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Exploring the factors in food marketing that influence food choice preferences in New Zealand Adults

A thesis submitted in partial fulfilment of the requirements for the degree of

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Abstract

Background: Over the past few decades, there has been growing concern regarding modern dietary habits, particularly the overconsumption of processed, sugary, and fast foods. While various factors shape food choices, targeted marketing strategies aimed at specific population segments have emerged as a primary influence. Food marketing shapes individual preferences and choices towards food. It involves the use of television, print media, digital platforms, social media, packaging, labelling, health claims, pricing and product placement and celebrity/influencer endorsement to reinforce messages to consumers. A substantial body of evidence exists on the influence of marketing on children's food choices, but there is currently limited research focusing on adult populations.

Aim: This study aimed to investigate the factors in food marketing that influence food choice preferences of adults in New Zealand (NZ).

Methods: A qualitative research method was adopted in the form of semi-structured interviews to explore experiences with and influences of food marketing in NZ Adults. Data was analysed through thematic analysis where main themes across participants were recognised. 15 participants took part in this study, with two groups identified as; 18 – 44 years old (n=8) and over 45 years old (n=7).

Results: Seven main themes were identified; (1) Health consciousness (2) Packaging attributes, (3) Interpersonal influence, (4) Product placement, (5) Price, (6) Exposure and influence of food marketing, and (7) Suggestions to improve marketing that promote healthier choices. The findings suggest that there are factors related to food marketing that influence food choice or preferences across multiple levels of the Ecological Model of Health Promotion. These influences exist at the individual, interpersonal, organisational, community and policy levels.

Conclusion: The findings highlight that food marketing strategies influenced food choice or preferences in NZ Adults, while also presenting differences between adult generations. The findings indicate that current food marketing regulation around advertisement, as well as the health star rating may need to be reviewed in the promotion of healthier food choices. It is important that health professionals and policy makers take this into consideration when

working with the population of NZ or developing future policy or regulation surrounding food marketing.

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List of Abbreviations

| | |
|--------|---|
| ANZFSC | Australia New Zealand Food Standards Code |
| ASA | Advertising Standards Authority |
| EMHP | Ecological Model of Health Promotion |
| FBAC | Food and Beverage Advertising Code |
| FOP | Front of pack |
| HEM | Hierarchy of Effects Model |
| HSR | Health Star Rating |
| NZ | New Zealand |
| TV | Television |

Chapter 1: Introduction

This thesis explores the factors in food marketing that influence food choice preference in NZ Adults. Chapter One begins by outlining the research topic by providing an overview of food marketing and the current literature. Next, food choices are discussed followed by models used in health promotion. The purpose and significance of this research is then explained followed by the aims and objectives of the study. The chapter ends by providing an overview of the thesis structure within the six subsequent chapters followed by researcher contributions to this study.

1.1 Overview of Food Marketing

The World Health Organisation has identified that food marketing lies predominantly within the marketing of foods that contribute to unhealthy diets and dietary behaviours (World Health Organization, 2022). This includes the marketing of fast food, sugar-sweetened beverages and confectionaries (World Health Organization, 2022). Therefore, food marketing has been identified as a contributor to obesogenic environments, thus having a negative influence over the health of populations (Folkvord & Hermans, 2020). Particular concerns have been raised in the influence of unhealthy food marketing and the health outcomes in children, such as obesity (World Health Organization, 2022). As a result, literature points to food marketing and its ability to shape food choices, preferences and eating behaviours within children. For instance, research consistently demonstrates that exposure to unhealthy food marketing leads to unhealthy eating behaviours in children (Boyland et al., 2022; Boyland et al., 2025; Folkvord et al., 2016) and intake or preference towards associated products (Boyland et al., 2016; Smith et al., 2019).

Food marketing is an external tool used to influence consumer choices and preferences to drive purchases towards a particular product or brand (Martinho, 2020). To achieve this, companies use a variety of marketing modes and strategies to increase the awareness of a product in the hopes for eventual purchase (Qader et al., 2022). Food marketing is

presented via multiple channels such as print media (billboards, flyers, brochures), outdoor advertising, television (TV), radio, digital media (social media) and endorsement.

Alternatively, marketers use techniques such as price, packaging, labelling, health claims, and placement or display to influence consumers (Qader et al., 2022).

Exposure to food advertising through Television (TV) as well as the visual elements of packaging are common influences of food choice seen in children (Hallez et al., 2020; Smith et al., 2019). Children are particularly vulnerable to the persuasiveness and sales intent in food marketing, as their cognitive development is limited compared to adults (Rozendaal et al., 2010). This is of concern, especially given the influence of unhealthy food marketing demonstrated in children (Smith et al., 2019).

In NZ, food and beverage advertising is currently regulated by the Advertising Standards Authority (ASA) under the Food and Beverage Advertising Code (FBAC) (Advertising Standards Authority, 2024). The FBAC applies to all food and beverage placed in any media, including but not limited to; print media, billboards, TV, streaming services, radio, social media, online content creation, email, websites and point of sale materials (Advertising Standards Authority, 2024). While not law, the FBAC is a self-regulatory code that sets expectations and standards to uphold social responsibility towards the promotion of food and beverages for the greater good of the population. The FBAC is defined by three principles; advertisements must display a high level of social responsibility, advertisements must be truthful and not misleading in terms of nutritional value and the advertising sponsorship of occasional food and beverage towards children is to be restricted (Advertising Standards Authority, 2024). Occasional food and beverage is defined by the Advertising Standards Authority (2024) as products that do not meet a specific nutrient profiling score. The FBAC is important to consider as it provides a basis for food and beverage advertising in NZ.

Less is clear about food marketing and its influence on adult populations. However, it is known that adults are exposed to a high amount of unhealthy food marketing across various modes (Mills et al., 2013; Nieto et al., 2022). Few studies have demonstrated the influence of food marketing outcomes in adults, with recent reviews concluding insignificant evidence

when compared to children (Boyland et al., 2016; Mills et al., 2013). Researchers conclude that the majority of the studies situated around adults have limitations in sample size, reliance and mainly focus on lab based experimental or observational work of previous researchers (Mills et al., 2013). However, it is known that adults are exposed to a high frequency of food marketing (Nieto et al., 2022), and may be similarly impacted (Boyland et al., 2025; Vukmirovic, 2015). For instance, adults can be influenced by food marketing through grocery store strategies, such as product, samples and end of aisle displays as well as through TV advertisements (Vukmirovic, 2015). Additionally, food marketing has been associated with hunger and craving in adults, particularly when presented through TV or digital media (Boyland et al., 2024). Moreover, less is known about the influence of food marketing in NZ adults.

It is important to consider how food marketing may influence individuals through different stages of life, not just in childhood. Younger adults are becoming independent in decision-making as well as entering the work force and becoming financially independent (Nelson et al., 2008). Unhealthy food marketing is known to target this group, therefore having an impact on the development of unhealthy eating behaviours that could inflict negative health outcomes such as obesity (Nelson et al., 2008). Good eating behaviour and food choice promotes good health as adults age (Delaney & McCarthy, 2011). Particularly in older adults, who are more susceptible to developing health conditions within the later stages of life (Delaney & McCarthy, 2011).

A model used to explain the success of marketing is the Hierarchy of Effects Model (HEM). The HEM proposes three phases that consumers go through, leading to the purchase of products. The three phases include; 1, the cognitive thinking stage, defined by the awareness and knowledge of a product, 2, the affective stage, being the liking, preference and conviction of a product and 3, the behavioural phase, purchase of a product (Lavidge & Steiner, 1961). The HEM indicates that advertising may not lead to the immediate purchase of a product but acts to influence consumer awareness, preference and decision-making over time (Lavidge & Steiner, 1961). The HEM has been applied in food marketing research finding that repetitive exposure to food advertising triggers positive attitudes, recall and normalisation of products, therefore influencing food choice (Kelly et al., 2024).

An individual's food choice behaviour is shaped by personal, economic, political, environmental and sociocultural influences (McLeroy et al., 1988; Pin-Jane & Marta, 2020). The overall process of food choice and preference is complex and is influenced by multiple factors, which have been demonstrated through the development of theoretical models used in health promotion. The Ecological Model of Health Promotion (EMHP), developed by McLeroy et al. (1988) in the late 1900's seeks to understand human behaviour through multi-level influences relating to food choice. The EMHP (Figure 1) considers five levels of influence being individual, interpersonal, organisational, community and policy (McLeroy et al., 1988). Individual factors include knowledge, preferences and behaviour, while the interpersonal level considers the influence of others (McLeroy et al., 1988). In addition, organisational institutions can influence behaviours (McLeroy et al., 1988), while the community can influence responses and perceived norms (Poux, 2017). Policy refers to current or future policies that could influence behaviour (McLeroy et al., 1988).

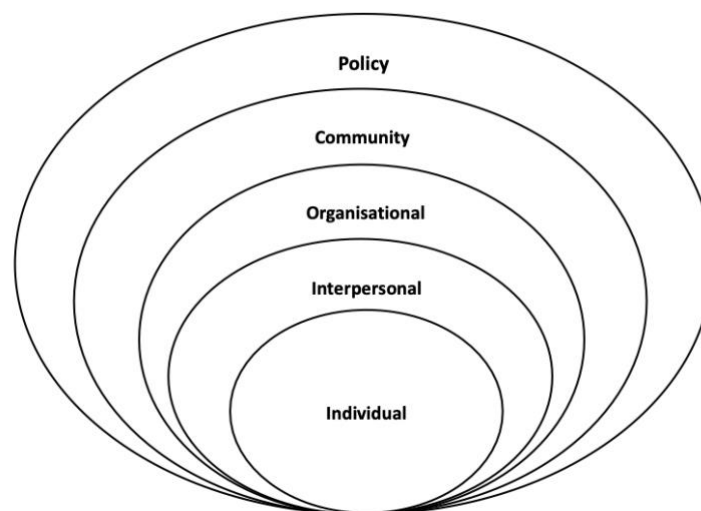


Figure 1: *Ecological Model of Health Promotion*

Food marketing operates across multiple levels and can be applied to aspects of the EMHP. For instance, food marketing shapes individual preferences, influences food choice from others, operates at an organisational level, creates community norms through exposure and can implement policy or induce regulation. Therefore, this thesis uses the EMHP as the

theoretical framework to guide the multi-level influence of consumers' food choices and preferences in a food marketing context. The findings from this study will increase awareness of these factors and help to inform health professionals and policy makers in decision-making.

1.2 Research Aim

This study aims to explore the factors in food marketing that influence food choice preferences amongst NZ Adults.

1.3 Research Objectives

1. To explore the influence of food marketing on food choice between individuals aged 18 to 44-years-old and over 45 years old in NZ.
2. To use the EMHP to understand food marketing and its influence on adults in NZ.
3. To make recommendations that inform future practical, policy and research directions related to the influence of food marketing on adult food choice behaviour.

1.4 Structure of Thesis

This thesis is comprised of six chapters. Chapter One provides background and context on food marketing and identifies gaps in the literature regarding context towards NZ Adults. Chapter Two presents a narrative literature review of the histories in food marketing, common modes of food marketing, strategies used in food marketing and how they influence food choice or preference. Next, the methodology of the study is described in Chapter Three. Chapter four presents the findings of the study, following a discussion of the findings in Chapter Five. Lastly, Chapter Six consolidates the findings of the study in relation to the aim, presents strengths and weaknesses of the study and explores further research opportunities.

1.5 Researcher Contributions

Table 1: *Researcher Contributions*

| Researcher | Contribution |
|---|--|
| Courtney Hampton MSc Nutrition and Dietetics Student | Primary author of the thesis, involved in all of the ethics, participant recruitment, data collection, presentation of findings, data analysis, discussions, conclusions as well as literature review. |
| Dr Ravi Reedy Primary Academic Supervisor | Main supervisor providing guidance and assistance with ethics application, literature review structure, data analysis and feedback of each thesis chapter in preparation for submission. |
| Dr Sharon Henare Co-Supervisor | Guidance and revisions of the complete thesis draft in preparation for submission. |

Chapter 2: Literature Review

This chapter provides an overview of the literature on food marketing and associated food choices and preferences. The first section explores the history of food marketing by noting the changes over centuries and the growth of food marketing globally. Secondly, various modes of food marketing are discussed. Common techniques of food marketing and their influence on food choice are explored in the third section. A summary of the literature is presented in the final paragraph, along with gaps within the current literature.

This review was completed by searching for literature in the databases of Scopus and Google Scholar. Key words and their alternatives were searched such as 'food marketing', 'food choices', 'food marketing influence', 'strategies', and 'techniques'. Grey literature, such as government reports and webpages was searched where applicable.

2.1 Food Marketing History

In the early 19th century, marketing strategy largely focused on the production, transportation and sale of goods (Van Trijp & Meulenberg, 1996). Demand of goods exceeding supply as well as lack of purchasing power was the main driver of marketing methods at the time and wider promotional strategy was not yet considered (Van Trijp & Meulenberg, 1996). However, during this time, food production increased as processing methods and machinery became more advanced (Biswas et al., 2025). This initiated a rapid growth of food production as companies took low cost goods and manufactured them on a large scale to produce products of high value to consumers (Lonier, 2010; Tedlow & Jones, 2014). During this period, major food brands that are seen today began to emerge into wider markets such as Kellogg's and Heinz (Biswas et al., 2025). Variety and product availability increased as buyers had greater purchasing power and demand for specific goods (Van Trijp & Meulenberg, 1996), and mass production drove food prices down (Biswas et al., 2025). In this environment, food marketing became a pivotal method for companies to remain successful (Qader et al., 2022; Van Trijp & Meulenberg, 1996).

Food marketing sort to build confidence and ties of loyalty between sellers, retailers and consumers (Martinho, 2020). Leading into the mid 19th century, marketing strategy shifted with companies utilising mass production, branding and product packaging as a way to shape consumer food choices (Lonier, 2010). Companies began to produce, adapt and market products to satisfy the needs of their target groups more efficiently than their competitors (Tedlow & Jones, 2014; Van Trijp & Meulenberg, 1996). Further, the use of advertising platforms such as radio, television and newspapers became pivotal promotional methods for food products (Biswas et al., 2025; Conference et al., 2015).

Today food marketing has expanded rapidly as companies seek to influence consumers using a wide range of techniques and strategies. This includes the shift of food marketing to online platforms such as social media (Qader et al., 2022). The scale at which food marketing has expanded is reflected on the annual expenditure of food marketing. For example, it is estimated that \$696 million was spent on food and beverage marketing in Canada alone during 2019 (Potvin Kent et al., 2022). Expenditure was highest in advertising medium of TV and digital media, with the most spending completed by fast food restaurants (Potvin Kent et al., 2022). Additionally, Potvin Kent et al. (2022) note that 87% of advertising was spent on unhealthy food and beverage marketing.

There are four key variables of marketing used as a strategy to target consumers. They include; product, price, place and promotion, known as the 4P's of marketing or the 'marketing mix' (Singh, 2012). Each variable can be manipulated to influence consumers and drive a competitive advantage (Singh, 2012). Promotion, being the key element within the marketing mix describes the advertising and promotional methods for the product (Singh, 2012). The marketing mix is crucial to understand when it comes to food marketing and its influence on food choices and preferences, as it describes how marketers target consumers to shape individual preferences. Aspects of the marketing mix, including their strategies will be described throughout this chapter.

2.2 Modes of Food Marketing

Modes of food marketing details the promotional methods that companies use to communicate products to consumers. This is achieved through advertising, defined as “any message, the content of which is controlled directly or indirectly by the advertiser, expressed in any language and communicated in any medium with the intent to influence the choice, opinion or behaviour of those to whom it is addressed” (Advertising Standards Authority, 2025). Food advertising can therefore act as a medium for food marketing, with these terms being used interchangeably. Food advertising details the fourth variable within the marketing mix, being promotion and is achieved via various modes such as print media, outdoor advertising, TV, digital media, and endorsement. Companies often use a combination of marketing modes to increase product exposure and reinforce messages to consumers (Scully et al., 2012). Understanding where individuals are presented with food marketing is important for health professionals and policy makers to better understand the food marketing environment and how it may influence food choice or preferences.

2.2.2 Traditional Modes of Food Marketing

Traditional modes of food marketing include the use of print media, outdoor advertising such as billboards, TV and radio to advertise products to the consumer. The traditional modes of food marketing are explained in the following section.

2.2.2.1 Print Media

Print advertising is one of the oldest forms of food marketing that uses physical materials, visuals and descriptions to convey a brands’ message to a broad demographic (Biswas et al., 2025). It includes the use of flyers, pamphlets or brochures to promote food products to consumers (Qader et al., 2022). Advertisements may also be placed in magazines or newspapers (Hee & Yen, 2018; Qader et al., 2022). Print materials are used to offer discounts, promote new products, advertise specials or advertise a product in general (Biswas et al., 2025), with the purpose of spreading awareness to consumers (Hee & Yen,

2018). Literature points to a large proportion of unhealthy food advertising in print media, raising concern among researchers. For example, studies have shown that food and beverages advertised within supermarket flyers do not align with national nutritional guidelines (Hendriksen et al., 2021; Laframboise et al., 2022; Ravensbergen et al., 2015). This has been demonstrated through research in the Netherlands, finding only 28.9% of healthy food promotion within supermarket flyers (Ravensbergen et al., 2015), while Hendriksen et al. (2021) found 70% of supermarket flyers promoting unhealthy food products. A similar study conducted in Canada found 60% of food in grocery store flyers did not align with national nutritional guidelines (Laframboise et al., 2022). Similar findings have been identified in NZ where supermarket flyers had displayed a high amount of unhealthy food advertising of sugar-sweetened food and beverages, baked, fried or packaged foods high in salt, fat and sugar (Vandevijvere et al., 2014).

The call for supermarket flyers to promote healthy options has been widely suggested, as well as addressing barriers towards healthy food promotion (Hendriksen et al., 2021; Ravensbergen et al., 2015; Vandevijvere et al., 2014). Although these studies do not evaluate the impact of print media and food choices, the frequent exposure to unhealthy food advertisements within flyers may indicate some influence over food preferences. In addition, in the past advertisements placed in magazines have been shown to influence food choice behaviour, particularly among children (Jones & Kervin, 2011; King & Hill, 2008; Vandevijvere & Swinburn, 2014). In contrast, the evidence of the effectiveness of print media in adults is limited, however one study in Malaysia found a relationship between print media and consumer purchasing of food and beverages (Hee & Yen, 2018). However, the type of print media and influence over specific food choices were not addressed in this study.

There is also evidence to suggest that print media may not be as successful compared to modern forms of food advertising such as digital media due to the decline in modes of communication such as physical newspaper sales (Hee & Yen, 2018; Upadhyay, 2014), but it remains relevant amongst older populations. Older adults are more likely to engage in print media compared to the upcoming generation of adults, who are more inclined to use electronic media. (Upadhyay, 2014). The overall finding suggests notable gaps in the research on print media and its influence on food choice preferences in adults, possibly

reflected by the rise in alternative food marketing modes and the difficulty to obtain specific data relating to print media influence.

2.2.2.2 Outdoor Advertising

Furthermore, advertising is commonly used outdoors on billboards, posters at bus stops (Lowery & Sloane, 2014; Wray et al., 2025) or displays on the back of buses, trains, walls or buildings (Qader et al., 2022; Roux & Van der Walddt, 2014). This form of advertising markets goods not typically sold at the location of the sign (Lowery & Sloane, 2014). Outdoor advertising is common amongst marketers due to its cost effectiveness and vast reach to potential consumers (Kelly et al., 2008; Shanmugathas, 2018). Outdoor advertising commonly displays a few words, a catch phrase, product image, promotions or new products (Shanmugathas, 2018). Due to the various locations of outdoor advertising, marketers can place billboards in areas that are easiest to convey their messages (Shanmugathas, 2018).

The majority of outdoor food advertising has been found to display unhealthy food products (Finlay et al., 2022; Lowery & Sloane, 2014). For example, a scoping review conducted by Finlay et al. (2022) of 39 high income countries found that out of 22% of outdoor advertising for food, 63% was of unhealthy nature. Similarly, researchers across Australasia highlight the large volume of unhealthy food advertising around schools in NZ, (Kneller et al., 2025; Maher et al., 2005; Vandevijvere et al., 2018b) Australia (Kelly et al., 2008) and public spaces such as residential areas (Liu et al., 2020). Examples included advertisements for sugar-sweetened beverages, frozen desserts and fast food products (Liu et al., 2020; Vandevijvere et al., 2018b). The impact of such advertising has been demonstrated overseas, with studies correlating outdoor advertisements with food purchasing amongst adolescents. For example, He et al. (2012) and Wray et al. (2025) found that the availability of outdoor advertisements around school and home environments prompted purchases at fast food, convenience or grocery outlets as they made the journey from home to school, indicating an influence over food choice.

However, these studies present limitations as the data was self-reported, potentially leading to biases. When it comes to outdoor advertising and adults, the literature is limited,

particularly towards the impact on food choice and preferences. For example, Finlay et al. (2022) noted three studies to explore outdoor advertising and behaviour or health outcomes, with only two studies to support the association between outdoor advertising and food intake in adults, while the third found little significance. However, it is clear that individuals are exposed to a high amount of outdoor food advertising around home environments, schools and public places, which could point to an influence on food choice, but further research is needed to draw accurate conclusions on the impact of outdoor food marketing, especially towards food choice and preference in adults within a NZ context.

2.2.2.3 Television

Another traditional mode of food marketing is the use of audio-visual methods such as TV advertisements. TV advertising has become an easy way for marketers to target a large population due to TV being an essential item in most households (Qader et al., 2022). TV advertising combines the use of sound and visuals to engage consumers (Qader et al., 2022; Tedlow & Jones, 2014). The success of TV advertisements to influence food choice or preferences has been widely demonstrated within systematic reviews on food advertising amongst children (Boyland et al., 2025; Smith et al., 2019).

Evidence of the influence of TV advertising on food choice and preference in adults is limited. Some observational studies have associated TV food advertising to unhealthy food consumption in adults. For example, Scully et al. (2009) found that adults that spent a greater time watching TV were more likely to consume fast food at dinner time compared to those who spent less time watching TV. Furthermore, TV advertisements have been shown to elicit feelings of craving adults. Food craving is the immediate desire or urge to consume a food product (Boyland et al., 2024). This effect has been demonstrated within experimental studies where individuals reported feelings of craving towards food products following the exposure to food advertisements on TV (Boyland et al., 2024; Boyland et al., 2017). This feeling was exacerbated towards TV advertisements for sugar-sweetened beverages, fast food, snacks and confectionery (Boyland et al., 2024).

In addition, some experimental studies have assessed the priming effect of TV advertisements in promoting immediate food or beverage intake. For example, Koordeman et al. (2010) found TV advertisements for sugar-sweetened beverages promoted intake of these beverages compared to TV ads for water, while Harris et al. (2009) found increased snack intake in children and adults following exposure to food advertisements on TV, compared to when no food advertisements were displayed. The impact of TV advertising on feelings of cravings may indicate some influence over food choice, whereas the ability of TV food advertisements to prime eating behaviours may not reflect food intake outside of an experimental environment.

It is important to note that there has been a shift in recent trends on TV usage with on-demand or streaming services taking preference over traditional or linear TV viewing. For example, a recent report conducted by NZ on Air (2024) noted an overall decline in the use of linear TV and an increase in streaming services or on-demand viewing. While traditional TV advertising may not be a dominant form of food marketing exposure to young people as time spent engaging in digital media increases (Boyland et al., 2025). However, there are currently no studies that indicate the influence of food marketing on food choice and preference in NZ adults.

2.2.2.4 Radio

A final traditional mode of food marketing is presented via radio, often described as broadcast advertising. The introduction of the radio in the early 1920s marked the beginning of broadcast advertising globally (Biswas et al., 2025). Radio advertising, being limited to audio, uses sound, jingles or phrases to gain attention (Biswas et al., 2025). The use of sound provides an advantage over print media as the need to read and analyse text is taken away (Hee & Yen, 2018). In terms of food marketing, radio is often used by supermarkets to broadcast sales and promotions (Qader et al., 2022). However, limited studies point to the impact of radio advertisements on food choice. Qader et al. (2022) note that radio advertisements in moderate tone that elicit positive emotion may have a greater impact on consumers.

2.2.3 Digital Media

Digital media describes the online modes of food marketing used such as social media and email and are important to consider as food marketing trends have shifted towards online modes.

2.2.3.1 Social Media

In more recent years, food marketing has moved from traditional modes of TV and print to digital platforms. The rise of the internet and the establishment of media sharing platforms within the past decade has led to the development of social media (Voramontri & Klieb, 2019). This includes the rise of social media applications such as Instagram, Facebook, TikTok and X, formerly known as Twitter (Biswas et al., 2025).

Social media platforms have become a popular mode for food marketing (Murphy et al., 2020) as they provide a cost effective method for companies to promote food products (Martinho, 2020). Social media can be described as a tool used to communicate and share information to and between users (Lad-Khairnar, 2021). This involves the creation of company generated content such as posts, videos or updates across platforms to expand product awareness to users (Godlewska et al., 2025; Lad-Khairnar, 2021). Techniques include posting special offers, deals, limited edition items, humour in posts and visual elements such as colour, font and use of animations (Elliott & Truman, 2024). Users then engage and connect with posts through likes, comments and shares (Voramontri & Klieb, 2019). Additionally, social media acts as a platform for companies to showcase sponsored advertisements to increase exposure of food products. Sponsored advertisements are common within the food industry, with an estimated \$2.8 billion spent globally across social media platforms between 2020 to 2021 (Bragg et al., 2025). The purpose of sponsored advertisements is to increase brand awareness and build consumer preferences in the hope of eventual purchase (Kulathunga et al., 2024).

Literature points to high exposure of unhealthy food and beverage advertisement on social media in adolescents (Ares et al., 2025; Murphy et al., 2020; Potvin Kent et al., 2019; Qutteina et al., 2019) and young adults (Aljefree & Alhothali, 2022; Molenaar et al., 2021). Due to this, adolescents have been known to recall and engage with unhealthy food adverts on social media (Ares et al., 2025; Kucharczuk et al., 2022; Murphy et al., 2020). These advertisements triggered an increase in desire and preference towards unhealthy food, whereas advertisements for healthy food have been shown to have a minimal effect (Ares et al., 2025; Murphy et al., 2020; Qutteina et al., 2019).

In adults, research on social media food marketing and food choice or preference is limited, however similar findings have been highlighted. For example, a study in Saudi Arabia on university students found that half of the participants purchased food products from social media, particularly that of unhealthy nature (Aljefree & Alhothali, 2022). Their findings indicate that unhealthy food advertising exposure on social media is related to unhealthy food choices amongst students. This is of concern as consumers are often unaware of the persuasive nature and the influence towards the purchasing of unhealthy food and beverage products (Molenaar et al., 2021). In contrast, Molenaar et al. (2021) found that young adults often ignored food advertisements appearing in social media, noting that the exposure and frequency of food advertising was frustrating (Molenaar et al., 2021).

Other research points to differences in purchasing behaviour between men and women from advertisements on social media. For instance, Godlewska et al. (2025) found that men were more likely to purchase food promoted on social media, while women used social media to gain knowledge about food and food products, particularly those of a healthy nature. Additionally, young adults have identified social media food advertisements to be more persuasive in nature compared to TV advertisements for food (Molenaar et al., 2021). This could be explained due to the use of social media amongst this generation increasing meaning that young adults are spending less time watching TV (Aljefree & Alhothali, 2022), further indicating the effectiveness of social media marketing over traditional modes of food marketing, particularly when it comes to influencing younger populations.

In NZ, social media is widely used by companies to promote food and beverage products. Studies have identified the use of Facebook or YouTube for the promotion of occasional food and beverage brands and their products (Garton et al., 2022; Gerritsen et al., 2021; Vandevijvere et al., 2018c). Occasional food and beverage being products that do not align with current NZ Ministry of Health guidelines (Garton et al., 2022). Marketing techniques identified across Facebook and YouTube included offers, limited edition items, sports team endorsements and competitions (Garton et al., 2022; Vandevijvere et al., 2018c).

Advertisements also prompted users to interact with posts, including commenting, sharing or tagging friends as a strategy to increase engagement and exposure of their advertisements (Vandevijvere et al., 2014). The studies assessed user engagement of posts through likes, shares, comments or views with Garton et al. (2022) finding an average of 285 likes, 24 shares and 397 comments between 285 Facebook posts while Gerritsen et al. (2021) noted a reach of up to 300,000 views between Facebook and YouTube advertisements. The impact of food choice and preference was not assessed within these studies, however the engagement and reach of posts containing occasional food products may point to an effect on food choice or preferences in NZ adults as they opt to engage with advertisements of food brands on social media.

2.2.3.2 Email

In addition to social media, companies may use emails as a form of communication to reach consumers. Email is a cost effective marketing mode that targets consumers directly (Biswas et al., 2025). Email marketing involves sending out promotional or non-promotional information to consumers (Thomas et al., 2022). Promotional material includes deals or offers, while non promotional materials aim to inform consumers about new products or build brand connection (Biswas et al., 2025; Thomas et al., 2022). Generally, consumers need to opt in to receive email marketing, usually through signing up or subscribing to a company (Abrahams et al., 2010; Thomas et al., 2022). Although research on the impact of email marketing remains limited, it can promote incentives for purchases, especially when emails contain deals, new products or reminders of past purchases (Kulathunga et al., 2024). Hence, email can be used by marketers to shape consumer food preferences or choice, as

consumers opt to receive emails from various food and beverage retailers, although no specific evidence of this effect was found within the literature.

2.2.4 Endorsements

Food companies may also promote the sale of their products through others, such as celebrities. These collaborations can enhance the credibility and visibility of a brand, prompting food choices especially with consumers who hold an emotional connection towards the promoter (Biswas et al., 2025; Calvo-Porrall et al., 2021). The use of celebrity endorsement has become increasingly common in food marketing to promote the consumption of a product, service or brand (Calvo-Porrall et al., 2021). It poses an effective marketing mode to influence food consumption and purchasing behaviour (Calvo-Porrall et al., 2021). For instance, Calvo-Porrall et al. (2021) found that consumers are likely to pay premium prices for food products that are endorsed by their favourite celebrity, therefore indicating an influence over food choice.

Moreover, celebrity endorsement associated with sporting personnel has been found to influence preference and consumption of energy dense nutrient poor food products in children (Dixon et al., 2014) while also enhancing recall and awareness of unhealthy food products endorsed by celebrities through social media (Kucharczuk et al., 2022; Murphy et al., 2020). Similar research has been found in adults, where celebrity sport endorsement may lead to higher consumption of unhealthy food and beverages (Zhou & Kraak, 2022). Overall, celebrity endorsement has been demonstrated within literature to impact consumer purchase intention, food choice or preference, particularly in children. However, research poses limitations due to low sample size, study design and focus on children, limiting the evidence in adults, particularly within a NZ context.

2.3 Techniques used in Food Marketing

This section will discuss the various techniques used by markets to influence consumer food choice and preference. Techniques of price, packaging, labelling and product placement and

how these may influence food choice or preferences is explained in the subsequent paragraphs of section 2.3. This section details the variables of price, product and placement within the marketing mix, and is therefore crucial to understand the strategies used by marketers and their potential influence on food choice and preferences.

2.3.1 Price

Price is an important component of food marketing strategy as it determines a products affordability and ability to create profit, as well as influencing consumers' purchasing decisions (Biswas et al., 2025). There are three main methods that companies use to determine the price of a product including; cost, value and competition based pricing (Biswas et al., 2025). Cost-based pricing is determined by the overall price of a product by taking into consideration the cost of production, distribution, marketing spend and mark up to obtain reasonable profits from sale (Biswas et al., 2025; Singh, 2012). Value-based pricing considers the perceived value, benefit and price consumers are willing to pay, rather than the overall price (Biswas et al., 2025). Competition based pricing is used to set the price based on what competitors are charging (Biswas et al., 2025).

Sales and promotions are an important component of the marketing mix used as an incentive for consumers to purchase products (Hawkes, 2009). Research indicates that the price of food and beverages is a key element of food choice and preferences. In NZ, a study on household purchases found that 46% of food and beverage purchases were completed with products on promotion (Tawfiq et al., 2022). Promotion was largely dominated by food products that do not support healthy eating behaviours, such as those with a low Health Star Rating (HSR) or sugar-sweetened beverages (Tawfiq et al., 2022), therefore indicating that price strategies may influence unhealthy food choices.

In addition, research has identified that healthy items such as fruit, vegetables, milk and bread are less likely to be on promotion within supermarkets, compared to packaged foods of snacks, sugar-sweetened beverages and confectionaries (Powell et al., 2016). The effect on food choice has been demonstrated through supermarket purchasing data that found

that purchases were higher for sugar-sweetened beverages, grain snacks and sweet snacks items on sale when compared to fruit and vegetable promotion (Phipps et al., 2014). Therefore, the price has an influence over food choice and preferences, as consumers are inclined to select products based on pricing strategy.

2.3.2 Packaging

Food packaging is important to consider regarding the choice of individuals. Visual elements such as colour and branding are strategies used to draw attention to a product (Li et al., 2020; Prinsloo et al., 2012). Packaging details the 'product' within the marketing mix, with various aspects of colour, branding and physical packaging detailed in the following section of 2.3.2.

2.3.2.1 Colour

Packaging colour can fulfil both aesthetic and psychological perceptions as consumers associate colour with meanings and judgements (Biswas et al., 2025; Steiner & Florack, 2023). Warm vibrant colours such as red and yellow relay feelings of excitement, joy or energy, while blue and green signify calmness (Hallez et al., 2023; Mead & Richerson, 2018). The colours of red and yellow are used to gain attention and promote a sense of urgency (Biswas et al., 2025). Hence, these colours are often used in the packaging of unhealthy snacks or beverages (Biswas et al., 2025). Individuals have been known to associate warm colours with higher saturation with unhealthy food products (Mead & Richerson, 2018; Steiner & Florack, 2023). This is evident as Su and Wang (2024) found that warm packaging increases consumer purchase intention for unhealthy food products, compared to when packaged in cool colours. However, it is noted that colour preference remains variable amongst consumers and can come down to individual preferences (Kauppinen-Räsänen, 2014) or overall aesthetic of the packaging which may elicit positive emotion, regardless of its colour and is therefore a better indicator at driving food choice or preference (Kauppinen-Räsänen, 2014; Mohebbi, 2014).

Colours are also used by marketers to dictate the perceived healthfulness of a product. Light coloured packaging is a common strategy used in the promotion of healthy food products (Mai et al., 2016; Mead & Richerson, 2018). Light tones such as blue and green may influence perceptions of health (Hallez et al., 2023). For example, in Tijssen et al. (2017) less saturated colours such as white and blue were associated with perceived healthiness, and may influence health conscious individuals. On the other hand, these individuals may associate colours of higher saturation with unhealthy products (Mead & Richerson, 2018; Steiner & Florack, 2023). For example, Mead and Richerson (2018) found that consumers reported muesli bars packaged in bright, high saturated colours to be less healthy compared to those in less saturated packaging.

In contrast, unhealth conscious consumers may find light colours less attractive compared to high saturated warm colours (Tijssen et al., 2017). This perception of healthfulness has been shown to lower taste expectation amongst these consumers (Hallez et al., 2023). Due to the influence of colour and perceived healthfulness, it has been suggested that pale colours should be used with caution when trying to nudge consumers towards healthier food choices (Mai et al., 2016). However, it is important to note that perceived healthfulness of packaged products may vary between food categories (Plasek et al., 2020; Steiner & Florack, 2023). As such, the colour of the packaging may not indicate if a product is actually healthier, leaving consumers vulnerable to the influence of product packaging colours when trying to promote healthy food items.

2.3.2.2 Branding

Branding involves adopting a specific logo or name for a company, which sets them apart from other products and their competitors (Biswas et al., 2025; Ismail et al., 2017). One marketing strategy of branding aims for consumers to develop preference, satisfaction and loyalty toward a specific brand (Martinho, 2020). In doing so, companies obtain the trust and satisfaction of consumers, leading to an increase in sales and profit of their brand (Ismail et al., 2017). Consumers will often have at least two brands in mind between product categories (Martinho, 2020), while at least 70% of consumers' brand decisions are made in

store, even as they enter a supermarket with a planned shopping list (Kauppinen-Räsänen, 2014).

Consumers often remain loyal to specific brands and their products. Loyalty develops as consumers make repetitive purchases from the same brand, due to previous satisfaction (Ismail et al., 2017), brand exposure over the lifetime (Frost et al., 2025) or through brand awareness over time (Lou & Yuan, 2019). Brand awareness can act as a short cut to decision-making, shaping consumers' purchase intention (Lou & Yuan, 2019), therefore acting as a component on brand loyalty. Brand loyalty often develops from a young age, with children obtaining preferences towards specific brands and their products namely through advertising exposure that proceeds into adulthood (Boyland & Halford, 2013b).

Studies indicate mixed findings of brand loyalty that differs across the generations of adults. For example, millennials have a strong correlation with food and beverage brand image and loyalty, as they have been conditioned to brand imaging over time (Ismail et al., 2017). However, this generation have been known to follow current trends and select the newest brand or product on the market (Ismail et al., 2017). Older adults are less inclined to switch brands once a preference or liking to a specific brand has been established (Fraccastoro & Karani, 2010).

2.2.2.3 Physical Packaging

Physical packaging refers to the material that a product is presented in. Materials such as plastic, cardboard, aluminium, and steel are widely used and function as a protective mechanism through transport, handling storage and food safety (Cordeiro et al., 2025). Packaging can also act as a marketing strategy used by food companies to influence choices (Biswas et al., 2025). For instance, packaging products into sustainable materials can influence environmentally conscious consumers and shape preference towards products or brands (Biswas et al., 2025) as trends in green consumption and the demand for sustainable packaging continues to grow (Donato et al., 2021). Research suggests that sustainable packaging, such as recyclable materials holds greater importance to consumers who are environmentally conscious (Martinho et al., 2015).

2.2.3 Labelling

Food labelling communicates information about a product to assist or draw consumers into purchase (Prinsloo et al., 2012). Techniques focused on in this section include health claims and nutrition content labelling and are detailed in the following section.

2.2.3.1 Labelling Requirements

Food labelling is regulated by governing authorities, with each country having specific labelling requirements for packaged food products (Biswas et al., 2025). In NZ, food labelling is regulated by the Food Act 2014 and the Australia NZ Food Standards Code (ANZFSC) (Ministry for Primary Industries, 2022a). The ANZFSC states that packaged food products must display in English; a name or description, date mark, batch number, physical address, net contents of the food, storage instructions, ingredient list, allergen declaration and a nutrition information panel (Food Standards Australia New Zealand, 2025).

2.2.3.2 Health and Nutrient Content Claims

Front of pack (FOP) labelling can help consumers identify the nutritional elements of a product (Ikonen et al., 2020). One type of FOP labelling is the voluntary display of health claims or nutrient content claims. Health claims are statements presented on the front of a product that depict nutritional benefits in relation to health (Biswas et al., 2025). For example, calcium being good for bone health. However, the claim must meet specific conditions set out by the ANZFSC (Food Standards Australia New Zealand, 2025).

Additionally, nutrient content claims for fibre, salt, protein, fat, sugar or energy and may state as being low, high, free, source of or contains (Biswas et al., 2025). These claims may display a numerical value such as grams or percentage of the nutrient that the food contains. Like health claims, nutrient content claims are regulated by the ANZFSC and must meet specific conditions. For example, a product claiming to be a good source of fibre must contain at least 4g of dietary fibre per serving (Food Standards Australia New Zealand, 2025).

In NZ, nutrient content claims are more widely used than health claims, with 43% of surveyed products containing a nutrient content claim and 6% containing a general health claim in 2022 (Ministry for Primary Industries, 2022b).

However, researchers question the authenticity of nutrient content and health claims stating that they may mislead consumers towards products that aren't necessarily classified as being 'healthy' (Al-Ani et al., 2016; Gorton et al., 2010). For example, in a sample of 7526 products, Al-Ani et al. (2016) found one third of products classified as being 'unhealthy', displaying claims with 26% nutrition content and 7% health claims respectively. This points to concerns about the authenticity of nutrient content claims on products, while positively influencing the purchase of both healthy and unhealthy products (Ikonen et al., 2020). The influence of health and nutrient content claims varies between consumers. Studies on adults have indicated that individuals often mistrust claims, stating that they are 'just a marketing tactic' used to perceive a product as being healthy (Chan et al., 2005; Lawrence et al., 2017; Stuthridge et al., 2022).

However, some consumers may perceive a product with a nutrient content claim of fat free and no added sugar as being healthy overall, therefore influencing food choice (Gorton et al., 2010). Additionally, claims relating to low or reduced fat content have been found to influence consumers through increased purchase intention (Chan et al., 2005; Mai & Hoffmann, 2015). Practically in women, who were more likely to choose a product with a nutrient content claim relating to fat (Lynam et al., 2011).

Research in Australia and NZ has indicated that over two thirds of participants had purchased a product after reading a nutrient content claim, with fat or sugar claims being main drivers of label use on food choice (Colmar Brunton Social Research, 2007). In addition, consumers may check the nutrient content claim against the nutrition information panel to ensure that they are not being misled towards a product (Chan et al., 2005; Lawrence et al., 2017). Other studies have found that individuals with health conditions may find claims helpful, but this depended greatly on their education level and understanding of the health claim itself (Lynam et al., 2011; Stuthridge et al., 2022; Svederberg & Wendin, 2011).

2.2.3.3 Interpretive Nutrition Labelling

Governments have adopted interpretive FOP strategies to help guide consumers towards healthier food purchases (Bablani et al., 2022; Campos et al., 2011; Ni Mhurchu et al., 2017). Interpretive FOP labels give a food product an overall nutrition score or summary of nutrients (Hallez et al., 2020). They provide a visual for consumers to make a quick judgment of the healthfulness of a product, without the need to read extensive labels (Biswas et al., 2025; Stuthridge et al., 2022). A systematic literature review conducted overseas found interpretive nutrition label use more effective than health claims, but concluded mixed evidence on food choice in adults and children (Hallez et al., 2020). However, they may have an effect when used in conjunction with a nutrient content claim (Talati et al., 2018).

In NZ, the HSR may be used as a form of interpretive nutrition labelling on food products. The HSR was adopted in 2014 as a voluntary method to compare the health rating of food products within the same category (Ni Mhurchu et al., 2017). It uses a ranking system between zero and five stars based on a products energy or nutrient content; sodium, sugar, saturated fat, fibre, protein or calcium content (Bablani et al., 2022; Ni Mhurchu et al., 2017). In Bablani et al. (2022), the HSR was more likely to be adopted on cereals, produce, convenience foods and meats compared to confectionery and sugar-sweetened beverages or used by brands with a variety of products. Due to this, the HSR was more likely to appear on products with a HSR of 4.0 to 5.0 stars (Bablani et al., 2022).

There is evidence to suggest that HSR has encouraged companies to reformulate existing products to improve the HSR as part of a wider marketing strategy (Ni Mhurchu et al., 2017; Vyth et al., 2010). However, studies have found mixed evidence on the impact of the HSR on consumer choices as Bablani et al. (2022) and Hamlin and McNeill (2018) note limited impact on consumer purchase or choice, while Hallak et al. (2021) found the HSR to influence beverage choice, indicating that more research is needed to draw accurate conclusions towards the impact of the HSR and consumer food choices.

2.3.4 Product Placement

The layout of food retail environments, such as supermarkets is important to consider regarding food choices as they are the main source of food for high income countries, including NZ (Young et al., 2020). Supermarkets often have a strategic layout, designed to influence food choices at the point of purchase (Aires et al., 2024). The placement and layout of food products within a supermarket can determine whether a product sells (Cohen & Babey, 2012). Therefore, manufacturers pay retailers to display their products within supermarkets in areas known to influence sales (Cohen & Babey, 2012). Factors to consider are end of aisle displays, the height of the product on the shelf and items located around the checkout area (Cohen & Babey, 2012). End of aisle displays are mainly used as a strategy to display products on promotion (Nakamura et al., 2014).

Product placement is known to influence adult purchasing decisions within food retail environments (Cohen & Babey, 2012; Glanz et al., 2012). For example, in a review conducted by Glanz et al. (2012) end of aisle displays were identified as being a main influence over consumer food purchases, therefore having an influence over food choices, while Cohen and Babey (2012) estimate 30% of supermarket purchases come from end of aisle displays. Furthermore, the allocation of shelf space for products within retail environments is another strategy used to influence consumer choices. Scarce shelf space within the retail environment is an issue that manufacturers face therefore, they pay retailers to display their products on the shelves through 'slotting allowances' (Marx & Shaffer, 2010). Slotting allowances are the locations on the shelf paid for by companies to display food products (Marx & Shaffer, 2010). Research suggests that products placed in middle or top shelf locations are more likely to be selected by consumers (Chandon et al., 2009), therefore may drive manufacturers to select these positions.

Additionally, checkout areas encourage impulse purchases as they encounter a high amount of foot traffic as consumers pay for their goods (Miranda, 2008). Products placed at the checkout area are mainly classified as being of unhealthy nature including, sugar-sweetened beverages, confectionery or chewing gum (Cohen & Babey, 2012; Lam et al., 2018). There is

evidence to suggest that adults found difficulty in resisting items at the checkout area, resulting in impulse purchases even when aware that the product selected is not considered healthy (Ford et al., 2020).

The manipulation of product placement to display healthier food items has been assessed to promote healthier food purchase, thus consumption in adults. There is a positive influence in food choice in enhancing the salience of healthy food and beverage products in end of aisle and eye level areas on dietary outcomes, therefore food choice (Shaw et al., 2020). However, their findings conflict with previous research by Escaron et al. (2013), noting inconclusive evidence, but acknowledging some positive influence on the placement strategy of healthier food and purchases.

2.3.5 Sponsorship

Sponsorship is a marketing strategy commonly used within a sports environment to promote specific products or brands (Cornwell, 2008). Many sports teams, events or clubs rely on sponsorship as a financial backbone, while marketers benefit through brand or product awareness and exposure (Greenhalgh & Greenwell, 2013). Companies select who to sponsor based on media coverage at regional and national levels, cost effectiveness or reach of targeted consumers (Greenhalgh & Greenwell, 2013). The sports environment in NZ is known to have a large proportion of food and beverage sponsorship from companies that do not promote healthy lifestyles. This is evident in both national and regional sport settings (Batty & Gee, 2019; O'Brien & Kypri, 2008). Scholars have increasing concern around the use of such sponsorship within sporting environments, placing pressure on sports outlets to reconsider their sponsorship approach (Batty & Gee, 2019). Research has indicated that unhealthy food sponsorship in sports increases the awareness and preferences towards unhealthy food products in young adults (Dixon et al., 2018).

Other research points to the impact of alcohol sponsorship on intake within regional sports clubs in NZ. For instance, O'Brien and Kypri (2008) found that players belonging to a sports club affiliated with an alcoholic beverage sponsor were more inclined to consume the beverage provided by the sponsor. There has been calls for a complete ban on alcohol

sponsorship, as appealed for by a private members bill (Chambers et al., 2021). The bill acknowledges the impact of alcohol sponsorship in NZ sports and its potential to influence preference and consumption with concerns of harm to the health of the NZ population (Chambers et al., 2021).

2.4 Summary of the Literature Review

This chapter presented an overview of food marketing including the history, various modes of food marketing and techniques used to influence consumers' food choice or preferences. The review indicates the expansion of food marketing over the centuries, particularly regarding the shift from traditional modes (print and radio) to digital modes such as social media. There is extensive literature that points to unhealthy food marketing through the modes of print media, outdoor advertising, TV, social media and endorsement and its influence on children's food choice or preference. There was some evidence found on the influence of food marketing advertisements on adults' consumption or preference of unhealthy food or beverages through TV (Boyland et al., 2024; Boyland et al., 2017; Harris et al., 2009; Scully et al., 2009) or purchase intention through social media (Aljefree & Alhothali, 2022).

Moreover, multiple techniques used in food marketing presented an influence over food choice and preference. This included pricing strategies (Tawfiq et al., 2022), packaging colour and perceived healthfulness (Mead & Richerson, 2018; Tijssen et al., 2017), branding strategies indicated to influence brand loyalty (Lou & Yuan, 2019), as well as sustainable packaging, used to influence environmentally conscious consumers (Biswas et al., 2025; Martinho et al., 2015).

In addition, labelling strategies such as nutrient content claims were shown to influence some consumers (Colmar Brunton Social Research, 2007; Gorton et al., 2010) however, researchers questioned the presence of nutrient content claims presented on unhealthy products (Al-Ani et al., 2016). Research indicated the HSR was widely used, however had an insignificant influence over food choice (Bablani et al., 2022). Moreover, the literature found

that product placement strategies (end of aisle, checkout areas, shelf location) are commonly used to influence consumers (Cohen & Babey, 2012), while sponsorship was largely devoted to unhealthy food and beverage products within sports environments, with its influence being demonstrated among young adults (Dixon et al., 2018).

There are notable gaps presented within the literature on the effect of food marketing and food choice and preference in adults. For instance, the lack of high-quality evidence and use of experimental or qualitative research throughout each mode or technique of food marketing present limitations in the evidence. Even so, a lot of the research presented focused on children, adolescents or young adults, with evidence towards the impact of food marketing between adult generations limited, presenting a gap of valuable literature in this population.

Furthermore, there were gaps of evidence within print media, outdoor advertising, radio and email food marketing modes as the influence of food choice preference in adults and not been rigorously studied. This implies that these forms of advertising modes are not the current focus of researchers, maybe due to the shift in traditional food advertising to alternative modes, or difficulty to obtain results within an observational nature. There is limited evidence of association or influence between food marketing and food choice and preference within a NZ context.

The next chapter (Chapter 3) presents the methodology used in this study. It details aspects of the study design, data collection and analysis used to explore the effect of food marketing on food choice and preference in NZ adults

Chapter 3: Methodology

Chapter 3 outlines and justifies the methodology used in this study. This chapter commences by noting the ethical considerations, followed by the study design, participant criteria, recruitment and data collection. The final section details the process of data analysis for the development of results.

3.1 Ethics and Consent

The study and methodology were approved by the Massey University Human Ethics under a low-risk application (notification number 4000027419) in March 2024. Information considered within this application was participant autonomy, storage and use of data, and exclusion criteria. Participants under the age of 18 were excluded from this study. At the beginning of each interview, participants were reminded of their rights and given an opportunity to opt out.

3.2 Study Design

A qualitative research approach in the form of semi-structured interviews was applied to this research. Qualitative research uses non numerical data to grant researchers access to participants' experiences, perspectives and behaviours surrounding a topic of interest (Benlahcene & Ramdani, 2020; Creswell & Poth, 2016). Qualitative methodology is an accepted approach used within marketing research to explore the 'how' 'what' and 'why' of advertisement or marketing phenomenon and how it may influence perception, attitude or behaviour of individuals (Maison, 2019). The qualitative research approach can therefore be considered appropriate to the design of this study to explore the factors in food marketing that influence food choice preference in NZ adults.

Semi-structured interviews are deployed in qualitative research, allowing for a flexible structure guided by open-ended questioning style to explore participant ideas or experiences in-depth (Benlahcene & Ramdani, 2020). Interview questions were formulated

through applying two questioning levels of main theme and follow up questions to allow participants to speak freely and expand on their experiences (Kallio et al., 2016). Follow up questions were applied to probe and direct the interviewee toward the study objectives (Benlahcene & Ramdani, 2020). Probing techniques offer participants time to gather and expand their thoughts while allowing unexpected information to emerge (Benlahcene & Ramdani, 2020). Semi-structured interviews were therefore applied to this research as an appropriate data collection methodology to address the aim and objectives of this research.

3.3 Participant Criteria

To be eligible to participate in this study, participants needed to be 18 years of age or older and living in NZ. This study aimed to explore the influence of food marketing on NZ adults, therefore anyone under the age of 18 was not considered. Additionally, this research focused on food marketing in an NZ context, therefore participants were recruited from NZ to ensure that participants were exposed to similar food marketing techniques and methods.

3.4 Recruitment

Recruitment for this study occurred via private Facebook community groups. Social media applications such as Facebook are efficient channels used to recruit research participants and enable access to a large group of users across diverse demographics and backgrounds (Darko et al., 2022). The main researcher requested access into seven Facebook community groups on the Northshore of Auckland NZ; Hobsonville Point, Schnapper Rock, Takapuna / Milford, Torbay, Birkenhead / Northcote, Beach Haven / Birkdale and Devonport. Upon acceptance, a recruitment poster (Appendix A) was uploaded into each community group, asking for volunteers to take part in the study. The recruitment poster included the contact details of the main researcher and a QR code that led to a Google Form. The Google form asked volunteers for their name, age range, gender and email address. Age range included 18 – 44 years old group and more than 45 years old group. Eligible individuals were contacted by the main researcher and sent the participant information sheet (Appendix B)

and consent form (Appendix C) as well as interview date availability, should they wish to participate. Upon receiving the consent form and interview availability, the participants were then emailed a Zoom invitation for the agreed interview date and time. Recruitment posters were also printed and placed in the bathrooms and the notice board of the Massey University Albany campus library.

3.5 Interview Facilitation / Data Collection

Discussions around interview strategy were held between the primary researcher and the main supervisor of this study. Interview concepts such as open-ended questioning strategy and probing were discussed before the primary researcher undertook the interviews for this study. The main supervisor provided feedback and guidance on the interview schedule and structure to ensure the application of open-ended questions and logical flow. The interview schedule was set out to follow the nature of the EMHP at all levels; individual, interpersonal, organisational, community and policy identified by (McLeroy et al., 1988).

All interviews were conducted online via Zoom, on the main researcher's computer with participants attending remotely online. Interviews were completed between July to August 2024. Each interview lasted between 30 – 40 minutes to ensure there was sufficient time to capture participant thoughts and experiences related to food marketing. The interview began with the main researcher introducing themselves and explaining the basis of the study research aims. The consent form was reiterated with verbal consent obtained to proceed with the interview and recording for transcription purposes. Participants were given an opportunity to ask questions or opt out of the interview. For privacy reasons, the participants were given an option to have their camera on or off during the interview. Following this, the main researcher proceeded with the interview and participants were asked a set of pre-determined questions outlined in Appendix D.

Interviews were conducted to the point of saturation, where no new themes or information emerged, leading to a redundancy in data collection (Renjith et al., 2021). Saturation was determined by the main researcher following the 15th interview, where there was sufficient

data obtained to reflect the research objectives and no new information was being captured. Saturation in qualitative research has been found to be achieved by 9 to 17 interviews (Hennink & Kaiser, 2022), while the saturation range of semi-structured interviews falls between 5 and 20 (Creswell & Poth, 2016), therefore supporting the interview number of this study.

Initial coding of the interview recordings included taking the first letter of the participant's name and age range, e.g.: M18-24. Recordings were further coded into participant number and age group, e.g.: G1P1, forming the two age groups of this study; 18 to 44 and over 45-year-olds.

The two age groups of this study were selected to represent different adult generations, who are likely exposed and influenced by different modes of food marketing and have differences in food preferences. Participants aged 18 to 44 years old captures Generation Z, born between 1997 to 2012 and Millennials, born between 1981 to 1996. The over 45 years group was selected to represent Generation X, born between 1965 and 1980.

3.6 Data Storage

The data obtained in this study were saved within Microsoft Word documents and NVivo software password protected by a University account belonging to the main researcher. Interview recordings and transcripts were saved within folders on the desktop computer of the main researcher. All personal identifiers of participants were removed. The data obtained in this study is to be stored for no longer than five years following the studies completion and will be deleted thereafter.

3.8 Data Analysis

Audio recordings were uploaded onto Otter.ai, a transcription software that produced the transcripts of each interview. Interview transcripts were saved and carefully edited to maintain fluency by removing non meaningful words or general chatter. Once transcripts

had been checked for fluency, they were uploaded in NVivo (Version 15). NVivo being a qualitative data analysis software used to manage, sort and organise data to find connections themes or patterns was an appropriate application for data analysis of this study (Nvivo: Leading qualitative data analysis software, n.d).

The data obtained in this study was analysed thematically using the six steps of thematic analysis by Braun and Clarke (2023). Firstly, the main researcher read through each transcript to become familiar with the data and concepts relating to the research objectives (Braun & Clarke, 2023). Next, coding was achieved through highlighting quotes and establishing codes and definitions (Braun & Clarke, 2023). Once coding had been completed, emerging themes were identified, with codes being reorganised into sub-themes (Braun & Clarke, 2023). Following the final phases of thematic analysis, the main themes and sub-themes were reviewed and named to produce the final themes of the study (Braun & Clarke, 2023). The main themes were then organised in relation to each level of the EMHP, and presented as Table 3 in the Results chapter (Chapter 4).

3.8.1 Validity and Reliability

The credibility of this study was enhanced through including reflexivity and recognition of the primary researchers' own bias and preconceptions (Renjith et al., 2021). The bias considered included their background in nutrition and dietetics, and their female gender of white NZ European descent. The unconscious bias was continually reassessed throughout the process of this research. This was done through a personal reflection of data collection, literature review and discussion with supervisors. In addition, the coding of the qualitative data underwent several iterations as a reflective exercise to ensure effective capture of themes. The themes and sub-themes were also reviewed by the supervisors, and this exercise ensured revisions and the final confirmation of themes by consensus.

3.9 Chapter Summary

Chapter 3 justified and explained the methodology used for this research by noting the study design, criteria, recruitment of participants, data collection, storage and analysis. The following chapter (Chapter 4) presents the findings of the study and identifies emerging themes and sub-themes between both age groups, identified from the data analysis.

Chapter 4: Results

This chapter provides an overview of the participant groups and themes generated from the data analysis. In total, 15 participants took part in this study. Participant groups identified as Group 1, 18 to 44 years old (n=8) and Group 2, >45 years old (n=7), as indicated in Table 3. A complete breakdown of participant age range and gender is presented in Table 2.

Table 2: Overview of Participants

| Group | Age Range | Number of Participants | Number of Males | Number of Females | Total Number of Participants |
|---------|-----------|------------------------|-----------------|-------------------|------------------------------|
| Group 1 | 18 – 24 | 4 | 1 | 4 | 8 |
| | 25 - 34 | 3 | 2 | 1 | |
| | 35 - 44 | 1 | 0 | 1 | |
| Group 2 | 45 - 54 | 5 | 0 | 5 | 7 |
| | 55 - 64 | 1 | 0 | 1 | |
| | >65 | 1 | 0 | 1 | |
| Total | | | 3 | 12 | 15 |

4.1 Emerged Themes and Sub-themes

There were 7 major themes identified in this research. These themes are supported by sub-themes that relate to marketing and food choice behaviour. The key themes reported below are (1) Health consciousness, (2) Packaging attributes, (3) Interpersonal influence, (4)

Product placement, (5) Price, (6) Exposure and influence of food marketing, and (7) Suggestions to improve marketing that promote healthier choices. Each sub-theme is supported by sub-themes and separated into participant age groups.

Theme 1.0: Health Consciousness

Participants in both groups expressed mixed thoughts about food labelling techniques such as nutrient content claims or interpretive labelling, such as the HSR. Some being drawn into or influenced to purchase food or beverages utilising these techniques, indicating a level of health consciousness, however some were more suspicious of such strategies.

Sub-theme 1.1: Nutrient Content Claims

Nutrient content claims had a high influence amongst participants aged 18 to 44 years old as they often opted for products perceived as the healthiest.

18 – 44 years age group

Participants in the 18 to 44 years age group were influenced by energy drinks with claims of zero sugar.

*“If they're, zero sugar I'm more likely to go because I drink energy drinks.
and I'm more likely to go for the zero sugar than the, like, full sugar ones”.*
[G1P1]

While others reported the influence of high protein nutrient content claims in yoghurt and muesli bars.

“Zero sugar, that's what I look for in my drinks, and then high protein or fibre, what I look for in my muesli bars or protein yogurt as well, high protein, is usually what I would go for”. [G1P6]

Participants reported perceiving products with nutrient content claims of reduced sugar and more fibre as a healthy option, compared to products with no nutrient content claim and would purchase food products that displayed a nutrient content claim over one that did not.

“I always try to go for the healthier option. So, if something doesn't I guess I think muesli bars, if it says it's healthier than the other one with less sugar or more fibre then I'd probably pick it up more than the one that doesn't say anything...”. [G1P1]

However, it was reported that nutrient content claims only had an influence when the food product was inexpensive.

“But then again, the price is probably the biggest thing. Like, if it's way more expensive than I wouldn't go for I'd go for the cheaper one. But if it had like, a low price and the like health claims on it, then I would definitely go for it”. [G1P1]

While another participant reported that nutrient content claims had begun to discourage food choice of products, explaining that often other ingredients are added to compensate.

“I've noticed over the last year or so that if they are claims of things like sugar-free or low fat on a product...it actually discourages me where, at some point it attracted me, it now actually actively discourages me from even picking up the product. If something is sugar-free, there's probably

something else to compensate. If something is low fat, there's probably something else to compensate". [G1P8]

>45 years age group

Similarly, participants in the over 45 years age group reported being influenced to choose food products displaying nutrient content claims relating to sugar and fibre, while additionally reporting influence of fat claims on food choices.

"Low fat, sugar-free. Yeah, that definitely draws me to it, to at least have a look anyway. I think especially when I stand in front of the muesli bars... that's a big one normally they have the claims, like it might be saying high fibre". [G2P9].

"The ingredient I care about is the sugar, yeah, and some additional ones that is not that natural. I'd prefer sugar-free. When I bought some yogurt, I always buy the sugar-free, low fat one, like Greek. I think it means more protein in it". [G2P13].

Sub-theme 1.2: Health Star Rating

Participants reported that food choices were guided by interpretive nutrition labelling, such as the HSR. However, some participants reported that the HSR had no influence over food choice.

18 – 44 years age group

Participants in the 18 to 44 years age group reported using the HSR to make healthy food choices.

“New Zealand is a specific authority in New Zealand that provides that healthy stars rating. That would influence me yeah, because the closer to five stars, is more healthy, I will go and purchase it”. [G1P7]

While other participants were less concerned about the HSR on products, explaining that it did not influence them as much as it would for their friends.

“I know people look at the health stars and some of my friends do but not really, like, I can't say I read the nutrition information and stuff like that, I'm too concerned about that”. [G1P2]

>45 years age group

In contrast, participants aged over 45 years old were less likely to be influenced by the HSR, claiming that is it just a marketing strategy, or thinking that companies need to pay to add the HSR to their packaging.

*“I tend to just ignore the health stars...that is a marketing ploy to me”.
[G2P13]*

“I've heard that people have to buy their health claims. Some products that don't have that health rating on it, but you have to pay to get that star put on. So, I don't take a lot of notice of that”. [G2P14]

Theme 2.0: Packaging Attributes

A common theme between participant groups was the influence of product packaging. This included aspects of the packaging design, colour, branding and the physical packaging of

food products, all influencing the food choices or preferences of participants within a supermarket environment.

Sub-theme 2.1: Packaging Design

18 – 44 years age group

Participants aged 18 to 44 years old reported having a preference towards food products with minimalistic packaging that was plain, simple and easy to read compared to messy distracting packaging which was perceived by some as being lower in quality overall.

“If the packaging is simple and not too busy, I would normally go for products where I can read what is clearly and it’s not that old fashion bright, messy packaging. I feel like I wouldn’t choose those products as they feel like they would be less quality than products with simple aesthetic packaging”. [G1P4]

“If the labelling and the physical imagery on the on the product itself, if it's cleaner design I'm more inclined to try it or to look at it over something that is really busy or has a lot of small print on it kind of distracts me too much”. [G1P8]

While others reported that they would choose food products based off artistic designs or images.

“If I buy things like craft beers, I'll pay attention to the design a lot more. They've always got real artistic hard work on them, on the cans...I don't know enough about wine to choose based on the flavours, so if the bottle looks cool or has a nice design then I will choose it”. [G1P6]

“I drink oat milk, and I go for the same brand, the Boring oat milk just because the bottle is cooler compared to the other ones...It just looks nicer,

looks cleaner and more fresh than the other brands with aesthetic colours and an image of a bear". [G1P1]

>45 years age group

Similarly, participants aged over 45 years old preferred products with simple packaging and disliked those that were busy and harder to read.

"Probably one where the packaging looks professional, and someone's thought about it, and it's not cluttered, and it's easy to read, and it's appealing". [G1P12]

Sub-theme 2.2: Colour

Aspects of colour were reported to be of significance to participants' food choices in the 18 to 44 years age group.

18 – 44 years age group

One participant reported that they often selected beverage products that were blue, while another participant reported that natural coloured packaging such as green was appealing as it related to health.

"I was looking at a vending machine before and trying to pick out which drink to drink today, and this one was chosen because it's blue. But I know I like the blue one with most things, when I buy a Powerade, it's pretty safe to go for the blue Powerade. I don't know maybe that's the colour that works". [G1P6]

“I think colours can play a crucial role in how we feel about the foods we interact with, while things that could be wholesome could be represented, let's say, in different shades of beige and brown. I'm probably going to be as attracted to it as something that has green to it. So those colours would play a role when it comes to health”. [G1P8]

Sub-theme 2.3: Physical Packaging

When asked, participants reported that the packaging material had influenced their preferences.

>45 years age group

Participants in the over 45 years age group reported selecting products based on the sustainability of the packaging material, often opting for eco-friendly packaging by avoiding goods wrapped individually packaged or choosing products in recyclable materials.

“If things are individually packaged, I try not to choose that either, it's just not as eco-friendly”. [G2P13]

“I go for the kind of things that can be recycled, because if it's packaged in plastic, I make sure that I put it through the recycling. Or if the packaging that's brown, or that say that it's environmentally friendly”. [G2P10]

Sub-theme 2.4: Branding

Participants explained that the brand of the product only mattered when it was a product that they liked, otherwise they would still opt for a cheaper option for more staple food products.

18 – 44 years age group

"If it's a brand I like then I would choose that... But then only for some things, other things, like, I don't care if it's cheaper ill just buy the cheaper version. This is such a random example, but tinned tomatoes, I'll just choose the cheapest version. Whereas, if I was going to buy peanut butter, I would buy a brand that I like". [G1P4]

While others were more likely to stay loyal towards the brand that they liked, no matter the price.

"I'm a type of a loyal customer, you know, once I get used to the food product, I'll go and buy, like, no matter if it is advertised or not". [G1P7]

>45 years age group

Similarly, participants in the over 45 years group reported to stay loyal to specific brands, no matter what the price was, or reported choosing the cheapest option for staple food products.

"There're a few items that I will not buy the cheaper version because they're just not nice. For example, Gingernuts, I won't buy whatever the cheaper one is. I don't even know if Griffin's having a competition anymore, but you know, there's some things I won't skimp on." [G2P14]

"Like granola, there's only one particular brand that we like., so even if it wasn't on special, and if there was a cheaper option, I'd still buy it just because I know that they [children] like it...". [G2P12]

However, branding and loyalty to products were also reported to be a secondary consideration to the cost of the product.

“Pasta, rice, flour, sugar, that's all pretty similar so it doesn't matter as much with those., so I would, I often just get Pams, and Pams is often a lot cheaper than Edmonds or and it's perfectly fine., It does the same thing, you know, the baking powder, cocoa powder, often just go for the cheapest price it doesn't really make any difference”. [G2P12]

Theme 3.0: Interpersonal Influence

Participants reported that they were influenced by online influencers or public figures.

Sub-theme 3.1: Online influencers / Public figures

Participants' food choices were influenced by online influencers or public figures in the food industry or products associated with celebrities.

18 – 44 years age group

Participants aged 18 to 44 years old reported purchasing products from influencer collaborations or reviews.

“Influencer collaborations on Instagram is probably where I would actually be influenced to purchase. I remember buying protein powders, off influencers, recommendations... One was a Tropeka and Two Islands one on Instagram. And alcohol drinks definitely, again from Instagram and influences mostly”. [G1P5]

“On TikTok, if people are talking about it, then it will definitely make me want to go and buy it. Or if I see a good review, then I would want to try it myself”. [G1P4]

While others were influenced by products endorsed by a celebrity.

“On the weekend, I bought a bottle of wine, which was Graham Norton's, just because his name was slapped on the bottle, I also bought Margo Robbie's gin. but yeah, those celebrity endorsements yet, I'm all for it. I'm sold on them, it's me every time”. [G1P6]

>45 years age group

In contrast, participants in the over 45 years age group reported making food choices from online influencers or personnel within the food industry. Participants reported being influenced through recipes, or meal kits rather than paid promotions.

“There is a lady I follow called AI, she is keto. She does a lot of keto stuff. So, I'll say often they'll be cooking something, and so they are advertising the food. So yeah, I sort of do probably get a little bit influence of that, because I might try that product because it is low keto. Chelsea Winter is another one that I follow for recipes”. [G2P9]

“I definitely get recipes... I would follow, Jamie Oliver or Nadia Lim...they probably are my two most common or even Gordon Ramsay. Years ago, I did food bag because of her”. [G2P11]

Theme 4.0: Product Placement

When asked, participants were influenced to purchase food products at various locations within a supermarket being the end or front of store (e.g.: checkouts), end of the aisle or the shelf level of products.

Sub-theme 4.1: End and Front of Store

Participants across both age groups reported that they were influenced by products placed at either the front of the store as they walked in or items positioned around the checkout area.

18 – 44 years age group

Participants aged 18 to 44 years old were influenced to purchase food products posited at the store entrance.

“I feel like I'm more likely to grab something if it's, like, right by the door and it's in your face”. [G1P2]

“I don't really pay attention to the bins of stuff on special at the front. I'm definitely with sweet treats and chocolate, if those are on their own stand at the front, I'm very intrigued by them and I need to investigate”. [G1P5]

While others reported being influenced to choose items at the checkout area, such as chocolate.

“So yesterday I was in Countdown doing my regular grocery shopping, and there was a new Snickers flavour out, a brownie flavour. I thought I should try to give it a go. It had its own display by the checkout”. [G1P6]

>45 years age group

Participants in the over 45 years age group reported being similarly influenced by products positioned at the front of the store.

“If it's a new product, and they put it sort of in the front where you're going to walk into it, then yes, it definitely catches my eye, and I'd probably look at it”. [G2P11]

While others reported to pick up chewing gum or confectionaries from the checkout area.

“The other day, I did buy a chocolate bar because I hadn't, I was feeling like I really needed something And yeah, I mean I purchase chewing gums there.” [G2P14]

Sub-theme 4.2: End of Aisle

Participants were drawn to purchase food products positioned at the end of the aisle, when they displayed items on promotion.

18 – 44 years age group

Participants in the 18 to 44 years age group reported the influence of end of aisle promotions on food choices. This included the selection of new products.

“They have those stands that are mostly for advertising new products at the end of the aisles, especially in Woolworths, sometimes I have a little look at those”. [G1P3]

“I would get the specials advertised at the ends of the aisles. Often things that aren't on my list will come from there, because it's cheaper, even if I don't know how much cheaper it is, I will still purchase it if it stands out to me and I feel like I want it”. [G1P4]

>45 years age group

Similarly, participants in the over 45 years age group reported being influenced by products on promotion positioned at the end of the aisle.

“I guess, if it was on promotion, so if it was on sale and then, usually if it is at the end of the aisle...I would look at it because it is standing out on its own”. [G2P9]

“We buy kombucha a lot, which I discovered first of all at Pak and Save when it was at the end of the aisle and it was 99 cents a bottle, we gave it a try, and now we buy it nearly every week. I'm always looking and usually it is at the end of the aisle, so definitely look for that when it's on a special”. [G2P14]

Sub-theme 4.3: Shelf Level

Participants reported selecting food products strategically positioned at eye level of the shelves.

18 – 44 years age group

Participants in the 18 to 44 years age group reported only looking at food products at eye level.

“I can't even imagine a time where I've reached to the bottom or reached to the very top for a product. It's always like, eye level”. [G1P5]

“I feel like eye level is always going to be easier, I don't think I look anywhere else unless I'm looking for a specific product ”. [G1P4]

>45 years age group

Participants in the over 45 years age group were similarly impacted by products at eye level but were aware that these products may be more expensive.

“I do know that with products that are at eye level, that the companies actually pay more to actually be on those levels. So, they can be a bit more expensive as well. I mean, I am drawn to the ones that are more eye level, but I will always, you know, look above and below anyway, as well”. [G2P9]

Theme 5.0: Price

The price of food products was found to have a large influence on participants preferences amongst both age groups. The overall price of food was a large contributor to food choice as well as promotions such as specials and deals.

Sub-theme 5.1: Overall Price

Participants commonly reported that the overall price of food products was a main factor to influence food choices.

18 – 44 years age group

Participants in the 18 to 44 years age group commonly reported the impact of budget and the importance of selecting items that fit within budget restraints.

“The number one thing is, for me, is price, especially at the moment, food so expensive. I try and have a strict budget. I know I have my strict budget, and I try and keep to that. I've only ever got a fixed budget to purchase items like and most of it goes for essentials like milk, bread, eggs, so after

that, whatever is left. So, it's like limited items, so whatever is the cheapest that would appeal to me". [G1P7]

On the other hand, participants reported that the price of food products may not influence them as much as it should, which often depended on the reputation or quality of the product.

"If the reputation of the product is well known, and I know that it is a good product then I will buy it. I won't necessarily get the cheapest product on the shelf". [G1P8]

>45 years age group

However, in contrast to the 18 to 44 years age group, the participants in this group mentioned that they compare the cost of food between the same category to calculate the cheapest product overall.

"Also, comparisons, so I look at, for instance, with porridge, they have the smaller pack of porridge as opposed to a bigger one. And so, you sort of calculate the difference and what's cheaper, different brands. Also, they have the per kilo, what it is or like for egg, or for eggs might be a good example, and it tells you how much per egg it is off at 72 cents or 75 so that that kind of could influence me as well" [G2P9]

Sub-theme 5.2: Specials and Deals

When asked about specials and deals, it was commonly reported that supermarket promotions had a large influence on participants' food purchases and choice.

18 – 44 years age group

Participants in the 18 to 44 years age group commonly reported purchasing food items on special, or products at a discounted price.

“I’d say [I purchase] on special, because then it seems to me that I’m getting more value from my money. I would normally choose the option on special”. [G1P3]

“I saw an [instore] ad for a pizza base. It was showing a full pizza on it, and it was saying, buy it a pizza base for a discounted price. So, the banner was there, and I just saw that banner, and I brought the pizza base”. [G1P7]

While another participant reported being influenced by multi deals, explaining that they seem like a better deal overall.

“If I was going to buy one thing, but then it was two for \$5 I would just grab two, because it seems like a better deal, those signs always stand out to me”. [G1P5]

>45 years age group

On the other hand, participants in the over 45 years age group reported looking for items that were on special from their shopping list, while also stocking up on products if they were on special.

“I generally go with a list, and I genuinely have a rough idea of the normal kind of prices. So, when I see Best Food Mayo is a good example, when it's

not on special, it's like over \$7, smaller one, and when it is on special, it's \$4.50 so even if it's not on my list, I'll definitely get it". [G2P12]

"I just purchase the same things that I like, I guess if it's on special I might stock up". [G2P11]

Theme 6.0: Food Marketing Exposure and Influence

Participants had recalled exposure to food marketing through advertisements on social media and TV which had influenced their food choices. Participants report seeing food or beverage advertisements on social media platforms such as Instagram, TikTok or Facebook. The influence of TV food advertising was also commonly reported by participants.

Sub-theme 6.1: Social Media

Participants reported the exposure of food advertising on social media platforms of Instagram, TikTok and Facebook that had influenced their food choices.

18 – 44 years age group

Participants in the 18 to 44 years age group reported exposure to food advertisements on social media platforms Instagram and TikTok. The participants expressed the influence of food choice towards food advertisements displaying new products for chocolate, alcohol or fast food from established brands. All food marketing recalled from social media in this group was of an unhealthy nature.

"I bought the new Pals [alcohol] flavour after I'd seen it promoted online. We always buy the new Whitaker's flavour after we see it on Instagram that it's launched... I feel like with Pals and Whitakers, they are both brands that I have tried before and have liked in the past, so when they bring out new products and I see it advertised., I am more likely to go and purchase them". [G1P5]

“Quite a few of like, off TikTok. It'd be the Whitaker's ones they've been coming up so much more recently. It's like, quite often we'd see the new kinds of, new flavours and stuff. So would be all over that we'd go to the supermarket and we're like, oh, we'll just split it and try it because we've seen it and because they come up with some interesting flavours”. [G1P2]

Another participant was influenced by fast food promotions and deals advertised through Instagram, which they would have been aware of otherwise.

“I basically get most of my advertising through TikTok and Instagram. Quite often Mac Donald's does 30 days of 30 deals and those sorts of promotions. So quite often me and my friends see the deals on Instagram. We were like, oh, that's kind of cheap. So, we'd go get some Maccas which we wouldn't have done without knowing about the deal”. [G1P2]

>45 years age group

In contrast, participants aged over 45 years old were similarly influenced by food advertisements, but on Facebook, of new brands or products previously unknown to them, that were not typically of unhealthy nature.

“Okay, it was a actually, just probably last week. It was a product called Radix. So they do freeze dried meals that you can take away camping. So I'd seen advertisement on Facebook, it popped up on my Facebook feed. So, oh yeah, I'll give that a go. So yeah, we purchased some... I thought that really appealed”. [G2P9]

“I know that when I've seen stuff on Facebook, generally I will go research...I've brought some gluten free bread like that, because I'm always looking for new products... that's how I came across Venerdì”. [G2P11]

Sub-theme 6.2: Television

When asked, participants expressed exposure and influence of food marketing on TV again, mainly of unhealthy nature that had influenced their food choice at a later date.

18 – 44 years age group

Participants within the 18 to 44 years age group commonly expressed exposure to unhealthy food advertisements on TV that had influenced food choice at a later date.

“I just remember there was Coke ads all the time, just in every single ad on TVNZ Plus, and when on MAFS actually, there's always the Magnum ads coming up.... It doesn't make me go out and get it at the time, but I might be more inclined to try it if I see it at the shop”. [G1P2]

“I've seen a Cadbury chocolate [on TV]...it made me want to buy it because it was appealing. I like chocolate, so yeah, so I could connect to that, so I would likely go and purchase it next time I saw it in the store”. [G1P7]

>45 years age group

Similarly, participants aged over 45 years old reported being influenced to purchase food products off advertisements on TV.

“The Teagle, Louisiana, Nashville, chicken patty things. We tried them and they were oh my gosh, are amazing. We saw that advertised through TV”. [G2P12]

Theme 7.0: Suggestions to Improve Marketing that Promotes Healthier Choices

When asked about food marketing policy, participants reported negative feelings towards unhealthy food marketing, especially the marketing of unhealthy food and beverages affiliated with sports teams.

Sub-theme 7.1: Unhealthy Versus Healthy

Participants reported the frequency of unhealthy food advertising was greater than healthy food advertising and suggested the potential for guidelines or restriction.

18 – 44 years age group

Participants in the 18 to 44 years age group reported that there could be restrictions on unhealthy food advertising.

“I think the market is so, dominated now by KFC and unhealthy types of advertising, rather than the potentially like positive ones. So, I think if there was some restrictions that could potentially be helpful”. [G1P2]

“I feel like most of what I see [advertised] is chocolate or sweets. But I'm not really sure in terms of policy regarding that, or not necessarily policy but guidelines around how much something can be advertised”. [G1P3]

>45 years age group

Participants in the over 45 years old group reported that they would like to see more healthy food advertised.

“What I'd like to see is more healthy eating advertising, because I don't think there's a lot of that. You certainly don't see a lot of vegetables and stuff like that being advertised”. [G2P11]

Or reported that alcohol should not be advertised.

“If it's a food that would benefit some people then I think that's good to advertise for them. I think sometimes alcohol shouldn't be advertised because it's not a healthy product”. [G2P13]

Sub-theme 7.2: Sport Environment

Participants reported the use of unhealthy food and beverage marketing in sports and questioned whether it was appropriate.

18 – 44 years age group

“Promoting drinks like Powerade and stuff like the All Blacks promoting Powerade. Yeah, the people who are fans of the All Blacks probably don't need it...But then things like Weet-Bix and like the All Blacks promoting Weet-Bix, is quite a nutritional food. Like, there's pros and cons to both. Just depends on the product here”. [G1P5]

Other participants noted that sports sponsorship largely comes down to who has the most money, but felt it was contradicting marketing unhealthy food products within a sports environment.

“All the big brands, I guess all the big unhealthy takeaway brands are promoted because it's good marketing for them and they can afford it. I don't think that it should be allowed because it's very contradicting going to a sports game to watch and then advertising unhealthy products”.
[G1P4]

>45 years age group

Participants over 45 years old identified concerns around a high amount of unhealthy food advertising at sport games or worn and promoted by players, suggesting that the types of food products used in sport sponsorship should be monitored.

“I think in sports games, they have those banners if you watch cricket or they're flashing something, and most of it is quite unhealthy food. All the fast-food chains, they have big sponsors, so that's part of the problem, it should really be monitored”. [G2P10]

“The Australian Rugby team was sponsored by Cadbury, and it's like, that just doesn't go...it should be like a health promoting product for stuff like that”. [G2P11]

4.2 Theoretical Framework and Link to Themes

The themes identified in this study reflect the multi-level influence of the theoretical framework, being the EMHP. The individual level is represented by theme 1, Health consciousness and theme 2, Packaging attributes. The interpersonal level is represented by theme 3, interpersonal influence. Organisation level influences are theme 4, Product placement and theme 5, Price. Community level influence was identified as theme 6, Exposure and influence of food marketing and policy level is theme 7, Suggestions to improve marketing that promotes healthier choices. The link between the theoretical framework, themes and sub-themes is indicated in Table 3.

Table 3: Ecological Model and Link to Themes and Sub-themes

| Theoretical Framework | | |
|------------------------------|--|--|
| Level | Theme(s) | Sub-themes |
| Individual | Health consciousness | Nutrient content claims, Health Star Rating |
| | Packaging attributes | Packaging design, Colour, Physical packaging, Branding |
| Interpersonal | Interpersonal influence | Online influencers / public figures |
| Organisational | Product placement | End or front of store, End of aisle, Shelf level |
| | Price | Overall price, Specials and deals |
| Community | Exposure and influence of food marketing | Social media, Television |
| Policy | Suggestions to improve marketing that promotes healthier choices | Healthy vs unhealthy, Sport environment |

4.3 Chapter Summary

Chapter 4 presented the findings of the current study by identifying the main themes and sub-themes between each age group and link to the theoretical framework. The key themes related to health consciousness where there were mixed views on labelling and packaging attributes with preference for simple design across groups and sustainability important to participants over 45years old. In addition, interpersonal Influence was also reported with the younger group influenced by social media influencers and those over 45 years old influenced by recipes and celebrity endorsement. Product Placement (front of store, checkout, and eye-level shelves), and Price (a major influence, with Group 2 comparing cost per weight) were also key findings of this research. Both groups were influenced by food marketing exposure on social media and TV, primarily of an unhealthy nature. Participants endorsed restrictions on unhealthy food advertising, particularly its association with sports environments. These themes align with the EMHP, covering influences from the individual to the policy level. The

following chapter (Chapter 5) discusses the findings in relation to each level of the EMHP and identifies key differences between the age groups.

Chapter 5: Discussion

There are 7 main themes related to the influence of food marketing on food choice behaviour among adults. The main themes are (1) Health consciousness, (2) Packaging attributes, (3) Interpersonal influence, (4) Product placement, (5) Price, (6) Exposure and influence of food marketing, and (7) Suggestions to improve marketing that promote healthier choices. In this chapter, each theme and sub-theme identified in Chapter 3 is discussed as they relate to the multiple levels of the EMHP. The findings are interpreted, compared with the literature and between age groups. Strengths and limitations of the study, as well as recommendations for future research are presented at the end of this chapter.

5.1 Individual Level

The main themes identified at the individual level were health consciousness and packaging attributes. These themes indicate individuals' knowledge of products, as well as their beliefs and attitudes that shape food choice and preferences, aligning with the individual level of the EMHP (McLeroy et al., 1988). Health consciousness was driven by labelling strategies such as nutrient content claims and the HSR. Food labelling strategies are used to shape consumer beliefs about products and inflict positive attitudes towards products that depict health messages (Prinsloo et al., 2012). Participants in both age groups reported being influenced to choose products with nutrient content claims relating to sugar, protein or fibre, with participants reporting this influence when selecting muesli bars high in protein or fibre, sugar-free items such as beverages, or high protein for yoghurt.

The result indicates that participants have some knowledge of nutrients such as fibre, protein and lower sugar and fat that depict good health, as well as having a preference for these products. It is known that nutrient content claims are widely used amongst women (Lynam et al., 2011; Vaudin et al., 2021), which may be reflected by the majority of participants in the current study being female. Additionally, nutrient content claims regarding sugar content are widely used in NZ, with the findings of the current study

reflected in the Colmar Brunton social research report, indicating that zero or low sugar claims were the most used amongst consumers (Colmar Brunton Social Research, 2007).

Moreover, participants in the over 45 years age-group reported being influenced by nutrient content claims for low fat, suggesting that participants in this group had greater concern about fat content than participants in the 18 to 44 years age group. This finding is reflected in the qualitative study of Chan et al. (2005), who explored attitudes and beliefs of adult consumers' use of fat nutrient content claims. They found consumers to be influenced by claims regarding fat, with female participants reporting an increased desire to purchase food products with low fat claims (Chan et al., 2005).

It was reported that products were selected when they displayed nutrient content claims of sugar and fibre, as they are a healthier option. This finding indicates that consumers may perceive products with nutrient content claims as being a healthier alternative, therefore driving purchasing intention (Drichoutis et al., 2006). However, the findings highlight that price had a large influence over food choices, therefore only selecting products with nutrient claims if they were inexpensive. This suggests that while nutrient content claims have a large influence on participants, the price of such products may be a barrier towards selecting healthier alternatives.

However, it was suggested by participants in the 18 to 44 years age group that nutrient content claims discouraged them from selecting a product and believed that alternative ingredients were added to compensate. This may be concerning when trying to nudge consumers towards healthier alternatives, and is reflected in the study of Lawrence et al. (2017), who found individuals living with diabetes to mistrust nutrient content claims as products claiming to be low fat were identified to be higher in sugar. Further research in NZ has identified participants to often mistrust these claims, perceiving them as a marketing strategy, and therefore did not influence food choice (Stuthridge et al., 2022).

A supporting sub-theme of health consciousness was the HSR its influence on participant preferences and perceptions. The younger age group reported selecting products with a HSR of 5 stars, often believing these products were a healthier option. The finding indicates that

interpretive nutrition labelling has a large influence on participants in this age group, as they report a preference for products displaying the HSR. This result builds on previous research on the review of the HSR, which found that 28% of consumers were influenced to purchase products displaying the HSR, while 88% of consumers reported selecting products with a higher HSR in NZ (MP Consulting, 2019). The report further indicates that 35% of Australian consumers used the HSR as a tool to select healthier options (MP Consulting, 2019), aligning with the result of this study.

However, this finding contradicts with a recent study of Bablani et al. (2022), who found the HSR to have no influence on consumer purchasing in NZ. In contrast, participants in the over 45 years age group were less influenced by the HSR, reporting that it is a marketing ploy or believing that companies pay to display the HSR. This is also reflected in the qualitative study of Pelly et al. (2020), noting that participants reported a lack of confidence and trust in the HSR with participants identifying that unhealthier products were rated highly. This suggests that different groups of people will have different attitudes towards HSR based on their knowledge and beliefs.

The second theme identified at the individual level was packaging attributes with packaging design, colour, branding and physical packaging reported to be of influence towards product preferences among participants. Packaging design included aesthetics as participants reported a preference towards food packaging with minimalistic designs. Minimalistic packaging designs are often used to signify transparency, authenticity, healthfulness or quality of products, a design trend that is increasing (Biswas et al., 2025). Consumers rely on multiple cues in selecting products that they cannot taste, with product packaging offering a first impression in the selection of food products (Panda et al., 2022). The effect of minimal packaging design is reflected in the qualitative study of Dave (2023), who assesses the ability of product aesthetics (colour, illustration, image and information) on the preferences of ready to eat foods. Based on the results, it can be suggested that participants preferred minimalistic and simple packaging aesthetics, which had enhanced selection towards ready to eat food products (Dave, 2023).

Participants in the 18 to 44 years age group were influenced by products such as packaging displaying designs or characters. This packaging strategy is commonly used to influence children, with a systematic review finding that cartoon images were consistently found to influence food choice and preference in children (Alazne et al., 2022). The finding of the current study suggests that this strategy is also used to establish preferences in adults, with its influence extending to individuals aged 18 to 44 years old.

Participants in the 18 to 44 years age group were also found to be influenced by packaging colour. The effect of cool toned colours in packaging is known to influence the perception of health amongst consumers (Tijssen et al., 2017), with the finding of this study indicating the success of colour strategy used to depict a product as being healthier (Mai et al., 2016). However, the finding of colour and belief of healthfulness may be of concern if such colours are used on products that do not promote good health. The findings also highlight the preference for products based on recall or recognition of packaging colour. The ability of packaging colour to attract attention has been noted by Kauppinen-Räsänen (2014), as consumers can retain memory of the colour associated with brands and their products.

The physical packaging influenced participants in the over 45 years age group. Participants reported to select products packaged in sustainable materials that could be recycled, while also avoiding products wrapped in plastic. This finding indicates that participants over 45 years old were environmentally conscious and hold a belief in the importance of such materials. Preferences towards sustainable packaging has been highlighted within the study of Martinho et al. (2015), who found 67% of surveyed consumers to prefer products packaged in recyclable materials. Additionally, consumers who found environmentally friendly packaging important were willing to pay more for sustainable packaging compared to less environmentally conscious consumers (Martinho et al., 2015). It was further noted by Martinho et al. (2015), that the majority of consumers who were concerned about packaging materials were women, aged around 50 years old, therefore aligning within the age group of over 45 years olds in the current study.

A supporting sub-theme to packaging attributes was branding. Participants in both age groups reported to select products of brands that they liked, regardless of the price.

However, in some cases, branding was reported to be secondary to the cost for more staple items. The result of branding indicates that participants of this study remain loyal to brands once individual preference and liking towards a product has been established. Food brand loyalty can be established through perceived value of the product, which includes considerations of the price and quality (García-Salirrosas et al., 2024), aligning with the comments of the participants in the current study. In addition, millennials have been shown to obtain brand loyalty once attachment and favourability towards a product has been established (Ismail et al., 2017). However, brand loyalty has been noted to be less prevalent in younger adults as they have access to a wide variety of products through various modes of influence (Aires et al., 2024), which contradicts the findings of the current study, as brand loyalty was consistent among adults across both age groups.

5.2 Interpersonal Level

The findings of this study indicate that interpersonal relationships influenced food choice and preferences. Participants' food choices were influenced by people they connect with being online influencers, public figures or celebrities.

Participants in the 18 to 44 years olds report purchasing food or beverages from online influencer collaborations or reviews on social media. Companies often target consumers through others, where they pay online influencers to create and post content in the hope to influence their audiences (Weismueller et al., 2020). This effect has been demonstrated in children, where food advertisements from influencers on Instagram and YouTube promoted food intake following the exposure to advertisements (Coates et al., 2019a). However, unlike Coates et al. (2019a), the finding of the current study indicates that influencer collaborations influenced participant purchases of products, which in turn led to food choice. The finding suggests that influencer based collaborations may also influence the food choices of adults, therefore building on the study of Coates et al. (2019a).

In contrast, participants over 45 years old reported using influencers or public figures on social media to search for recipes or look for dietary related products. This finding aligns

with the qualitative study of Godlewska et al. (2025) in adults, who found women to use social media to gain knowledge of food products while also using diets promoted on social media. It was further reported that women were likely to change their eating behaviours through the influence of social media (Godlewska et al., 2025), which could reflect the finding of the current study where participants use recipes from cooking related public figures. This effect has been demonstrated in the qualitative study of Sokolova et al. (2024), who explored the role of influencers on home cooking practice. It was found that individuals who follow food related influencers on social media engaged in recipes and cooking practice within the home (Sokolova et al., 2024), therefore reflecting the use of influencers for recipes in the current study. Their findings indicate that individuals who hold an emotional connection with the influencer are likely to reflect and model the influencer's behaviours (Sokolova et al., 2024), therefore reflecting the interpersonal influence of public figures within the cooking industry.

Participants also reported purchasing products that were associated with celebrities. The finding highlights that celebrities who endorse products have an influence over food choices or preferences. It has been found that adults are easily persuaded to purchase food and beverages associated with celebrities (Zhou & Kraak, 2022). Moreover, Calvo-Porrall et al. (2021) note that celebrity influence has a positive effect on purchase behaviour, therefore aligning with the result of this study.

The findings of the interpersonal level indicate that food choice is closely aligned to the establishment of trust and relationships within interpersonal networks. Research indicates that purchase intention can increase where influencers are seen as credible or trustworthy (Kareem & Venugopal, 2023; Weismueller et al., 2020), with a similar effect found through celebrity endorsement (Calvo-Porrall et al., 2021; Zhou & Kraak, 2022)

5.3 Organisational Level

There were two key themes that align to the organisational level. These were product placement and price. Product placement within supermarkets were strategically organised

by the front or end of stores, end of aisle or shelf location. It is known that supermarket placement strategies are used by organisations as they gain consumer attention of products and influence impulse purchases (Aires et al., 2024). Participants in both groups reported being influenced to purchase chocolate positioned around the checkout area, which has been recognised in previous literature examining the influence of checkout areas and consumer behaviours (Miranda, 2008).

Additionally, participants reported being drawn to purchase products positioned at the end of the aisle when the display contains products on promotion. This finding reflects the use of this location in product promotion (Nakamura et al., 2014), and is supported by the literature that found an influence over end of aisle displays on food choices through increased purchase intention (Cohen & Babey, 2012; Glanz et al., 2012). Glanz et al. (2012) further note that end of aisle displays has been shown to be the most effective strategy to influence food purchases.

Additionally, participants were drawn to reach for products positioned at eye level however, participants in the over 45 years age group were aware that these products may be more expensive. Middle shelf placement of products is positioned to gain attention and drive purchases (Chandon et al., 2009). This influence has been shown in the study by Sigurdsson et al. (2009), who found that potato chips positioned at the middle location were purchased more often than those placed at the top or bottom of the shelf. However, the result of shelf location conflicts with the study of Aires et al. (2024), who found no influence of supermarket shelf positioning on younger adults. Additionally, an intervention study in NZ found no influence over the purchase intention for healthier breakfast cereals positioned at eye level (Young et al., 2020).

Although specific food choices of product placement were not addressed in this study, the overall finding may be of concern if food that does not promote health are positioned at the checkout, end of aisle or at eye level. In NZ, the positioning of unhealthy food products in locations of the supermarket has been found to be disproportionate to that of healthy food with checkouts, end of aisle display and shelf space displaying a significant amount of unhealthy food products (Vandevijvere et al., 2018a). Organisations such as supermarkets

could promote healthier food choice outside of a policy level. This has been demonstrated by Woolworths, an NZ supermarket retailer who has adopted various approaches to enhance healthy eating behaviours. Woolworths provides free fruit for children and has a goal towards providing healthier checkout areas through the inclusion of foods with the HSR (Woolworths, 2023). The restriction of unhealthy products at the checkout can have a positive influence on food choices (Ejlerskov et al., 2018). Perhaps other supermarket retailers could follow suit or adopt strategies to enhance healthy eating behaviours.

The second theme identified at the organisational level was price. Price was reported to be reflected through the overall price and special and deals. Pricing is a fundamental component used in food marketing and can be one of the main drivers to food choices (Martinho, 2020). The result of the study suggests that individuals face increased pressure due to rising food costs, resulting from recent inflation (Commerce Commission New Zealand, 2024). Participants in the 18 to 44 years age group reported being confined to strict budgets, indicating that individuals with a low income are highly impacted by the price of food, which is reflected in the qualitative study of Steenhuis et al. (2011), who found that the price of food products was most important to those on low incomes. A qualitative study of Polish consumers has highlighted that the price is the most influential factor in food choice amongst generation Y and generation Z (Makowska et al., 2024). The age of this generation of adults falls between 18 to 44 years old, therefore reflecting the participants of the current study. However, in contrast to the study of Makowska et al. (2024), participants of the 18 to 44 years age group also reported that the price has less of an influence on their purchases, particularly when it was a brand or product they liked, therefore reflecting the influence on branding and food preference.

In contrast, participants in the over 45 years age group reported searching for the cheapest product within categories or calculating the price based on quantity. This suggests that this group are more technical when it comes to food cost and do not just rely on the price label. This finding is supported by a previous qualitative report in NZ that found participants to make informed value assessments through mental calculation of food prices (Ipsos, 2021).

Participants in both age groups reported mainly purchasing food products on special within supermarket organisations. This finding is supported by an exploratory study in NZ, which found product promotion to have a large influence over food and beverage purchases (Tawfiq et al., 2022). Additionally, participants reported that they may stock up on items if they are on special, even when these items are not on their shopping list. This finding indicates that participants are highly influenced by specials and deals within the supermarket, which are known to promote impulse purchases (Aires et al., 2024; Hawkes, 2009). The impact on specials and deals in stocking up on food items is reflected in the study of Phipps et al. (2014), who found focus group participants to report using food sales to stock up on items that they need, or may be running out of. Additionally, this finding indicates that consumer behaviour surrounding specials may be influenced through fear of the product increasing in price.

5.4 Community Level

At the community level, participants report exposure and influence of food marketing through both social media and TV which have influenced their food choices. This finding implies that these modes have a strong influence over adult food choice, through shaping norms through advertising exposure within the community. This finding is consistent with the literature of Nieto et al. (2022), in that TV and digital modes of marketing were the most prevalent modes of food marketing identified in adults across a multi county analysis.

This study found that the exposure and influence of unhealthy food marketing on social media on food choice was more prevalent within the 18 to 44 years age group. Participants report being influenced by social media food and beverage advertisements of products such as chocolate, alcoholic beverages or fast food across Instagram and TikTok platforms. The finding indicates that unhealthy food and beverage advertising on social media has a large influence over this age group, which is of particular concern as it may lead to unhealthy eating behaviours or preferences towards such products. This finding is reflected in the literature that found unhealthy food advertisements on social media to influence eating behaviours in adolescents (Ares et al., 2025; Qutteina et al., 2019). Ares et al. (2025) found

that exposure to such advertising led to a higher consumption of energy dense nutrient poor foods such as sugar-sweetened beverages and snacks. The result of the current study builds on the literature found in suggesting that the influence of unhealthy food advertising on social media extends to adults aged 18 to 44 years old. In contrast, participants in the over 45 years age group did not report exposure to unhealthy food advertising on social media, which could indicate that unhealthy food marketing through social media may not target this age group.

A main difference in social media exposure and influence was the platforms used within each age group. Participants within the 18 to 44 years age group report the effect of food and beverage advertisement through Instagram and TikTok, whereas participants in the over 45 years age group reported Facebook. This notion reflects generational trends in social media use, with younger adult generations engaging in Instagram, Snapchat and TikTok more frequently than older adults who use Facebook (NZ on Air, 2024; Pacheco, 2023). Moreover, each age group was found to be influenced by new products advertised through social media, which reflects the finding of Ismail et al. (2017), in that millennials are known to be influenced by new or trending products within personal care categories. The results also suggest that this influence extends to new product launches within the food and beverage category and influence over both young, middle age and older adult generations.

A supporting sub-theme was the exposure and influence of food advertising through TV. Participants in both age groups reported viewing advertisements on TV that had influenced their purchases at a later date. TV advertisements that appealed to participants were mostly of unhealthy nature including frozen desserts, chocolate, or packaged food products. This finding builds on the qualitative study of Giese et al. (2015), who found that the exposure to food advertisement on TV was positively associated with unhealthy food intake of fast food, snack and sugar-sweetened beverage intake amongst individuals aged 8 to 21 years old. The finding of the current study further suggests that this influence extends into adults aged between 18 to 44 years old and over 45 years old in NZ.

The overall finding at the community level illustrates the effectiveness of theoretical models used in advertising, such as the HEM through making consumers firstly aware of a product,

which leads to recall and eventual purchase (Lavidge & Steiner, 1961), with the result of the current study extending the HEM success to food and beverage advertising through social media and TV.

5.5 Policy Level

The main theme identified at the policy level was suggestions to improve marketing that promotes healthier choices. Participants report a strong negative opinion towards the frequency of unhealthy food marketing and its presence in sports environments.

Suggestions made by participants in the 18 to 44 years age group included restrictions or guidelines on the frequency of unhealthy food advertising, while participants in the over 45 years age group reported that they would like to see more healthy food advertised. The finding supports the current self-regulated FBAC set out by the Advertising Standards Authority (2024), but indicates that it may fall short when it comes to limiting the advertising exposure of occasional food and beverage products. Moreover, the FBAC does not provide guidelines or rules on the frequency of food marketing, with the result of this study suggesting that this aspect may have been overlooked. In addition, it is known that the advertising spend on healthy products such as fruit and vegetables is considerably disproportionate to food and beverage products of unhealthy nature (Potvin Kent et al., 2022).

In NZ, there have been some suggestions around food policy in making fruit and vegetables more affordable, as well as the potential introduction of a tax on sugar-sweetened beverages (Wilson et al., 2020). Research has identified that food tax or subsidies could improve dietary behaviours, thus contributing to the reduction of diet related disease (Ni Mhurchu et al., 2015). Systematic review has identified that pricing incentives, such as subsidies on healthier food items has a positive influence on food choice and consumption of products such as fruit and vegetables (Gittelsohn et al., 2017).

The findings also highlight that alcohol should not be advertised, which suggests that participants are aware of the harm that alcohol causes. In NZ, alcohol is currently able to be advertised through any medium, but must meet specific requirements of the ASA alcohol advertising and promotion code (Advertising Standards Authority, 2021). Current guidelines state that alcohol must not be advertised on TV between 6am and 8:30pm, be advertised where the audience is intended to be 80% adults, as well as the promotion of alcohol being limited to those over the age of 25 (Advertising Standards Authority, 2021). A nationwide survey on alcohol use in NZ on 4473 adults has found respondents in favour of alcohol related policies. For instance, 76% of respondents were in favour of banning the advertising of alcohol on social media, as well as 62% in favour of banning alcohol sponsorship at sporting events attended by minors (Health Promotion Agency, 2021). Their finding aligns with the result of the current study in suggesting that further restrictions on alcohol advertisement could be proposed for NZ.

A supporting sub-theme at the policy level was sport environments. Participants reported that the advertisement of unhealthy food and beverages within sport environments, either endorsed by teams, presented on uniforms, or advertised at the game has contradicting messages, further reporting that it did not seem fitting or suggesting that advertisement or sponsorship in sports should be aligned with healthy food and beverages. The result suggests that there is a perceived mismatch between unhealthy food advertising or sponsorship and the representation of sport for health and wellbeing. This finding aligns with the study of Danylchuk and MacIntosh (2009), where participants reported that unhealthy food sponsorship within sporting events does not belong, as it contradicts with the health messaging of sports. This misalignment has been further communicated by parents, who have raised concerns about the appropriateness of unhealthy food sponsorship exposure to children in a junior sport setting (Zorbas et al., 2023).

In NZ, occasional food and beverage sponsorship, including that surrounding sports, is to be restricted under the FBAC, particularly that targeting children (Advertising Standards Authority, 2024). However, the result of the current study indicates that the restriction and meaning of 'occasional' may need to be reviewed, as well as food and beverage sponsorship where adults are present. However, it has been found by Carter et al. (2013), that both

healthy and unhealthy food and beverage companies do sponsor sport in NZ. The perception of 'healthy' could be conflicting, as individuals have been found to perceive items such as sports drinks affiliated with sport sponsorship to be healthy alternatives (Zhou & Kraak, 2022). Additionally, the threat of sponsorship policy may have negative implications on sport organisations in a regional setting, by limiting financial support that funds opportunities in sport (Batty & Gee, 2019). Policy could therefore act to support sporting organisations to replace unhealthy food and beverage sponsorship with healthier sponsors or non-food sponsors (Carter et al., 2013), being more aligned to the health messaging of sport.

5.6 Strengths and Limitations

Strengths

Many strengths were identified in this study. One strength was the use of a qualitative methodology of semi-structured interviews to explore participants' lived experiences. This offered an in-depth opportunity to explore the perceptions of the participants and analyse the rich lived experience data. Furthermore, the study looked into two age groups: 18 – 44 years old and over 45 years old, covering adult generations in NZ. This allowed the research to explore uniqueness of perceptions in two generations within the adult lifespan. Another strength is the ability of this study to provide insight into food choice at each level of the EMHP; individual, interpersonal, organisational, community and policy. Additionally, at the time of writing, this study was identified as one of the few studies in NZ to explore the multiple factors in food marketing on adults' food choice and preference, adding valuable insight to the literature within the context of NZ.

Limitations

There were limitations identified in this study. A limitation of this study was that it focused on those living on the North Shore of Auckland, NZ, making it possible that results may not be representative of the entire population. Another limitation was sampling bias, as many participants reported being health conscious, which could be reflected by the

sociodemographic region that the data was collected. Another limitation was the disproportionate representation of gender, as 12 participants (80%) were female and 3 participants (20%) were male, with all 7 participants (100%) being female in the over 44 years age group. Additionally, the nature of the study and the dietetic background of the primary researcher could have contributed to the study bias.

5.7 Recommendations for Future Research

Future research could explore the impact of social media on a younger age group, of 18 to 44 year olds, as social media was found to have a profound influence on the food choices of this generation, and is highly under-researched in NZ. This research could reflect changes in food marketing modes that align with the digital age of the 21st century.

Moreover, an in-depth reflection of the FBAC and its ability to reduce the presence of unhealthy food marketing could be explored, and whether this regulation is up to standards in reducing the frequency of unhealthy food marketing to adults. This research could include a reflection of the current self-regulated FBAC and recommendations for future policy.

The impact of healthy versus unhealthy food marketing strategies and their influence over food choice could be explored in-depth to determine where each type may fall short in the promotion of healthy eating behaviours. This could include recommendations for future food marketing strategy in the promotion of greater health outcomes, through analysing the influence of nutrient content claims, and the Health Star Rating system presented on food and beverage products.

A final recommendation for future research is the exploration into the influence of food marketing on food choice preference within a larger population, covering multiple sociodemographic regions, genders, age groups and education status, to provide a greater representation and understanding of food choice within the NZ population.

5.8 Chapter Summary

This chapter further identifies the factors in food marketing that influence adults' food choices and preferences across age groups. At the individual level, both groups were influenced by nutrient content claims, while the HSR system was used by those in the 18 to 44 years age group. It was noted that the older age group were less influenced by the HSR, while some others reported to mistrust nutrient content claims. Strategies within packaging attributes such as aesthetics and branding drove food preferences in both groups. The differences identified were packaging colour and design which were shown to influence food choices in the younger group, while physical packaging of sustainable materials drove food preferences in adults over 45 years old. However, in some cases nutrient content claims and branding were reported as a secondary influence on the price. It was demonstrated that food choice was driven by others, through online influencers and celebrities in the 18 to 44 years age group, and through online cooking influencers in the older age group. Product placement strategies and price within supermarket organisations influenced the selection of food products. Food price and budgets were reflected in the younger group, while both age groups were influenced by specials and deals. Exposure to food advertising on social media and TV enabled participants to become aware of food products at the community level. It was found that unhealthy food advertisements through social media and TV had influenced food choices and purchasing behaviours. The exposure to unhealthy food advertising on social media had a profound influence on adults in the 18 to 44 years age group. The main differences between the groups were the use of Instagram and TikTok in the younger group and Facebook in the older group. At the policy level, suggestions were made to reduce the presence of unhealthy food advertisement or sponsorship, as well as increasing the advertisement for healthy food and beverages.

Chapter 6: Conclusion

This is an exploratory study that aimed to explore the factors in food marketing that influence food choice preferences amongst NZ Adults. To achieve this, a qualitative methodology using semi-structured interviews was adopted to explore the experiences of food marketing and the influence on food choice or preferences.

The first objective was to compare the influence of food marketing on food choice preferences between individuals aged 18 to 44 years old and over 45 years old. This objective was achieved through interviewing 15 participants, with two age groups identified as 18 to 44-year-olds (n=8) and over 45-year-olds (n=7). Further, thematic analysis was applied to identify main themes and sub-themes, with the findings presented for each age group and consolidated using comparison. In achieving this objective, the main differences in the influence of food marketing were identified across age groups. Differences found included the use of the HSR system, packaging attributes (colour and physical packaging), external influence through others (online influencers and celebrities), exposure and influence of food marketing through social media, use of price, and suggestions made to improve food marketing that promote healthier choices.

The second objective was to use the EMHP to understand food marketing and its influence on food choice preferences on adults in NZ. In this study, the findings were presented using a multi-level influence of interpersonal, individual, organisational, community and policy of the EMHP by McLeroy et al. (1988). Multi-level influences of food marketing were found within each level, with the ability of food marketing to shape participants knowledge, beliefs and preferences at the individual level. Interpersonal relationships established by trust were identified at the interpersonal level, while strategies adopted by supermarkets were found to drive food related behaviour within supermarket organisations. The community level shaped food preferences and the normalisation of products through TV and social media advertising, while policy level suggestions for regulating food marketing were identified.

The results at each level were used to achieve objective three; to make recommendations that inform future practical, policy and research directions related to the influence of food

marketing on adult food choice behaviour. In this approach, several recommendations were identified, including extended research into the influence of food marketing on younger adult generations, an in-depth analysis of the current FBAC and its credibility at reducing the frequency of unhealthy food and beverage advertisement in adults. A final recommendation persisted in the exploration of healthy versus unhealthy food marketing strategy and future direction of nutrient content claims and the HSR system. Additional recommendations were made at the organisational level, including supermarkets adopting strategies to influence healthy eating behaviour beyond the policy level.

The findings of this study demonstrate that food marketing operates at multiple levels to influence the food choices and preferences of NZ adults. This is increasingly important as it shows the multiple factors of food marketing used in NZ, including what may drive food purchasing behaviours. It is therefore important for health professionals and policymakers to consider these factors and how they drive food choice and preferences in adults. This research demonstrates that further consideration of unhealthy food and beverage marketing strategies should be given further consideration in future policy or regulation to enhance healthy eating behaviours within the NZ population.

References

- Abrahams, A. S., Chaudhary, T., & Deane, J. K. (2010). A multi-industry, longitudinal analysis of the email marketing habits of the largest United States franchise chains. *Journal of Direct, Data and Digital Marketing Practice*, 11(3), 187-197.
- Advertising Standards Authority. (2021). *Alcohol Advertising and Promotion Code*. Retrieved November 3 from <https://asa.co.nz/wp-content/uploads/2025/04/ASA-Alcohol-Advertising-and-Promotion-Code-April-2025.pdf>
- Advertising Standards Authority. (2024). *Food and Beverage Advertising Code*. Retrieved November 2 from <https://asa.co.nz/wp-content/uploads/2025/04/ASA-Food-and-Beverage-Advertising-Code-April-2025.pdf>
- Advertising Standards Authority. (2025). *Definition of advertising and advertisement*. Retrieved October 17 from <https://asa.co.nz/industry-guidance/definition-of-advertising-and-advertisement/>
- Aires, M., Dias, Á. L., & Pereira, L. F. (2024). How visual merchandising influences Generation Z purchasing behaviour in supermarkets. *International Journal of Arts and Technology*, 15(1), 13-37.
- Al-Ani, H. H., Devi, A., Eyles, H., Swinburn, B., & Vandevijvere, S. (2016). Nutrition and health claims on healthy and less-healthy packaged food products in New Zealand. *British Journal of Nutrition*, 116(6), 1087-1094.
- Alazne, A.-C., Rafael, A. A.-P., Maria Jose, M.-S., & Cristian, M. O.-S. (2022). The effect of food packaging elements on children's food choices and intake: A systematic review. In *Frontiers in Nutrition* (Vol. 9): Frontiers Media S.A.
- Aljefree, N. M., & Alhothali, G. T. (2022). Exposure to food marketing via social media and obesity among university students in Saudi Arabia. *International Journal of Environmental Research and Public Health*, 19(10), 5851.
- Ares, G., Antúnez, L., Alcaire, F., Natero, V., Gugliucci, V., Machín, L., de León, C., & Otterbring, T. (2025). Associations between exposure to digital food marketing and food consumption in adolescence: a cross-sectional study in an emerging country. *BMC Public Health*, 25(1), 3158.
- Bablani, L., Mhurchu, C. N., Neal, B., Skeels, C. L., Staub, K. E., & Blakely, T. (2022). Effect of voluntary Health Star Rating labels on healthier food purchasing in New Zealand: longitudinal evidence using representative household purchase data. *BMJ Nutrition, Prevention & Health*, 5(2), 227.
- Batty, R. J., & Gee, S. (2019). Fast food, fizz, and funding: balancing the scales of regional sport organisation sponsorship. *Sport Management Review*, 22(1), 167-179. <https://doi.org/10.1016/j.smr.2018.06.014>
- Benlhcene, A., & Ramdani, A. (2020). The process of qualitative interview: Practical insights for novice researchers. *European Proceedings of Social and Behavioural Sciences*.
- Biswas, D., Chakraborty, D., & Manna, A. (2025). *Food Marketing and Labelling: A Practical Guide*. CRC Press.
- Boylard, E., McGale, L., Maden, M., Hounscome, J., Boland, A., Angus, K., & Jones, A. (2022). Association of food and nonalcoholic beverage marketing with children and adolescents' eating behaviors and health: a systematic review and meta-analysis. *JAMA pediatrics*, 176(7), e221037-e221037.

- Boyland, E., Muc, M., Coates, A., Ells, L., Halford, J. C., Hill, Z., Maden, M., Matu, J., Maynard, M. J., & Rodgers, J. (2025). Food marketing, eating and health outcomes in children and adults: a systematic review and meta-analysis. *British Journal of Nutrition*, *133*(6), 781-805.
- Boyland, E., Spanakis, P., O'Reilly, C., & Christiansen, P. (2024). Associations between everyday exposure to food marketing and hunger and food craving in adults: an ecological momentary assessment study. *Appetite*, *196*, 107241.
- Boyland, E. J., Burgon, R. H., & Hardman, C. A. (2017). Reactivity to television food commercials in overweight and lean adults: physiological, cognitive and behavioural responses. *Physiology & Behavior*, *177*, 182-188.
- Boyland, E. J., & Halford, J. C. G. (2013b). Television advertising and branding. Effects on eating behaviour and food preferences in children. *Appetite*, *62*, 236-241. <https://doi.org/10.1016/j.appet.2012.01.032>
- Boyland, E. J., Nolan, S., Kelly, B., Tudur-Smith, C., Jones, A., Halford, J. C., & Robinson, E. (2016). Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food and nonalcoholic beverage advertising on intake in children and adults. *The American journal of clinical nutrition*, *103*(2), 519-533.
- Bragg, M. A., Albert, S. L., Cassidy, O. L., Powell, L. M., & Rummo, P. E. (2025). National trends in social media food marketing expenditures: 2020-2021. *AJPM Focus*, 100440.
- Braun, V., & Clarke, V. (2023). Thematic analysis. In *APA handbook of research methods in psychology: Research designs: Quantitative, qualitative, neuropsychological, and biological.*, Vol. 2, 2nd ed. (pp. 65-81). <https://doi.org/10.1037/0000319-004>
- Calvo-Porrá, C., Rivaroli, S., & Orosa-González, J. (2021). The influence of celebrity endorsement on food consumption behavior. *Foods*, *10*(9), 2224.
- Campos, S., Doxey, J., & Hammond, D. (2011). Nutrition labels on pre-packaged foods: a systematic review. *Public health nutrition*, *14*(8), 1496-1506.
- Carter, M.-A., Signal, L., Edwards, R., Hoek, J., & Maher, A. (2013). Food, fizzy, and football: promoting unhealthy food and beverages through sport - a New Zealand case study. *BMC Public Health*, *13*(1), 1-7. <https://doi.org/10.1186/1471-2458-13-126>
- Chambers, T., Jackson, N., & Hoek, J. (2021). New Zealand's proposed ban on alcohol sponsorship of sport: a cost-effective, pro-equity and feasible move towards reducing alcohol-related harm. *The Lancet Regional Health—Western Pacific*, *13*.
- Chan, C., Patch, C., & Williams, P. (2005). Australian consumers are sceptical about but influenced by claims about fat on food labels. *European journal of clinical nutrition*, *59*(1), 148-151.
- Chandon, P., Hutchinson, J. W., Bradlow, E. T., & Young, S. H. (2009). Does In-Store Marketing Work? Effects of the Number and Position of Shelf Facings on Brand Attention and Evaluation at the Point of Purchase. *Journal of Marketing*, *73*(6), 1-17. <https://doi.org/10.1509/jmkg.73.6.1>
- Coates, A. E., Hardman, C. A., Halford, J. C., Christiansen, P., & Boyland, E. J. (2019a). Social media influencer marketing and children's food intake: a randomized trial. *Pediatrics*, *143*(4).
- Cohen, D. A., & Babey, S. H. (2012). Contextual influences on eating behaviours: heuristic processing and dietary choices. *Obesity Reviews*, *13*(9), 766-779.

- Colmar Brunton Social Research. (2007). *Consumer Use of Nutrition Content Claims in Shopping Environments*.
<https://www.foodstandards.gov.au/sites/default/files/2024-01/P293-ConsumerResearch-Attach10.1.pdf>
- Commerce Commission New Zealand. (2024). *First Annual Grocery Report*
https://www.comcom.govt.nz/data/assets/pdf_file/0019/362305/Annual-Grocery-Report-2024.pdf
- Conference, Jones, G., & Tedlow, R. S. (2015). The Rise and Fall of Mass Marketing. In: Routledge.
- Cordeiro, A., Hussain, M., Ramachandran, T., Beemkumar, N., Kumar, R., Karthikeyan, A., Bupesh Raja, V., Thatoi, D. N., Mahapatro, A., & Nanda, J. (2025). Advancements in packaging materials: trends, sustainability, and future prospects. *Circular Economy and Sustainability*, 1-32.
- Cornwell, T. B. (2008). State of the art and science in sponsorship-linked marketing. *Journal of Advertising*, 37(3), 41-55. <https://doi.org/10.2753/JOA0091-3367370304>
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Danylchuk, K. E., & MacIntosh, E. (2009). Food and non-alcoholic beverage sponsorship of sporting events: the link to the obesity issue. *Sport Marketing Quarterly*, 18(2), 69-80.
- Darko, E. M., Kleib, M., & Olson, J. (2022). Social media use for research participant recruitment: integrative literature review. *Journal of Medical Internet Research*, 24(8), e38015.
- Dave, A. C. (2023). Packaging of ready-to-eat products: a mix research approach for exploring aesthetic element influence on brand preference. *British Food Journal*, 125(11), 4182-4198.
- Delaney, M., & McCarthy, M. (2011). Food Choice and Health across the Life Course: A Qualitative Study Examining Food Choice in Older Irish Adults. *Journal of Food Products Marketing*, 17(2/3), 114-140.
- Dixon, H., Scully, M., Niven, P., Kelly, B., Chapman, K., Donovan, R., Martin, J., Baur, L., Crawford, D., & Wakefield, M. (2014). Effects of nutrient content claims, sports celebrity endorsements and premium offers on pre-adolescent children's food preferences: experimental research. *Pediatric obesity*, 9(2), e47-e57.
- Dixon, H., Scully, M., Wakefield, M., Kelly, B., Pettigrew, S., Chapman, K., & Niederdeppe, J. (2018). The impact of unhealthy food sponsorship vs. pro-health sponsorship models on young adults' food preferences: a randomised controlled trial. *BMC Public Health*, 18(1), 1399.
- Donato, C., Barone, A. M., & Romani, S. (2021). The satiating power of sustainability: the effect of package sustainability on perceived satiation of healthy food. *British Food Journal*, 123(13), 162-177.
- Drichoutis, A. C., Lazaridis, P., & Nayga Jr, R. M. (2006). Consumers' use of nutritional labels: a review of research studies and issues. *Academy of marketing science review*, 2006, 1.
- Ejlerskov, K. T., Sharp, S. J., Stead, M., Adamson, A. J., White, M., & Adams, J. (2018). Supermarket policies on less-healthy food at checkouts: natural experimental evaluation using interrupted time series analyses of purchases. *PLoS medicine*, 15(12), e1002712.

- Elliott, C. D., & Truman, E. (2024). Food marketing on digital platforms: what do teens see? *Public health nutrition*, 27(1), e48.
- Escaron, A. L., Meinen, A. M., Nitzke, S. A., & Martinez-Donate, A. P. (2013). Supermarket and grocery store–based interventions to promote healthful food choices and eating practices: a systematic review. *Preventing chronic disease*, 10, E50.
- Finlay, A., Robinson, E., Jones, A., Maden, M., Cerny, C., Muc, M., Evans, R., Makin, H., & Boyland, E. (2022). A scoping review of outdoor food marketing: exposure, power and impacts on eating behaviour and health. *BMC Public Health*, 22(1), 1431.
- Folkvord, F., Anschütz, D. J., Boyland, E., Kelly, B., & Buijzen, M. (2016). Food advertising and eating behavior in children. *Current Opinion in Behavioral Sciences*, 9, 26-31.
- Folkvord, F., & Hermans, R. C. (2020). Food marketing in an obesogenic environment: a narrative overview of the potential of healthy food promotion to children and adults. *Current Addiction Reports*, 7, 431-436.
- Food Standards Australia New Zealand. (2025). *Food Standards Code Legislation*. Retrieved October 21 from <https://www.foodstandards.gov.au/sites/default/files/2025-06/Food%20Standards%20Code%20-%20Compilation%20%28June%202025%29.pdf>
- Ford, A., Eadie, D., Adams, J., Adamson, A., White, M., & Stead, M. (2020). Parents' and carers' awareness and perceptions of UK supermarket policies on less healthy food at checkouts: A qualitative study. *Appetite*, 147, 104541.
- Fraccastoro, K., & Karani, G. (2010). Resistance to Brand Switching: The Elderly Consumer. *Journal of Business and Economics Research*, 8(12), 35-42.
- Frost, H., Te Morenga, L., Mackay, S., Mc Kerchar, C., & Egli, V. (2025). Impact of unhealthy food/drink marketing exposure to children in New Zealand: a systematic narrative review. *Health Promotion International*, 40(2), daaf021.
- García-Salirrosas, E. E., Escobar-Farfán, M., Esponda-Perez, J. A., Millones-Liza, D. Y., Villar-Guevara, M., Haro-Zea, K. L., & Gallardo-Canales, R. (2024). The impact of perceived value on brand image and loyalty: a study of healthy food brands in emerging markets. *Frontiers in Nutrition*, 11, 1482009.
- Garton, K., Gerritsen, S., Sing, F., Lin, K., & Mackay, S. (2022). Unhealthy food and beverage marketing to children on digital platforms in Aotearoa, New Zealand. *BMC Public Health*, 22(1), 2407. <https://doi.org/10.1186/s12889-022-14790-6>
- Gerritsen, S., Sing, F., Lin, K., Martino, F., Backholer, K., Culpin, A., & Mackay, S. (2021). The timing, nature and extent of social media marketing by unhealthy food and drinks brands during the COVID-19 pandemic in New Zealand. *Frontiers in Nutrition*, 8, 645349.
- Giese, H., König, L. M., Täut, D., Ollila, H., Băban, A., Absetz, P., Schupp, H., & Renner, B. (2015). Exploring the association between television advertising of healthy and unhealthy foods, self-control, and food intake in three European countries. *Applied Psychology: Health and Well-Being*, 7(1), 41-62. <https://doi.org/10.1111/aphw.12036>
- Gittelsohn, J., Trude, A. C. B., & Kim, H. (2017). Pricing strategies to encourage availability, purchase, and consumption of healthy foods and beverages: a systematic review. *Preventing chronic disease*, 14, E107.
- Glanz, K., Bader, M. D., & Iyer, S. (2012). Retail grocery store marketing strategies and obesity: an integrative review. *American journal of preventive medicine*, 42(5), 503-512.

- Godlewska, A., Mazurek-Kusiak, A. K., & Soroka, A. (2025). The Role of Social Media in Food Product Choices Made by Polish Consumers. *Nutrients*, *17*(11), 1801.
- Gorton, D., Mhurchu, C. N., Bramley, D., & Dixon, R. (2010). Interpretation of two nutrition content claims: a New Zealand survey. *Australian and New Zealand journal of public health*, *34*(1), 57-62.
- Greenhalgh, G. P., & Greenwell, T. C. (2013). Professional niche sports sponsorship: an investigation of sponsorship selection criteria. *INTERNATIONAL JOURNAL OF SPORTS MARKETING & SPONSORSHIP*, *14*(2), 77-94.
<https://research.ebsco.com/linkprocessor/plink?id=507e1bfb-4edf-3b40-83a1-70c0966d7130>
- Hallak, R., Lee, C., & Onur, I. (2021). Health star ratings and beverage purchase intentions: A study of Australian and New Zealand hospitality consumers. *Foods*, *10*(11), 2764.
- Hallez, L., Qutteina, Y., Raedschelders, M., Boen, F., & Smits, T. (2020). That's my cue to eat: A systematic review of the persuasiveness of front-of-pack cues on food packages for children vs. adults. *Nutrients*, *12*(4), 1062.
- Hallez, L., Vansteenbeeck, H., Boen, F., & Smits, T. (2023). Persuasive packaging? The impact of packaging color and claims on young consumers' perceptions of product healthiness, sustainability and tastiness. *Appetite*, *182*, 106433.
- Hamlin, R., & McNeill, L. (2018). The impact of the Australasian 'Health Star Rating', front-of-pack nutritional label, on consumer choice: A longitudinal study. *Nutrients*, *10*(7), 906.
- Harris, J. L., Bargh, J. A., & Brownell, K. D. (2009). Priming effects of television food advertising on eating behavior. *Health Psychology*, *28*(4), 404-413.
<https://doi.org/10.1037/a0014399>
- Hawkes, C. (2009). Sales promotions and food consumption. *Nutrition Reviews*, *67*(6), 333-342. <https://doi.org/10.1111/j.1753-4887.2009.00206.x>
- He, M., Tucker, P., Gilliland, J., Irwin, J. D., Larsen, K., & Hess, P. (2012). The influence of local food environments on adolescents' food purchasing behaviors. *International Journal of Environmental Research and Public Health*, *9*(4), 1458-1471.
- Health Promotion Agency. (2021). *Alcohol Use in New Zealand Survey (AUiNZ) 2019/20 reports and results*. Health New Zealand.
<https://doi.org/10.60967/healthnz.26536297.v1>
- Hee, O. C., & Yen, W. S. (2018). The influence of advertising media towards consumer purchasing behavior in the food and beverage industry in Malaysia. *International Journal of Human Resource Studies*, *8*(2), 148-163.
- Hendriksen, A., Jansen, R., Dijkstra, S. C., Huitink, M., Seidell, J. C., & Poelman, M. P. (2021). How healthy and processed are foods and drinks promoted in supermarket sales flyers? A cross-sectional study in the Netherlands. *Public health nutrition*, *24*(10), 3000-3008.
- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*.
<https://doi.org/10.1016/j.socscimed.2021.114523>
- Ikonen, I., Sotgiu, F., Aydinli, A., & Verlegh, P. W. (2020). Consumer effects of front-of-package nutrition labeling: An interdisciplinary meta-analysis. *Journal of the academy of marketing science*, *48*, 360-383.
- Ipsos. (2021). *Consumer behaviour and preferences in the New Zealand retail grocery sector*. Commerce Commission of New Zealand.

https://www.comcom.govt.nz/data/assets/pdf_file/0020/260381/lpsos-Consumer-behaviour-and-preferences-in-the-NZ-retail-grocery-sector-Consumer-study-report-July-2021.pdf

- Ismail, Z., Shokor, S. S. A., Alimun, R., & Suhaimi Ab Shokor, S. (2017). Brand Image And Customer Loyalty Among Gen-Y. *European Proceedings of Social and Behavioural Sciences*, 44.
- Jones, S. C., & Kervin, L. (2011). An experimental study on the effects of exposure to magazine advertising on children's food choices. *Public health nutrition*, 14(8), 1337-1344.
- Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, 72(12), 2954-2965.
- Kareem, S. A., & Venugopal, P. (2023). Social media influencers' traits and purchase intention: A moderated mediation effect of attitude towards brand credibility and brand familiarity. *FIB Business Review*, 23197145231162257.
- Kauppinen-Räisänen, H. (2014). Strategic use of colour in brand packaging. *Packaging Technology and Science*, 27(8), 663-676.
- Kelly, B., Boyland, E., Tatlow-Golden, M., & Christiansen, P. (2024). Testing a conceptual Hierarchy of Effects model of food marketing exposure and associations with children and adolescents' diet-related outcomes. *Public health nutrition*, 27(1), e10.
- Kelly, B., Cretikos, M., Rogers, K., & King, L. (2008). The commercial food landscape: outdoor food advertising around primary schools in Australia. *Australian and New Zealand journal of public health*, 32(6), 522-528.
- King, L., & Hill, A. J. (2008). Magazine adverts for healthy and less healthy foods: effects on recall but not hunger or food choice by pre-adolescent children. *Appetite*, 51(1), 194-197.
- Kneller, K., Garton, K., Exeter, D. J., & Egli, V. (2025). Mapping the extent of unhealthy food advertising around schools in Tāmaki Makaurau/Auckland. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 20(1), 65-82.
- Koordeman, R., Anschutz, D. J., van Baaren, R. B., & Engels, R. C. (2010). Exposure to soda commercials affects sugar-sweetened soda consumption in young women. An observational experimental study. *Appetite*, 54(3), 619-622.
- Kucharczuk, A. J., Oliver, T. L., & Dowdell, E. B. (2022). Social media's influence on adolescents' food choices: A mixed studies systematic literature review. *Appetite*, 168, 105765.
- Kulathunga, N., Laknath, R., & Abeywickrama, H. (2024). The Impact of Digital Marketing Strategies on Consumer Repurchase Intention in the Food and Beverage Industry: A Study in Colombo District, Sri Lanka. *Journal of Business Research and Insights (former Vidyodaya Journal of Management)*, 10(02).
- Lad-Khairnar, M. (2021). Social media marketing: an Overview. *Vidyabharati International Interdisciplinary Research Journal*, 12(1), 172-175.
- Laframboise, N. A., Seabrook, J. A., Matthews, J. I., & Dworatzek, P. D. (2022). Sixty percent of foods advertised in grocery store flyers are not in-line with Canada's food guide. *Canadian Journal of Dietetic Practice and Research*, 83(2), 52-58.
- Lam, C. C. V., Ejlerskov, K. T., White, M., & Adams, J. (2018). Voluntary policies on checkout foods and healthfulness of foods displayed at, or near, supermarket checkout areas: a cross-sectional survey. *Public health nutrition*, 21(18), 3462-3468.

- Lavidge, R. J., & Steiner, G. A. (1961). A Model for Predictive Measurements of Advertising Effectiveness. *Journal of Marketing*, 25(6), 59-62. <https://doi.org/10.2307/1248516>
- Lawrence, H., Reynolds, A. N., & Venn, B. J. (2017). Perceptions of the healthfulness of foods of New Zealand adults living with prediabetes and type 2 diabetes: A pilot study. *Journal of nutrition education and behavior*, 49(4), 339-345. e331.
- Li, S., Zeng, Y., & Zhou, S. (2020). The congruence effect of food shape and name typeface on consumers' food preferences. *Food Quality and Preference*, 86. <https://doi.org/10.1016/j.foodqual.2020.104017>
- Liu, W., Barr, M., Pearson, A. L., Chambers, T., Pfeiffer, K. A., Smith, M., & Signal, L. (2020). Space-time analysis of unhealthy food advertising: New Zealand children's exposure and health policy options. *Health Promotion International*, 35(4), 812-820.
- Lonier, T. (2010). Alchemy in Eden: Entrepreneurialism, branding, and food marketing in the United States, 1880–1920. *Enterprise & Society*, 11(4), 695-708.
- Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. *Journal of interactive advertising*, 19(1), 58-73. <https://doi.org/10.1080/15252019.2018.1533501>
- Lowery, B. C., & Sloane, D. C. (2014). The prevalence of harmful content on outdoor advertising in Los Angeles: land use, community characteristics, and the spatial inequality of a public health nuisance. *American journal of public health*, 104(4), 658-664.
- Lynam, A.-M., McKeivitt, A., & Gibney, M. J. (2011). Irish consumers' use and perception of nutrition and health claims. *Public health nutrition*, 14(12), 2213-2219.
- Maher, A., Wilson, N., & Signal, L. (2005). Advertising and availability of 'obesogenic' foods around New Zealand secondary schools: a pilot study. *The New Zealand Medical Journal (Online)*, 118(1218).
- Mai, R., & Hoffmann, S. (2015). How to Combat the Unhealthy = Tasty Intuition: The Influencing Role of Health Consciousness. *Journal of Public Policy & Marketing*, 34(1), 63-83. <https://research.ebsco.com/linkprocessor/plink?id=c84cb252-1b0a-3e8c-beb5-07a676bf87c9>
- Mai, R., Symmank, C., & Seeberg-Elverfeldt, B. (2016). Light and pale colors in food packaging: When does this package cue signal superior healthiness or inferior tastiness? *Journal of Retailing*, 92(4), 426-444.
- Maison, D. (2019). *Qualitative marketing research : understanding consumer behavior / Dominika Maison*. Routledge. <https://research.ebsco.com/linkprocessor/plink?id=90482e0a-b851-3180-8202-31feffc5192>
- Makowska, M., Boguszewski, R., & Hrehorowicz, A. (2024). Generational differences in food choices and consumer behaviors in the context of sustainable development. *Foods*, 13(4), 521.
- Martinho, G., Pires, A., Portela, G., & Fonseca, M. (2015). Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling. *Resources, Conservation & Recycling*, 103, 58-68. <https://doi.org/10.1016/j.resconrec.2015.07.012>
- Martinho, V. J. P. D. (2020). Food Marketing as a Special Ingredient in Consumer Choices: The Main Insights from Existing Literature. *Foods*, 9(11), 1651. <https://www.mdpi.com/2304-8158/9/11/1651>

- Marx, L. M., & Shaffer, G. (2010). Slotting allowances and scarce shelf space. *Journal of Economics & Management Strategy*, 19(3), 575-603.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15(4), 351-377. <https://doi.org/10.1177/109019818801500401>
- Mead, J. A., & Richerson, R. (2018). Package color saturation and food healthfulness perceptions. *Journal of Business Research*, 82, 10-18.
- Mills, S. D. H., Tanner, L. M., & Adams, J. (2013). Systematic literature review of the effects of food and drink advertising on food and drink-related behaviour, attitudes and beliefs in adult populations. *Obesity Reviews*, 14(4), 303-314. <https://doi.org/10.1111/obr.12012>
- Ministry for Primary Industries. (2022a). *Food and drink labelling and composition rules*. Retrieved August 11 2025 from <https://www.mpi.govt.nz/food-business/labelling-composition-food-drinks/food-and-drink-labelling-and-composition-rules/>
- Ministry for Primary Industries. (2022b). *New Zealand Nutrition and Health Claims Survey 2022*. Retrieved August 11 from <https://www.mpi.govt.nz/dmsdocument/56314-New-Zealand-Nutrition-and-Health-Claims-Survey-2022>
- Miranda, M. J. (2008). Determinants of shoppers' checkout behaviour at supermarkets. *Journal of Targeting, Measurement and Analysis for Marketing*, 16(4), 312-321.
- Mohebbi, B. (2014). The art of packaging: An investigation into the role of color in packaging, marketing, and branding. *International journal of organizational leadership*, 3, 92-102.
- Molenaar, A., Saw, W. Y., Brennan, L., Reid, M., Lim, M. S., & McCaffrey, T. A. (2021). Effects of advertising: a qualitative analysis of young adults' engagement with social media about food. *Nutrients*, 13(6), 1934.
- MP Consulting. (2019). *Health Star Rating System Five Year Review Report*. Retrieved 23 August from <https://www.healthstarrating.gov.au/sites/default/files/2024-12/Health-Star-Rating-System-Five-Year-Review-Report.pdf>
- Murphy, G., Corcoran, C., Tatlow-Golden, M., Boyland, E., & Rooney, B. (2020). See, like, share, remember: adolescents' responses to unhealthy-, healthy-and non-food advertising in social media. *International Journal of Environmental Research and Public Health*, 17(7), 2181.
- Nakamura, R., Pechey, R., Suhrcke, M., Jebb, S. A., & Marteau, T. M. (2014). Sales impact of displaying alcoholic and non-alcoholic beverages in end-of-aisle locations: an observational study. *Social Science & Medicine*, 108, 68-73.
- Nelson, M. C., Story, M., Larson, N. I., Neumark-Sztainer, D., & Lytle, L. A. (2008). Emerging adulthood and college-aged youth: An overlooked age for weight-related behavior change. *Obesity*, 16(10), 2205-2211. <https://doi.org/10.1038/oby.2008.365>
- Ni Mhurchu, C., Eyles, H., & Choi, Y.-H. (2017). Effects of a voluntary front-of-pack nutrition labelling system on packaged food reformulation: The health star rating system in New Zealand. *Nutrients*, 9(8), 918.
- Ni Mhurchu, C., Eyles, H., Genc, M., Scarborough, P., Rayner, M., Mizdrak, A., Nnoaham, K., & Blakely, T. (2015). Effects of health-related food taxes and subsidies on mortality from diet-related disease in New Zealand: an econometric-epidemiologic modelling study. *PLoS One*, 10(7), e0128477.
- Nieto, C., Jáuregui, A., Contreras-Manzano, A., Kent, M. P., Sacks, G., White, C. M., Pauzé, E., Vanderlee, L., Thrasher, J. F., & Barquera, S. (2022). Adults' exposure to unhealthy

- food and beverage marketing: a multi-country study in Australia, Canada, Mexico, the United Kingdom, and the United States. *The Journal of Nutrition*, 152, 255-345. <https://doi.org/10.1093/jn/nxab449>
- Nvivo: Leading qualitative data analysis software. (n.d). Lumivero. Retrieved 8 October 2025 from <https://lumivero.com/products/nvivo/>
- NZ on Air. (2024). *Where are the audiences?* Retrieved 23 November from <https://www.nzonair.govt.nz/news/where-are-the-audiences-2024/>
- O'Brien, K. S., & Kypri, K. (2008). Alcohol industry sponsorship and hazardous drinking among sportspeople. *Addiction*, 103(12), 1961-1966.
- Pacheco, E. (2023). The social media use of adult New Zealanders: Evidence from an online survey. *arXiv preprint arXiv:2305.00119*.
- Panda, D., Masani, S., & Dasgupta, T. (2022). Packaging-influenced-purchase decision segment the bottom of the pyramid consumer marketplace? Evidence from West Bengal, India. *Asia Pacific Management Review*, 27(2), 145-153.
- Pelly, F. E., Swanepoel, L., Rinella, J., & Cooper, S. (2020). Consumers' perceptions of the Australian health star rating labelling scheme. *Nutrients*, 12(3), 704.
- Phipps, E. J., Kumanyika, S. K., Stites, S. D., Singletary, S. B., Cooblall, C., & DiSantis, K. I. (2014). Buying food on sale: a mixed methods study with shoppers at an urban supermarket, Philadelphia, Pennsylvania, 2010–2012. *Preventing chronic disease*, 11, E151.
- Pin-Jane, C., & Marta, A. (2020). Conceptual Models of Food Choice: Influential Factors Related to Foods, Individual Differences, and Society. *Foods*, 9(12), 1898-1898. <https://doi.org/10.3390/foods9121898>
- Plasek, B., Lakner, Z., & Temesi, Á. (2020). Factors that influence the perceived healthiness of food. *Nutrients*, 12(6), 1881.
- Potvin Kent, M., Pauzé, E., Bagnato, M., Guimarães, J. S., Pinto, A., Remedios, L., Pritchard, M., L'Abbé, M. R., Mulligan, C., & Vergeer, L. (2022). Food and beverage advertising expenditures in Canada in 2016 and 2019 across media. *BMC Public Health*, 22(1), 1458.
- Potvin Kent, M., Pauzé, E., Roy, E. A., De Billy, N., & Czoli, C. (2019). Children and adolescents' exposure to food and beverage marketing in social media apps. *Pediatric obesity*, 14(6), e12508.
- Poux, S. (2017). Social ecological model offers new approach to public health. *The Borgen Project*.
- Powell, L. M., Kumanyika, S. K., Isgor, Z., Rimkus, L., Zenk, S. N., & Chaloupka, F. J. (2016). Price promotions for food and beverage products in a nationwide sample of food stores. *Preventive medicine*, 86, 106-113.
- Prinsloo, N., Van der Merwe, D., Bosman, M., & Erasmus, A. (2012). A critical review of the significance of food labelling during consumer decision making. *Journal of Consumer Sciences*, 40, 83-96.
- Qader, K. S., Hamza, P. A., Othman, R. N., Anwer, S. A., Hamad, H. A., Gardi, B., & Ibrahim, H. K. (2022). Analyzing different types of advertising and its influence on customer choice. *International Journal of Humanities and Education Development (IJHED)*, 4(6), 8-21.
- Qutteina, Y., Hallez, L., Mennes, N., De Backer, C., & Smits, T. (2019). What do adolescents see on social media? A diary study of food marketing images on social media. *Frontiers in psychology*, 10, 2637.

- Ravensbergen, E. A., Waterlander, W. E., Kroeze, W., & Steenhuis, I. H. (2015). Healthy or unhealthy on sale? A cross-sectional study on the proportion of healthy and unhealthy foods promoted through flyer advertising by supermarkets in the Netherlands. *BMC Public Health*, *15*(1), 470.
- Renjith, V., Yesodharan, R., Noronha, J. A., Ladd, E., & George, A. (2021). Qualitative methods in health care research. *International journal of preventive medicine*, *12*(1), 20.
- Roux, A., & Van der Walddt, D. (2014). Out-of-home advertising media: theoretical and industry perspectives. *Communitas*, *19*, 95-115.
- Rozendaal, E., Buijzen, M., & Valkenburg, P. (2010). Comparing children's and adults' cognitive advertising competences in the Netherlands. *Journal of Children and Media*, *4*(1), 77-89.
- Scully, M., Dixon, H., & Wakefield, M. (2009). Association between commercial television exposure and fast-food consumption among adults. *Public health nutrition*, *12*(1), 105-110.
- Scully, M., Wakefield, M., Niven, P., Chapman, K., Crawford, D., Pratt, I. S., Baur, L. A., Flood, V., Morley, B., & Team, N. S. (2012). Association between food marketing exposure and adolescents' food choices and eating behaviors. *Appetite*, *58*(1), 1-5.
- Shanmugathas, D. M. (2018). Billboard advertisement strategies. *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, *7*(4).
- Shaw, S. C., Ntani, G., Baird, J., & Vogel, C. A. (2020). A systematic review of the influences of food store product placement on dietary-related outcomes. *Nutrition Reviews*, *78*(12), 1030-1045.
- Sigurdsson, V., Saevarsson, H., & Foxall, G. (2009). Brand placement and consumer choice: an in-store experiment. *Journal of applied behavior analysis*, *42*(3), 741-745.
- Singh, M. (2012). Marketing mix of 4P's for competitive advantage. *IOSR Journal of Business and Management*, *3*(6), 40-45.
- Smith, R., Kelly, B., Yeatman, H., & Boyland, E. (2019). Food marketing influences children's attitudes, preferences and consumption: a systematic critical review. *Nutrients*, *11*(4), 875.
- Sokolova, K., Perez, C., & Vessal, S. R. (2024). Using social media for health: How food influencers shape home-cooking intentions through vicarious experience. *Technological Forecasting & Social Change*, *204*.
<https://doi.org/10.1016/j.techfore.2024.123462>
- Steenhuis, I. H., Waterlander, W. E., & De Mul, A. (2011). Consumer food choices: the role of price and pricing strategies. *Public health nutrition*, *14*(12), 2220-2226.
- Steiner, K., & Florack, A. (2023). The influence of packaging color on consumer perceptions of healthfulness: a systematic review and theoretical framework. *Foods*, *12*(21), 3911.
- Stuthridge, L., Alexander, D., Stubbe, M., Eme, P., & Smith, C. (2022). "It's All Just Marketing", a Qualitative Analysis of Consumer Perceptions and Understandings of Nutrition Content and Health Claims in New Zealand. *International Journal of Environmental Research and Public Health*, *19*(6), 3510.
- Su, J., & Wang, S. (2024). Influence of food packaging color and foods type on consumer purchase intention: the mediating role of perceived fluency. *Frontiers in Nutrition*, *10*, 1344237.

- Svederberg, E., & Wendin, K. (2011). Swedish consumers' cognitive approaches to nutrition claims and health claims. *Food & Nutrition Research*, 55(1), 5929.
- Talati, Z., Norman, R., Kelly, B., Dixon, H., Neal, B., Miller, C., & Pettigrew, S. (2018). A randomized trial assessing the effects of health claims on choice of foods in the presence of front-of-pack labels. *The American journal of clinical nutrition*, 108(6), 1275-1282.
- Tawfiq, E., Bradbury, K. E., & Mhurchu, C. N. (2022). Does the prevalence of promotions on foods and beverages vary by product healthiness? A population-based study of household food and drink purchases in New Zealand. *Public health nutrition*, 25(5), 1246-1254.
- Tedlow, R. S., & Jones, G. G. (2014). *The rise and fall of mass marketing (RLE Marketing)*. Routledge.
- Thomas, J. S., Chaoqun, C., & Iacobucci, D. (2022). Email Marketing as a Tool for Strategic Persuasion. *Journal of Interactive Marketing*, 57(3), 377-392.
<https://doi.org/10.1177/10949968221095552>
- Tijssen, I., Zandstra, E. H., de Graaf, C., & Jager, G. (2017). Why a 'light' product package should not be light blue: Effects of package colour on perceived healthiness and attractiveness of sugar-and fat-reduced products. *Food Quality and Preference*, 59, 46-58.
- Upadhyay, I. B. K. (2014). Effectiveness of Print and Electronic media Advertisement: A Comparative Study. *International Research Journal of Social Sciences*, 3(7), 23-28.
- Van Trijp, H. C., & Meulenberg, M. T. (1996). Marketing and consumer behaviour with respect to foods. In *Food choice, acceptance and consumption* (pp. 264-292). Springer.
- Vandevijvere, S., Aitken, C., & Swinburn, B. (2018c). Volume, nature and potential impact of advertisements on Facebook and YouTube by food brands popular in New Zealand. *The New Zealand Medical Journal (Online)*, 131(1473), 14-24.
- Vandevijvere, S., Mackay, S., D'Souza, E., & Swinburn, B. (2014). How healthy are New Zealand food environments. *A comprehensive assessment, 2017*, 25.
- Vandevijvere, S., Molloy, J., Hassen de Medeiros, N., & Swinburn, B. (2018b). Unhealthy food marketing around New Zealand schools: a national study. *International journal of public health*, 63(9), 1099-1107.
- Vandevijvere, S., & Swinburn, B. (2014). Food references and marketing in popular magazines for children and adolescents in New Zealand: a content analysis. *Obesity Research & Clinical Practice*(8), 109.
- Vandevijvere, S., Waterlander, W., Molloy, J., Nattrass, H., & Swinburn, B. (2018a). Towards healthier supermarkets: a national study of in-store food availability, prominence and promotions in New Zealand. *European journal of clinical nutrition*, 72(7), 971-978.
- Vaudin, A., Wambogo, E., Moshfegh, A., & Sahyoun, N. R. (2021). Awareness and use of nutrition information predict measured and self-rated diet quality of older adults in the USA. *Public health nutrition*, 24(7), 1687-1697.
- Voramontri, D., & Klieb, L. (2019). Impact of social media on consumer behaviour. *International Journal of Information and Decision Sciences*, 11(3), 209-233.
- Vukmirovic, M. (2015). The effects of food advertising on food-related behaviours and perceptions in adults: A review. *FOOD RESEARCH INTERNATIONAL*, 75, 13-19.
<https://doi.org/10.1016/j.foodres.2015.05.011>

- Vyth, E. L., Steenhuis, I. H., Roodenburg, A. J., Brug, J., & Seidell, J. C. (2010). Front-of-pack nutrition label stimulates healthier product development: a quantitative analysis. *International journal of behavioral nutrition and physical activity*, 7, 1-7.
- Weismueller, J., Harrigan, P., Wang, S., & Soutar, G. N. (2020). Influencer endorsements: How advertising disclosure and source credibility affect consumer purchase intention on social media. *Australasian Marketing Journal (AMJ)*, 28(4), 160-170.
<https://doi.org/10.1016/j.ausmj.2020.03.002>
- Wilson, N., Morenga, L., Mackay, S., Gerritsen, S., Cleghorn, C., Jones, A. C., & Swinburn, B. (2020). Food taxes and subsidies to protect health: relevance to Aotearoa New Zealand. *Politicians: please work together to minimise the spread of COVID-19*, 133(1511).
- Woolworths. (2023). *Woolworths increases healthier choices at the checkout and cuts out kids confectionery*. Retrieved November 12 2025 from
<https://www.woolworths.co.nz/info/news-and-media-releases/2023/woolworths-increases-healthier-choices-at-the-checkout-and-cuts-out-kids-confectionery>
- World Health Organization. (2022). Food marketing exposure and power and their associations with food-related attitudes, beliefs and behaviours: a narrative review.
<https://www.who.int/publications/i/item/9789240041783>
- Wray, A., Martin, G., Seabrook, J. A., Doherty, S., & Gilliland, J. (2025). Does outdoor advertising correlate with retail food purchases made by adolescents? A cross-sectional study in Canada. *Health Promotion International*, 40(2), daaf016.
- Young, L., Rosin, M., Jiang, Y., Grey, J., Vandevijvere, S., Waterlander, W., & Mhurchu, C. N. (2020). The effect of a shelf placement intervention on sales of healthier and less healthy breakfast cereals in supermarkets: A co-designed pilot study. *Social Science & Medicine*, 266, 113337.
- Zhou, M., & Kraak, V. (2022). A mixed-methods study of American Millennials' views about celebrity endorsement of foods and beverages. *Health Promot Int*, 37(1).
<https://doi.org/10.1093/heapro/daab048>
- Zorbas, C., Martino, F., Heneghan, T., Potter, J., Chisholm, M., Cameron, A. J., Sacks, G., Ananthapavan, J., & Backholer, K. (2023). Perceptions towards unhealthy food sponsorship in junior sports in Victoria, Australia. *Australian and New Zealand journal of public health*, 47(2), 100024.

Appendices

APPENDIX A

Recruitment Poster



**DOES FOOD MARKETING
IMPACT YOUR FOOD
CHOICE?**



We are seeking volunteers to take part in a 20 – 30 minute interview in person or online to investigate how food marketing influences day to day food choices and experiences.

If you are over 18 years old, then we would love to hear from you!

Participation is voluntary and confidential.

Contact Information
If you are interested please contact:

Main researcher: Courtney Hampton
Email: c.p.hampton@massey.ac.nz

Or scan the QR code to be contacted.

Scan the QR Code



 **MASSEY UNIVERSITY**
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

COLLEGE OF HEALTH
TE KURA HAUORA TANGATA

APPENDIX B

Participant Information Sheet

Exploring the factors in food marketing that influence food choice preferences in New Zealand Adults

PARTICIPANT INFORMATION SHEET

Introduction:

I am Courtney, a Master of Science in Nutrition and Dietetics student from Massey University conducting research supervised by Dr Ravi Reddy. I am seeking to recruit participants to investigate the factors of food marketing that impacts food choices in New Zealand adults.

This participant information sheet is set out to help you to decide whether you would like to take part in this study. If you agree to take part in this study, you will be asked to sign a consent form. You will receive a copy of this information sheet and signed consent form to keep.

Project description:

Food marketing is a strategy used by companies to promote a product to influence consumer choices. Various aspects of food marketing include audio-visual (television), print media (magazines, flyers, newspapers), digital media (social media, online advertisements) and partnerships or endorsements (influencers). Other factors of food marketing include price, promotion, packaging and labelling.

Food marketing is known to impact children's preferences towards food products, but less is known about this influence on adults. In particular, less is known about the influence of food marketing on young adults versus older adults in New Zealand. Therefore, the aim of this project is to explore the factors in food marketing that influence food choice preferences amongst New Zealand Adults. I plan to interview about 20 participants to explore the influence of marketing on food choices.

You can participate if you:

- Are over 18 years old

- Living in New Zealand

Project procedures:

- This study requires you to attend a 20 – 30 minute interview with the student researcher either in person at a chosen location OR online over Zoom.
- Participation is voluntary

Data Management:

Interviews will be voice recorded on a recording device belonging to the primary researcher only. Data will be transcribed and analysed for themes. All data collected during the study will be destroyed within three years of the studies completion. Data will be stored on password protected devices belonging to the primary research team only. Participant information will be kept confidential and your personal identity will be deidentified for data analysis and reporting. A code will be used to identify you. The results of this study may be published or presented, with your identity remaining confidential.

Participant Rights:

You have the right to;

- Withdrawal from the study, after two weeks following the completion of the interview
- Decline to answer any questions that make you uncomfortable during the interview process
- Decline to have the interview image recorded if it is conducted on Zoom
- Request summary findings of the research following the completion of the study by contacting Courtney Hampton

Ethics Committee Approval Statement:

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the ethical conduct of this research that you want to raise with someone other than the researcher(s), please contact Massey University Human Ethics by email: humanethics@massey.ac.nz.

Project Contacts:

If you have any questions or concerns about this project, either now or in the future, please contact:

1. Student Researcher

Courtney Hampton

Email: c.p.hampton@massey.ac.nz

2. Primary Supervisor

Dr. Ravi Reddy

Email: r.reddy@massey.ac.nz

APPENDIX C

Consent Form

Exploring the factors in food marketing that influence food choice preferences in New Zealand Adults.

CONSENT FORM FOR STUDY VOLUNTEERS

I have read and understand the participant information sheet. The details of the study have been answered full satisfaction. I have been given sufficient time to consider whether to participate in this study and I understand that my participation is voluntary and that I have the right to withdrawal from this study at any point. I understand who to contact if I have any further questions about the study.

1. I agree / do not agree to have the interview sound recorded (please circle one)
2. I agree / do not agree to have the interview image recorded if conducted on Zoom (please circle one)

Declaration by participant:

I hereby consent to take part in this study.

Participant's Name: _____

Signature: _____

Date: _____

Declaration by member of research team:

I have given a verbal explanation of the research project to the participant and have answered the participant's questions regarding this study.

I believe that the participant understands the study and has given informed consent to participate.

Researcher's Name: _____

Signature: _____ Date: _____

Ethics Committee Approval Statement:

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the ethical conduct of this research that you want to raise with someone other than the researcher(s), please contact Massey University Human Ethics by email: humanethics@massey.ac.nz.

APPENDIX D

Interview Schedule

Introduction

Hey [name], my name is Courtney, I am the student researcher studying towards a master of science in Nutrition and Dietetics. For the research component I am looking at food marketing and food choices in New Zealand adults. Thank you for agreeing to participate / meet for this study. I have a set of questions that I will be asking in relation to how food marketing impacts your food choices or decisions to purchase specific food products. This interview should take around 20 – 30 minutes. I have a set of questions that I will ask and will probe information in between.

The interview will be recorded today for data analysis and theme generation.

I have obtained your consent form for the study but do you have any further questions or concerns before we continue?

QUESTIONS

1. Can you think of a time where you have purchased a food or food product based off an advertisement that you have seen? What type of food / food product was it?

Community

2. Where do you encounter the most food advertisements?
 - Television
 - Online advertisements
 - Social Media
 - Flyers, magazines, newspaper
 - Billboards
 - Bus stop posters
3. What about advertisements online or on social media? What platforms expose you to the most food advertisements?
 - YouTube
 - Facebook
 - TikTok
 - Instagram

- Twitter
- Snapchat
- Webpage ads

Individual / Organisational

4. When you are at the supermarket, what factors influence the foods that you choose?
 - Specials
 - Packaging
 - Product placement

Interpersonal

5. Have you been influenced by others to purchase a food product?
 - What about celebrities or online influences?

Policy

6. Do you think we need any policies on the frequency of food advertisements?
 - What about on the types of food products that are marketed?

Is there anything else that you would like to add that hasn't been discussed already?

End statement:

That concludes the interview process for this study. Thank you for your contribution with your answers. I will end the recording now.