger than 18 years
- 18-39 years
- 40-64 years
- 65 + years

Do you live within the borders of South Africa?

- Yes
- No

Please select the province in which you live:

- Gauteng
- Eastern Cape
- KwaZulu Natal
- Free State
- Limpopo
- North West
- Western Cape
- Northern Cape
- Mpumalanga

Please select your gender:

- Male
- Female

Please indicate your highest level of education:

- Lower than matric / Grade 12
- Matric / Grade 12
- Grade 12 + a diploma/degree/masters/doctorate

Please indicate your status of employment:

- Permanent full time
- Permanent part time
- Contract work
- Self-employed
- Unemployed

APPENDIX 5: INTERVIEW GUIDE

Research objective 1

1.1 To determine the health-conscious consumers' understanding of the term functional foods.

1.1.1 What do you understand when you hear the term "functional foods"?

1.1.2 How did you become familiar with this term?

1.1.3 What do you know about functional foods that is important to you?

1.1.4 What do you think is the purpose of functional foods?

1.1.5 Can you name some of the products you include in your shopping list that are important functional food items to you to consume?

1.1.6 Which are your favourite functional food products and why?

1.1.7 Are there any particular sources you consult on functional foods? Which are they and why do you consult these sources?

Research objective 2

2.1 The influence of attitude on health-conscious consumers' intention to purchase and consume functional foods.

2.1.1 When you purchase food products, do you specifically look for functional food products?

2.1.2 Were you always keen on purchasing functional foods? If not why, and if yes, why was it important to you?

2.1.3 Has your idea about functional foods changed in any way? What do you attribute it too?

2.1.4 What role has your health consciousness played in your purchase and consumption of functional foods?

2.1.5 What does it mean to you to be health-consciousness?

2.1.6 What important things does your health consciousness include?

2.1.7 How has your health

h-consciousness influenced your purchasing of functional foods?

2.2 The influence of subjective norms on half-conscious consumers' intention to purchase and consume functional foods.

2.2.1 Do you feel pressured socially to purchase or not to purchase functional food products, if so why?

2.2.2 If previously answered yes, from who does the pressure originate?

2.2.3 In which way does friends and family influence your decision to purchase functional food products?

2.2.4 Are there any individuals or groups of people who would influence your purchasing decision and consumption of functional food products?

2.2.5 What influence does any individual or groups of people have on your purchasing decision and consumption of functional food products?

2.2.6 How important is it that you are seen to be using or including functional foods in your food purchases?

2.2.7 Who introduced you to functional foods or how did you become aware of functional foods?

2.3 The influence of perceived behavioural control on health-conscious consumers' intention to purchase and consume of functional foods.

2.3.1 Are you easily able to include functional foods in your food purchases or not? Explain your experience.

2.3.2 What has been your main hindrance in purchasing or using functional foods?

2.3.3 How does it make you feel to be able to purchase functional foods? Explain your feeling.

2.3.4 If you had to share your belief about functional foods with someone, what would you say those beliefs are?

Research objective 3

3.1 To explore health-conscious consumers' knowledge and use of: Conventional functional foods and Modified functional foods.

3.1.1 What do you think conventional functional foods are?

3.1.2 According to your opinion which foods are conventional functional foods?

3.1.3 Do you include these foods in your food purchases?

3.1.4 Of these products, which is the most important conventional functional food item to you?

3.1.5 Which advantages do you think the foods that you mentioned as conventional functional foods hold?

3.1.6 What do you think modified functional foods are?

3.1.7 According to your opinion which foods are modified functional foods?

3.1.8 Do you include these foods in your food purchases?

3.1.9 Of these products, which is the most important modified functional food item to you?

3.1.10 Which advantages do you think the foods that you mentioned as modified functional foods hold?

Research objective 4

4.1 To identify the factors that influence the health-conscious consumers' intention to purchase and consume functional foods.

4.1.1 What factors would influence your decision to purchase and consume functional foods?

Research objective 5

5.1 To explore health-conscious consumers' use of functional foods.

5.1.1 As a health-conscious consumer how important is it to you, to include functional foods in your diet?

5.1.2 Are there any specific rules or processes that you follow to make sure that functional foods are included in your diet? Explain these rules or processes.

5.1.3 How do you make sure that functional foods are present in your diet?

APPENDIX 6: DATA TABLES

Table 1 What do you understand when you hear the term functional foods?

CATEGORY	QUOTES
Nutritional Benefits	"It could be perhaps a modified food or a food that has perhaps additional nutritional benefits"
	"Foods or kinds of foods that when paired with something else have beneficial nutrient"
	"Foods that are probably very nutritional for you",
	"I suppose foods that are nutritious. They supply a function other than just junk food or to supply a craving... but it would be a food that supplies you with nutrition"
	"My understanding is very simply that uh, food that the nutrients to sustain me"
	"I think that it is foods that provide an additional nutritional value, that it has a bit of nutrients... extra nutrients compared to just normal food"
	"It is like foods that are very nutritional and very healthy and also like easy to make and things like that"
	"Foods that are good for you, but has more nutrition than most of us actually know what is in this food"
	"Okay so my understanding of 'functional foods' is the type of food that you have and its nutritional value. And then functional foods on top of that adds more benefits from those specific ingredients, like that they have spinach for example... And spinach has very good nutritional value and there could be additional nutritional values to it that could help probably... let us say like for Indian people turmeric is like the number one medicine to have for any illness... maybe spinach has an... another additional nutritional value to help out with a certain type of illness or something like that"
	"It is food that has an active nutritional value either from a dietary or health perspective"
	"I am thinking along the lines of probiotics being added into yoghurts or an additional benefit like adding calcium into milk or vitamin C to orange juice"
	"Yes, I think it adds something like vitamins, minerals... something that you add to your food to make it more healthy. So that is what I would say"
Health Benefits	"My understanding is that the food that you are purchasing serves a function other than just filling you. In other words, it has a value to it – be it health"
	"Foods that have a health benefit asserted with them like if you are sick people tend to eat oranges because its high in vitamin C, if you are a person whose trying to lose weight you'll eat less fatty foods, because that obviously

	contributes to weight gain and it's to do with the benefits and functions that food provides your body on a daily basis"
	"My understanding is that it has benefits. Something that is beneficial to your health"
	"Foods that your body processes and functions in a beneficial manner to your system and is how I think I would probably describe it"
	"Okay. Probably... when I hear that, I would think that it is foods that help the body to function in a way that will be beneficial for the body, for the organs and well-being of that person... of the consumer"
	"So, for me functional foods are foods that have potentially positive effects on your health"
	"So, I guess functional foods are foods that have like added benefits or added functions to it. So I guess in one, in one breath, it's like food that is sort of like high in fibre for example. Like it's known for fibre but obviously has the benefit of maybe lowering cholesterol or, you know, sugar levels or such"
	"Well, I would say I understand it by what we tend to eat as a staple. And as far as what we perceive to be good for us. That is my understanding"
	"Oh, my interpretation of functional foods is to help you be a little bit more healthy. Like general vegetables, eggs, natural fats and all that kind of stuff. So that is my understanding - that it is better for my well-being"
	"Functional foods... What I understand about it, is healthy foods or foods that offer benefits beyond their nutritional value. That should also include food or fruits with vitamins etc. Yes, that is what I know about it"
	"I would actually agree with the other participant. It is... for me, it is health-conscious foods. Obviously in their correct food groups"
	"Foods that can help boost your immune system or help you fight off certain diseases... yes, just giving you extra than what you would get from your normal daily diet"
	"To my knowledge or understanding of functional food, it is food that can serve a purpose either from the health aspect or... let us say, protein or vitamin aspect to a consumer or customer"
	"I think that functional foods are probably the foods that help the movement of your stool in your body"
	"Functional foods... usually, for me, it is the basic food source of what we can get through. Say from small age until currently, it has always been a set of meat , fruit and vegetables"
	"I think it is foods that are good for your body. Foods that help your immune system"
	"Just the foods that serve functions. Say you want to lower your cholesterol, so then you eat food that is known to lower cholesterol"
Uncertainty	"Okay, so mine is sort of on the line of what the other participant just said. So, it is something that you would use in a recipe and that is a base and you would add other ingredients... into the flour base"

	<p>“For me, when I hear the term ‘functional foods’ it is foods that can be used in a multitude of different ways. For example, for me the best example would be something like flour. That is a simple staple for a lot of people but that flour can be turned into bread, it can be turned into pasta. Yes, it is a carbohydrate, but it is a better carbohydrate than regular sugar. So for me it is a multi-functional product. So, I think I have to say that would be, what my understanding would be. Something that you can use in a multitude of different ways”</p>
	<p>“I would determine this being a food out of the I’m not sure how many groups there are in the food structure, I would say carbohydrates your proteins, starches and those that would be required to make your body work on a daily basis. I think there’s 4/5 food groups, saying that one of each is essential to make the body function on a daily basis”</p>
	<p>“To be honest I have never actually heard the term ‘functional foods’ before. No idea what it is. It is probably something that is easy to prepare, but at the same time still in-line with healthy foods. Maybe? Well, maybe the natural products or organic products”</p>
	<p>“I think my understanding is that it is healthy foods or supplements that are associated with healthy eating”</p>
	<p>“So for me, it was the first time when you sent out the e-mail that I heard about functional foods and then I just went to Google and I just found out. Maybe I had not come across that term, but I understand that functional foods are...so I got examples... things like oatmeal, where you adding minerals and vitamins to existing products just to give it more of... I will say a healthy benefit”</p>
	<p>“So that was... I actually... when you sent those things that was the first time that I actually got to know what a functional food is. But then what I also did was that I Googled and... because I have got arthritis, so when I was Googling it, the more I read about it, I was like, hang on, is that what a functional food is? So something like ginger, I always add ginger in lots of my food because I was told that if I eat a lot of ginger it will help with my arthritis. So that was more of my understanding of "Oh, then I guess ginger would also fall as a functional food". I am not sure if I am correct or off the mark”</p>
	<p>“Something you can easily get from the store. Something you eat daily. Healthy”</p>
	<p>“Functional meaning day to day, every day, kind of... It is just going to create a need for filling your body. Maybe nutritiously... it is... functional... That is a bit of a hard one”</p>

Table 2 How did you become familiar with this term?

CATEGORY	QUOTES
Through Reading	“I looked it up”

	"I have come across it in certain articles that I have read"
	"I was bought a book on Cancer and Cancer foods. And there it started talking specifically to food groups and how they can help you or how they are detrimental to you. So that is how I started understanding what the functional food groups were"
	"Just doing research and finding out what foods are healthy and good for you. And I just came across the term"
	"It did come up in the course of my studies that I have done, and I have looked it on further"
	"So, the more I read about it, that is when I got an understanding of what it is"
	"Well, I'm gonna be honest. I actually only started reading it after I read about your presentation. And, and obviously because I knew I was gonna be partaking this. I mean, I have to be honest because it was something I wasn't aware of but obviously read about it now and I now am familiar with it"
	"To tell you the truth, it is not a term, it is a concept to me and I think everybody is familiar with eating healthy. So if that is the right definition of it. Then ... so it is not a term as such... since time immemorial the concept of health has been around so I am not familiar with it as a term, but purely as a concept"
	"I think when one looks at various terms that are attached to food, for example, organic food, functional foods you know, it becomes from a conversation point of view"
	"I wouldn't say it's a word I heard everyday of the week, but it makes sense that the word functional equates to the food groups that we have in our world today, and I think that one follows and understands what those 4/5 food groups"
	"When I studied my BSC in Biomedical Engineering we did a project on the effects of food on the body"
	"It was a change of lifestyle, I guess. When you decide you have had enough of the rubbish in life and you want to live a clean, healthy life, you start doing your research and terms come up, so yes"
	"I just know. Sorry, I cannot remember when I found about these. I do know that it is to do with health benefits and all that"
	"Okay, so being a chef, I have studied a year or so in college. It did come up in the course of my studies that I have done"
	"I will... I have got to go and sound like a yuppie and say I found this out... what functional foods are (laughs) via Pinterest. And blogs really"
	"For me yes, also through my studies as a Chef. But I think I really became more interested in the different food types and functional foods and whole foods, when I became more health-conscious and the more health-conscious I became, the more interested I became with different products and what it

	means and what do they do for you, when you look at nutritional values and so on”
	“I think more along the lines of what is trending at the moment. And not even just trending, the popularity of the healthy aspect. Healthy food is very popular at the moment. People are more aware of what they are consuming... what is in their food”
	“I am not too sure. I just thought about it because I always want to read the ingredients and ... yes”
	“I think getting older you start to realise to look after yourself. And so you tend to gravitate towards research towards superfoods/functional foods and those types of things”
	“I was studying Consumer Science in Beauty. So at that time, I might have heard about it and then something just clicked in my mind because I would have studied about it or probably come across the term. So that is how I came to know about it”
	“I found out about this term on the internet”
	“So I think... like I mentioned that I did not know that the term existed or that something like ginger would be referred to as a functional food for me. It would be... is it a vegetable or a fruit? So I did not know that you can break it down even further, if it makes sense. So the more I read about it, that is when I got an understanding of what it is. On the internet”
	“When I went vegan, I did quite a bit of research but I have not actually done research on the term functional foods but it has been mentioned... and I guess I just understand the term from what the videos and stuff would say about it”
	“It is just from a thought of it. When the survey came “What was functional food”, so as I was saying, it is adding in additional things to form a function. So, I am hoping it is correct (laughs). From your survey... it has not been something I have really thought about lots before. I have bought products because of the fact that they do something but I never knew they were termed as such”
	“I have not heard the term before but just the word ‘functional’ and ‘food’ – it just makes sense what it means”
Through People	“I have come across it in certain people that I follow with regards to diet programs and exercise regimes”,
	“Well, the first time that I heard it was actually with you”
	“With exercise and all of that... from gym routines and all of that... the gym instructors have always spoken about getting functional foods”
	“Well, actually, I heard it the first time from your side now... with the research”
	“Friends, family influence. People talking about it, seeing separate shopping, in shopping centres - the aisles and that sort of thing”

	"I just heard about it now actually. I have never really heard about it. I think that this is probably the first time I am hearing about it. Because we always hear about healthy foods but not functional foods. It is a new term for me"
	"I think through my boyfriend, I guess"
	"Mainly because of my health situation, like certain things that I need to like watch out for foods and I have been to a couple of dietitians as well that have given me more information on what foods are good for me with regard to my illness that I have as well"
	"I am in the medical field so we deal with a lot of different medical personnel, including a nutritionist and they make mention of this when they speak about how you should lead a healthy lifestyle in terms of at home and at work. That you should have a balanced lifestyle"
	"Well, having not heard this name before today, I would say this focus group"
	"I think through wellness centres"
	"I heard of the term before from my running coach but I cannot exactly remember in what context he used it in but it is something I have heard of before"
	"Yes, through you"
	"Through you"

Table 3 What do you know about functional foods that is important to you?

CATEGORY	QUOTES
Health Benefits	"Simply that it may have additional health benefits"
	"I try & focus my diet in the way I eat and how many times a day I eat based around superfoods, which I think would form part of functional foods. I try to adapt my eating regime towards healthier more functional foods. I try to stay away from processed non beneficial trans fatty foods. Mainly health benefits, the energetic vitalising benefits you get from eating these foods your body processes. You have a better digestive response to it, & long term health benefits that would be felt immediately, from known studies there are definite facts that these foods aid your health"
	"Uhm, I guess it will be like a repetition of the first answer where it's like, like, uhm, what was it? Like oats and stuff, that have fibre but obviously have the potential to reduce, like, cholesterol and stuff and you've got like, chia seeds You've got your flax seeds You've got fruits, berries, kiwis apples"

	" Not a hell-of-a-lot. I think this is partly why I am quite interested in what you have to share"
	" Okay, if I think it is, what I think it is, like healthy foods - it is probably foods that are good to maintain the body, keep it disease-free, prolong ageing, prolong longevity and to keep you in a good state of health for your mind, body and... yes"
	"Besides the fact that it's nutritious, it's also heart healthy with uh, fatty acids. It's high in fibre, can lower your cholesterol. Uhm, the same with nuts. It also, it may aid like with weight loss. Uhm, it can reduce inflammation, lower cholesterol"
	"A lot of, each and every fruit and vegetable and seeds and nuts have their own function"
	"Uh just I think that the pairing certain foods will be more beneficial than, than others"
	" To come back to the term - so it is just that health so health is important because it means that you are not going to die screaming in agony, hopefully. That you are going to live and have a bit more quality of life. And yes, that would be it"
	" They need to contain the various elements that would be able to sustain me as an individual"
	"So, you know, functional foods that they are nourishing"
	"that they give me the level of energy"
	"that they do oxidize and they can be excreted"
	"and that they are not harmful"
	" I think it is obviously maintaining a good health level. So what is important to me is making sure that I put the right kind of stuff into my body that is going to help improve my immune system, improve the way that my energy levels and the way that I think because sometimes you can... I find that if you eat well, you have got a clearer mind. So I would say that is kind of my understanding, to a certain extent. I am not a genius in that! Look. If I can add, it is just making sure that you have the right combinations of food that is going into your body to ensure that you have got the right kind of vitamins and everything in your system. It does not help if you just eating meat all the time. You need some sort of options and maybe eat some nuts... some pecan nuts or... that kind of stuff"
	" Well, he took that one right from me - the last sentences. But yes, it is just for the nutrition parts of it that you need to know what is going into the body, what sort of vitamins the body needs to function properly"
	" It depends on the function you want out of the food, so for example if you're sick you must consume more vitamin C, if you are a person that active you use a lot of potassium, so you need to eat foods that have the minerals that

	your body needs, depends on your blood and body type, of the type of foods that you should be eating, to most beneficial your body"
	" Yes. Also, like when you are reading the back and seeing your sugars and how much it entails and obviously going in-line with your diet, you would obviously consume the amounts that are like... I would not say allowed, but that you would prefer"
	" They have... they have probably like got a lot of, like... I would say vegetables and things like that have got a lot of nutritional value. So that is what I would see it as. All kinds of fruits and vegetables that would be probably part of it "
	" Yes, I would say that it is normal foods and vegetables that like contains the most vitamins and proteins and stuff that people actually need and when they go on diets and stuff, they have to follow like a certain amount of fruits and vegetables and stuff they have to eat"
	"Well like I am diabetic so, certain foods that are high in sugar, that I should not be eating, certain foods that can help reduce cholesterol and eating at the right times. Following a healthy diet, a lot of fruit and vegetables"
	" Okay, so I have irritable bowel syndrome and I need to be wary of what kind of products I eat. So for example, having a lot of leafy foods and things that... dairy products are bad but leafy foods are good. Things like flaxseeds which have a lot of antioxidants. All kinds of food which have antioxidants that are good for my gut"
	" So, I have recently learned about fruits and vegetables that can help with hormone problems. I have a hormone imbalance. So, I have been researching foods that can help me with things that I can put in my smoothie. That just helps to balance your hormones and stuff. So I have been researching what is good for me in that manner"
	" Okay, so for me what is important is the nutritional value of the functional food. That is, it is very difficult to find.... foods, it is very difficult to find them. You always get these modified foods that do not have the full value that you want from it nutritionally. It is always additives that is in it and it is not pure. So for me it would be the nutritional value"
	" I think the most important ones are grains and nuts and whole foods. Those ones tend to be important too, especially the Mediterranean influence with the beans and pulses and that kind of ancient grains. Those are quite important because of fibre and also reducing inflammation"
	"I think it is, as I said earlier... for me, it is a matter that you can use one product in a multitude of different ways. That for me is important. If we consider our current economy and financial state of a lot of households it becomes very difficult to buy random foods, you need to count your cents. You need to be very careful with what you spend and how much you spend. So for me functional foods that I can use in multiple ways and store for a long time, that is what is important for me"

	<p>" I think that is very well said, what the other participant has said. I think in this day and age when we are so worried about what we are putting in our bodies, I think that what we feel is important too. If we are going to binge-eat sweets and chocolates and stuff, then your body starts to feel it. I think that when we are either exercising or want to feel good, we must want to know what goes into your body. So I think Ryan's right. You want to know what concoctions want to go into your body. You want to know what is right. And I guess even if you do not have enough information about ... 'okay, should I have more carbs, should I have more protein?' ... What is the right diet because there are 10 000 diets and next week there is a new diet out and everyone says 'Follow my diet'. I think there are so many diets or trainings that people want to follow that I think none of us really know what is the right food to consume or the right quantities of food to consume"</p>
	<p>" I think for me also it is about a balanced diet. And I think it is personal because it is what you want to get out of it. You can choose the right selection for health reasons or for weight loss and I think that is the big determining factor. But for me it is trying to get the right amount of protein and to have a healthy balanced breakfast, lunch and dinner"</p>
	<p>" I suppose it is the right foods that suit your type of body and I think it is important that you have the right concoction that will give you the right results. And I think I do not have enough knowledge to... to know exactly what that concoction is but I know it is good for me"</p>
	<p>" It is important to us because it will be helping lots of... It will give our body a lot of benefits. For example, as Tipiso said ginger - which is the functional food if she had arthritis then it will help her overcome that or at least ease it or... anything to do with that"</p>
	<p>"So, my understanding is that functional foods... they provide you with you important... your body to function on a day to day basis and fight diseases - diseases that are trying to attack your immune system"</p>
	<p>" So my understanding would be to improve with the health benefits. So, that is why I would add... so I have been buying these things but like I mentioned, I was not aware that they are called functional foods. So I was buying them because I knew that if I add them in to my diet they will they would somehow contribute to my health"</p>
	<p>"I know that certain foods you have to eat together for them to work. Like if you have turmeric you have to eat black pepper. So I think it is important to keep in mind which foods are actually going to work and which ones are not"</p>
	<p>" Just listening to all these other people, I suppose functional foods may be a preferred choice to go that route rather than medications – so go for the more natural approach with functional foods"</p>
	<p>"I am just thinking, I am not exactly sure. I think it depends what you want out of the functional food, like if you... as the other participant said, if you are looking to lower your cholesterol or you are looking to something with less</p>

	salt then... It would depend on what you are trying to get out of the functional foods".
	" I do not know too much about functional foods but I just know, as the other participant said, foods that are low in cholesterol... foods that are low in salt help with hypertension... just some stuff like that"
	"Well... it needs to be healthy, nutritious, vitamins... stuff like that"
	"I would say that it has to fill me for longer periods of time. It has got to be rich in quality"

Table 4 What do you think is the purpose of functional food?

CATEGORY	QUOTES
Health Benefits	"Difficult to say from a consumer perspective except for maybe better health. If it is a health food then it would be better health or more nutritional value from the food. The additional benefits would be indirect benefits like more holistic awareness about, you know... life and whatever, for a reason but, yes, anyway"
	" I try & focus my diet in the way I eat and how many times a day I eat based around superfoods, which I think would form part of functional foods. I try to adapt my eating regime towards healthier more functional foods. I try to stay away from processed non beneficial trans fatty foods. Mainly health benefits, the energetic vitalising benefits you get from eating these foods your body processes. You have a better digestive response to it, & long-term health benefits that would be felt immediately, from known studies there are definite facts that these foods aid your health"
	"Again, I would have to say that I am not 100% sure. I would say staples... as far as what we need to eat, what is good for us and to give us the nutrients that we should have"
	"The purpose is probably to feel... like for you to maintain growth; to make sure that you grow normally, like for instance from infancy to adulthood; to make sure that you develop properly as a human being. And as well as to continue helping you to just be healthy and to keep you away from disease"
	"Uhm, to live healthy"
	"Nutritional health. Uh, trying to, uh, lemme think. Hmmm, in the, in terms of trying to ensure you get the best nutritional benefit from whatever you're eating"
	"Life and health"
	"As an organic food, one wants to consume food that one considers to be appropriate for one's wellbeing"

	"To be grouped... and this is my take... is that, functional foods are grouped into what is their purpose. In other words, what is grains, what is meat, what is protein, what is poultry, what vegetables do you need. So if I want to lose weight, what should I eat or not eat to be functional for that goal. So, my function at that time is to fight a disease so I looked at what... that is the function that I need and what food groups fit into that function"
	"It is just... in order to maintain a healthy body...a healthy balance. That is my idea"
	"Well, the purpose of it should basically be to put your body in a better position. That is nutrients for the body. So you need to ensure that all the vitamins and everything you take in actually contributes towards your body and not against you"
	"I think there's a purpose for functional foods, I think there's a reason, why we have such a, and I'll go back to the food groups again, I think every single one has a duty and performs its own function in order for your body to function, if you gonna get your body then its like the other participant said its something that you need to look at diet in order for your body to function properly"
	"I think the purpose is to help your body, function as best as it can, so the food has impact on your everyday life, so it influences your energy levels, influences your sleep pattern, it influences your daily habits"
	"I would say obviously to have you live a better or healthier lifestyle. Obviously making sure that you are just living better and you are not dependent on a lot of other things like... medically wise"
	"Well, the other participants took the words out there. Obviously living a better healthier lifestyle"
	"Yes, I would say the same, but probably yes for health and also probably... yes, mainly for health purposes, like if you have got cholesterol or something like that. Yes"
	"It is... it could be for either health, for dieting... yes, basically for health and dieting"
	"It also forms... it like balances out your system, so that everything works properly"
	"It is just to make you healthier I think because it has an added nutritional value to it. So that is what I would say"
	"Yes, so just giving you added nutrients and helping you just have a balanced diet and helping you even out like if you have deficiencies or if you are having health issues... just trying to regulate all of that in your food"
	"I think it is a good benefit to understand your body's needs and in order to get those needs and requirements through the food that you consume daily"
	"To make people more aware of being healthy"
	"Yes, like the other participant was saying it needs to, in some form, help your body out. You choose what you want to eat, be it fruit or vegetables. It

	needs to assist you in whatever you need to do with your body. Like, for example, if you go the doctor and he tells you that you need to eat certain types of fruit or vegetables to help you become more energised... or something like that. So, yes... it needs to help you grow inside... be strong...yes"
	"I think it helps us in a general health, basic nutrition way. So almost to eat the closest to whole foods and unprocessed foods, to reduce... to improve health benefits and reduce all of the risk of all of the diseases we get from eating badly - the way the human race has begun to eat. And if you look at America, for instance, I think that if they introduce functional foods and people got into eating it more, it would lessen the chance of diabetes and obesity... and these kinds of chronic conditions"
	"I think for the most part the purpose of functional foods is that they meet with my dietary requirements. So, you get the nutrients that are necessary. It feeds you, it fills you and for me, like I said, what is very important is that it needs to be foods that can be stored and used in multiple different ways but also obviously contribute to your nutritional needs"
	"I think just to add on to that as well, just also to fit into our lifestyle. I think pre and post Covid in our country right now, I think everyone is trying to adapt to the new norm and we just try to stay healthy and stay fit. We are all worried about what we consume and what is right for us. So I think just finding that balance, a lifestyle balance. Yes, immunity. That is huge at the moment"
	"Well, it is for health reasons"
	"Yes, I mean obviously health for long-term, but, keeping healthy and on the dietary side I see it as giving you energy and making you sustainable throughout the day. Moods. Keeping your moods healthy. And to add to that, immunity. Definitely"
	"The purpose would be... I think it is the same thing as... it is the nutrients which your body needs so that it will fill that need that your body requires. That would be the purpose. Like eating carrots for better eyesight. So... like that"
	"Yes, I do. (Shares same sentiments as the other participant)"
	"Yes, I agree with the other participant. It is the same. For the health benefits"
	"I would also say that it helps you live longer and look how you want to – fitness goals"
	"Listening to these people... (laughs) I think there are many purposes to functional foods but I think basically to enable a healthier lifestyle/a healthier body. So they have a beneficial effect and not a deteriorating effect – the food that you eat"

	"Yes, I think that functional foods are in general healthier foods that are meant to do something good for your body rather than just food for eating it... it is food for actually doing something healthy to your body"
	"I think it is foods that are... like besides just having a caloric value it also has additives like vitamins and other additives that will help you be healthier"
	"Yes, same as the other participant. Keeping you healthy. Maintaining your weight – not picking up more weight or being obese, but..."
	" It is to optimise your body to the best level, I suppose, to function properly. For your eyes, your hands. Your Vitamin B's, your Vitamin D's"

Table 5 Can you name some of the products you include in your shopping list that are important functional food items to you to consume? and Which are your favourite functional food products and why?

CATEGORY	QUOTES
Fruits and Vegetables (avos, berries, apples, bananas, kiwi, oranges, grapefruit, lemon, broccoli, spinach, cauliflower, lettuce, cabbage, tomatoes, cucumber, onions, potatoes, leafy vegetables, kimchi, butternut, sweet potato, pumpkin, peas, beetroot, green beans and carrots)	"I also find that when I eat lighter meals that are very rich nutrients I'm having like a spinach, stew, I sleep a lot better, less moody"
	"I have also heard about the health benefits of things like Kimchi which I presume is a functional food"
	"Well, I do eat a lot of vegetables and fruits, Yeah, just for health benefits"
	"Those vegetables have a lot of nutrients like your vitamins and anaemic- your spinach, because that food is iron related"
	"I think they have got a lot of health benefits for certain of your body functions or organs or improve your immune system"
	"I would say a wide range of vegetable, we try and grow our own in the spring and summer seasons to benefit from high nutrient base veges"
	"I would go with what I've just mentioned in terms of fruits. Definitely lots of berries, lots of apples, bananas, and stuff"
	"Okay, so my favourite would definitely be fruits. I think fruits are an everyday thing. At home we try to blend our fruits and make a smoothie - a fruit smoothie or a fruit juice. So whichever fruit we have available in the

	house, we just cut it up and blend it and that is just all your added nutrition into one glass. So for me it has got to be fruit.”
	“think I must mention my shopping list. Spinach. Spinach because one of the things I have always had health issues with is low iron levels. So I try to eat a lot of spinach and besides I love it and it is versatile- you can make a nice spinach salad, you can make curried spinach... yes. And I try to include it in the diets because I know it is good for the kids - I disguise it well”
	“Vegetables, So very important to have that in our diet.”
	“Uh, yes, sure. Uhm berries, kiwi, apples, oranges, broccoli, spinach”
	“We are also very food conscious in terms of the greens, spinach, broccoli, cauliflower, salad items, lettuce, cabbage, tomatoes, cucumber, avo is very important to us”
	“I eat a lot of spinach because I’m anaemic so I need high iron, I try and eat as many fruits and veges as I can”
	“I think maybe some fruit and vegetables,”
	“Your standard vegetables – carrots, tomatoes, onions, potatoes... all the vegetables that you would eat”
	“avos, Bananas, oranges”
	“So it is cauliflower, broccoli, Brussels sprouts. I then include mushrooms which are very good for me as well. Or kale which I have included”
	“carrots, some fruits, some vitamin B - like some decent fruits”
	“That it is obviously your basic fruits and your vegetables”
	“The one thing that I have enjoyed eating recently is spinach because of the iron content and because it is a very quick and easy side dish to make.”
	“Fruits – oranges... that that type of thing.... sometimes berries. Vegetables - that is always in there.”
	“Okay well, I normally buy a lot of fresh fruit and vegetables. Like that is one thing that I do, do. So yes, fruits and vegetables”
	“Yes, it is a lot of vegetables and fruits as well. Because fruits for example, they usually contain a lot of vitamins and stuff that could be really healthy for people”
	“For me it is fruits and vegetables”
	“a lot of fruit and leafy vegetables that I put into smoothies that I make.”
	“I think a lot of the items that you might consume... in terms of raw materials, such as fresh fruits and vegetables, stuff that there are not... that do not

	have preservatives or fancy... hindered in anyway. I think those are good things to consider.”
	“I would say fruits definitely, fresh vegetables - lots of leafy vegetables, all the green coloured vegetables...”
	“I think a lot of the items that you might consume... in terms of raw materials, such as fresh fruits and vegetables, stuff that there are not... that do not have preservatives or fancy... hindered in anyway. I think those are good things to consider.”
	“Sure. I would say most of the fruits and vegetables that I purchase on a monthly basis when we buy groceries.”
	“Fruit and veggies- we are big on our fruit and veggies. All kinds of fruits and veggies we can get”
	“We like to buy our fruit and veggies when we need it because that way we try and get it at least as fresh as possible.”
	“As far as food-wise lots of vegetables. Yes, I think that is important without a doubt, probably the majority of vegetarian diet”
	“Then today I am going out shopping I would buy some spinach because I know my body needs to be cleansed”
	“So for me, it is spinach”
	“I think stuff like fruits”
	“Fruits and veg”
	“Your fruits and vegetables”
	“Mmm, definitely fruit. The fruit range”
	“And a lot of the greens- a lot of lettuce, a lot of spinach... things like that”
	“I would say I love mushrooms. It is a good substitute for meat... for chicken because I used to love chicken until I decided to let it go”
	“I love Avos”
	“Well, I do eat a lot of vegetables and fruits. Yeah, just for health benefits, I guess”
	“I suppose vegetables. I am trying to move away from meat and I tend not to eat a lot of it. So it would be tomatoes, onions, potatoes, carrots. I do like a grated Indian salad... with the carrots and all that type of thing. Spinach – I like a lot of spinach”
	“Avo, uh, is my favourite. In that it is rich rich in so many nutrients and it's got oil and qualities that enhance one's wellbeing.”

	"Mushrooms. I am mad about mushrooms. I can eat mushrooms every day."
	"So one of my favourites is definitely beetroot. That just adds nice... like one of my general meals... one of my quick meals - I do not eat takeaways, hardly ever."
	"So I would say that is one of my favourite functional chows and then obviously tomatoes - I love tomatoes"
	"So it is usually carrots or cabbage, green beans, pumpkin"
	"cauliflower, broccoli, spinach, avo definitely that's important we love it, butternut, squash. Those vegetables have a lot of nutrients like your vitamins and anaemic-your spinach, because that food is iron related. If your iron levels are low that's a very product to eat and I do sometimes, so I do find myself with low iron and we eat spinach and the leafy greens."
	"I like the berries and the fruits"
	"I would say avocados. I love avocados. It has got a lot of nutritional values. It has got a lot of vitamins in it. So, they say it is a superfood as well. So yes, I love avocados"
	"Fruits, because although it is sweet, it is not unhealthy"
	"Fruit for me - I like fruit a lot"
	"Okay, it is bananas, I think for me strawberries. I feel like that has a lot of nutrients in it as well. Those would be my favourites, yes"
	"So fruits definitely, it is always on the shopping list"
	"There are certain vegetables that I like... broccoli, cauliflower and things like that. And why do I like them? Because I think they have got a lot of health benefits for certain of your body functions or organs or improve your immune system"
	"It is funny, I also choose spinach. In our house we have bags and bags of spinach. But spinach contains very low calories but is high in vitamins and high in protein. So we consume <u>a lot</u> of spinach in our house."
Meat, Poultry and Egg products (grain fed beef-free range, chicken and eggs)	"grain fed beef-free range"
	"chicken"
	"eggs"
	"I would say steak... but lean meat obviously. Because it is healthy, and it is nice to eat"

	"My favourite would be chicken and pasta. I just enjoy chicken. It is like our go-to everyday kind of cook"
	"So yes, big for me... what is big for me is the free-range eggs - I do not like the caged eggs. If I can try and buy free-range I do"
	"And eggs for the children – protein"
	"In our house we have lots of eggs"
	"I would say... the main thing that we buy is poultry"
	"we more like chicken and its grilled, as opposed to fried and all those types of things"
	"Chicken"
	"Mostly we buy roasted chicken or something whatever that can be for an easy meal prep for an evening."
	"So yes, big for me... what is big for me is the free-range eggs - I do not like the caged eggs"
	"chicken... chicken is a big part of my shopping list."
	"Functional food for every person is different things to function every day. So that is what it is supposed to be. So for me, for example, if I just ate mutton or I ate chicken yesterday and the day before that"
	"Lean meat"
Spices (turmeric, ginger, cayenne, paprika and garlic)	"Well, I battle to sleep so I find turmeric really helps me relax. It relaxes my mind and I only drink turmeric in the early evening and it helps me sleep",
	"Then obviously spices - like... I am quite a big fan of putting cayenne pepper in my food"
	"Then on the spice side a lot of turmeric, ginger, garlic – really high in fighting that"
	"The basics of ginger, garlic, turmeric, paprika... which I use as a base for a lot of my cooking at the moment"
	"Something like turmeric, perhaps"
	"Obviously it is your spices - your turmeric's, ginger that we cook with every day"
	"So for me, it is ginger"
	"ginger - it is one of the products that I buy frequently."

Seafood (mackerel, sardines, herring, salmon and hake)	"Yes, so for me, mostly seafood because of omega three and the protein. So since I am into bodybuilding I like to consume foods that are high in protein"
	"And then seafood - it is something that I like and also I think because of when you read about it and you trying to lose weight, you kind of get to know which foods would agree with you or... not really agree but which foods would work for weight loss and that is how I kind of got into eating less meat and more fish. But not knowing that I am actually... it is contributing to my health, it was about trying to lose some weight"
	"I occasionally eat something like Mackerel."
	"I would say... the main thing that we buy is fish"
	"we more like fish and its grilled, as opposed to fried and all those types of things"
	"I also eat a lot of seafood. So your salmon and your hake."
	"Probably the fish, I think."
	"A lot of raw salmon... I try to keep... unprocessed."
	"Salmon. You cannot go wrong with it. Salmon, definitely you cannot go wrong with that. That is one of my favourites"
Legumes, nuts, seeds and grains (chia seeds, nuts, pulse, flax seeds, sunflower seeds, pumpkin seeds, beans, almonds, wholewheat bread, bread, pasta and brown rice)	"Chia seeds. I often make that in a shake with some bananas, fruit products in the morning usually in a blend, keeps you fuller for longer so you don't feel hungry as often. It's a nice snack it keeps you energetic"
	"I also like nuts as a snack it keeps you full for longer, it's healthy foods and it makes you feel good"
	"My favourite is the snacky stuff. I like nuts. Yes, those things for me are my favourites, So, for me, I enjoy it because I am not a... yes, I live a healthier lifestyle, but I am not someone who has to eat three to five to six meals a day. These are the things I like because it does not necessarily fill me up that I feel bloated, but I am full enough to like carry out until I need a proper meal... like sit down for dinner",
	"I love my nuts, for the omegas... we have got heart problems in our family, so we need to watch it. And all the grains because it is a smart source of just fibre",
	"I would say probably nuts would be my favourite. Well from a taste perspective and also because it is meant to have good properties as well".

	"I think lentils will probably count as well and certain kinds of nuts. I do not know if pulses are included?"
	"Chia seeds-some of your superfood groups,"
	"Nuts... nuts, I love them! And why? Look, again it is also taste, texture... apart from not having to cook, yes, it is the taste"
	"Seeds, yeah, try to get as much as, but I guess uh, more like the ... I'm not sure in terms of the sunflower seeds, pumpkin seeds"
	"We are obviously very careful on which beans we do buy."
	"Obviously being your legumes. So very important to have that in our diet."
	"I buy legumes and beans mostly, veggies, soy products... like for instance soya chunks"
	"almonds, flax seeds"
	"wholewheat bread"
	"Okay, beans is one thing"
	"Bread, I try to stay more to whole wheat bread, so yes, those are the things"
	"nuts.... I eat a handful of nuts every day."
	"And then, yes... I think the important things for us are also the pulses, the grains"
	"whole wheat bread instead of white bread"
	"I think stuff like nuts"
	"your grains, your pasta"
	"I love beans. All beans"
	"And brown rice... and bread."
	"healthy breads as well, I find that very filling, like the seed breads"
	"Okay, so I have to say my biggest functional foods are rice, flour... I supposed it will be your starches. Because you can do so much more with them. They provide your body with energy, which is in the form of carbohydrates, which is a better form of sugar to burn, a better form of energy for your body to absorb. Especially if you are a very active person, you do a lot of exercise, you go running or hiking, you go to the gym... that kind of stuff, you are going to need that extra energy. And that for me... the

	best way of getting that is from doing your own... for example, your own bread or making your own pasta. Because that way you control the amount of additives that is in it. So yes, I think, it must be flour then”
Cereals (Oats)	“Oats is a big one, raw oats. I often make that in a shake with some bananas, fruit products in the morning usually in a blend, keeps you fuller for longer so you don’t feel hungry as often. It’s a nice snack it keeps you energetic”
	“I like oats... I do not know; they just taste good”
	“I would also enjoy a bowl of oats... so, say in the form of Jungle Oats. I enjoy them because they are an easy breakfast to make”
	“Raw oats pretty much all healthy fats”
	“oats, yeah definitely, love..., jungle oats, ya”
	“Yes... and cereal, cereal as well.”
	“Okay for me I think it would be oats,”
	“For me, it is oatmeal”
	“Oats - steel cut oats and rolled, nuts”
	“Cereals like whole grain”
	“And then for me it is oats as well because I do more with the instant oats as my snack for my day for work”
Dairy products (milk, cheese, yoghurt, butters, and calcium enriched foods)	“The only thing is, which I do not know if it is good, is that I like full cream milk”
	“Yoghurt - yoghurt is filling and it is a snack. When I need to have a snack in between I have yoghurt that works perfectly fine for me”,
	“Oh okay, uhm, I’m not a hundred percent sure. Uh, I think maybe dairy products. Like milk. Uh, if you Pair it with uh, uh, I dunno, breakfast”
	“Cheeses”
	“also like your dairy products”
	“I have been buying a lot of yoghurts”
	“then calcium-enriched foods as well because as you get older osteoporosis is a thing that you need to consider”

	"yoghurt"
	"I know that yoghurts are good for building up probiotics in your immune system"
Fermented Beverages (Kefir, Kombucha)	"Mine are going to be the probiotics. Like I said, I drink kefir and make my own kombucha. I think gut health is really important for your overall immune system and your overall health"
	"I make my own kombucha"
Oil Products (olive oil, coconut oil)	"I use things like natural oils - like your olive oils, your coconut oils in your cooking"

Table 6 Are there any particular sources you consult on functional foods? Which are they and why do you consult these sources?

CATEGORY	QUOTES
Social Media Content	"It would have to be... Instagram factly speaking. I follow certain thought leaders that produce content about functional foods"
	"I would come across articles on news websites"
	"I normally would like google, what healthy foods, what are the best foods. Like I also follow a lot of these Keto things on Instagram"
	if I am on a medication then if I want to take... beetroot or something which could have something in it that could... then it would be a Google search or it would be the Medical Journals"
	"I Google it a lot so I can learn new things about it. But yes, mostly social media and online"
	"I like to google a lot of the foods recipes, I like Jaimie Oliver because he has wholesome foods, because his very big on growing your own veges and also has his own garden"
	"I watch YouTube videos. I watch YouTube videos on nutritional foods"
	"I actually also watch videos of this famous guy... he is actually a gym instructor"
	"Mostly the internet as well. Looking for easy foods that you have to cook"
	"So, I just look up healthy smoothie recipes on different sites"
	"So also, the internet and just looking up on healthy recipes, mainly for snacks and for meal recipes as well"
	"Pinterest is great. A lot of amazing recipes. Even the Food Network. I go into many websites, including Food Network, that show me many recipes"

	that I can use to make smoothies and any other nutritional meal that I look forward to making”
	“And yes, for me, it has to be YouTube and Food Network and obviously.... I am not too big on Pinterest, but mostly Food Network and YouTube, those are my sources”
	“I think I would also say Google. So what I usually do is, if I feel I want to know what is the purpose of something, a certain fruit or certain vegetables, then I will just Google it, and then I will try to consume it for one week or one month and then see how it affects my body. And then if I know it is good for me, then I will continue doing that. I do not really consult anybody else. Just Google”
	“So there are.... so things like Google, I will always Google or get a diet plan from the gym. And just recently I went to the dietician and I also got a diet plan for what I want to achieve in terms of my body”
	“Probably Instagram. I do not have particular names of dietitians or things like that but I do follow a lot of food trends on Instagram and social media”
	“Yes, for me, it is Google as well. I just put it on Google and just search.”
	“Okay, so my favourite thing is Pinterest. I find everything that I need on Pinterest. You just type in whatever are concerned about and find the worldwide system of like people and like eating and lost dolls. So yes, I am going to say Pinterest and also, I found... I like books (I am traditional in that sense, I am not big on e-books) so I found that moving between The Real Meal Revolution and my low carb books and my Mediterranean books... I kind of move between books and Pinterest”
Literature Content	“I would say it’s a group of differently articles, like you say sources, articles, “Look, I mean, I buy their books”
	“I used obviously the book that initiated it”
	“Look, I mean, I buy their books”
Culture and Religion	“The decision is actually from a faith-based side. So I am a Christian Seventh Day Adventist and we believe in the health message. So in the health message it is mentioned in certain verses in the Bible what we are supposed to eat, what are clean and unclean foods... so we get it from there. So that is why I get my source from - that we should eat fruits and veggies and grains, whole wheat foods and less processed foods and stuff like that”.
No Sources Consulted	“I make my own determination from how I would like to structure my diet”, “I have got a fairly good knowledge of foods, So it is knowledge that is fairly well known”
	“I do not think there is anybody actually. We kind of just tend to go with the flow”,

	"No, there is not. There is no particular... it is a matter of me walking through the store and picking what I want"
	"I think I just go for what looks good. I said not to any particular sources"
	"I would say I try and look for things that would either lower cholesterol or improve your immune system and things like that"
	"No, not really"
	"I have to say that there are not any particular sources that I consult for functional foods"
	"I would have to say no. We do not actually"
	"You know what, not, not necessarily. I think the only time I've really heard the term briefly is when I saw a dietician. I don't think there's been any other situation, where I've heard that term or spoken about it"
	"No, there isn't any. I just get mountains of emails and I skim them from time to time And when it looks interesting. (Indistinct)... like Deepak Chopra Er, you know promote them then I do take heed"
Influential People	"Gf studies hospitality she had some food science books that I read through"
	"My mom was a nurse, my father was/is... she is a retired nurse"
	"I just get mountains of emails and I skim them from time to time and when it looks interesting..like Deepak Chopra"
	"Friends and family... my wife is very supportive of it and she will say 'are we going to have this or that' to try and get me to eat more of the product",
	"Do you know... obviously, it used to be my gym instructor. And then some friends",
	"When I lived in CT there's a lady, she is a vegan, and she's amazing, she's got her own shop with all the natural products, cashews, almonds but it's all plant-based products, and I get a lot of guidance from her on what I can eat, which food groups mix well with, starches vs carbs, not a good example but sweet foods vs non-sweet goods"
	"I always follow Jamie Oliver because I really enjoy his style of cooking and his natural ingredients"
	"I follow Patrick Holton and Ela... the vegan chef. I find that she has got great natural remedies"
	"It is mainly just my mother!"
	"From running I have heard of certain foods that are supposed to be good for that. I do eat some of them but not in particular – like no sort of...like, I cannot eat this because I am eating that"
	"Well I generally go for a light mayo. If I am in the store...Not necessarily... I just generally... if I am shopping, we do go to a nutritionist and she says

	obviously stay away from, like your tomato sauces which are full of sugar and thing like that. So if you can do anything that is light or fat-free, with the diet that we are on, I mean I know there are people that are doing high-fat. So they look for the fatty mayonnaises. So it just depends on what... but I generally go for a light if I am looking”
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Table 7 When you purchase food products, do you specifically look for functional food products?

CATEGORY	QUOTES
Yes, they do specifically look at functional food products	“Yes... so if I made a shopping list then I put ‘veg’. The veg that I go and search for are my functional veggies”
	“Yes I do, so definitely and if there’s something else that looks interesting and is healthy then I would try it just for some variety in the house, as opposed to just buying the same thing over and over”
	“Yes. Because when we do tend to make food we go full out, but yes. It also depends on price range, of course”,
	“Yes. Yes, I actually do in a way. I will not say... it is just that, it is my way of lifestyle that actually, I use a lot of fruit and vegetables for health reasons”
	“I think generally. I am actually a type one diabetic, so I try to look at foods that do not obviously have high carbohydrates or preservative influence, that are low GMO, obviously low sugar as well, if not none at all”
	“So functional foods is the way to go because that is something that has the most nutritional value in any product that you purchase”
	“I just... I am conscious about GMO’s, hormones and stuff that is added. I try and eat as close to whole as I can”
	“Yes, I do. So, in my purchases, if it is, let us say vegetables or even if it is processed vegetarian food items, then I will look for functional foods throughout”
	“Yes, I do. Such that I know of, right”
	“Yes, definitely”
	“Yes, yes”
	“Yes”
	“Being a Chef, you learn many things about the different types of food that you work with, and you find out things that you never knew before about certain ingredients and certain food types and stuff. So, going out and buying food, you look for something that is fresh, that is natural, that is pure, because you want the best from it. So functional foods is the way to go

	because that is something that has the most nutritional value in any product that you purchase”
	“Yes, I do. I do. Absolutely. Yes, I am a very conscious shopper. So I save all the plastic... I... first of all, I try to not buy plastic and prefer to buy glass. And I prefer to buy vegetables and fruits that are not in packaging”
	“Yes, certainly”
	“Yes I do. Because I know my children like it as well, all 3 of us enjoy the foods that I mentioned earlier, so definitely, your spinaches, what I mentioned earlier, so definitely and if there’s something else that looks interesting and is healthy then I would try it just for some variety in the house, as opposed to just buying the same thing over and over”
	“Not a one hundred percent of the time but I would say like eighty to eighty-five percent, yes”
	“It is both a yes and a no. So, it is consciously and unconsciously, depending on the time and what I am doing at the moment. So it is a matter of yes, there are times where you are looking for specifics and there are times where you are just walking through the aisle and you decide to have a look and you just pick up what you want”
	“I think I do. If I am standing at the counter and there is an organic product and there is another product. I think I would go more for the organic”
	“Absolutely, absolutely. I am also a very big believer in reading labels. So whichever products I do end up buying at the shops I always look at the labels and I make sure that the fat content is acceptable - so it is not too much added fats, it is not too much added sugars - I tend to go for products that are unsweetened or no sugar added so it has got natural sweetness to it. Yes, so absolutely”
	“Yes”
	“Yes”
	“It is ideal to choose functional foods. Unfortunately, with a large family you often go more on budget than on function. They tend to be more expensive if you are looking for functional foods that have added benefits. If it is just fruit and vegetables and that, that you know can have an effect, then that is an easy one to choose”
	“Weekly, yes. Not over the weekend. I like chilling and ...”
	“I do. I do. I try and get the best value. I often read the labels in a store. Like I said earlier, it is low-fat... high protein and low-fat is sort of what I look at when I am purchasing. And fresh ingredients over frozen. I prefer to get fresh”
No, they don’t specifically look at functional food products	“No personal preference or you know, what I’m feeling for or what I have, what I’ve been craving for most of the time, yeah”

	“Ya I don’t think I specifically look at things to see whether they’re functional food products because I’m not, I’m not a hundred percent about you know, what the term means and those types of things”
	“I would say no, because I live in house with a lot of people, so obviously we shop more on price value, it’s more like quantity over quality”
	“No, not really. Only if I come across something that somebody told me it is healthy”
	“I do not really, specifically, say that I should buy this under... depending on when I am going to buy my stuff”,
	“Not always. I sometimes just grab the junk food because it is quick, and it is tasty”
	“I would say no, I do not but my wife, does. She definitely does”
	“Ya I don’t think I specifically look at things to see whether they’re functional food products because I’m not, I’m not a hundred percent about you know, what the term means and those types of things”
	“Not necessarily”
	“Not really”
	“No, not really, if you say like going into a shop and looking at the nutritional value of everything before I buy it, no I do not do that”
	“No, not everything, just certain things. So mainly things that I am buying for my baby, then I look up the nutritional value... if it has added sugars and all of that. For me when it comes to like snacks for my work or my breakfast cereals or things like that. That is when I look up, because I know some of them have a lot of sugar in them. So I try and stay away from those ones”
	“Most of the time I am not aware of the difference if it is functional food or not but if I was made aware of that, I think I would probably go with the functional food option.”
	“I do not specifically look for functional foods if I was to be shopping but if it was in the same display and it was around the same cost but it was advertised that it was better, then I would probably go for that option”

Table 8 Were you always keen on purchasing functional foods? If not why, and if yes, why was it important to you?

CATEGORY	QUOTES
Health Related	“Yes, I was always told that certain foods had nutritional sources that were important to include in my diet”

	<p>"I changed my diet sort of midway through my 20's toward a more healthier balanced diet. Reason being I'm very focused on living a healthy life and into old age and I believe eating the right food products"</p>
	<p>"Yes, I've always, uh, I've always been buying functional foods. I think it's just the way I grew up. I grew up with my granny and they always used to make sure I eat healthy"</p>
	<p>"Yes, I suppose it is your upbringing. I was brought up with the knowledge that it is important to eat healthily"</p>
	<p>"So, at times I try to just find things that will work for me instead of like... making it... decreasing my sugar levels"</p>
	<p>"After having had children and as you get older, I have just become a lot more aware of healthy eating and purchasing the right products"</p>
	<p>"So when you eventually understand the whole process of what goes on to food and how it is made and how it can be modified, you immediately move towards functional foods because you want the best quality and the best nutritional value of food"</p>
	<p>"But I think the older I have got, the more important it has become. So I definitely think it relates to your current health issues"</p>
	<p>"I think when you make an effort to improve your eating habits then I think you look for functional food"</p>
	<p>"Initially, no, we were not but it became quite apparent that I need to have a lot more of the functionals in my diet"</p>
	<p>"So I have always been aware of it, but I have not been so interested personally but when I had my baby, then that is when I got more interested in it because I was very interested in what I was putting into her body"</p>
	<p>"For me it... I was keen just to see if they would actually help because I think our society is so dependent on pills. So when I was told that, no, instead of relying heavily on pills, why do I not try ginger and that is how I actually got keen"</p>
	<p>"Initially, no, we were not but it became quite apparent that I need to have a lot more of the functionals in my diet. So it became a point of we need to have this to keep my heart and my weight down"</p>
	<p>"Well, I would not say not always keen... I always wanted things that taste nice. And I never realised... all the... how can I say? The admin, for lack of a better word, of buying food or eating. I was not conscious. I would just eat what tastes nice before I was more informed. I would say maybe when I was younger but as I read more, started studying more, reading more books, I became more enlightened on diseases and stuff like that. And then I became more health-conscious. So actually reading actually helped me in that"</p>
	<p>"No, it hasn't been, but it's become, er, I've become aware of it as one matures and one engage and one sees the benefits from it"</p>
	<p>"The first answer is no. I did not always purchase functional foods. It was really just purchasing what was there and what I felt like. My reason now for purchasing functional foods is for health"</p>

	<p>"I think it is because... I like food in its natural form. So I think that is the most important. If I am going to make something I would like to make it from scratch"</p>
	<p>"I have to go with a yes and no, on that one, for functional foods but some of them are just to make much easier purposes. Just buy whatever you can get. For example, that pre-made sources. (laughs) So that is not exactly the most healthy or functional, but it works"</p>
	<p>"I agree with exactly with what the other participant has said, you are what you eat, also when you are 20 years old vs what I am now, things start changing in your body, parts of your body starts to change and I know very very aware of how things have changed over the years, your arthritis starts appearing, I think if you're eating the correct foods it will definitely help eliminate a lot of that"</p>
	<p>"Yes, I think its important, you know you are what you eat, so if you're a person that consumes food for the sake of eating food, then you will mostly like be a person that's most likely depressed, that effects your moods that effects your sleep patterns, and if your e a healthy person, very active but you don't feed those nutrients into your body, obviously that's not very healthy for you, your body isn't replenishing all that stuff that's been burnt off, if you're a healthy person and conscious of the foods you're eating obviously then you re not only is your mind in a goof place but your body is in a good place, know your sleeping habits, moods, daily functioning all has a ripple effect on what you eating"</p>
	<p>"Yes, absolutely. I mean, since I have had Lexi I think my focus is a lot healthier than what it used to be"</p>
	<p>"No, I was not all the time conscious or keen on always purchasing it. We were young and stupid so nobody cared about eating healthy. And we have grown up and are getting older (laughs) and the joints are starting to pain (laughter) and we tend to lean towards the healthy stuff"</p>
	<p>"Yes, I would because I do not think meat in itself is very important. For me, I believe that you need a variety of vitamins. So, I would always be looking for the more natural way to go"</p>
	<p>"I am not... I have been keen on it since I became diabetic. I watch... because by speaking to dietitians, they tell you what is high in salt... I mean in sugar... and for me the foods that I like is the highest in sugar. So at times I try to just find things that will work for me instead of like... making it... decreasing my sugar levels"</p>
	<p>"Mine was just basically when my irritable bowel syndrome started acting up and then every day was painful, depending on what sort of things I would eat. So I needed to find things that I could eat that would not cause so much of irritation and that would be gentle on my bowel"</p>
	<p>"No, I was not... I did not know about functional foods. Leaving school and then cooking for myself, you kind of go on this adventure. I am also into gardening and the whole organic thing and composting. I am growing</p>

	African Birds Eye Chillies... and growing all my herbs. I am actually into permaculture. I have got a full-on little set-up of permaculture. So then as I started to... funny enough... gardening and cooking, cooking for myself, then you start to learn these things. Also the media is a massive influence on this. I do not think we would have known much about permacultures and functional foods and stuff if it was not for the media”
	“No, I was not always conscious of functional foods or healthy foods or anything like that. I became more conscious when I became more health-conscious and started going to the gym and starting exercising. That is when it all sparked”
	“I think also, he said if your intention is to go and look for functional healthy food when you go to the shops, you actually start to look for and you come across more items”
	“I was not always keen, just two years ago where I really gave attention to the health that I kept and the type of foods that I ate. It has only been for the past two years”
	“When I was vegan, yes. Because then I had to be very mindful of how much protein I was eating and extra minerals in food but now I would not say as much. But I do keep it in the back of my mind that you cannot just eat unhealthy all the time”
	“I do not think I was always keen on it. When you are younger you are invincible and you do not need to think about old age. Old age creeps up very quickly and when you are responsible for other people’s health then you start thinking about what you are actually serving them. So as you get to be more of an adult and have to be responsible for children then you have to make sure that you are actually feeding them decently. So you become more aware”
	“When I was younger that was my lifestyle – being healthy, going to the gym. Yes-always keen on purchasing functional foods”
	“Well, I do generally go for as healthy as possible but sometimes I go for a quick meal – a frozen meal if I have had a long day or whatever and I do not feel like cooking, I do tend to go for a frozen lasagne or a frozen cottage pie. Which is not necessarily healthy but it is better than buying a burger. So that generally influences”
Not keen / Lack the understanding of functional foods	“uh, I think just to reiterate, no, I haven’t been very aware of buying just functional foods because I haven’t been exposed to what the, you know, what functional foods really are, and how they benefit you. So, I don’t think I’ve ever used, like uhm my shopping or, or shopped for functional foods specifically”
	“So unintentional I guess but I have to be honest, when I’m purchasing it’s not that I’m looking out to, you know, get the functional food basically”
	“Okay for me it is a no because it is actually a personal choice for me. Because I do not eat a lot of things, so I actually buy just things that I actually

	eat and sometimes it could be healthy and sometimes it could not be healthy”
	“Probably not something that I have been aware of doing and as the other participant said, it is probably because I am a bit young and I have not thought of the health implications of food. It is something I have thought of but not in-depth”
	“It is not something I actively think of. Normally I just base what I eat off the foods that I enjoy and not what functionality they actually give to”

Table 9 Has your idea about functional foods changed in any way? What do you attribute it too

CATEGORY	QUOTES
Health & Lifestyle Related	“I just think if you eat healthy, you feel better about yourself. You actually function better you feel more awake”,
	“It’s all positive, it defiantly changed like I said in my mid 20s towards more functional foods”
	“Well, I guess now coz I’ve read up on it and I’ve gained my knowledge, the little that I’ve gained on so I would say now its changed, Again, I would say that it changed from a point of my health as I got older, I tend to realise that things had to change”
	“Well, yes. I have learnt... even though I have been in kitchens and using foods my whole life, I have learnt the nutritional value and what value certain food groups... or functions certain food groups have in your life. It actually has a function to fulfil in your daily lifestyle for health reasons.”
	“Yes, most certainly. I think, my years because I am not getting any younger and obviously, I want to ensure... more better longevity”
	“Definitely a positive perspective, I just... like you can feel that your lifestyle is better. You feel healthier. You feel like you can get things done”.
	“Again, I would say that it changed from a point of my health as I got older, I tend to realise that things had to change”
	“I think maybe after I saw a dietician, I kind of, just tried to, to, to buy products and foods that are the most nutritionally bene, like beneficial towards me, but like I said, I’m not sure whether that lands in like functional foods or whether its actually, affected what my idea of functional food is”
	“No, it has not. I suppose because I have always been aware that it is a good thing to eat healthily. And that is a non-negotiable. That is just life. So I... it has not changed at all”
	“Increased knowledge. Increased visibility”
	“It has changed, yes. Because with this... I only recently came of age to do everything on my own. I always had the mother to do everything. So starting

	when I have to try and finalise everything I started... the choices I made started to differ from what was used to be made for me, so yes”
	“I’m also going to say yes, I think again it’s a balance, there’s no fast way or easy way to diet, I think if you are exercising and eating the right foods there’s no reason why you shouldn’t maintain your body weight, and if you need to lose weight then eat the correct foods and drink a lot of water and just eat correctly”
	“Yes, you do feel different. You feel fresher, you feel lighter, you feel more energetic. So that has changed. You have got more energy eating that way”
	“Yes, it has. A while back my son... about a year/a year and a half ago, my son moved out... my youngest son and he did not like a lot of the things that I would now be eating... like I would make a lot of roasted vegetables and stuff like that. He did not like to eat that. He was always into the potato and meat and stuff like that. Whereas now I have changed. I have actually got a lot of more variety in my diet”
	“No... It has not changed... well, like I said it is actually a bit personal for me because I like do not eat a lot of stuff. There are specific things I do actually eat”
	“It changed not a lot, but a little bit after I had reflux, so I try not to have anything that is going to go and cause the reflux.... flare-ups, so I try to avoid those foods”
	“Okay so, just basically with the irritable bowel syndrome to be honest. If that had not come up I would probably not have known about healthier ways to eat and what would be better for me”
	“It changed more... again, with my baby, so when I started looking up healthy and nutritious things for her, that is when I realised of how much unhealthy ingredients are actually in products. Even products that claimed to be healthy, are not so healthy. So that is when I started to research and learning about that”
	“Yes, I think with the whole movement towards the change of how people eat their food with regards to whether you are vegan or vegetarian or you know... all those things. I think that has definitely opened my eyes to a lot of different ways to consume foods and make sure that it is healthy for you in the long run”
	“Well, I think it has certainly changed a lot now during these last two years because everybody's just become so health-conscious and trying to maintain a healthy immune system... you are just trying to put all the right stuff into your body”
	“So yes, functional foods has definitely changed my mindset in many ways. It has become much more important than people think. Like some people will just brush it off, but then when you actually go into it and you find out exactly what it is, then it becomes very important to your lifestyle”
	“Yes, we constantly learning about new things. I have recently only stumbled on permaculture because I stopped using pesticides in the garden. So that

	would not have changed my way, I would have lived and done gardening as... because you just normally spray the pesticides on without thinking what it does”
	“Yes, I have to say my ideas and my understanding of functional foods had been greatly influenced financially”
	“Well I think I am not aware of all the functional foods, as you get older you realise the benefits. It would be great if you realise that at a younger age but you do not”
	“No, I would not say it has changed in any way. But I do hope to improve it. It has not changed”
	“So for me, it has not changed that much based on the information that I have been on this call. Like, over the years, then yes”
	“So no, for me, it has not changed. It is just that now I know that they are called functional foods”
	“Yes, I think I need to probably research it a bit more and see which foods I should be eating”
	“So, from my perspective, I actually think that with Covid and being in Lockdown and realising how important your health is, I have started making more conscious decisions. Most of my friends are very health-conscious so I do get picked on. And after this conversation I think I am going to land up having to spend a lot more money on food! (laughs)”
	“It has changed quite a bit. Like as I said I had a terrible sort of before but going through these questions I have a slightly better understanding of what functional foods actually are”
	“My understanding of what healthy foods and functional foods are has grown. It can be attributed to life orientation classes that we had during high school”
	“No, I do not think so. I just think it is more expensive being healthy than just buying all sorts of pastas and...”
	“I just think over time, being unhealthy in my past, I have changed my mindset to start going towards healthier foods and more on the fresh ingredients side. Rather than purchasing the easy route”
Media Content	“More positive, I mean you can see that it is becoming more socially acceptable. There are videos out there these days where people are saying ‘Oh, if you eat kimchi you will live until 100’”
	“Yes, a lot. The more I read, the more I actually research and watch and whatever... and even observe how my body reacts to certain foods”,
	“Yes, you get people who believe in intermittent fasting, where it doesn’t matter what you eat you just can’t eat in certain periods of time, so think social media especially is very big impact on it cause you always get these videos of how to lose weight very quickly / do you want to bulk up and go to gym”
	“I would say, yes. I think with knowledge being at our fingertips, such as Google and that, we have basically more access and more awareness, especially because it is about something that I am interested in”

	“Yes, I think the information is so easily available and I think a lot of it is on social media now. There is always somebody saying, ‘try this new product’”.
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Table 10 What role has your health consciousness played in your purchase and consumption of functional foods?

CATEGORY	QUOTES
Has played a significant role in the purchase and consumption of functional foods	“Yes... I mean it is important, it has played a significant role in you purchasing and consuming these types of foods”
	“I think when your early teens to mid-20s you kind of don’t have any effect on food or any noticeable effect until you actually only change over and keep a clean healthy diet”
	“I would say quite, quite, drastically actually. We have had to really have a look at and exactly see what I am eating and also with my family issues”
	“A big role. It defines my diet. It defines what I eat and even in the house, they have changed their way of eating”
	“I think just living a healthier life and feeling better”
	“if anything, I’d, I’m, I am pretty uhm, strict when it comes to, especially because I live alone. I try my best to stay as healthy as possible so, in that sense then I think it’s played quite a large role In me trying to find foods that are as beneficial as possible for me”
	“100% Er, I think about the things that I eat, the things that will digest, the things that, er, are not bulky. So, I look at it from an overall, er, awareness point of view”
	“Wholeheartedly. My whole purchase is about the functions. So I will not buy something because it is this. I buy it because of what I am going to get out of it and ... does it help me on a health level”
	“The role it has played... it has just made me think a little bit more about what I am putting in my body. It has played a significant role”
	“My health - I recently went to hospital due to a gallbladder operation. So everything consists for my body. I need to eat in a way to try and prevent getting pains because those pains are not the most wonderful to have. So with that, I had to cut off on a lot of stuff that I used to eat. So my health precaution became a lot better after that, because I tend to cut out like the bread and everything now because it has a different effect on the body”
	“Very important. I am looking for ways to maintain my health. So, I am eating good foods that are healthy for me, that contain vitamins with... one’s that have a lot of nutritional value are beneficial for me... all that, as I am not that young anymore and I cannot afford to really play around with health issues”

	<p>"It definitely got me to purchase more healthier foods and the whole foods, fresh vegetables, fruits. Not food that have a lot of preservatives in them, I try and stay away from them, so it changed my shopping list a bit"</p>
	<p>"Well, I definitely make better choices now than I would before. We definitely get a lot more raw foods in our diet. As opposed to snacking on things like chips and chocolate since we definitely buy more healthy alternatives like nuts and biltong and drink more water and all those things"</p>
	<p>"Okay, I will say it has a huge role on my health consciousness. So my mom was diabetic and of course diabetes is hereditary so down the line, eventually, I might get it if I do not take care of what I eat and my lifestyle. Also that alone played a major role in changing what I do eat"</p>
	<p>"Yes, it has played a really significant role in my consciousness. Regarding my purchases and the type of stuff that I buy and I am conscious all the time of trying to understand what I am eating and I try to visualise (laughs) what it is helping with"</p>
	<p>"A <u>huge</u> role. Yes, so being a Chef, it is very, very easy to just eat the wrong foods. I mean we are in a kitchen all day long, we are cooking very nice foods, not necessarily healthy foods, because face it, that is not what people want when they go to a restaurant... at least most people go to a restaurant and they want a giant steak and chips and you know, not the healthy stuff. So as a Chef it is very, very easy to pick, you taste here and you taste there and you taste here and you taste there. Whereas at home, for me, it is important that I concentrate on the healthier foods because at work there is very little healthy food"</p>
	<p>"So, for me, I have been... the role it has played is that I chose being cautious regarding the things I eat because of my love for gym. I am always trying to be in good shape and having the perfect body"</p>
	<p>"When... I have gone and purchased food. It has been something that has been there in my mind. Most of the time I make sure that I do not get just junk food, as I was saying earlier. But I normally get things that I find that I enjoy and make sure that our house has enough of it. Like, the health factor would be ... like, I would still think about it but it will be second to, if I enjoyed the taste of it"</p>
	<p>"I would say that my ability to purchase more healthy foods... like I said, I am subconsciously always thinking about it. Because obviously you start getting to an age where you start worrying about your longevity and if you are going to be around long enough. So... your mindset does change as you get older".</p>
	<p>"A huge amount! Because as I said, it is not just important that I purchase healthy, organic food but it is also the packaging"</p>
	<p>"I think, I've been brought up in a home we we've always eaten healthier, my mum has always instilled a good and healthy balanced meal, so that's followed through from when I was a child"</p>

	<p>“For me personally I live with someone who is obese, and I think when I look at her and I see her food habits on how she eats excessively, its very glutinous, the types of food that she eats and the quantities, and I think personally I don’t even want to get to that point, where I’m glutinous with food. I think I try and eat less quantity of what they eating and more veges greens nutritious food which is also a little bit detrimental because I get to the point where the meal that is prepared is very fatty and groce and I’m not going to eat that, because I don’t want to end up looking like this person for example”</p>
	<p>“Yes, I would say I agree. And also, when you have the opportunity to look up healthier recipes and see those certain products, then obviously that would play a role in going for that particular product because ‘Maybe it would taste good? Okay, it does not, so let us try another one next time’... you know”</p>
	<p>“Healthwise, consciousness has not really played on it. It was just a matter of trying. And I mean, there is a lot of advertising now going around somewhat to us.... (to an) extent. So, it plays on your mind in that sort of role. To purchase? Again, if it is stuff that looks good out there then you tend to... you know, it plays on your mind to purchase it and try it”</p>
	<p>“Yes, I share the same sentiments, just add more fruits and vegetables into the diet”</p>
	<p>“I think the same. We try and stay away from processed things. Things that have a lot of preservatives we try to go a bit more organic with what we are eating”</p>
	<p>“Yes definitely. When I went on my food adventure - whole foods, sustainable foods, functional foods, I lost 10 kilos. Actually, you are eating healthy and eating better and more whole foods, so it is has been huge”</p>
	<p>“I think we now... I am still younger but I can feel my body definitely from recovery aspects and that... it takes a lot longer really now. If I am exercising I need to make sure I am consuming the right food and I think healthy aspects are also going to be first on my side. But I do feel it definitely. I definitely do look for those items”</p>
	<p>“Yes, definitely. As the other participant said, as you get older but I always have shops that I have always looked... at pluses and wholesome and things that come from scratch”</p>
	<p>“That is obviously the biggest one. I have found that over the past five years especially, your thinking levels are not where they are and it affects your mood. It affects your thinking. And I think that your clarity in thought is important in business. I definitely noticed that in the last five years. So I am looking for meals that will give me sustainable energy... and... good sleep and that sort of thing”</p>
	<p>“So I think I actually got to know about these things because of my own... because of my health. So because I know that if I take them, I feel better. So that has now become like a habit. It is not even a thing of, can I afford it or</p>

	not? I know that if it is a budget issue then I have to kind of forfeit on the sweets or the ice creams but I need my 'A, B or C', you know"
	"I grew into that lifestyle where, if I am going to cook something, it is fresh. I do not get it out of a packet. Or I do not use it out of a can, it is all fresh. So that is what I would say contributed to this"
	"I would say... like I said when I was vegan that I would keep it in mind but it does not determine exactly what I would buy. I would still buy foods that taste good. So I would say I rather just base what I buy on taste instead of how healthy and functional it is in your body"
	"I would have to do the grown-up choice and say that I would be more concerned about the health factor but unfortunately, I think that food is often an emotional purchase as well. So you wanting things that will bring some joy to the day and not be in Lockdown all the time. So... Yes, you are aware more that there is health consequences to your food and that you <u>should</u> be doing it but often the will is not as strong as what you want it to be"
	"My dad is a diabetic so... yes. It makes you especially... I think if you eat more healthier, you feel healthier... so it does change your mindset a bit"
Has not played a significant role in the purchase and consumption of functional foods	"Yes, okay so for me, right now it has not really played any role as yet, but I do think it is going to affect me later on, which I will have to sort of try and come up with a way of eating these healthy products"
	"I am not really health-conscious. So that does not have any influence on whether or not I would buy functional foods"
	"Mmm. Well, I guess I mean, you know, I'm health conscious. I mean everyone wants to be but at the same time you wanna give in to those binge days I guess but, uh, mmm, its not really played a big role in my consumption of functional foods. Like I'm saying, it just happened you know that I like certain things and it has an added benefit of being a functional food"

Table 11 What does it mean to you to be health-conscious?

CATEGORY	QUOTES
Health Related Aspects	"To be health-conscious means eating a balanced diet comprising vegetables, fruits, legumes, protein"
	"Probably one of the highest-ranking priorities in my life. Every day when I wake up I got some sort of ambition and drive towards changing lifestyle habits, towards a healthier lifestyle"
	"To have like a balance so, I'm getting to eat healthily"

	<p>“So, we find that we are eating a lot healthier to keep our minds clear. And then also, secondly, it helps us to stay focused with regards to health/fitness”</p>
	<p>“Well for me I feel like when I also eat healthy, my little one eats healthy, you feel, you feel better about yourself”</p>
	<p>“Well it has become... let me put it in simple terms... like life or death. So for me to survive and fight this disease... for the last four years which I would do it again, is that you have got to have a strong mind and a strong willpower. So, you need the functional foods to give you the strength physically and it keeps your mind physically strong”</p>
	<p>“Yes, it is very much around my personal health and my ability to perform at the best I can”</p>
	<p>“Guess for me, it is making sure that you are watching what you take in, in a day. Making sure that you are choosing the healthier option”</p>
	<p>“It is wanting that healthier lifestyle. It is pushing yourself too. I mean, people these days are scared of getting sick and getting diseases etc. etc. So, you want to try do things differently versus eating all the junk food, etc. So it is a matter of trying it and you want to... on a health-conscious point is that it plays that you <u>want</u> to do it.”</p>
	<p>“So definitely just eating healthier, trying to stay away from saturated fats, from preservatives, from unhealthy products”</p>
	<p>“To be mindful. That there are diseases in the air, diseases in the environment and one needs to...them off. By miti... by taking things that could mitigate or ameliorate the catching thereof”</p>
	<p>“Healthier. To be more healthy... that is what I would say. Just in general on your normal well-being for yourself”</p>
	<p>“To me it means like watching everything that you eating, which sometimes we do not want to do, we just want to get what we want and move along”</p>
	<p>“Basically, just making sure that you having a balanced diet and exercising with that as well, not just consuming things just because they taste good”</p>
	<p>“Well for me the aspect of being health-conscious is obviously a lot closer to home, considering my diabetes. I find that if I eat certain foods, especially... even at certain times, it can affect me negatively. But I have tried to obviously stay away from those types of food, eat at the correct times of the day. And I actually got into a routine of when I eat, what I eat, how much of that I eat and it actually helps me just to keep going throughout the day”</p>
	<p>“I think it is an overall consciousness. I just want to eat healthily and live a healthy lifestyle. Overall, just your eating, your attitude towards your eating, your exercise and just maintaining a healthy lifestyle”</p>
	<p>“Okay so being health-conscious is of very important. Like... as I was saying knowing there is a chance of you becoming diabetic, that just changes your whole lifestyle, changes your mindset of everything. As much as I love sweet stuff, as much as I want to eat it, at home we do not buy sweet stuff</p>

	<p>anymore. So that changes everything because... from a certain time you have, every day, you know there is a chocolate in the drawer that you can have. It is there waiting for you after work but now that changed. So I have become a lot more health-conscious in terms of that. And yes, it is scary to think that diabetes can be such a dangerous thing - at one point, if you let it go, if you do not look after yourself, knowing that there is a possibility that you might get it because it can get really bad. From what I have seen with my mom and stuff, I do not want to get to that point. So health-consciously I am a bit extreme at home, yes, so that is it for me”</p>
	<p>“To be health-conscious I do not think it is just the way you eat and you the way you exercise. It is what you... the creams you use on your body, the medicine that you take, it is pretty much everything we do in our daily lives, that is health-consciousness. We have just got to be aware. And like our families... on my husband side, cholesterol is a hereditary thing and on our side is heart attacks and stuff, linked to cholesterol, high blood pressure... so you have got to also understand our genetics to be health-conscious”</p>
	<p>“I think for me, what it means to be health conscious is to actually know what it is what you buy. Understanding when you read a label, what does it mean? What does all those things mean that you see on the back of a label? What does non-GMO or GMO products mean? What does organic mean? Knowing what those mean and knowing what the products are that you should try and avoid, that to me is important. And I think that is what health-conscious to me means - is knowing the product and knowing what the right decision is to buy”</p>
	<p>“I think it is finding a balanced lifestyle. It always tastes better. It is interesting that you say that as well”</p>
	<p>“I think it is a balanced lifestyle. I think being health conscious is making sure that you exercise... everything in moderation, I think. That is to exercise on a regular basis, to get good sleep, and I believe vitamins are important”</p>
	<p>“I would say that you need to know what your body wants, like, what are the key things you need if you are feeling down and probably have a fruit or a juice or a fruit juice... Or at night if you feel you do not want to eat something so heavy, you eat something just nutritious but light”</p>
	<p>“I think it means to have balance. So not to just go all out and just eat complete junk food and the same with the scale of not just eating healthy all the time just to treat yourself. But to enjoy the food that you are eating and make sure that you are nourishing your body as much as you can”</p>
	<p>“Just being aware of your body’s health status and what choices you can do to improve it or just maintain the general healthiness of your body”</p>
	<p>“Obviously it means eating healthy, being healthy, eating food that has high nutrition value... like... fulfilling. Yes, it makes you feel healthier as well. You feel better”</p>

	<p>"And like I said earlier, I want to get longevity out of my life and I have realised how fatty foods are not agreeing with me. So, it is just tending to go a little bit healthier"</p>
	<p>"It means everything. It means everything. Because I see people dying of disease. I see people dying of what they are eating and some are even still diagnosed with a disease, but they still continue those dangerous eating habits - they do not stop. For me, it is life. To eat healthily"</p>
	<p>"Uh, to try to have as many balanced meals and to be healthy overall you know, physically and mentally and to, to consume foods that will aid in that and not make me feel more sluggish I think that's kind of where I stand with that"</p>
	<p>"Oh, it is the quality of life. It is vitality. It is how you feel... it is all of that. If you want to know what it looks like, then it is about trying to find balance, I suppose"</p>
	<p>"Basically, it is just to be more... I do not know the correct word to put it now that I thought of it... but just to be more aware of what is around you that is more functional for you"</p>
	<p>"It means that, and I don't actively follow it, so I'm actually saying something that I should do, but I skip breakfast for example I don't eat, that's wrong I do believe that I should be having something for breakfast, because at 11 o'clock I can eat anything that I can put into my mouth sort of thing"</p>
	<p>"You are just aware of your body as a whole, to be health conscious is to have the correct amounts of exercise, its to eat a balance d diet and get enough sleep"</p>
	<p>"Okay, what it means to be health-conscious is when you take care of yourself now by eating these healthy products. You do know that it will not affect you later on and it could be healthy for you at a later stage and not specifically now but at a later stage"</p>
	<p>"Yes. And the funny thing is, when you start eating quality healthy food it actually tastes better. Actually you feel very confident but you sort of, myself included, gravitate towards quick and easy stuff"</p>
	<p>"Yes, I actually agree with her that it is more being mindful of what you put in your body and is it really good for your body. Something like having a chocolate - it is not good for your body but then it tastes nice, but then being health-conscious is more something that is beneficial to your body"</p>
	<p>"Yes, I agree with the two ladies. (being mindful of what you put in your body and is it really good for your body)"</p>
	<p>"Make consistent choices to remain as healthy as you can. To try and ensure that you do not get any chronic diseases due to the choices that you are making. To try and preserve your health as you age"</p>
	<p>"I would say that to be health-conscious is to eat well but also not to force yourself to be like... you always have to eat healthy. And to have regular exercise, that is what I say"</p>

Table 12 What important things does your health consciousness include?

CATEGORY	QUOTES
Certain ingredients/foods used	"It means cooking the food that I eat and using high-quality ingredients"
	"I think it definitely helps me to look for the correct products that I am going to be using",
	"Just to look for the right products that are not only valuable to your lifestyle but just to being totally health-conscious",
	"The cause of the pimples was because of the oily foods and fatty foods that I had been eating and it was not healthy. So because of that, I had to really decrease the amount of oils I consumed and how much of oil I use in my cooking"
	"I would say obviously eating healthily and buying the correct vegetables, meat/protein... whatever. It does influence me, yes"
	"Yes, sure. I think from my understanding, important things would include like what you take in, in the day - your proteins, your fats, your healthies"
	"So yes, I am going to say 'snap'. Yes, Kombucha also... I am big into taking (along with trying to eat whole foods and functional foods) supplements. So my vitamins and minerals and that kind of stuff, big. Green tea at this point. I am living on to stay awake (laughs) as Louis said. Yes, those are two important... or three important things"
	"For me, a very important thing for me is my kombucha... I have found that with the use of kombucha, it does boost energy levels and that has got to do with gut health"
	"And I think that having a balance of fruit and veg, starch, proteins... because you feel better when you have got that balance"
Exercising	"My health-consciousness also includes exercising as well",
	"Well, I guess I try to get in the exercise and as much as possible"
	"Exercising I don't exercise every day. I wish I had the time, but I try and run on the treadmill regularly"
	"So, prior to COVID time, it involved a lot more exercise. I was a part of a gym"
	"Uh, try my best not to eat like processed foods or hot food, trying to pair that a lot with exercising"
	"Er, exercise"
	"Keeping an active lifestyle and keeping in shape"

	"Obviously your exercise - making sure that you are exercising"
	"Yes, I was actually going to go with the same thing, like stable-y fit"
	"Exercise"
	"I throw in there some sort of exercise"
	"And doing some form of exercise as well"
	"I would say... getting enough exercise"
Eating healthy	"We try and include more of a natural sucrose rich product, nartjies, oranges, apples etc. Just replacing some of the non-healthy elements with more healthier elements with regards to food"
	"So, it's definitely eating healthy"
	"Drinking enough water everyday which we don't do enough of, speaking for myself, balanced diet for sure, getting enough sleep, and enough rest",
	"Being more aware of what I should not have and what is not healthy for me",
	"it is definitely a healthy eating plan that you have to maintain",
	"I had to increase my water intake. And also eat a lot of fruits because that really helps your skin to heal"
	"The balance between the two definitely. You cannot just do one without the other. You have got to have both"
	"So I have to make sure that he also gets his health supplements or the food that he eats. So it plays an influence in that way, I would say"
	"Uh, try my best not to eat like processed foods or hot food"
	"Multivitamins, so, er, taking, you know, vitamin B12 injection ensuring that I get vitamin C, I take vitamin D by even walking in the sun. So, these things are germane to my existence"
	"Okay, obviously eating properly"
	"I just need to get through my day to day basics without fainting due to a lack of food, so at this stage it is just trying to function during the day"
	"Sleep is a big one, moods, exercising regularly, eating a balanced diet, and also mental space, your mental space is a big impact on your health"
	"Making sure you are drinking enough fluids and you are watching what you are doing in the day and not just eating what is convenient"
	"To a certain extent. But it is a half and half. So, half of it is playing on your health conscience that yes, I want to be healthy, and I want to be... etc. But it

	does not really play on my mind or my conscience to that level... that I need to watch what I am eating, when and how and who and what. So, it is a 50/50 thing for me”
	“Yes, I was actually going to go with the same thing - a healthy eating plan to be”
	“And improving your diet as well”
	“Yes, just a healthier diet - more fruit and vegetables, more water... I am trying to drink more water... and just like spreading out my meals in the day, so that you are not too hungry or you are not overeating and yes, that is it”
	“All right. So I would say, I have tried dieting and in that my health-consciousness would be knowing a balanced diet”
	“We tend to understand fibre as a single thing and it helps your tummy and it makes you regular. But there are certain types of fibres which are more important, which actually work in the lower gut. And that is where kombucha comes in as well. Although it is not a fibre-rich product, it does have a lot of beneficial bacteria. And those beneficial bacteria settle in the lower gut and that is what helps you to absorb more nutrition’s from foods that you eat. So I have to go with, yes, with my kombucha in that one”
	“sleep... keep watching blood pressure as well and blood sugar. Food that is good for bone density because relate... to me, I can see those things are starting to go downhill with my age”
	“Yes. So for me, it is all about cutting down the fat in my body. So I will consume... So these days I do not take coffee with sugar and I am a huge coffee lover”
	“So it would be... so I have... let me say something... Okay, so this thing for me, it started with the weight gain. I was aware that I am drinking a lot of Coke and I was putting on a lot of weight”
	“I think it is important to drink a lot of water with meals. And I think it is also important to eat at set times so that you are not making yourself over-full and then really hungry”
	“I think it is also not just food. It is a matter of changing your lifestyle to be under less pressure. Taking time out”
	“eating food not just for the enjoyment of eating food but for like... eating food in moderation also.... Like choosing healthier options”
	“I feel the same. Yes. If you do eat, you eat healthy”

Table 13 How has your health-consciousness influenced your purchasing of functional foods?

CATEGORY	QUOTES
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Buying and eating healthy foods	"Because now I do not just buy... I make sure it is calculated. I make sure I know exactly what it contains, what it does to my body"
	"I definitely tried to buy, uhm, especially now moving out of home, I try my best to purchase uhm, good food and stuff that is considered healthy"
	"If it is not in the criteria that I need, then I do not purchase it"
	"So, I have got to make sure what I eat is healthy. So yes, it does have a major influence on what I buy"
	"It influenced me quite a lot because everything that I used to buy... my whole shopping list changed... like in 180%"
	"Changing from normal sunflower oil to olive oil and changing from drinking tap water to bottled water and then just those small, subtle changes that actually end up making a difference in the long run to my health"
	"When I go to the shops I look for healthy components or ingredients"
	"So it influenced the purchasing of functional food in the sense that I tried not to include junk in my groceries"
	"Functional foods are included more or less in what I consider to be the health-conscious category or healthy food category",
	"It's completely changed if you look at a basket of food I would have bought in my early 20s versus a basket of food I buy now, completely different"
	"The amount of portions of food that we have compared to what we used to have has changed a lot. So, we really are trying to reduce that intake of fatty foods to make sure that we get the right intake and to help us with that"
	"I find a go to the shops 1ce every 2 days to buy fresh stuff, and how normally go through to the spinach cabbage and lettuce, dining with fresh stuff u need to do that"
	"Look for healthier foods, crackers, fruit, yoghurts to snack on in between"
	"It definitely increased from before with fruits and vegetables, because of cutting out carbs, like potatoes and rice and bread, that gets replaced by vegetables and fruit"
	"I try to eat fresh most of the time unless it is something like pulses and dahls and rice. But I try to eat fresh, whatever it is"
	"To a significant degree"
	"Probably 90%. They are around my health"
	"It has influenced it in a big way. As I said, when you are trying to do your shopping or preparing your meals, you try and purchase the right things to prepare your food and to just make sure that you are eating healthy"
	"Well I think it is defiantly related to age and the more like your body you become. So, I just find that the way I am purchasing my foods... I have specific shops that I know that I go to and I kind of... I do like a menu"

	planner, the more organized... It has made me more organised in the way that I purchase foods. So I try to plan a meal... and the food and everything that goes with it. I do not know if that is the answer that you are looking for, but, yes"
	"Yes, I think that is a good point. It has forced us to be more organised and planning. Without a plan you end up buying non-functional foods"
	"So, I think with me when I am buying groceries I try to not buy, like... what can I say... junk food. But then when I feel like I am craving it, in inverted commas, I would... let us say I would drive out and buy it but I try not to include it in my groceries. Because that is me feeling bad and being committed to eating healthy. But then when I feel like no, let me just have a cheat day, then I will buy it. It will be like an impulsive purchase kind of thing"
	"I would try and balance what you can afford and then what is the healthiest. So I would try and get the healthiest option that you can afford on your current budget"
	"I would tend to buy foods that are genuinely ... are more healthier but obviously on a price range because often the healthiest options are not always the cheapest options"
	"Obviously you purchase more healthier foods - more fruit and veg, more lean meat... mostly chicken. Yes, it is a healthier choice that is not that expensive"
Promotes Health	"The functional foods are giving you that added benefits, Here you've got food that has the added benefit of lowering cholesterol, lowering, lowering your you know, your insulin levels, your diabetes... sugar levels and stuff"
	"When you actually get those goals and you are getting the benefits of it, it gives you that kind of kick up the butt to say 'okay, there is actually good that comes from the blood, sweat and tears"
	"I definitely say it has influenced because we want to live a healthy lifestyle"
	"Making sure that everything that you are getting is what your body needs"
Creating Awareness and being more Health-Conscious	"You've just become more aware"
	"I think as, as I got older and became more health conscious"
	"Yes, it has got a huge influence. My health... I am very health conscious"
	"Yes. Definitely reading food labels, with added sugar, preservatives and GMO's. It has definitely influenced mine"
	"Because you just grabbed whatever from the shelves that you think you need, you spend a bit more time and look at the labels and see whether or not you actually are willing to eat the product that you just bought"
	"And I try and educate my children to eat foods that they may not like necessarily to eat because of the benefits associated"

	"I tend to read labels a lot more. I tend to investigate a bit more"
	"Yes, I agree with that. It is those feel-good moments. It is achieving the goals you set out, that type of thing. You want to lose weight. You want to be healthier... type of thing. So, it is achieving those goals that influence the purchasing of it"
	"Yes, like I said I have in the last year and a half... I mean even with my water, I try to not even drink the tap water. I would try and drink the water from the... you know that you get at the shops... and go with that kind of water so that it does not have all the chemicals and stuff added into it. Me being health-consciousness has influenced how I purchase functional food products"
	"The same, I think instead of having more cakes and things like that as snacks, you just rather go with healthier options like fruits and I now do... like I said I was doing the smoothies. So a smoothie during the day instead"
	"It has definitely made me look out for healthier options. So some things that I would eat before, as my snacks especially, instead of going for like biscuits"
No Influence	"It hasn't really, as I'm not the person that usually buys the food in my house, doesn't really personally influence my shopping that I do",
	"Now not really.... It has not"

Table 14 Do you feel pressured socially to purchase or not to purchase functional food products, if so why? If previously answered yes, from who does the pressure originate?

CATEGORY	QUOTES
Do feel socially pressured to purchase or not to purchase functional food products? If previously answered yes, from who does the pressure originate?	"Yes, my mother- she doesn't really put pressure on me I think it's more because I'm not a very healthy weight at the moment"
	"For me... the people at work, especially because I have a lot of friends that are vegetarian and also a lot of people that like to eat organic food"
	"I sometimes do. So definitely at work because I am in the beauty industry, and everyone is always health conscious and worried about what they are eating and what is going into their bodies"
	"Yes, sometimes I do feel pressurised socially to purchase. Because of, you know, the type of friends and my children and my grandchildren"

	"I think definitely. Because you see Influencers posting their healthy breakfasts and their body looks a certain way and you think to yourself"
	"I sadly still have social pressure. My friends who are very healthy"
	"I find that there is a slight pressure. I find Woolworths... I find Woolworths... because I read the Taste Magazine and eight out of ten times we will try at least three of the recipes. And generally it is either vegan-based or... I know the last couple of months it has all been. And they have all been very tasty. We have enjoyed them. So yes, I would say Woolies is the one that influences me"
Do not feel socially pressured to purchase or not to purchase functional food products	"No, I do not"
	"I definitely don't feel pressure, I think it's a personal choice"
	"No, definitely not because like I said I normally I purchase functional foods in any case"
	"I do not necessarily feel pressured, it has become like a conscious way of living right now"
	"No, I do not feel pressured... I do not feel socially pressured to buy it. It is a willingness to want to eat healthy and to buy healthy"
	"Personally, not. I don't. No, no, no"
	"No, no, no. I do not think... it has got nothing to do with them it has got to do with us as people. But no, I am not pressured at all"
	"Not at all. Not at all. Now maybe... maybe when I was younger, I do not know. But not now. Not at all"
	"Uh, I think a little bit of both being a student I think it's very easy or like being fresh out of university it's very easy to fall into that, that category of, you know, just buy the cheapest thing and just buy all the fast food because It's kind of what students do but then also wanting to be as healthy as possible and you know, the, like, having fast foods and all of those things is quite frowned upon in society so, uhm, I think that pressure of, you know, trying to be as healthy as possible to fit in with society and be you know, be part of that group that, you know, is doing good for yourself and what not. But also, on the other end my age group there's a lot of you know, slackingness when it comes to trying to you know, be healthy and just like, oh you're young, you know enjoy your life, have all the processed stuff that you wanna have. So, there's just there's both, I guess"

	<p>“Not at all. Not at all. I do not think there is anybody that would be able to... In fact, I am the one who has actually influenced a lot of others in their purchases. So, no. I am not easily swayed”</p>
	<p>“No, I’m not pressured. But I do it out of choice”</p>
	<p>“No, I do not feel socially that I have to. It is my own self-will and my own desire to do that”</p>
	<p>“No, I do not”</p>
	<p>“The girls and I think the same, like the same food so its actually no pressure at all”</p>
	<p>“I would not say I feel pressured... but I like what I like... kind of (<i>thing</i>). I am not going to get what you like just because you sold it to me. Yes, I will try it. I do not mind trying it, but I like what I like, and I am a creature of habit. So, yes, I do not think I feel pressured at all”</p>
	<p>“I one hundred percent agree with that. I do not feel pressured at all”</p>
	<p>“No, I do not. It is just my own self. How I feel. So, no, I do not feel that I am pressured by anybody”</p>
	<p>“No, for me not really. I look at healthier options, but it is not influenced by anyone. It is what I want to purchase basically”</p>
	<p>“I think not socially pressured in so much as like people making me buy stuff that I do not want to know about or that I have not bought before”</p>
	<p>“Okay so socially no, financially yes. Like the other participant said it is the willingness you have to want to be healthy and to purchase the functional foods”</p>
	<p>“No, I would not say that I feel any social pressure to buy functional foods or to not buy it”</p>
	<p>“No”</p>
	<p>“No, not at all”</p>
	<p>“Not socially pressured”</p>
	<p>“Same from my side, no pressure at all. So I just buy because of the lifestyle I have adopted”</p>
	<p>“No, I do not feel pressured to buy functional foods. It is more of a decision that I made and me speaking to it but I do not feel pressured in any way”</p>
	<p>“So I do not feel pressured. Because I mean, whatever I want or what I want to prepare, I eat it”</p>
	<p>“I think that if you are... like... out at a restaurant and they are eating not as-healthy, then you would not feel the pressure to... like, okay I need to eat healthy. But if everyone else is eating healthy then you would probably go...”</p>

	you would be more inclined to it. They are eating healthy so I would eat healthy as well”
	“I do not use social media actively and I do not have the most health-aware group of friends, so I do not really feel pressured at all”
	“No, I do not. It has always been my own decision. I mean my family has not been very healthy. So me deciding to be healthy helped them as well”

Table 15 In which way does friends and family influence your decision to purchase functional food products?

CATEGORY	QUOTES
Health Related	“I guess coming from parents with chronic conditions such as cholesterol, diabetes, hypertension. So, I guess also to benefit them as well as the family, why not. Let’s consume stuff that’s gonna be good or all of us”
	“My wife has a big influence on that where she... the influence of looking after us as a family is very high”
	“My parents have always tried to be, tried to influence us to, to be a healthy as possible”
	“We as a family have always eaten healthily”
	“My grandfather he had a brain aneurism and a stroke so that caused him to change his eating habits, so I think friends and family kind of learn from their habits on what their eating and how they look and then you can take a little bit of that information and then you can see”
	“I will guess my sister. Because ever since she started feeding her baby all of these very nice things and healthier aspects and that also opened up your eyes a bit where you can see okay maybe this is actually better for you”
	“Yes, my family and friends do influence my decision because we all seem to be much more functional foods focused”
	“I would be influenced by my mom – the impact she has put on my diet based on what healthy choices she would have brought me up with”
	“Certainly. A lot. Yes. By providing me with their opinions and their research and sending me links and stuff like that. Research and Yes”
	Well, I suppose it would be to the positive because my family would all subscribe to eating healthy
	“it depends. If you are invited Er, to family and friends, and they serve particular meals and they exhort the benefit therefrom. So, one takes that into account”
	“My family play a very supportive role and they support me... how do I say.... So if I invite the whole family over for lunch they will eat what I need to eat to support me. To support everything that I need, yes”
	“I would say... like with my family, it is just me and boyfriend really. And he is very health- conscious so I kind of just... we do it together”

	<p>“Friends and family... just people that I work with basically, of my friends. And then family... just helping me stay away from my unhealthy choice”</p>
	<p>“Okay, so friends and family have definitely had a major influence because being the same bloodline of course, I would not want my family members to go through any difficulties when it comes to their health. So yes, of course we want everybody to have functional foods to bring out the best in them for them to be part of the... the thing I am trying to show people as well, which is going into functional foods... or should be something that is very important and in everybody's life. So I try to push my family and friends towards that as well”</p>
	<p>“Look, I would not say a huge influence but you also have to understand that if you have got family coming around, like my dad also he had a heart problem not too long ago, so he also has had to cut sugar and salt in his diet. So whenever we have them around, we do not cook those... We actually do not have a lot of that in the house as well. He has a slight influence, but I think it is just more of being aware”</p>
	<p>“I think it is their health and health issues. If I look at my dad he is an extremely healthy person and he lives off fresh ginger, he only eats boiled food and boiled vegetables. And he is a very healthy person and I believe that has influenced the way that I am”</p>
	<p>“So for me, the influence is much more on the friend's side. Because I have gym buddies. So yes, so we will talk and say, maybe... I Googled this product or this item and these are the benefits and then maybe it is something that you have been lacking or you have wanted to increase in your diet. So yes, friends do influence the decision of me buying functional foods”</p>
	<p>“I have a younger brother and a younger sister... they are like... they are kids, and usually they prefer eating these soya products and they want foods which are processed. So at that time, they would be influencing what I buy and what I eat. So it would be family who would be influencing me”</p>
	<p>“This one is actually funny because I live alone, but now I have family living with me and they love meat and I am not really a meat person. So now I actually found myself eating it more regularly, but I actually... so I found myself buying it for them”</p>
	<p>“Yes, I think also my mom. Because she is also weight-conscious and she also worries about my dad being a diabetic”</p>
	<p>“I do not know... if my mom just tells me I am getting fat! Healthier options, yes! And often we will discuss where we are getting our vegetables from”</p>
Food Preparation and Consumption	<p>“I would a general family gathering, somebody's preparing a food product that would influence us because you wouldn't want to be rude to the rest of the family, you would find yourself eating for instance, stew that's been cooked they my not have bought the same meat we would have tend to have</p>

	bought and the same veges, maybe have pesticides and so forth, pesticide free and herbicide free”
	“The only influence that I get is basically when they make a dish that is so delicious that I need the recipe”
	“Okay. It is usually that they buy something, and they try it out first and they get me to try it out”
	‘we cook differently when we entertain compared to when we normally cook – vegetables, gravy. So, we look for more thyme food and simpler food”
	“So mine would be influenced by the flavour, of course. I think... just... how tasty food is, I would say. The flavour of good food”
	“I would say... especially now being at home, with Covid, it is more family that influences what I eat but we tend to eat the same things for dinners”
No Influence	“They do not actually... that much. Let me just see... They do not... they just... because we just have different diets”
	“I would not say that they really influence... it is my own decision to ensure that I am influencing <u>them</u> to eat better... if that”
	“Then the other ninety percent just do not care”
	“No, not really... like I say it is mainly myself”,
	“They do not really influence me to purchase anything, yes, they do not really”
	“Well, unfortunately, I am the influencer in my family”
	“I would not say that my family or friends influence me really in any way, as far as functional foods are concerned”
	“Uhm I think for instance, like I’m not a very big meat eater so if I decide that I’m going to just eat veggies and fruits for a week or two ... Like... influence because you’ll be ... Okay Okay when it comes to that”
	“No, they do not influence me. I am the influencer! It is very much like they are saying. I am the one who said everyone bring kombucha and I introduce these weird and wonderful things to my family”

Table 16 Are there any individuals or groups of people who would influence your purchasing decision and consumption of functional food products? And What influence does any individual or groups of people have on your purchasing decision and consumption of functional food products?

CATEGORY	QUOTES
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Friend, Family, Colleagues/Retail	"My direct family. Predominantly just them"
	"I guess my parents"
	"Well definitely my wife does influence"
	"I think my friends at work, like, all of my colleagues at work and my sister would be those people that would influence me"
	"People at work, sometimes our clients as well, health-conscious clients that tell us what new options are on the market and then we try those things out"
	"Yes, my friends work in the healthcare industry so I have a friend whose a physio, she's very big into the physical aspects of exercising, stretching"
	"I would say, Woolworths are first. Woolworths always have a range of fresh products"
	"Yes, I am very impressed actually with Checkers, Pick 'n Pay and Woolworths at the moment. They have got some amazing ranges"
	"I think in my case, my wife. We are not on the same page with these things and then we end up filling the house with regular things"
	"My main influence would just be my mother. Just the way she has brought me up and the foods that we have been served would just influence which products I would buy"
	"As I said, there are friends... not really social media things. Every now and again I will look at e-mails that have come out from... there is the Big Breakfast Debate where they have Keto-type diets. And also if I see something from Woolworths which will have e-mails because I have online shopping, so they have e-mails with recipes and things like that. So I would go through and have a look there. And they actually do have quite a few functional food products on their shelves"
	"Yes, yes. So I suppose organisations like supermarkets influence me in that as soon as everything is in polystyrene or in plastic or with an elastic sort of band... they influence me not to buy it"
	"So what is available at that shop at that time and if it is not there then... and you know it is more expensive at another shop, then I think wait until it is in stock..."
	"I would say that most people tend to go to the same store. You do not want to be going to multiple different stores to buy things"
	"You take people's advice, so yes, there is some influence but at the end of the day it all depends what is available within the stores and what is available online 90% of the time and budget. So that is where my criteria would come from, more"
	"Hmmm, well I guess I mean, ah, the influence there again I think my parents. I mean, you know, in terms of them"
	"As I said... Oh, well I am influenced by my wife and what we feel is right as a family. So, no"

	"I feel like just uhm, when you see other people living a healthier life and looking good, uh, it kind of motivates you to, to lead that same way"
	"I would not say... I think, society in general, I mean, everyone wants to live a healthier life"
	"I would say yes cause I live in a house where I don't control the type of food so its not so much that they force me to eat a certain type of food group but more what's available in the house, so for eg if its lunch time and u hungry and all there is is to make a toasted cheese, then you make a toasted cheese for lunch otherwise you go hungry"
	"So, yes for me... Like I said previously it is mostly friends"
	"For me it is family"
	"Yes, I would take influence from what people have been telling me... what are healthier options and foods to buy. And then I would take that to the shopping I would do and then if it meets my price range and availability in the store the I will... like... more actively look for functional food products"
	"Yes, I suppose if anybody came out. There are a couple of organisations now that actually deliver fruit and veg baskets to your door. So I suppose they would influence me because they... I think there are a lot of these independent polytunnel chaps, so they would grow the vegetables and then you buy a box of seasonal veg. And they would influence me in the sense that if that is the seasonal veg on offer then I would buy"
Media Personnel and Content	"A lot of the health people on Instagram and just there you get some ideas of functional foods and new recipes"
	"Maybe some like cooking shows that I am watching, and I see something nice that cooks nice or looks nice when it is cooked then I would like to try that out sometime"
	"So, I love watching cooking shows on YouTube so I would say that influences me quite a bit"
	"If it is advertised on TV then I will give it a go. I often check the shelves at the store to see if anything is new"
	"I just, always Google to see or YouTube... and just see what there is out there. Maybe that recipes that I can use to add..."
	"Okay, like I said I am really thin so there is a guy that I actually follow on Facebook... He is always posting stuff on the diets and stuff... in order to get a good built"
	"I am going to go with again with YouTube. With a couple of the people that I follow on YouTube, they constantly come up with new ideas and information about certain food products or food groups"
	"Also think that when there are Facebooks posts and stuff that says eat this"

Medical Professionals	"I think if it was not directly from a dietician, you know, I do have one. I think if it was not directly from a dietician, then I would not really mind what other people think or say about what I purchase"
	"Yes. Also influenced by my nutritionist"
	"The only person would be a doctor that could tell me and I would listen but other than that"
	"If anything, I think the one individual is my dietician. But I don't think anybody else, no"
	"Yes, as I said before, other than my nutritionist I do not think there are any other individuals or groups that would have any influence on my functional food buying"
	"Well, I suppose my nutritionist because with certain issues that you have she tries to recommend certain things"
	"Okay well, I do not I know if you know, but we have been going to a nutritionist.... A dietician. So she has obviously helped us in our purchasing as well of what to buy and what not to buy"
Participants who not influenced at all	"Not that I can think of, no"
	"I do not think so. I would not say that I would actually be influenced as such, it would be more what we feel is right for us"
	"So... no, I cannot even think of anyone right now"
	"No, nobody is going to influence me to eat something, and I will say no thank you that's not for me"
	"My side, no, not really. Yes, it is because it is my choice to choose healthy"
	"Yes, most certainly. I pretty much live on my own. I have got my girlfriend that comes over and my brother in law who stays in the flat. So I pretty much do the shopping, so it is my call"
	"I have a few that would try but I do not think they would get it right because like I said previously, I like what I like. I will try it but if I do not like it then I am not going to do it again"
	"No, not at all. Nobody would influence that"
	"I am not sure... Yes... I am not sure... I do not find... No, because I do not put my ideas on other people. It is the same"
	"No, not right now. I would not say right now. Right now I would just choose whatever I want to eat and what I want to buy"
	"So, there would not be much external influence... like, from outside. So, for sure, they do not know what I eat"

	"No, I do not think so"
	"Personally, I don't think, to be very honest, it won't really be an influence as such because I guess its your own individual decision"
	"None. I am not influenced by people"
	"No, no. Nobody really does have an influence. For me, actually, mostly, it would be what I can afford and what is good for me"
	"Not necessarily"
	"Not at the moment"
	"There is not much of a group influence somewhere"
	"Again, I don't think anybody could influence me to eat something that I'm not happy to eat"
	"No, it is the same as the previous. There is no influence at all. It is myself consciously that would make those decisions"
	"Yes, individually based"
	"No, not right now. I would not say right now. Right now I would just choose whatever I want to eat and what I want to buy"
	"Yes. I could not agree more. (no influence, similar to the other participant)"
Participants that were influenced by health related factors	"It would simply to be aware of additional functional foods or functional foods that I may or may not have included in my diet"
	"When you exercise and spend time with very health-conscious people they sort of motivates you to bring about this change from who you sort of react with and mingle with"
	"To buy more healthy foods to put into my body and try to stay away from, you know, the, uh, the processed stuff and the unhealthy stuff"
	"Like if I feel that there is something that I need to get for them, that would be more healthier or would help them in a situation like, with regards to illness or something... that I can get to them that will help them with that... That is the only thing that would influence me"
	"They give me information, so it makes you curious to see whether that is as good as it could be for you know, so you try out a new thing"
	"Just information that you get from people that you did not know before that can help you make healthier choices"
	"So again, your greens and your vitamins and whatever else it is that you wanting to achieve"
	"So if it is a lack of sleep I will look for solutions that will solve that problem. If I am grumpy then I will look for solutions for that. I am not saying that I am

	grumpy... but I am saying that if I was... I think of the outcome... if I answered that question... Your influences are just as the other participant said. If you follow certain food trends... I follow certain styles of cooking and I do experiment a lot with recipes and in there I will buy what it needs. So that is probably going to influence the ingredients that I purchase. Yes, it is a temporary influence because they make you want to buy these things"
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Table 17 How important is it that you are seen to be using or including functional foods in your food purchases?

CATEGORY	QUOTES
It's important to be seen to be using or including functional foods in your food purchases	"Definitely very important aspect of my purchasing decision, I try and influence friends and people around me as much as possible"
	"Well, for me, important for them to realize the need to live healthier"
	"Well, for me, it is very important. I get a lot of flak from my family if I do not eat the right stuff, being a diabetic"
	"I would say it is a little bit important because often at times you lead by example and sometimes it is easier for someone else to eat healthier if they see you eating healthier"
	"Relatively important"
	"It is important to have functional foods in your system... if you want to put it that way"
	"Again, for us as a family its important that we eat the right foods, I'm not trying to impress so and so to include broccoli and whatever protein is, so we do it because it's healthy and that's the way we should be in our world eating, again it's not a case of trying to please anybody, we eat that because we want to eat that"
	"Yes. It is very important for me to include functional foods. Also for certain health issues, which my nutritionist obviously recommends, I should eat this or I should not eat that, so it is very important to purchase the right foods for me"
	"I think it would be important if people had to see me buying stuff because they would be motivated to also buy it. Because they would feel a little bit more confident in trying products that I try if they are health-conscious"
it's not important to be seen to be using or including functional foods in your food purchases	"Not that important"

	"Not really. I mean no one's really keeping an eye on that so I don't think it's considered that important"
	"No, I really... I do it for myself and for the family"
	"I wouldn't say it's important because that is something that you wanna do"
	"None, whatsoever. It is not important to be seen"
	"It does not really worry me if other people see or not... it is just my... like I said, it is for me, for my health benefit"
	"No, it is not really important for me to be seen purchasing or being influenced by the people"
	"It is not important for others to see what you are doing because you are doing it for yourself at the end of the day", "No... It is not really important. I think it is just a personal reason"
	"No, for me it is not important to be seen"
	"Uh, I don't, I don't really care Ya, no. It's not that important to me"
	"It is not important that I get seen at all but it is for my... to my own knowledge that I am being functional and I am buying what I need"
	"Yes... I do not think it really matters too much. I am the kind of person that when I cook something I always take a photo and I share it. (laughs) But I am not too worried about how I am perceived by other individuals when I am doing my grocery shopping"
	"It's not important for me to be seen buying whatever it is I want from the shops, if I'm getting something healthy it's my choice and if I'm not getting something healthy then its my choice to, so no I don't care for what other people think of what I'm eating"
	"would not say it is important for others to see, but for myself, yes, very important. I like to know that my intake is healthy and clean. Yes"
	"Yes, I would agree with that. It is more so on my mindset versus what... I do not care what anybody else thinks about what I am purchasing... so"
	"Yes, also it is only for me. So I am not really worried about who sees what I actually eat"
	"Yes, same for me. It is not that it is necessary for other people to see it, it is just your own personal decision"
	"It is not really important to me, I think it is more important for me to know that I made the right choice and that my family is getting a healthier meal or healthier snack, because of the choices I made"

	"Yes, exactly the same sentiments as the other participant. I am not fazed by who says what"
	"No, no that is not important to me at all. I do it for me, I do not do it for other people to see, "Oh look!"
	"No... It is not really important. I think it is just a personal reason. I am just making sure that I am healthy, so no importance at all"
	"No importance at all. It is just the person I am"
	"It is not important? Okay, all right"
	"It is not that important. But I just do it because of the benefits that comes with it"
	"I would not really care what... whether other people know or... So, yes, it would not be that important to me"
	"Other people would have no influence on whether I would buy functional foods or not"
	"No"
	"It is not that important to me. No. I mean I am doing it for myself"

Table 18 Who introduced you to functional foods or how did you become aware of functional foods?

CATEGORY	QUOTES
Social influencers	"My mother"
	"There's a gentleman at work, he was a very very health-conscious person"
	"I'm gonna use your name here because obviously given this research project"
	"When my dad was diagnosed with a liver problem we became very aware of the fact that we need the correct foods in our diet"
	"I think on a technical term of functional foods, my dietician"
	"I think been very sporty in high school, they very big on nutrition and something is were I've kind of learnt you know what your body needs"
	"I did learn in school and my mom is a vegetarian, so she is always forcing us to eat healthy things",
	"I think it was a combination of my sister and also people at work. So, where you notice... certain people that lead healthier lifestyles and then with my sister who had started buying healthier things for the baby and telling us everything that is in that"

	"I think over the years, just going to different health specialists and nutritionists", "
	"First off from a dietician who told us what you should or should not be having for weight management and high blood pressure and cholesterol ideas"
	"For me, I was introduced by the health clinics in the workplace"
	"My wife introduced me by buying the book and giving it to me while I was in hospital"
	"I would say initially my mom had a lot to do with it. And then my gym instructor/my trainer. My trainer was always quite clear about what you need to put in your body. I think mainly more focussed on dietary but yes, I would say my mom and my trainer"
	"I was sort of always aware of it... that being brought up mostly by my gran. She is always the one that had to like... encourage 'you need to see better; you need to eat this for this and this for this'"
	"School helps in the early days, to start with those food groups like I said, that important, it's always sort of triggers what is important to eat and I always keep going back to these food groups because that's how it was drummed into you at school, I just think my mum has always been very health conscious"
	"Also the same with friends and family and my daughter after having a baby, and as I said I did speak to dietitians as well with regards to my illness, so that is where I have heard of it"
	"Yes. Just people around me and then my own sort of research as to what would be good foods to add into my child's diet and then we also found the benefits of it for all of us, things that are healthy in our diets"
	"Okay, so like I said before it is college. Studying to become a Chef was when I was introduced to functional foods"
	"Yes, for me definitely it was through college as well, studying to be a chef. But I think the biggest influencer would have been, at that time, my personal trainer who was very adamant about the things that I eat and the diet and how and when and what"
	"It has got to be my mum and my brother. My brother, many years ago decided then to look at vegetarian and veganism and to experiment more with food from a health and also moral aspect away from meat"
	"Listening to friends and they would say "Oh, have you tried this, have you tried that", so yes"
	"For me, I would say that it is the people in India because my friends who used to go with me to their homes for eating lunch or for having dinner... I used to just watch what they eat and how they eat. The types of ingredients that goes into one meal. So I watched all of that and that is how I was influenced. I took the decision that I also need to inculcate that into my life"

	<p>“So for me, it was through talking to people about something that I was struggling with – it was arthritis and another thing was anaemia... and I was told to try this. So that is how I got introduced to functional foods”</p>
	<p>“I was introduced to the concept by my running coach. Yes, I would say that is where I first heard about it. It is a word I have heard a lot when people talk about what you should eat in order to help your running”</p>
	<p>“The idea of functional foods was like eating foods for the health factor comes from my mother and the way she has influenced our diet to bring us up healthy and I grew a habit of eating healthier foods”</p>
	<p>“Yes, I think my influence will always come from my family. And then obviously my husband is always eager to try healthy recipes”</p>
Media	<p>“Reading. Reading a health... I read a book years ago about keeping disease away”</p>
	<p>“I google a lot about functional foods and healthy foods, uhm and I’ve just always been eating very healthy”</p>
	<p>“As a result of media and them promoting”</p>
	<p>“I think ya social media also has a impact on it I think there’s a lot of influences that you know are very fit and healthy”</p>
	<p>“From how I became aware of it.... it is, well... advertising, social media, Internet, etc”</p>
	<p>“I used to watch this YouTuber; she would always talk about the importance of functional foods”</p>
	<p>“Googling different stuff... how to be healthy, how to eat healthy, how to lose weight, how to maintain your current weight”</p>
	<p>“Mine started out with Tim Noakes and that crowd... with The Real Meal Revolution and then low carb and then eventually a Mediterranean lifestyle”</p>
	<p>“Social Media, I think”</p>
	<p>“Well, I have been researching healthier recipes. I think trending... trending articles of recipes”</p>
Circumstances	<p>“I think I became more prominent to me when I actually fell pregnant and that was dawning on me”</p>
	<p>“Well, I think we have been doing this all our lives, to a certain extent. Eating... growing up with fruits, eating fruits, etc. You know, I mean, we cook with all the spices that have benefits... from your cinnamon’s etc. etc. It has been there all the time”</p>
	<p>“I have always just known that vegetables and healthy foods are very beneficial”</p>
	<p>“Yes, I think it is obviously with my condition, I have had to be self-aware of everything”</p>
	<p>“I am alive, breathing and thinking!”</p>

	“Also, just looking for different recipes. I think you also get tired of your own style of cooking. So you always trying to introduce something new”
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Table 19 Are you easily able to include functional foods in your food purchases or not? Explain your experience.

CATEGORY	QUOTES
Easy to incorporate	
Subcategories	
Availability and Location	“It is easy for me and mostly because I have direct access to functional foods in my business, but I guess I also live in developed areas which have an abundance of supply/shops”
	“I mean we’ve got an array of shops and grocers and stuff to purchase from”
	“So I kept on... I was intentional about it. And started planning what to buy and where”
	“Yes... Functional food/healthy foods, it is. Vegetables are easily accessible”
	“Well, it’s easy. As I’ve shared earlier the types of food that I eat and that I have access to”
	“Yes, it is easy to incorporate it because it is really stuff that you can see every day when you going shopping”
	“It is widely available everywhere, so you get to purchase and just incorporate in to your everyday life”
	“I think when you go to the stores there is a lot of variety and a lot of options”
	“It is available for me to buy from the shops and the stores that are near-buy”
	“It is fairly easy to use functional foods. They pretty much go with anything. It is just a matter of how you decide to do it”
	“I, I think it’s, I think in terms of me consuming these foods, it easier for me because I had a very good upbringing where my parents uhm, you know, were good in trying to get us to eat the vegetables and all the healthy stuff”
	“Yes, I am. Experience is... like I said before... I never really did, but now I do. And the reason is because it is healthier to eat that way, for me”
	“I am going to say yes because some of the products that they are making now, they are trying to make it even more and more healthy and they always coming up with new things every single day”
	“It is not hard, so it is basically my own decision because if I want to have something that is healthy I can just go and get it myself”

	"So when I started to live and eat on my own, in my own space, it was difficult and very overwhelming in the beginning but once you get used to it, it is very easy now to make the choice"
	"Yes, definitely"
	"You know, I am pretty easy"
	"Same here. I can access them easily, no issues"
	"Yes, I can access them easily"
	"would always be open to trying new things but it is a factor of whether it costs more"
	"If I am buying for myself, as I said, it is very easy to do. It is more difficult to pander to a family who has different tastes and different wants. And quantity and costs associated with it. So yes, if I am buying myself something specific, which I do from time to time, then it is easy"
	"Yes, I would be able to include functional foods in my food purchases so long as it meets my budgeting criteria and also if it is available at the stores I regularly shop at"
	"I think I am. I mean it is readily available. You do not battle to get it but it comes at a price. I would find functional foods a little bit more expensive than any of the other easily accessible foods"
Part of a shopping list	"The importance levels have shifted towards functional foods definitely. There's no substitute"
	"I include them when I go shopping"
	"I think just as how we people cook as a family I try to include that in every meal, I think its knowledge"
	"It is easy for me. It is literally part of my shopping list"
	"It is easy to incorporate it because it is really stuff that you can see every day when you going shopping"
	"So, for me it is a very simple way, it is almost a natural thing - it is second nature to go into the shops and to go and buy exactly what it is that I need"
	"Well like I say, for me, I have shopping lists. I am quite organised. I like to plan; I do a meal plan per week because I find the less you plan that is when you go home and look for whatever is in the deep freeze. So... I think... yes... I am, no definitely, because if I have a list then I also, you know, stick to a budget and I work with it"
	"Uh, yes. Definitely I am able to. I know some of the functional foods are obviously very expensive, uhm. Fruits and vegetables and nuts have just become ridiculously expensive" "But I do I make sure that's it's definitely like, a priority on the shopping list"

	"Yes, I am. As I said, without a list you will not get the functional foods. So I make a list of exactly what I am looking for and I go in to where I am purchasing from and specifically go looking for that particular item"
	"Yes, yes. I find it very easy because I always think of what I am making. So it is quite easy to pick functional foods. Because if I am making a dish, I want to try and make sure I have got a bit of everything in it, you know"
	"I agree with that. It is very easy to purchase. Most of the things are on the list already so you purchase it anyway"
	"At first we would go for anything that we can afford in terms of that as well. It did take some time to get used to it eventually and you work it out, you budget for it when you know exactly what you need to have. Every day, every week, yes"
Not easy to incorporate	"Home living situation I don't really have a big say in the food that we are eating like I said for us its quantity over quality"
	"It can be a bit difficult. Sometimes things that I want to eat or that I need to be eating are not exactly what other people want to be eating, especially if you are cooking a meal for multiple people you might have to consider all their individual wants and likes"
	"Well, where we are staying there is no Fruit and Veg or someplace where you can go and buy nice fruit and veg"

Table 20 What has been your main hindrance in purchasing or using functional foods?

CATEGORY	QUOTES
Hindrances on purchasing or using functional foods	
Education	"Knowledge of how to use the foods"
	"There's a very difficult process to find the right product, so in a lot of cases, there is some hindrances to purchases but that would be the main thing"
	"Is the lack of an understanding out there... or the people supplying it, what is functional foods"
	"Understanding... the values of it"
	"I think it might be the way people perceive the food. So if you might buy something that you would like that is necessarily healthy and other people might not like it, that might be a hindrance in purchasing"

Time	"I do not think there is much of a prevention towards it ...just about the time, just time consuming - it does not make everything possible to an extent that we would like it to be... but we manage around"
Price	"I think just the price of the functional food"
	"I think just maybe sometimes the cost of getting more like organic uhm, healthy food coz the cost of it is a bit higher"
	"I would say price cause it's a lot cheaper to eat unhealthy than to eat healthy"
	"I think for me, it would be the money. I find that healthier foods are more expensive"
	"I would say that the main constraint would just be budgetary"
	"I supposed it is the price. Yes, it is the cost of fresh things, you know. Fresh... like avocados are very expensive these days "
	"It is quite expensive, yes"
	"Sometimes the cost. The cost of it, a lot of these organic things are much more expensive than processed things or things that are unhealthy. Yes, so that, that would be my biggest hindrance"
	"Same. The cost from our side as adults"
	"with COVID it is even more difficult with price changing"
	"And the prices have gone incredibly ridiculous"
	"It could be price and also quantity. Sometimes healthy or functional foods come in very small quantities and the more you need to buy, the more expensive it becomes"
	"I think it would probably still be the price point. The price point is a big thing for me especially when we had all four of us at home"
Availability	"At times a lot of the mainstream food outlets do not always have it and you have got to look around"
	"Availability in the shops but I do find that most of the shops have everything"
	"When you are trying to find something, that specific product and it is not available"
	"The availability of products"
	"Availability at different stores"
	"There's a very difficult process to find the right product, so in a lot of cases, there is some hindrances to purchases but that would be the main thing"

	"When it comes to availability, especially. Being in the kitchen we notice how difficult it is to get a certain type of fruit or veg at any time of the year, especially seasonal fruits"
	"I think at this point and with COVID pandemic, is stock availability of the seeds and nuts"
	"I think it has probably gotten better now with the availability of the product"
	"Yes... I would also say that they would be in the store but stores can be arranged to have the more unhealthy options more obvious to where you can go... you know, they make those more available to you"
Lifestyle	"I'm gonna say lifestyle coz I'm often a binge eater"
	"I think when you are a bit hormonal, Yes, you tend to eat more sweets and fatty foods"
	"I think it would be the methods that we have to prepare them. I mean eating the same thing in the same way every day is boring. So if we had different ways to prepare them that would be nice"
Social Influencers	"My family"
Shelf life and Flavour	"I would say... on the food that can go off, it should be shelf life, on certain kinds of fruits or that it is... that is my only hindrance"
	"So sometimes just the taste"
	"Somewhat certain products or taste"
	"The taste. It depends on what tastes nice. Sometimes organic foods are not as nice and you do not want to eat it as much as you want to eat the other one"
Plastic	"Plastic"
No hindrances on purchasing or using functional foods	
No Hindrance	"There isn't, there hasn't been any hinderance"
	"I do not really think there is"

Table 21 How does it make you feel to be able to purchase functional foods? Explain your feeling

CATEGORY	QUOTES
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Positively	"Satisfied because it makes me feel that I am looking after my health"
	"It feels great when you buy the food. You got a sense of well-being"
	"I think it would be great because its easily available"
	"Oh, I feel so happy! I get a euphoria. I am my happiest when I am eating healthy food"
	"I am feeling happy to a certain point that I am eating good food"
	"I enjoy it because I know that I am going to get the benefit of the nutrition"
	"I think it makes me feel proud and responsible because it is like I am taking ownership of eating right"
	"It makes you happier knowing that the food that you are consuming, and buying is just going to make yourself healthier"
	"Uh, as somebody who is very health conscious, I do feel very good"
	"It is good! I mean, it feels as if the awareness is kind of shifting"
	"Ecstatic, when I can"
	"I feel pretty good. The fact that I can get fresh foods and all that"
	"Yes, I feel good when... okay, basically, you can get it most of the time... all the factual foods that is required"
	"Yes, I could say the same. And I think until I have picked up an easier... a new or easier recipe, then I would get excited to try it"
	"It is healthier than normal foods, so it makes me feel nice"
	"It just makes me feel happier in the sense that I am a bit of a healthier individual"
	"It does make you feel good to know that you are purchasing good products that are more beneficial for you"
	"It obviously makes me feel good to be able to do that"
	"Yes, I do. You know, it is a funny thing... Sometimes when you know that something is good for you"
	"Uh, as somebody who is very health conscious, I do feel very good"
	"I think it is empowering to have the knowledge of knowing what functional foods are and why to... why we eat them or why they are important"
	"So when I do purchase functional foods and it is a win, then I feel great and I will purchase that one again because it is a win. It works"

	<p>“So at least now that I am staying alone and I have the opportunity to buy my own stuff I really feel that... it is a good feeling. You feel like you are independent”</p>
	<p>“Yes, I do, same sentiments as the other participant (feel proud and responsible of eating right)”</p>
	<p>“I think it is kind of exciting because then you get to try new recipes and see how it makes you feel and see how much it betters your life”</p>
	<p>“I would say, from being a parent, it would make me happier to be serving food that is good for the children”</p>
	<p>“You feel healthier and you are not that tired...”</p>
	<p>“Well, if you know that you are doing the right thing for yourself and your family and your dietician tells you that you have to otherwise you are not going to lose weight... (laughs) so... that is a big thing for us, You feel healthier. I would not say maybe as full as junk food but you do feel better”</p>
	<p>“Yes, I would love to do it but I just cannot”</p>
Comfort & Relief	<p>“I feel comfortable and relieved that I’m in a position to afford makes sense and that are attractive to me”</p>
	<p>“To be able to get what you needed... it is a feeling of relief that you know that you getting the right food. There is definitely a clear and conscious decision to do it correctly and it is a big sense of relief”</p>
	<p>“Okay so, to be able to purchase functional foods, is pretty relieving honestly. Knowing that the food you will be buying is going to be helping you out...mentally, physically... it is really a good feeling to know that you can go to a store and purchase functional foods”</p>
	<p>“Well, I think I am interested in how they work things... I think... So I always grab new things when I see them as well. So I am always keen to experiment and if something works”</p>
Fortunate	<p>“I’m going to go with that word again, also definitely we are so fortunate to be able to walk into any shop and purchase exactly what we want, and its good quality foods”</p>
	<p>“Privileged I think like the other participant said there’s so many people out there that don’t have money or the resources to go and get those functional foods but also we live in such an uneducated society that people don’t actually know what a functional food is, they eat the food because they are hungry they don’t eat the food because they know what its doing”</p>
	<p>“Look, health food is not the cheapest. So, I think I would definitely say for me it is a luxury. Look, I think even consuming vegetables alone does not have to be expensive but I guess if you go for weird and wonderful stuff it does become expensive, yes, but I am happy to be able to think different and purchase different”</p>

Unsatisfactory	“the depressing part is that there might be a product that you include in your diet on a regular basis and when the prices got to such an extent that you actually cannot afford that product, it does not make you feel very good”
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Table 22 If you had to share your belief about functional foods with someone, what would you say those beliefs are?

CATEGORY	QUOTES
Health benefits	“Could reduce negative health events in your life and could add longevity to your life”
	“I would say functional foods is one of the main reasons to avoiding specific types of cancers, ailments, helps with all areas in your life with regards to reproduction, digestive and your overall health and vitality”
	“I would obviously like tell them the benefits of having it I mean in terms of seeing the benefits”
	“To keep disease away for the most part, to keep disease away. And to prolong life”
	“Functional foods makes you feel good. It’s uhm, it’s healthy”
	“Maybe just trying to tell them that eating healthier is better for you in the long run”
	“One needs to ensure that one preserves them so that the maximum nutritious benefit can be derived there from”
	“I thinks just like the nutritional value and what’s in your food”
	“Well, I would tell them that it is more nutritional, and it is actually better for us”
	“Functional foods are in a way a better lifestyle change”
	“Yes, I would say eat more lean meat. Eat more chicken than bacon and pork and stuff like that because that is quite unhealthy”
	“My belief would just be that functional foods are generally the better way to go as long as you are able to afford the foods”
	“I would say that they are really beneficial, and I would say to do research on them”
	“I think for me it would be... I would sell it more as things that contribute to your health... or they are beneficial to your health”
	“On beliefs, I would say you would have to look at the reasons why you should have functional foods. It is quite apparent that it is a big issue in that country, never mind the rest of the world, where functional foods are not being used because it is just not easy. You have got to cook up literally faster than fast food. So... it is to be conscious of your body, of the people around

	you and what is needed to keep going. The people have to think. As simple as that”
	“Oh, I would and I do it all the time! I have got... at the office prior to COVID times, there was... so we have got a coffee place downstairs, right... and they supply the coffee which is in polystyrene.... I think it is polystyrene or it could probably be cardboard coated with plastic and then it would have a plastic lid. So I have... Everybody that I chat to and all the colleagues, they have all started to take down their own cups to that and about two... And I have always chatted to the CEO and the COO because I deal a lot with them and three months ago, they have now banned plastic spoons, knives, cutlery, plastic tops for the coffee and I am sure that it was not myself... but I do think that the conversations that I have had with them about how as a global organisation, we actually have to take the lead and we have got to do things. So I am sure that all of those conversations sort of played a part”
	“That you must find the food groups that suit you and what you need – if it is for health”
	“it is quite, the importance of being health conscious. And ensuring that we put in the right stuff in the right amounts into the body. So yes, I think...Yes”
	“It is just for a better... Not exactly to live a better life but it is just to get the body the nutrition and everything that you need to build up a bit of a better immune system towards everything else that this wonderful life of ours tends to throw curveballs everywhere”
	“An apple a day keeps the doctor away. Hey? I think that is true! That is very true”
	“My belief is... live a healthier life. How it will make you feel. It will make you feel like you have got more energy. It will make you feel... you know, those type of things are what I would share with them. Yes”
	“Okay I would tell them that it is healthier and it is good for someone and even if it is not going to make a different to them now, it will make a difference to them in the future”
	“The same for me, that it is good for you, it is healthy and it also helps you to heal in certain ways”
	“Okay, just that they are good for you and it just makes you feel better. It gives you a lot more nutrients and antioxidants or it just makes you a healthier person. And your food consumption is just better for your body”
	“My beliefs would be just that it is better for you, it is healthier and will help you eliminate or treat some of your illnesses in a natural way”
	“I would share the belief that if you could eat in a way that could heal your body then why won't you? So by eating functional foods, a lot of the time we could (over time if you believe in homoeopathic options and stuff)... you could then generally eat yourself healthy”
	“My beliefs of functional foods are foods that have not been over... what is the word... processed. So try and avoid process foods as best as possible,

	because those foods tend to include added sugars, added preservatives, added facts”
	“That there is definitely a benefit or a beneficial balance about consuming healthy food items, functional food”
	“There is definitely a benefit for it. I always learnt that the nice thing is always everything in moderation in health”
	“Yes, I think functional food is probably the opposite to just having food at a function. It is just there to fill you up and my son can eat just to fill himself up. He does not see... he does not look at the value... Whereas functional foods I believe really works”
	“I believe that functional foods help your body run smoother. So if you want to feel good and if you want yourself to feel healthy then it is best that you include these functional foods within your diet so that... you feel good when you wake up in the morning”
	“I would share that functional foods are more healthier. They give you... benefits to your body for your every day, day to day movement of your body and that health comes with”
	“I would say it is good for your health... probably... I would probably need to do more research on it but I would recommend that and that they do their own research on it to see the health benefits”
	“They add benefits. You should try to do them. And... in the long run it will probably save you money due to the fact that you will not have health issues”
	“I would say, higher the level of your fruit and veg intake and lower your protein”
Educational Information	“It’s just explaining to people the basic food groups and what mixes with what and so on”
	“I think to educate, I thinks just like the nutritional value and what’s in your food so like if u have I would go back to eating spinach for iron, citrus for vitamin C eating protein for feeding your muscles eating you know stuff that helps your brain functionality, educating what food does for your body not necessarily what you should be eating or shouldn’t be eating”
	“I think personal experience is a very strong way to be able to influence somebody or something. If you give them personal occurrences and stuff that you have experienced then they would definitely feel more, more inclined to listen to what you have to say”
	“I would just try and influence people to believe what I believe and just try to get people to understand that feeling of just feeling so good when you know what you are putting into your body and that you are eating the right foods”

Table 23 What do you think conventional functional foods are?

CATEGORY	QUOTES
Those that perceived conventional functional foods to be natural and convenient	
Natural	"Whole food. Something that is unmodified or unedited"
	"More like your raw products less processed products. Fruits vegetables"
	"Trying to think about this one, conventional. I guess like the normal the norm that haven't been interfered with or like natural if I can safely say"
	"Okay, I would say conventional are in their natural state"
	"I could be completely wrong but if I look at, just stuff that's maybe, not modified in any way"
	"The normal, like I've indicated to you. An avo, a banana, that's picked and made available"
	"It is more in the long of... it is not being processed; it is more an organic type of food"
	"I think, more so your natural products with vitamins, somewhat like your oranges type of thing"
	"I think it is all of the natural foods. So, it is your fruits or vegetables, everything that is organic"
	"Okay, so conventional foods for me are organic foods that have been grown with the help of pesticides or herbicides"
	"I would say conventional functional foods are natural ingredients that serve a purpose in your body"
	"I would say... probably something like ginger. But I am only saying this because I think it is like a simple functional food"
	"I think it is normal fruit and veg. Apples. Whatever you can get that has not been changed or touched"
	"I would say, as they come in their raw state"
	"That is your fruits and your veggies and your normal day to day food that you would buy"
	"Yes, so I think it is just like fresh fruits, vegetables, seeds, nuts, your whole grains, things that you would just find naturally... your herbs and spices"
	"Well, I think conventional functional foods are more of the stuff that we get every single day, for example, from the earth"
	"I am a little bit stuck on this one. I am not understanding the question fully. Okay, yes sure. So for me, I think as far as the conventional foods are concerned. But again, as I said earlier, it needs to be foods, for me, that has not been over-processed. So natural that you would almost... as you would"

	get it out of nature. So out of the ground, onto your plate type of thing, within minimal preparations made”
	“Yes, naturally grown...”
	“I would say oats, honey, avocados, bananas – all the vegetables and fruits and stuff. Also, after you have eaten them they are not rich or heavy and they do not make you feel sick. It just feels good after eating them”
	“I would say as pure as able, things that tend to be generally healthy, like grains...basically food that has not been genetically modified to make it more healthy, it is just healthy in its natural state”
	“Yes, it is the same. Fruits, vegetables, oats and nuts. I am just taking my understanding of the term conventional functional foods is being...like... the most common functional foods. So that is my understanding of conventional. Those are just the examples that come to mind”
	“So that would be the old-fashioned like Jungle Oats. Because you have not changed them, they are just in their normal state. You have not modified them to add anything. No additives... Like spinach for iron, etc. Because they are naturally found/sourced in that manner. They have not been scientifically generated or enhanced”
	“Same thing. As raw as they come....”
Foods that are available	“My guess would be eggs, carrots and stuff like that. They are quite easy to get hold of, they can be grown, you can buy them very excessively”
	“I think that would be a ready-made Quinoa salad from Woolworths or Bulgar weed salad”
	“I am just trying to think now. Conventional... standard meals that are available”
Those that were uncertain about conventional functional foods	
Uncertain	“Again, I would say I do not know for certain”
	“Shu, I actually don’t know to be honest with you. I guess not such healthy foods. I really don’t know”
	“To be very honest to you, I’m not sure”
	“I’m not sure actually, I would go with the broccolis, cauliflowers the carrots, beetroots, apples bananas”
	“I don’t know that’s a very weird word. I think it has a lot to do with the producers of food
	“I am not a hundred percent sure... but I would say conventional functional foods are probably foods that maybe are cooked”

	"Okay, I am not really sure, but I am going to say that it is like... fully natural, it has not... no one has put chemicals and stuff on it"
	"For me, I cannot even guess. I will have to go and Google to check what are conventional functional foods"
	"I am also clueless on this. I think maybe it would be foods that really boost your body"
	"So conventional, healthy foods? Conventional healthy foods would probably be food that is GM treated - genetically engineered whereas the non... they would be more organic"
	"Conventional... I actually would not even know. Maybe I should not"

Table 24 According to your opinion which foods are conventional functional foods?

CATEGORY	QUOTES
Fruit and veg	"I think lentils would count as well. Those are your conventional kinds of... there are different categories, I mean, it is fruits, vegetables"
	"Fruits whole range and vegetables"
	"I'm gonna be guessing here. So conventional, I guess fruits and vegetables coz they're now really genetically modified"
	"I guess it could also include the healthy foods if I'm right. I really don't know, fruits, vegetable"
	"I suppose, like an apple that has not been engineered a potato that has not been engineered to withstand frost or the blight or the diseases"
	"So, vegetables raw off the shelf would be functional for me"
	"That will be like the fresh oranges. Mostly like the vegetables and the fruits that have not been put in chemicals and stuff on it, to speed up the process"
	"I would say your lettuce, your cabbage, your carrots"
	"I would go with your fruits and your vegetables"
	"Banana for potassium. That is basically your fruit and vegetables"
	"So I would say your conventional would be butternut, potatoes, onions, tomatoes, I am just telling you what I get when I go to the shop"
	"Broccoli"
	"avos and bananas"

	"vegetables and fruits and everything that tends to be grown"
	"I would go with the broccolis, cauliflowers the carrots, beetroots, apples bananas"
	"Yes... fruits, vegetables"
	"Fruit and vegetables"
	"Yes, that is exactly what I was going to say actually (Fruit & vegetables)"
	"Yes, food items serving a purpose"
	"Yes. So for me it will be spinach"
	"It would be spinach"
	"Fruits"
	"Mainly just fruits and vegetables"
	"Yes. I think the same as the other participant because that is what you use on a daily basis (So I would say your conventional would-be butternut, potatoes, onions, tomatoes... I am just telling you what I get when I go to the shop (laughs) Lettice, cucumber)"
Spices and herbs	"I think other forms of functional foods and... I do not know, maybe I am wrong.... that is spices. Once spices form part of a... because I mentioned cayenne pepper"
	"I would say garlic and ginger also helps with immunity"
	"Ginger"
Legumes, Seeds, Nuts, Grains, Flour based and Cereal	"Nuts would form part, & butter, seeds-hemp, all of the good nutritious seeds that form part of that group of products"
	"I would say your grains, your seeds, your legumes... foods as provided by nature without interference from us in terms of GMOs or all those fake fertilizers or pesticides"
	"The raw nuts... I think so"
	"You know like ready-made health meals... like probably you would find at Checkers. Like the couscous Something like that. If I am not mistaken. Maybe I am wrong"
	"Maybe your nuts, your grains, your cereals. Bread"

	"Okay, I am not too sure hey, I would say nuts"
	"I said oats lowers cholesterol... maybe brown bread versus white bread... more whole wheat bread. Those sorts of basic foods"
	"whole grains, seeds and nuts"
	"I would say nuts, seeds"
Seafood	"Things like seafood, things like your hake"
	"You are going to find... those are sort of your high in minerals, high in amino acids, high in other beneficial properties, Mackerel"
Natural Foods	"And from the... from the ground"
	"Foods as provided by nature without interference from us in terms of GMOs or all those fake fertilizers or pesticide"
	"Convention since the dawn of time would be organic"
	"The naturals... the natural stuff... they grow... the earthy stuff - tomatoes, onions, peppers, all that kind of stuff"
	"Yes.... I think I am going to say, maybe like... the raw... the things that have not been roasted or flavoured"
	"I would say your lettuce, your cabbage, your carrots. Foods that are grown in soil"
Animal Foods	"I would say your animal foods are conventional"
	"So, your animal source kind of stuff - chickens, fish, beef, pork"
	"I would say chicken"
Tea	"Kombucha"
	"We have forgotten the most important one, our kombucha"
Uncertain	"I don't know that's a very weird word"
	"Again, I will stick with it being your vitamins. I might throw in fibers... other than that.... I do not really know"

Table 25 Do you include these foods in your food purchases?

CATEGORY	QUOTES
Yes they include these foods in your food purchases	"Certainly"
	"Definitely Yes"
	"Yes"
	"Yes, I try to. Some of them are not always easy to find or some of them are like... for instance, free-range eggs are sometimes ridiculously expensive. So it depends"
	"It is hard to find!, if I can find it and if it can be proven that it is organic as opposed to just being like a marketing sort of word, then of course I will. Yes"
	"I am going to say yes because we do. We have fruits and nuts and fibers"
	"Yes, I do... only some of it"
	"Yes, definitely"
	"Yes, well. Yes, yes to cheese"
	"Yes of course"
	"Yes absolutely, As I stated earlier also it is a lifestyle"
	"Yes, I do include the food in my food purchases. Things like ginger, oatmeal, broccoli... and seafood as well – things like your hake"
	"Definite, yes, yes."
	"Yes, I actually include it in my diet also every day"
	"Yes, yes, I do. "
	"Absolutely"
	"Absolutely"
	"Yes I do"
	"Probably"
	"Well... if I am right to some extent... maybe, yes. So... if it is your vitamins, then yes. Fiber is in your cereals in the morning... So, yes, to that extent but I am not sure if I am right"

	"I do not purchase them but I purchase the ingredients and I make them myself"
	"Yes definitely. "
	"Yes, I do"
	"Yes, I absolutely do. I could not imagine not buying them."
	"Yes, I do."
	"Yes, of course. I include these foods in my purchases. "
	"Yes, in the morning I start my day off with a handful of a nuts and piece of fruit"
	"Yes"
	"Yes"
	"Yes"
	"Yes. So for me it will be ginger and spinach"
	"Yes, I do. "
	"Yes. Yes, if there are seasonal, then obviously it is different. "
	"Yes, I do. "
	"Mostly yes, I do. Yes. "
	"Yes"
	"Yes"

Table 26 Of these products, which is the most important conventional functional food item to you?

CATEGORY	QUOTES
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Fruit and veg	"Certain berries, kale I eat quite a lot, I would say that I have probably key items in each type of functional food that I prioritise to buy whenever I go shopping"
	"That's a difficult one they all have similar value, in terms of I would say, I would buy adequate amount of veg to fruit"
	"Okay. Veggies I would say. Because I can do a lot with them"
	"I guess, fresh vegetables and fresh fruit"
	"I will go with, again, mushrooms"
	"There are various, even vegetables and pasta. I try and eat on a balanced basis during the week, including eggs. So, when I do my shopping, I confirm to myself that these are aspects that these are commodities that I need to acquire"
	"General vegetables like potatoes and that kind of stuff"
	"Spinach and broccoli, butternut"
	"I am going to go with fruits"
	"I would say roasted vegetables or spinach"
	"I think the fruit and vegetables as well... well more fruits than vegetables"
	"Things like your broccoli. Because you can get broccoli instead of eating meat"
	"I like apples and oranges. That is something I will eat every single day. And potatoes"
	"Broccoli"
	"avos and bananas"
	"vegetables and fruits and everything that tends to be grown"
	"I would go with the broccolis, cauliflowers the carrots, beetroots, apples bananas"
	"Yes... fruits, vegetables"
	"Fruit and vegetables"
	"Yes, that is exactly what I was going to say actually (Fruit & vegetables)"
	"Yes, food items serving a purpose"

	"Yes. So for me it will be spinach"
	"It would be spinach"
	"Fruits"
	"Mainly just fruits and vegetables"
	"Yes. I think the same as the other participant because that is what you use on a daily basis (So I would say your conventional would-be butternut, potatoes, onions, tomatoes... I am just telling you what I get when I go to the shop (laughs) Lettice, cucumber)"
Meat & Poultry	"Yes. I love my meat! So, animals is the product!"
	"It is a balance between the proteins like a meat and vegetables"
	"Yes... and meat. We are big meat eaters, and we try and eat free-range as far we can"
	"It would be meat as well. Red meat"
Spices and Herbs	"I am probably not aware of all the different spices that are beneficial that I know but, for example, turmeric is, and I always have it around. It has antioxidants. turmeric I eat quite a lot"
	"For me it would be ginger. I think ginger is my default functional food"
	"It would be ginger"
	"Ginger"
	"Ginger"
Legumes, Seeds, Nuts, Grains, Cereals and Bread	"The lentil I eat quite a lot"
	"Nuts would be a small portion of that but always be raw not roasted I believe the roasting changes a lot of the protein, which become less beneficial, and some of the raw foods, like seeds, chia, flaxseeds, that I would always include in my shakes"
	"The cereals"
	"Nuts, almonds, seeds and things like that"
	"I can go ahead and say nuts"

	"I would say at the moment for me, nuts and oats"
	"I would say whole grain breads. An easy ingredient to make foods from but the meal is also a healthier choice than white bread"
	"whole grains, seeds and nuts"
	"I would say nuts, seeds"
Dairy	"Dairy based products, just a personal preference. I tend to eat a lot of dairy sometimes, I like my cheese, yoghurts"
	"Yoghurt - Yoghurt is really big our house"
Uncertain	"I don't know that's a very weird word"
	"Again, I will stick with it being your vitamins. I might throw in fibers... other than that.... I do not really know"

Table 27 Which advantages do you think the foods that you mentioned as conventional functional foods hold?

CATEGORY	QUOTES
Health and Nutritional Benefits	"Yes, it is the health benefits. It aids with digestion and with body minerals and vitamins that you do not get from other foods."
	"I think they hold superior nutritional value, the way that they prepared also makes quite a substantial difference to the outcome you are expecting from the food once its consumed"
	"They contribute to different minerals and amino acids and nutrients to your body which obviously, create healthy blood and the blood circulates throughout your whole body to your different organs"
	"It's filled with fatty acids, healthy fatty acids, uhm, it's high in fibre, it can apparently lower your cholesterol, uhm, It's very nutritious"
	"The advantage is that there is immunity from illnesses, So, one, one feels comfortable"
	"I just personally enjoy dealing with it, so its very high in calcium, its good for your bones"
	"Because they actually contain a lot of vitamins and minerals. That is why I consume them. which is beneficial for your well-being"
	"They are rich in antioxidants and vitamins as well and they are healthier for you"
	"like lowering cholesterol levels, high in iron high like potassium, you know, your vitamins and minerals that are hidden that you are unaware of and obviously, you wanna take supplements to make up for it"

	<p>“The right animal would be probably... what I should be eating, what I should not be eating. And also, how much of it. So if I am going to have a steak then I should not have the biggest steak as I would have had and I should have more fish”</p>
	<p>“I think when, when you’re eating uhm, like, fresh fruit and fresh vegetables and stuff that’s the best source of nutrients”</p>
	<p>“Life and Health”</p>
	<p>“Oh, general... once again, it is general health... proteins”</p>
	<p>“I enjoy the taste, its tasty for sure, and it’s good for you” “these products are not necessarily the most expensive purchase but they are still healthy”</p>
	<p>“Yes, although it tastes good it does have a lot of vitamins in. which is beneficial for your well-being”</p>
	<p>“They just have natural sugars which I think are good and they are not processed, which is also good”</p>
	<p>“Well giving you as much nutrients as possible, especially if you have nutrient deficiencies. You know, helping you have a better immune system”</p>
	<p>“Well, I think overall they definitely make you feel better and allow you to function better and have the necessary nutrients for your body to keep you healthy, so yes”</p>
	<p>“Yes. Advantages of just building immunity and the strengthening of bones, nerves, skin, health... you know, general health”</p>
	<p>“so the advantages for me are going to be things like they are rich in important nutrients”</p>
	<p>“So for me the greatest advantages of these foods are the nutritional value”</p>
	<p>“Look I think with all the other points that we have raised from a health aspect... definitely a body benefit. Feeling healthy, feeling stronger. Longevity of life”</p>
	<p>“Yes, health aspect”</p>
	<p>“Yes, I think energy... and obviously what is in your blood pressured veins, I think that is all relative which relates to longevity”</p>
	<p>“Health reasons”</p>
	<p>“I think for me it is more health reasons”</p>

	"Yes. Maybe... these conventional foods will probably keep you fuller for longer... so you do not... So it takes longer to digest"
	"I would say nuts would be a better snack than just having chips or some other junk food"
	"So, I was mentioning whole wheat bread as an alternative to white bread because they are generally just healthier from the grain aspect"
	"Yes, the nutritional value it does have, yes. Mostly the nutritional value"
Uncertain	"Advantages... again, it is like mummy said 'Take your vitamins!' I do not know hey. I would not know that one. I would be lying to you. No, I do not"
Availability	"That I can get them most of the year-round. Yes, my side as well. Yes, the functional foods that I buy mostly are the vegetables that are fresh off the shelves and are readily available most of the year-round".
	"You find this in your supermarkets when you need to go grocery shopping. It is... most of the year it is available. So availability as well is good, when it comes to conventional foods"
	"I just think that they are easily accessible, you get them pretty much in any shop"

Table 28 What do you think modified functional foods are?

CATEGORY	QUOTES
Enhance / Modified foods	"Let me think now... so it might be like any sort of functional food that has been cooked into a product. Or maybe it has additives in it. Like maybe additional vitamins or enriched milk"
	"it would processing the food, changing the product in some sort of way"
	"I guess modified is some things being altered in the gen, in the natural genetic makeup of it. to make it a bit more beneficial or to show the added benefits a bit more like you know"
	"I would say that it is healthy foods with a little bit of help from us and interference from us. For instance, soy. The soy plant is natural but soy products are processed"
	"So maybe like when orange juice is fortified with calcium"
	"They have been processed from their raw state into some... into a different form to be consumed"
	"Is it like foods that suppliers or changed to increase a certain nutrition in the food or try and sell the consumer"
	"it is taking those conventional foods and modifying them. So your oranges becomes a juice"

	"I would say also like your yoghurts and your milks that have been... it does not come directly from the cow, they have gone through a process so it has been modified"
	"Things that are modified, but also still healthy. They have healthier substitutes in them or healthier additions"
	"Okay so modified foods for me is enhanced foods that are on the market. Of course, it is more preservatives, more additives to increase the nutritional value in food as well"
	"So... modified functional foods... I think I will say oatmeal and orange juice. In oatmeal, you can add extra nutrients"
	"I think those foods that have stuff added in to make them more beneficial like probiotics in yoghurt"
	"think it is like adding extra sugar or extra cream or something -it has been changed. There is stuff that has been added"
	"it sounds something like processed maybe"
	"Foods that have been genetically engineered"
	"maybe something processed or something. But I think you have also got the protein shakes. I do not know if that is considered as a food, but that is what I would imagine as a modified version"
	"Modified functional foods? Well, that would be more of an enhanced to like... a processed food, basically"
	"Although it is healthy, it still has a process... for example, for conventional foods I said oranges and where you take the oranges and we make it into like juices... and they make the stuff with it. Okay, they take it, they add water and stuff and they make juices and stuff out of it-deem a modified food"
	"So foods with added content that are good for you"
	"So things that have been modified a little bit but are still healthy for you, a healthier option"
	"I think these are going to be the foods that they modify slightly to improve the vitamins and minerals in the foods. For instance, I am noticing more and more these days that they are actually vitamin enriching bread"
	"I think in the one end of the spectrum it is a good thing because enhancing bread with the vitamins and nutrients that people need can be a good thing for people who are on a budget"
	"you put in certain components in not to just fill you, but you also looking for the health aspect of it... so you are looking for protein, you are looking for vitamins"
	"I would say additives, you know..."

	"Like the proteins are added or something like that is added. To give you... let us say Vitamin C is added to it I think. Those kinds of things"
	"the orange juice because it is not like you made the juice yourself... other things were added on to it"
	"I think they are things which are modified. For example, eggs"
	"So, you will see cereals have got added vitamins and minerals"
	"it could be some things that we are not aware of that have been added. Like the other participant was saying with yoghurt"
	"has additional processing done to it to add vitamins and minerals"
Not Sure	"So, these are functional, but they undergo certain processes to mass produce, er, for example"
	"Probably... I would say... some sort of pill? Something you would ingest in a pill form. Modified"
	"I was going to say frozen, but I don't buy frozen broccoli or whatever it is, its preference, I prefer healthy fresh products"
	"Could I say those prepacked salads are modified? Modified functional foods. I do not know"
	"Yes, I do not actually know either"
	"Modified is obviously... it has been used. It has been modified into something like a recipe, maybe"
	"I do not know"

Table 29 According to your opinion which foods are modified functional foods?

CATEGORY	QUOTES
Dairy and Juices	"Something like a juice – so you can have an apple juice with extra Vitamin C or something like that, something like almond milk could be a modified functional food. There are modified yoghurts and drinks like Capri"
	"Modified... my guess for the modified... you get a lovely shake"
	"I would say like, dairy products, milk yogurts, fruit juices"
	"Some cheeses"
	"Protein shakes"

	"I don't know do yoghurts and that type of thing; they say you putting fresh strawberries into your yoghurt"
	"Fruit juice smoothie things, you know the ones with shots of ginger and apple whatever, cause they say they have all these vitamins and goodies"
	"Dairy products - milk, cheese, that sort of thing"
	"I would also say dairy products because some have high calcium, some have lactose removed which is healthier for some people"
	"I would say yoghurts, flavoured milks I suppose... modified... juices, fruit juices"
	"I think I am going to agree because you could make these booster juices with fruit and veg"
	"Yes... juices as well... and yes, I would say... yes, juices, yoghurt, milk"
	"Your yoghurts, certain milk alternatives that you get like the almond milk and the soya milk"
	"Yoghurts and dairy products, alternate milks like almond milk, coconut milk... those sorts of things"
	"So, maybe yoghurt? Maybe fruit juices"
	"Yes, I was going to say fruit juices"
	"The same like those power shots"
	"Kombucha"
	"Yoghurts, certain dairy products where the calcium and that has been added?"
Cereals/granolas/breads	"Cereals, granolas, (modified to be that way) more health beneficial"
	"Some cereals, Like the granola"
	"Like if you have a look at Bokomo... any of the big South African/American owned like Bokomo... who does the jungle oats? Yes. So any of those companies who are actually... if you follow the trail are actually owned or supplied by Monsanto. So they would be... like jungle oats have been genetically engineered. Bread flour has been"
	"So you get your breakfast cereals and everything is also modified to get to include all the vitamins and stuff in to it, like I said for the Future Life. You have got the iron and Magnesium and calcium is already included in the cereal"
	"I will also add in cereals"

	"Sourdough and obviously vitamin enriching breads"
	"In oatmeal, you can add extra nutrients"
	"Most cereals because a lot of cereals do not have the basic nutritional values and then have stuff added to it to make it seem healthier"
	"Breakfast cereals as they normally advertise their additives of vitamins and minerals to be a healthier source for breakfast"
	"So you get your breakfast cereals and everything is also modified to get to include all the vitamins and stuff in to it"
	"Breads and pasta"
	"grains, cereals"
	"Yes... they have even modified eggs. I saw that the other day when I got something"
	"Eggs-pasteurized (modified to be that way) more health beneficial"
Tinned food	"Yes. Yes. I do not know if canned/tinned food is also like a modified... They have got preservatives in them"
	"Even canned foods. You get those canned beans... they contain those... what do you call it? To give them long shelf life"
Meat, poultry and GM foods	"Your genetically modified chicken where they add more water into the chicken. It gives it more weight although the nutrition value, some say it increases, some say it decreases"
	"Cold meats are processed"
	"Anything where it says on the packaging 'GM'"
	"One would find, you know, the labels on them You know, genetically modified or, er, so the labels would accompany the product on the shelf"
Fermented Beverages	"Kombucha"
Did not know	"I don't even know what the categories of modified functional foods are"
	"I'm not sure"
	"I think medical stuff like milk of magnesia or something like that. What other things could I add? Oh, Oh! Modified. I would not call it functional <u>food</u> . Modified – I would say something like chips... let me just think of something else... like a sauce?"

	"I'm not sure to be honest with you"
	"I'm not sure actually"
	"I am not too sure actually. To be honest with you"

Table 30 Do you include these foods in you food purchases?

CATEGORY	QUOTES
Yes they include these foods in your food purchases	"Yes, definitely"
	"Yes, I do have them"
	"Uh, yes, I do. I don't buy it like very often but uhm, I, I mean I do have it sometimes, but I don't think it's like the most important thing that I purchase"
	"Yes, but a very small percentage"
	"I am going to say yes, because my husband has celery juice literally every day, so I am going to say yes"
	"Yes, the yoghurts, the breads, the juices is all in my diet"
	"Yes definitely. Genetically modified foods are always included in my purchases"
	"Yes, I think so"
	"Yes, absolutely"
	"Yes, I do"
	"Yes"
	"So yes, I do include some of these items in my diet, yes"
	"Yes, I do have a lot of cereal and certain things like muesli and things"
	"My whole stock there, I think the only thing I do not have is the alternate milks. But grains and breads, cereals, juices, yoghurts... all of that are in my diet as well"
	"Definitely"
	"Definitely"

	"I do"
	"Yes, I do"
	"Yes"
	"Yes, I do"
	"Yes"
	"Yes"
	"Yes, I do. I do eat eggs and those are modified"
No, they don't include these foods in your food purchases	"No, I do not"
	"Uh, not really"
	"God no!"
	"Shew! I do not really buy them, that is my problem. I do not really buy processed stuff"
	"I would definitely just stick with your raws, natural plain yoghurts is an option"
	"Look, I do not think I buy many modified"
	"No, I do not"
	"Not necessarily"
Probably / Unknowingly	"Occasionally. I prefer whole foods if I can find them"
	"The modified ones, well I guess unknowingly because I mean do they label foods as genetically modified or modified functional you know, I guess they don't tell you outright on the package inserts they may but I think unknowingly I may or may not"
	"I would say yes and no because yes if I'm feeling little but fluey, or if I feel like I'm getting a cold then I would go get like a little citrus boost that's high in Vitamin C but also no 'cause they generally quite expensive, the price is abit more so I would rather just eat an orange and get the Vitamin C benefits from that"

Table 31 Of these products, which is the most important modified functional food item to you?

CATEGORY	QUOTES
<p>Modified foods (fortified juices. fortified dairy products, such as milk and yogurt. fortified milk alternatives, such as almond, rice, coconut, and cashew milk. fortified grains, such as bread and pasta. fortified cereal and granola. fortified eggs)</p>	<p>“Which is the most important... if I was to choose it would probably be the modified milks, like you know, the lactose alternatives. Those would be the most important. Not because they are modified functional foods, but because they are alternatives to lactose”</p>
	<p>“Eggs”</p>
	<p>“Uhm, shu, I would say maybe yoghurt, but I don’t really eat that much anymore”</p>
	<p>“Well, I am looking more towards the grains side of it and cereal-based. Like the pasta and granola bars... like muesli for the yoghurt and so forth”</p>
	<p>“We not big fans of flavoured yoghurts but we definitely stick with the more plain brands like for example my girls like the plain yoghurts but then you add nuts, add the honey to it to give it that granola type yoghurt feel to it so adding nutritional value to that product but it’s also still healthy”</p>
	<p>“It has got to go with your fruit juice”</p>
	<p>“Yogurt. I enjoy the plain yoghurts as I said, I make the smoothies with the frozen berries and bananas and stuff like that”</p>
	<p>“The yoghurt. Because it is a healthier option. It also has probiotics and it is a nice snack to have in between especially when you are hungry or you are in a rush”</p>
	<p>“I would probably say yoghurt”</p>
	<p>“I would say cereals and grains”</p>
	<p>“I am going to go ahead and say yoghurt because of the probiotics in yoghurt”</p>
	<p>“Yes, probably cereals because they have a lot of added iron”</p>
	<p>“When you are talking modified I would probably look at probiotics and calcium - anything that has been added in... so dairy products, yoghurts”</p>
	<p>“I love yoghurt”</p>

	"It would be eggs"
	"your fibers, orange juices... that type of thing"
	"I am going to say the cereals because it is a perfect start of the day and that is usually the breakfast"
	"I think mine would be the cereals"
	"Yoghurts and then grains from the bread... breads and pasta - healthier pastas for my baby and then we have a lot of breads for lunch as well and for dinner"
	"purchase a yoghurt that might have an added.....probiotics"
	"We will get for the kids some yoghurts and yogi sips..."
	"For me it is oatmeal"
	"Eggs as well"
	"Yes, probably cereals because they have a lot of added iron and spreads because, like I have mentioned previously they have added Vitamin B12"
	"would say dairy products, especially yoghurt because I enjoy that"
	"The main modified functional food that I would be is just breakfast cereals"
	"Yoghurts. For sure"
I don't know/Seems unsure/don't purchase	"I would go with veggies"
	"Soy! I eat a lot of soy products like soya chunks, soya sauce, soya beans. I eat a lot of soy products"
	"I would probably say condiments"
	"I would say like canned soups and stuff like that because it obviously has a longer shelf life"
	"Yes, again I would have to say... we do take supplements but other than that I could not tell you other than that... any modified foods"
	"Not... none of them! Jesus! Why would anybody want to do that? You eating poison"
	"To myself, no the organic and the available are sufficient for my needs"
	"Shew! I do not really buy them, that is my problem. I do not really buy processed stuff"
	"For the most part I try and avoid modified products. Just because I am a bit more of a naturalistic person. Maybe not necessarily to my own benefit, but

	yes, I am more of a naturalistic person. So I believe in natural products as best as possible”
	“No, not really... I mean Woolworths do have an organic energy drink and that is probably the only thing that I can really think of now”
	“Again, I have to go with the chicken. That is one of the frequently eaten foods in my house. Chicken - all day, every day”

Table 32 Which advantages do you think the foods that you mentioned as modified functional foods hold?

CATEGORY	QUOTES
Health and nutritional benefits	“Maybe just from a consumption perspective but I think probably from a health perspective”
	“There’s advantages if you’re health conscious and understand what you’re eating”
	“Well, I think with the hidden minerals and vitamins like we are unaware of, yeah”
	“so I know like, with the dairy products, uhm, has a lot of calcium in it”
	“I guess if you’re purchasing food that is modified to be more beneficial for your health then maybe you’re getting a bit more out of that the more nutrients that is added for your benefit”
	“Advantages, again health-wise. Calcium in your body, in your bones etc”
	“I think from a dairy aspect, you get the natural cultures in the yoghurt, whilst adding your fresh fruit, nuts or honey you are making quite a nice meal, a healthy meal”
	“It does give you the right nutrition”
	“I think they obviously give you back certain nutrients that either you might lack or you just need additional of, in your diet”
	“so again with the yoghurts and the kefir -gut health. as they have got the most probiotics”
	“I would probably eat more eggs to feel fuller because I know it is healthier than, let us say, eating pap”
	“I think increased immunity and resilience and also a general sense of well-being”
	“I think yes, cause they put those nutrient back into the food for a reason and it just makes it more beneficial”
	“I would say, like the yoghurt... it has the good bacteria in it, how to fight off all the other not so good other bacteria in your stomach”
	“The advantages I think that they are fortified with extra vitamins and minerals. provides my body with, for my well-being”

	“Look, I think it is good... If it is a yoghurt in itself, it is good bacteria. You want a balance in your body, so I think any benefit that it can give to you, it can only benefit you”
	“For it is all about a feeling and for them to be digested easily or being broken down by my body easily”
	“I would say that you just... you do not feel tired and it will fill you up for longer. Headaches – some of those foods reduce headaches quite a bit”
	“you know, preserved for longer and will probably also have added health benefits”
	“With the additional vitamins and minerals that they do add it is a lot healthier than having that food object without those vitamins and minerals being added”
Availability and Convenience	“Overall, there’s definitely benefits in terms of how often an accessible foods are”
	“Easy - you just add water. It is not difficult to make. Convenient, yes”
	“Convenience”
	“I think it is convenience because now you do not have to buy the oranges anymore and press it yourself. It is done already, ready to buy”
	“I would say is availability”
	“Always available for you to purchase. So that would be that advantage of it”
	“I just think it is convenience and not having to flavour it yourself”
did not know the advantages that modified functional foods hold to them and that these products do not have any advantages	“I do not know. I do not know”
	“None... Well, I suppose it depends who... the perspective. For myself as a consumer, none”
	“I cannot, because you know, I do not pursue them”
	“To be honest with you, I do not really believe that they have the benefits”
	“I think we do not see an actual benefit coming from the food products available with functional additives. That is my opinion”

Table 33 What factors would influence your decision to purchase and consume functional foods?

CATEGORY	QUOTES
Availability	"The ready availability of functional foods from conventional retail and retail shops"
	"Obviously, availability as well"
	"I look at the range that is available"
	"The availability"
	"Convenience of whether it is available, like seasonal."
	"I am also going to say availability"
	"It has to be of course the availability".
	"It would be the availability because certain things you cannot get in certain seasons"
	"if it is readily available in stores I already go to and if it is actively advertised so that I am aware of the healthier food options to purchase"
	"Availability"
Health benefits	"Health benefits, exercise and vitality benefits, longevity, overall health and energy"
	"I guess I mean I'm looking at the added benefits that it has in terms of you know, the minerals and vitamins that we don't usually see"
	"Nutrition. Well... What is your body actually getting out of the food"
	"Nutritional benefit"
	"Your own personal health as well"
	"I think maybe just that need to want to be healthy and need to want to look good and feel good"
	"Life and Health. Well, yes. Food is all about life and health, health and enjoyment of it, I suppose... would be the only domain in which food could be appreciated"

	"I look at health and I look at a balanced diet"
	"For me it is the health aspect"
	"For me, it is that, but I would also say it is goal orientated. I am being a little bit health-conscious at the moment. I think it kind of influences my ability and my... what is the word I am looking for?... How fit I am. So yes"
	"Covid. No, I am just kidding. It is obviously living that healthier lifestyle. Those factors would diffuse the fear of getting sick and that type of thing would influence me"
	"For me it is just the health benefits. You buying what is healthy for you, what makes you feel good and what works for your body"
	"Okay, so that would be basically weight gain. So if I feel like I have gained weight then I start to change my eating habits a bit, to get healthier options"
	"Just the healthier eating options, choosing things that are better for us, better for my baby, so just those sorts of things"
	"the illnesses that are going out nowadays, for example diabetes of course, it is such a common decease that for me it pushes me more towards functional foods because it has changed my lifestyle which led me to go to consume functional foods"
	"I would say health"
	"Well, I think that if it satisfies one of the needs... So in other words, if you are looking for more energy then you are going to look for a functional food that can help with that. If you are looking for something that calms you, you go for that. If you are looking for something that helps you sleep then you look for other functional foods. Other than the health aspect – because I think you are always looking for that. If I was going shopping and looking for functional foods then I would have a goal for it - weight loss or energy... those sorts of things"
	"Okay, for me it will be for health benefits"
	"It will be for health benefits but the most important influence will be for... in me making that decision"
	"what are the health benefits"
	"And then I think your dietary requirements because my dad is a diabetic, so whatever he can eat and what he cannot eat"

Price	"Price"
	"Yes, it would be price"
	"I was actually going to say price. And I think the pricing is definitely a big factor especially with what is going on in the world today"
	"I suppose price as well"
	"I think the price is a big factor"
	"I would say... if it fits in my budget"
	"I would say how much it costs"
	"I would say cost"
	"Okay. Price. That is about it I suppose. That would influence me"
External Factors	
Subcategories	
Weather	"Weather is also another thing that definitely factors in how I buy, so will I buy more ginger or lemon juice or will I make more curries and all that kind of stuff."
	"Funny enough the weather, so if it is cold I tend to go for more homey foods like soups and stews where if its summertime I prefer more lighter meals where you'd rather have like a plate of ham with cheese, crackers where it's a lot cooler lighter foods".
Packaging & Brand	"The packaging"
	"I would say... probably brand"
Quality	"Yes, quality absolutely"
	"I will add quality. If the quality is bad then I would not buy it"
	"but for me also flavour that influences, definitely. I would not buy something if it was not functional and tasted nice"
Time	"I think you got to plan it some sort of plan as to what you going to have for dinner, time would be a factor"
Personal	"I think factors... depends more on situations on my side. So if I had the wonderful life of a house-woman or... if it is even a wonderful life, then

	obviously the food and stuff that I buy can be made of for the evening and so forth”
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Table 34 As a health-conscious consumer how important is it to you, to include functional foods in your diet?

CATEGORY	QUOTES
Imperative	
Subcategory	
Health & Nutritional Benefits	“Very important. I consider it to be essential to having a balanced diet and I go out of my way to use functional foods regularly in my meals. When I cook I will choose functional foods over and above non-functional foods if at all possible because of the health benefits”
	“Almost a 100%. I believe the body needs to constantly digest, and obviously in smaller amounts, helps with weight, weight gain & weight loss”
	“I’m gonna say it’s very important because it’s an added benefit”
	“It is very important. Specifically, health”
	“It’s very important for me. Because it provides people with nutrients that can help protect you against disease”
	“It is very important. I think... it is making sure I am getting the right food supplements into my body”
	“It is important for me. Like I said, it adds a lot of vitamins, nutrients and that our bodies will obtain”
	“Yes, it is also very important to me to include functional foods in my diet and also for health reasons”
	“It is very important. Because you want to be healthy”
	“Nutritionally it is good for you and that kind of influences me”
	“It is pretty much crucial. I mean at the end of the day all these functional foods form the basis for our diets”
	“Yes, I do believe it is good and I think it is the correct thing to do if you are actually buying for other people as well, that you are concerned about”
	“It is <u>very</u> important. It makes up my body, my type, my mental state, my health state, how I function with my duties at work and even my moods”
	“it is quite important to me. It is very important to me”

	“Very. Oh! <u>Why</u> is it important? Health and life! I cannot... Health and life!”
	“It’s non-negotiable. It’s an imperative”
	“Extremely important. Not negotiable”
	“For me, the most important is the nutrients in the food. It can protect you against diseases. Or the antioxidants that was mentioned earlier by the other participant and so forth. All the harmful stuff try and minimise”
	“Yes it is, it’s important that we have like a veg with your whatever and your whatever or salad with your chicken and potato for example, so it can be a variety”
	“Based on a scale of one to ten, I would say twelve. think definitely now that I get older and you realize that you cannot wake up so early in the morning, you have got to have that lifestyle change so that you feel better, you can do better and you are not in that slump anymore. So... it has got to be... I guess for me, I am just a little bit health goal-driven at that moment”
	“It is important for the health benefits, you are waking up fresher, you are feeling better. You have got energy and that sort of thing. Yes”
	“Okay for me it is very important because I do lack a lot of vitamins and things, but it is just that I do not eat a lot of things to actually get those vitamins”
	“It is health. It is important for me because it is for my health and keeps my sugar levels down and helps with my diabetes”
	“Okay so for me it is just that it helps with irritable bowel syndrome and also with keeping my weight consistent, not fluctuating too much. So if I eat healthier then my weight stays consistent”
	“It is quite important because I noticed that when you eat healthier things you tend to get hungry faster than when you eat healthier things where you stay fuller for longer, you have more energy and you feel better. So it is quite important to make sure that everybody in my family is having a good healthy diet so that they all feel better and they are healthier, just generally”
	“It is very important to me. Well without these foods I would end up in hospital”
	“In all honesty, it is pretty vital that I include functional foods in my diet. I would not have a diet if I did not include functional foods”
	“It is very important to me because the less that I need to supplement in my diet, the better”
	“As a health-conscious person, everything that we put into our bodies is thought about”

	“For me, I think it is very important... Again, I think from health benefits and exactly also what the other participant said as well. I am looking for weight loss or I am looking for relaxing, sleep for body balance... all of those things, then I am going to include it in my diet, because I know it is going to give me some sort of benefit besides nutrition”
	“Yes, I think for health reasons. For balance”
	“Yes, look... I think we have answered this previous question before ... So it will definitely be the same”
	“For me it is also important because of the lifestyle that I have chosen for myself”
	“It is very important. For health reasons”
	“It is very important because it has become part of my routine and if were to think about eating something then I would only think about eating it in a healthy way and not in any other way”
	“I would say I probably would lean more towards healthier functional food options... just because... especially if they are the same price because then it is like a no brainer – go for the healthier choice. Yes, I would say that they are important to me”
	“I would say yes. I would also say that it is important to have balance so where you can get more functional foods”
	“It is very important. Because you want to be healthy. You either want to lose weight or maintain weight and it is only functional foods that give you that benefit”
	“Yes. The same sort of thing. Nutritionally it is good for you and that kind of influences me”
Not Imperative	“It’s not something I’m very conscious on which I maybe should be a little bit more”
	“It is not of large concern to me but then if I am out shopping and I do see a functional food option being advertised then I will lean towards getting that because I do know that they are healthier”

Table 35 Are there any specific rules or processes that you follow to make sure that functional foods are included in your diet? Explain these rules or processes

CATEGORY	QUOTES
Types of foods consumed & purchased	“I do have like a meal plan that I stick to so when I eat, I try to get like the right portions of everything”

	“My first rule is to always have a specific list. Instead of writing down ‘vegetables’ write specifics... exactly what you are looking to buy and only buy those specifics”
	“I definitely do plan as I mentioned a few moments ago. So when I go shopping I am planning what I am going to make that week. And then I will still think... if it is cold... What I am going to make on a hot day compared to a cold day is going to be two totally different meals”
	“We eat healthy six days of the week and Sunday is a cheat day. That is a rule”
	“Yes it is, it’s important that we have like a veg or salad with your chicken and potato for example, so it can be a variety”
	“Just staying away from unhealthy foods and snacks like biscuits and things that are not good for me”
	“The processes of getting the healthier stuff is, the smoothies. So you just incorporate everything into a smoothie and you have all of your healthy things in one go”
	“I think it is good to draw up meal planners so that you stick to the planner for what you need”
	“I would say the advertising on food packaging, what benefits it has and also after that I would look at nutritional values on the back of boxes”
	“Butcheries, I got to specific veg stores, specific retail where I know these products are stocked”
	“Yes. I buy brands that I know carry functional foods and I visit stores that I know stock functional foods”
	“Uh, I’m not sure if this counts but I do have like a meal plan that I stick to so when I eat, I try to get like the right portions of everything”
	“So rules for me would just be staying away from unhealthy snacks mainly because we tend to snack too much on unhealthy things”
	“I think for me, it is more of what the nutritionists have advised”.
	“I often read up about it and find out what the nutrients is. I have also got an Application on my phone which tells you the sodium content of what you are eating or the nutritional value or the... what do you call it? The carbohydrates or sugars or whatever.”
	“Definitely! And do not shop hungry. Your intention to purchase has been affected by the diet”
	“No, like I said mine is planning and being organised. It is the time element”
	“My rule is: do not go to McDonald’s. No, I think...as Jackie said, you choose your shop”
	“For me aswell, it has become habit”

	"I think for me it is more of a habit. It is something that I need to do so that I do not feel pain after a week"
	"So, I will look at labels. I will look at percentage, RDA etc. on the side of the product"
	"I think it is important to look at food labels but also portion sizes. Sometimes you could be overeating too much of a healthy food and the benefits like.. no longer help"
No Rules	
Subcategory	
Personal Choice	"No, Because I take it as it comes, and you know like I'm saying, fasting days we eat certain things, non-fasting days so I guess it, it and also, it's mood and personal individual taste or feeling for the day"
	"We did try and follow the The Healthy Eating Plate, that is what I call it. It is trying to see how much... if we try to put some groups together then it is veggies.... how much veggies are on the plate compared to meat? We try and do that"
	"Yes, not rules, per se. I just read what they do to your body"
	"No, I wouldn't say I follow any rules, but like I said, I do include functional foods in my daily diet"
	"It is not really a plan; it is just stuff that I would eat"
	"Not necessarily. As I said It's an ongoing learning process. It's a journey"
	"No, there are no rules. No, I do not follow any rules. It is nothing that I am following throughout"
	"I also do not really have any specific rules or processes. I just (<i>buy</i>) what I feel that I need to use for that day"
	"I think for me it is more of a habit. It is something that I need to do so that I do not feel pain after a week"
	"There are no rules or processes. I think it is just in my mind that I should eat this or I should not eat that"
	"It is not really a plan, it is just stuff that I would eat. I would start the day off with a black coffee. I would always have porridge with grains and black currents and some honey and some coconut milk. So I would have that. And if I do not have that then I would do without I suppose until such time"
	"No... I do not have any rules or processes for you. I do not have a specific diet plan planned out though. I do not have a gym instructor giving me a diet"

	plan at this current stage. So, we do not have a plan. We just make what we have got in the fridge and go with that”
	“No, Is it something a part of your daily regime-Yes it is, it’s important that we have like a veg with your whatever and your whatever or salad with your chicken and potato for example, so it can be a variety”
	“No, I don’t. Its not something I’m very conscious on which I maybe should be a little bit more”
	“No, I do not actually have any specific rules”
	“I honestly do not have any specific rules when it comes to including functional foods. It is just... it has become part of my lifestyle. So it is more or less having the availability of it”
	“But I tend to not have any rules per say. At the moment I am just trying to eat a balanced diet and just find out what works for me. Because I have done most of these diets and eating programs and I have gotten to a point where you cannot fully cut out something, it is not good for you”
	“I would not call it a set of rules as such. I think it is more a case of... it needs to follow your thought process and your desired outcome of the product that you buy”
	“Planning takes time! Yes, when you go to the shops then you sort of decide what you are going to make”
	“I do not have any hard and fast rules. But I generally try to have at least two or three different vegetables on my plate every night”

Table 36 How do you make sure that functional foods are present in your diet?

CATEGORY	QUOTES
Part of a Shopping List / Meal Plan	“Shopping list plays an integral role, on your choice of foods because we try and avoid eating out or unnecessary products but every now and again”
	“Yes, it is. Absolutely. Part of the list”
	“I always make sure that it is on the shopping list and if we are out on that, I make sure I go purchase the functional foods”
	“I just make sure I always have a good source of, of healthy food and functional foods in my apartment or in my home. So, just always making sure it’s in stock”
	“I buy them”
	“When I go out shopping I make sure that I acquire things that appeal to me, that are healthy, that are sustainable”
	“I just make sure that I buy it. Make sure that I put the right stuff in”

	"Well, first of you have got to make sure that you have got it in your fridge"
	"Yes, definitely. It is on the list at shopping"
	"Well, I at least try and buy my stuff once a week. And I try and make sure that it is fresh stuff"
	"Include them in my groceries as well"
	"Including things in my monthly shopping and then also weekly shopping"
	"I have a list of groceries or ingredients that I use on a daily basis"
	"I do meal preps. So, it really helps because if I prep my meals then I do not just go and buy... I have to finish whatever that I have prepared"
	"By doing conscious decisions when you shop, and I also think that it becomes a routine"
	"Yes, planning is a big thing. So, I try and do a weekly shop and then you have just got to make sure that you use all those vegetables in that week... or fruit"
	"I make most of my food myself... mostly. So I am in charge of knowing... I know what is in there. So for the most part, I would say that, yes. Yes. For the most part it is the grocery list because I do not really do meal plans. I just do... as long as the food is here, I will cook different stuff"
	"Again, it is with shopping. It is always there. You know, you are purchasing all the time so you are making sure that it is there"
	"Yes, for me as well. I always try to have a fruit available every single day"
	"I just make sure that include them in my grocery list every month so that I have access to them at home"
	"I do the shopping. I have actually got a list on my fridge and I just tick off whatever I need and then I go and buy it"
	"So I generally try and keep all the grains that are on the lists for Mediterranean in the house, along with the fruits and veggies that go with them"
	"Yes. I think, for me the most important thing is that in my household, that is what is there. It is functional foods. So, they are always included in the diet. It comes back to the thought process"
	"I think again, like we have said in the previous question, when you go into the shop you have got intentions to buy certain components you have got to have an idea set out of what you are going to make - certain meals"
	"Yes, definitely, it is a conscious... it is something that you are conscious of. In my mind, funnily enough, it is herbs – the natural herbs that I always consciously buy and for me, I always reap the benefits of it to include it in my cooking. When it is shopping and big shopping lists"

	"I think for me it is more being creative with how I am going to eat it. Like with spinach... I can have it in a quiche or maybe have it in a salad"
	"When I wake up in the morning I think about what I am going to eat for breakfast lunch and supper"
	"I think drawing up a list of what you are going to shop for so that you go according to plan when you are shopping"
	"Well, you need to obviously buy them and decide what you are going to eat on a daily basis to make sure that that product is in your house"
Part of a Diet	"I guess... I cook a variety of recipes. I do not stick to such a limited diet, and I tend to also... I am generally interested in world cuisine"
	"Well, I guess by eating a balanced diet. You're gonna obviously include a balance of your carbs, fruits vegetables"
	"I only make recipes and do... I only cook food and create food that has those in their recipes"
	"I think in theory it's very important, to have something like that in your diet every day"
	"On a day-to-day basis I would try and do a more healthier choice in what I'm eating"
	"I just look for new recipes and if they are slightly healthier then I see which foods I can replace"
	"Yes, I do make sure that functional foods are present. But I am not that... I do not really have a set list. It just depends on my mood and what I feel like"
Not enough knowledge	"Look, I think... Functional foods have to be a conscious decision. Unfortunately, I feel from my part, I maybe do not have enough of a grasp of it yet. Although I enquire a lot about it but I think the more I understand what I need to look for, I will then go and purchase that"

APPENDIX 7: EDITING CERTIFICATE

Between lines editing

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30 August 2022

To whom it may concern:

I hereby confirm that I edited the dissertation entitled: “Exploring Health-Conscious Consumers’ Consumption, Knowledge and Factors that Influence the Intention to Purchase Functional Foods”. Any amendments introduced by the author hereafter are not covered by this confirmation. The author ultimately decided whether to accept or decline any recommendations I made, and it remains the author’s responsibility at all times to confirm the accuracy and originality of the completed work. Research participants’ verbatim quotes were not grammatically altered or checked for contextual accuracy. The author is responsible for ensuring the accuracy of the references and its consistency based on the department’s style guidelines.



Leatitia Romero

Affiliations

PEG: Professional Editors Group (ROM001) – Accredited Text Editor
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