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# **Motivators and influences that contribute to following a vegan lifestyle in New Zealand**

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## Abstract

**Background:** The number of people following a vegan diet has increased in many industrialised countries over the past decade, and the dietary option of excluding animal food products is currently a widely discussed and socially relevant issue. The vegan diet, often characterised as very restrictive, is associated with health benefits, and thus raises concerns. Our society is becoming more aware of their personal choices affecting the environment, and animal welfare. Controversy regarding the diet exists within a social context, with those actively supporting and advocating for it, while others question its purpose and proposed benefits. Therefore, determining the motivators and barriers to following a vegan diet within New Zealand may help guide further research within this growing field.

**Objectives:** To better understand the key motivators and corresponding sources of information for New Zealanders following a vegan diet.

**Methods:** This study obtained qualitative data via focus groups held on Zoom. All 41 focus group participants were living in New Zealand, aged 18 years or older, followed a vegan diet for a minimum of 12 months, and spoke fluent English. Vegan participant key motives, influential information sources, and challenges, were further explored through a series of open-ended questions, which utilised a constant comparative approach. In order to conduct a thematic analysis, the recorded discussions were transcribed and uploaded to NVivo 12.

**Results:** Three overarching themes were identified as: driving motives, sources of information, and challenges when following a vegan diet. Firstly, the major themes established for motivators were related to health, being environmentally conscious, and ethical beliefs/values linked to various factors, such as animal welfare, culture and religion. Secondly, an examination of influential information sources identified health professional expertise (e.g. nutritionists, dietitians and doctors), media platforms (e.g. Instagram, Facebook), and advice-seeking from peers. Lastly, some common challenges that arose while following the vegan diet included health concerns, culture and family controversies, and cost and affordability barriers.

**Conclusion:** This research indicates that vegans are generally bound to one or more motives, access various information to guide their lifestyle choices, and despite apparent challenges/barriers, many vegans are inclined to have strong motivations. While this study contributes to discourse on this topic, further research exploring where nutrition is not the key motivating factor for many vegans would be beneficial. Based on the findings in this thesis, it would be of benefit for future research to examine some areas of veganism more closely, such as animal welfare and environmental consciousness, and the detrimental effects of social media when misinformation concerning veganism is disseminated.

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# Chapter 1: Introduction

This thesis considers veganism in a New Zealand setting by exploring the motivators and influential information sources associated with adopting a vegan diet. The interest in veganism has been growing over the past decade, and the dietary option of excluding animal food products is currently a widely discussed, socially relevant issue (Christopher et al., 2018; Pendergrast, 2015). Research has identified that the number of people opting for a vegan diet is increasing as excluding animal foods becomes a more common choice (Sexton et al., 2022; Parker, 2018). This choice is made evident by the increasing range of vegan food products available and by the exponential growth in sales of vegan food products in both North America and Europe: with North American sales alone increasing by 20% (USD 3.3 billion) in 2022. Europe has 5% of the overall population now identifying as vegetarian and/or vegan (Sexton et al., 2022; Hargreaves et al., 2021) while in the United Kingdom, approximately 600,000 people currently identify as vegan (Sexton et al., 2022; Smithers, 2019). This demographic trend of adopting a vegan diet is growing in Western countries, and some evidence suggests this trend may also be seen as useful to maintaining good health in developing populations (Allès et al., 2017). Vegetarianism and veganism seem to be considered not only as dietary choices, but also as elements of a growing social movement motivated by personal health interests, environmental concerns, ethical beliefs and values (animal rights and welfare) and correlated with a growing body of research investigating individual differences, attitudes, health status and disease prevention (Christopher et al., 2018; Jabs et al., 1998).

There are various ways in which veganism can be defined, however, at the most fundamental level, veganism refers to the exclusion of animal-derived products from a person's diet. This includes omitting foods such as meat, seafood, insects, dairy products, eggs, and honey (The Vegan Society, 2022; Alcorta et al., 2021). Furthermore, those following a vegan lifestyle also exclude animal-derived products from their lives: such as leather goods or cosmetics tested on animals (Gora, 2022). Veganism is more than just a diet for many as it tends to be connected to a rounded perspective that considers the individual's personal ethics and principles, such as concerns regarding animal rights, welfare, and farming (Janssen et al., 2016). For this thesis, the terms 'vegan diet' and 'vegan lifestyle' are therefore used interchangeably.

Ostfeld (2017) suggests a plant-based diet is typically referred to as being minimally processed, rich in fruits, vegetables, whole grains, legumes, nuts and seeds and excludes all animal products, including red meat, poultry, fish, eggs, and dairy products. Such a description directly corresponds



to a vegan diet. However, Tuso et al. (2013) state that, despite the term 'plant-based' often being used interchangeably with the term vegan diet, it also can refer to a diet that aims to maximize consumption of nutrient-dense plant foods, while minimising processed foods, and animal foods (including dairy products and eggs) (Ostfeld, 2017; Satija & Hu., 2018; Lea et al., 2006). In this thesis, all three terms are utilised, however, it is clearly recognised that the latter term (plant-based) is broader and differs in certain contexts. Overall, irrespective of whether someone is said to be following a plant-based diet (as defined by Ostfield), a vegan diet, or a vegan lifestyle, the steady rise in numbers being reported for all three approaches represents a growing social movement that has seen these choices become more popular, especially among adolescents and females (Paslakis et al., 2020).

Health-oriented concerns are commonly related to health risks associated with consuming animal products and body mass index (Rosenfeld & Burrow, 2017; Sabaté & Wien, 2010). Vegan diets can assist with lowering cholesterol, blood pressure, and HbA1c concentration (a biomarker for the presence and severity of hyperglycaemia), as well as body mass index, leading to a reduction in risk of various diseases such as diabetes, cardiovascular disease, and obesity (Tuso et al., 2013; Le & Sabaté, 2014). Moreover, compared to an omnivorous diet, the vegan diet generally entails greater intakes of fibre, vitamin C, vitamin E, potassium, magnesium, various phytochemicals, and unsaturated fats which, in turn, have beneficial impacts on cholesterol levels (Craig, 2009). As highlighted by Le et al. (2014), those following a vegan diet generally display lower serum cholesterol levels and blood pressure, which reduces their chances of suffering from heart disease (Craig, 2009; Le et al., 2014). While the above benefits can be substantial for many people, it is important to note that the vegan diet can create nutritional deficiencies if not well-planned, and potentially resulting in macro and micronutrient deficiencies including protein, long chain polyunsaturated fatty acids (LCPUFA), iron, and calcium (Bakaloudi et al., 2021; Sebastiani et al., 2019; Craig, 2009). One issue is the bioavailability of iron, which is lower in a plant-based diet over an omnivorous diet (Bakaloudi et al., 2021). Additionally, plant proteins form a large part of the human diet, with most being deficient in one or more essential amino acids, and are therefore regarded as incomplete proteins (McDougall, 2002). Therefore, it can be important for vegans to consume complementary nutrients, in order to obtain all vital amino acids for vital functions such as tissue repair, and nutrient absorption in the body (Craig, 2009). For example, this could include additional consumption of legumes, nuts and seeds, beans, soy, and tofu.

In addition, ethical motives can refer to animal rights and religious beliefs (Hoffman et al., 2013). An important distinction when considering veganism, is how some vegan life-stylers or ethically

motivated individuals may refuse to purchase animal-derived products, and instead commit to a lifestyle that consists strictly of plant-derived products (Mann, 2014; Aguilar, 2015; Cooper et al., 2022; Sebastiani et al., 2019). In contrast to the vegan diet, the vegetarian diet does not include the total vegan lifestyle approach. For instance, some vegans choose not to wear or purchase animal-derived products such as leather goods (Mann, 2014; Aguilar, 2015; Cooper et al., 2022; Sebastiani et al., 2019). Furthermore, the considerations of environmentally conscious vegans are often based on environmental protection, climate change, sustainability, and resources (Janssen et al., 2016). For example, there are numerous studies and reports supporting the claim that omnivorous diets utilise more energy, land, and water resources, emitting greater greenhouse gasses, and contribute to deforestation, in comparison to the products consumed by those following a vegan diet (Aleksandrowicz et al., 2016; González-García et al., 2018; Joyce et al., 2012).

Although there is global evidence exploring motivators for following a vegan lifestyle, there is very limited evidence within a New Zealand context. With the rise in plant based diets locally (Milfont et al., 2021) and the potential for different motivators/information sources driving individuals compared to individuals overseas, this raises concerns on the significance the vegan diet has on an individual's nutritional adequacy, and accessibility to reputable resources (Craig, 2009). Existing research within New Zealand coupled with international findings highlight the importance of this research and concerns raised. Considering that following a vegan diet may have both health benefits and disadvantages such as a risk of nutrient deficiencies, it is therefore important to understand both current nutritional knowledge and sources of information/advice for those following a vegan diet. Hence, understanding from where individuals gather dietary information is important for their health and wellbeing (Fehér et al., 2020; Bakaloudi et al., 2021; Sebastiani et al., 2019; Craig, 2009; Tuso et al., 2013; Le et al., 2014). The current lack of information available also further highlights the importance of this study as outlined in the purpose of this study below.

### **Purpose of the study**

The vegan lifestyle is growing in popularity in New Zealand as our society becomes more aware of what they consume and purchase, and how it affects not only their health, but also the environment, and animals (Sexton et al., 2022; Parker, 2018). In New Zealand 2022, 18,000 people are followers of Facebook's Vegan Society of Aotearoa and another 10,400 are members of the Auckland Vegan Facebook page. In 2019, 34% of New Zealanders reported reducing or excluding meat consumption (Martin, 2019; Scoop News, 2019). Additionally, The Better Futures report by Brunton (2018) anticipates more New Zealanders becoming plant-based in the future.

Considering a dietitian's role in New Zealand is to make use of nutritional evidence to practical strategies to support optimal health within the community (Dietitians NZ, 2023). Dietitians need to be able to provide advice to assist individuals adopting a vegan diet, to ensure they are doing so safe and suitably (Wicks & Wentzel-Viljoen., 2021). Therefore, the purpose of this study is to gain an in-depth understanding of the key motivators and influential information sources of people following a vegan diet within New Zealand.

### ***Aim and objectives***

*Aim:* To better understand the key motivators and sources of information for New Zealanders following a vegan diet

### **Objectives:**

- To identify New Zealand adults (18 years or older) key motivators for following a vegan diet.
- To investigate leading sources of information for New Zealand adults following a vegan diet.
- To identify the potential benefits and challenges for New Zealand vegans 18 years or older when following this diet.

### ***Thesis structure***

This thesis is divided into six chapters - Chapter One is an introduction to the background and purpose of the research study, and includes the aim and objectives. Chapter Two is a literature review of relevant research within the field of the vegan diet and/or lifestyle. In particular, it highlights past discussions regarding the history of, and recent trends of veganism, identified key motivators for following a vegan lifestyle, influential information sources, an analysis of existing qualitative research, and an exploration of potential benefits and/or challenges being reflected upon in relevant literature. Chapter Three provides a detailed overview of the methodology underpinning this research, including the study design, methods used, participant recruitment, data gathering, results and analysis, and ethics. Chapter Four highlights the relevant findings to the research question and provides an overview of participant data concerning motivators, information sources, and challenges when following a vegan diet. Next, Chapter Five provides an in depth discussion about the main factors that stemmed from the results of this study. Lastly, Chapter Six, the concluding chapter, outlines how the aim and objectives have been met, acknowledges the impact this research may have on key motivators and influential sources of

information for those following a vegan diet and/or lifestyle within the New Zealand context, and future recommendations.

### **Researcher's contributions**

<b>Name</b>	<b>Contribution</b>
Ruby Alexander MSc Nutrition and Dietetic Candidate	Second year dietetics student and primary author of the thesis, involved in all study components. These include, ethics application, participant recruitment, focus groups as main moderator, qualitative data analysis, interpretation of results, and writing the thesis as per partial fulfilment of a Master's degree in nutrition and dietetics.
Dr Rachel Batty Primary Academic Supervisor	Conceptualised the study. Assisted in ethics application, focus group questions, literature review direction, and qualitative data analysis. Provided review and feedback on all documentation provided by the MSc Nutrition and Dietetic candidate in preparation for thesis submission.
Professor Pamela von Hurst Co-Supervisor	Assisted group questions and literature review direction. Provided review and feedback on all documentation provided by the primary researcher in preparation for thesis submission.
Associate Professor Cathryn Conlon Co-Supervisor	Assisted group questions and literature review direction. Provided review and feedback on all documentation provided by the primary researcher in preparation for thesis submission.

## **Chapter 2: Literature Review:**

This chapter reviews the current literature on the topic of veganism. The first section examines the history, recent trends and prevalence of the vegan diet. Secondly, the key motivators and challenges to following a vegan diet are explored. Influential sources of information regarding veganism are identified in the third section. In the last section, existing qualitative research that is relevant to this study regarding veganism is examined, with research and knowledge gaps identified.

### **History, recent trends and prevalence of veganism**

#### ***Definitions of veganism and vegetarianism***

The term veganism refers to a diet rich in plant-based foods (legumes, nuts, seeds, grains, and fruit) and the exclusion of animal-based food ingredients (Richter et al., 2016; Ostfeld, 2017; Satija & Hu., 2018; Lea et al., 2006). Consumers choosing to follow a vegan diet are those individuals who omit animal products: not just products where the animal has been killed (meat), but also dairy, eggs, and other animal-derived ingredients (Janssen et al., 2016; Hargreaves et al., 2021; De Boo, 2014).

In contrast, vegetarianism refers to a diet which excludes food products where an animal has been killed, but still allows dairy products and eggs to be incorporated into the mainly plant-based diet (Gora, 2022; Hopwood et al., 2020; Jabs et al., 1998).

#### ***History of veganism***

While the concept of the vegetarian diet can be traced back to ancient Greece, to Pythagoras and his followers, the history of veganism is much more recent (Hargreaves et al., 2021). The vegan diet has been evolving since 1944 when Donald Watson, founder of the UK-based Vegan Society, coined the word 'vegan' in order to separate the diet from the vegetarian diet (De Boo, 2014). The idea of a non-dairy vegetarian diet had been proposed numerous times by members of the vegetarian society in London, who continued to argue that animals still faced harm because of egg production and dairy farming (Mann, 2014).

## ***Recent trends and prevalence of veganism***

### *Countries and culture*

Individuals following a vegan diet are still a minority in most of the world's cultures. However, there is a global trend evident in the rising number of people classifying themselves as vegan, or involved in a primarily plant-based diet and this is seen to represent a growing social movement (Minassian, 2022; Schmutz & Foresi, 2016; Kamiński et al., 2020; Janssen et al., 2016).

Approximately 2% of the population in the United States follow a vegan diet: with numbers said to have increased from around 4 million in 2014, to 19.6 million in 2019 (Paslakis et al., 2020; The Vegan Society, 2022). The percentage of the population following a vegan diet in Great Britain quadrupled between 2014 and 2019, with 0.25% in 2014 (150,000 individuals), and 1.16% in 2019 (The Vegan Society, 2022). In Australia, it is estimated that 3.4% of the population follow a vegan diet, and there has been an increase in the overall demand for vegan produce and products in recent years (Statistica, 2021).

Closer to home, social media has reported on the reduction of meat consumption by New Zealanders. For example, Neville (2019) highlights a survey conducted by Colmar Brunton which was commissioned by food frontier in 2019 and reports that one in three of New Zealanders were consciously reducing animal consumption (Colmar Brunton, 2019). In particular, Neville discusses vegans are more likely to reside in Auckland, and commonly motivated by health concerns, the environment, and animal welfare. Milfont et al. (2021) analysed data from a 20-year longitudinal study – The New Zealand Attitudes and Values Study (NZAVS) – and found a rise in the adoption of plant-based diets locally. The NZAVS includes over 47,000 participants and documented that 94.1% of New Zealand respondents consume meat, with 5.8% defined as vegan or vegetarian. The percentage of meat-free eaters rose from 4% in 2014 to 10% in 2018 (Milfont et al., 2021). Although the number of studies is small, and these results may be limited by the size and representativeness of the samples, the state of veganism has been noted in popular news outlets in New Zealand. Moreover, it seems to have a rising percentage of the population following a vegan lifestyle (Colmar Brunton, 2018). The general interest in veganism also continues to rise: Google search trends show a marked global increase of 47% in the number of vegan searches between January 2004 and October 2022 - and, more specifically, within New Zealand this increase was 38% (Google Trends, 2022).

### *Contemporary views*

Over recent years, vegan food alternatives have also become increasingly convenient and accessible (The Vegan Society, 2022). Global economies, markets and industries are set to be impacted by changing food demands and the increasing amount of vegan-friendly products available in regular supermarkets (Alcorta et al., 2021; Coelho, 2019). Estimations by Donnan et al. (2019) suggest that by 2040, only 40% of individuals globally will be consuming meat from animals, while 35% will consume laboratory-grown meat, and 25% vegan meat replacements (Donnan et., 2019). Companies such as Tyson Foods, America's largest meat producer, are heavily invested in creating and producing plant-based meat replacements and alternatives (Purdy, 2017). Alcorta et al. (2021) claim the plant-based meat alternative market is projected to increase from 1.6 billion (USD) in 2019 to 3.5 billion (USD) by 2026. The plant-based milk market has also expanded considerably in recent times, with sales doubling globally from 2009 to 2015 (Alcorta et al., 2021). Furthermore, Alcorta et al. (2021) claim that, according to the American Plant Based Foods Association, plant-based cheese, yoghurts, and creamers have all increased by 43%, 55% and 131% respectively. The increasing interest in vegan diets is not only visible in the increasing amount of vegan-friendly products available in regular supermarkets (Strecker, 2016), but also in the rising number of participants enrolling in campaigns such as 'Veganuary': from 400,000 in 2020 to over 600,000 in 2022 (Baker, 2022; Veganuary, 2021). Veganuary is an annual challenge which is run by a United Kingdom non-profit organisation, aiming to educate and promote veganism by encouraging people to follow a vegan diet for the entire month of January.

The UK Vegan Society (2022) suggests that young individuals appear to be driving this vegan movement. In the United Kingdom, 42% of vegans were between the ages of 15 and 34, suggesting a dramatic generational shift in consumer behaviours and attitudes towards animal-based products. Knaapila et al. (2022) suggest millennials are the main generation behind the increase in plant-based meat alternatives, with the environment being a key driver for this dietary choice. Similarly, Trauth (2020) discusses how Generation Z is purchasing 57% more tofu, and 550% more plant-based milks than any other generation so far. Their work is supported by reports from the United States, where Generation Z and millennials are also reportedly the two most common age groups following a vegan or vegetarian-based diet (Statista, 2018; Woods, 2021). A research survey conducted in Australia also showed there is an increasing awareness and concern amongst Generation Z regarding negative impacts of animal consumption on our planet and ecosystem (Bogueva & Marinova, 2020). Generation Z is also more conscious of what they consume, and more likely to be influenced by what they view on social media and how a company



is portrayed online before they purchase any goods (Francis & Hoefel, 2018; Britain Thinks, 2019).

### *Gender prevalence*

In the narrow literature currently available, there is evidence for a strong gender bias toward more females opting for a vegan diet: meat is often perceived as part of a masculine diet (Modlinska et al., 2020). Generally, females in their adolescent years or twenties are also more easily influenced by their peers, mothers, or other female figures in their life and, therefore, more likely to transition to the vegan diet than their male peers (Modlinska et al., 2020). Contrary to this, some vegans will also try and avoid any conflict or embarrassment caused by this dietary choice and briefly give in to pressure from co-workers, friends and family to consume animal products in order to conform (Hargreaves et al., 2021; McKeown et al., 2021). Females adopting a vegan or vegetarian diet are twice as likely to adopt these behaviours when compared to males (Modlinska et al., 2020).

Furthermore, Modlinska et al. (2020) found men generally suffer more from conflicting thoughts between their intrinsic preferences and gender norms, whereas women are less concerned about gender-congruent choices. However, as younger generations become more conscious about sustainability and animal welfare, there is a noticeable shift in personal decisions that is creating a positive attitude towards more plant-based diets (Modlinska et al., 2020; Zhao et al., 2021). Omnivorous men typically present a more negative attitude towards vegan diets and/or lifestyles than females (Modlinska et al., 2020; Judge & Wilson, 2019). This is suggested to be linked to meat generally being associated with masculinity and leads to vegans being seen as less masculine, and not perceived as strong (Modlinska et al., 2020; Rosenfeld & Tomiyama, 2020). More research focussing on vegan males would be useful to determine whether males are less commonly vegan due to the way that meat and masculinity are typically portrayed in the media.

### **Key motivators and challenges to following a vegan diet or lifestyle**

According to the research and studies identified during this literature review, the most common emerging motives for adopting a vegan diet include: health-related, environmental, and ethical issues - or a combination of these motivators (Janssen et al., 2016; Dyett et al., 2013; Fox & Ward, 2008; Izmirlı & Phillips, 2011; Kerschke-Risch, 2015; Rosenfeld, 2018). North et al., (2021) also conducted a qualitative research study with Australian participants and concluded that health, environment and ethics were the main motivators for becoming vegan.

'Evidence mapping' is a process that describes the design, yield and characteristics of research in broad topic areas (in contrast to systematic reviews which usually address more specific research questions) (Lunny et al., 2016; Miki et al., 2020). Research by Miki et al. (2020) utilised evidence mapping to highlight public interest in plant-based diets, and found this to be largely driven by health interests - as well as taste/sensory development, animal welfare concerns, environmental concerns, and weight loss.

Overall, common challenges or barriers to following a vegan diet included nutritional concerns, health benefits and risks, ethical beliefs, and misinformation (Brouwer et al., 2022; Markowski et al., 2019). These key motivators and possible barriers to veganism are explored in more depth in the following sections.

### ***Nutritional and health benefits and risks***

Popular health-related motives include the notion that a vegan diet is preferable for one's health compared to an omnivorous diet, in that it reduces prevalence of illnesses, and is beneficial to one's physical health (Janssen et al., 2016; Craig, 2009; Timko et al., 2012; Rothgerber, 2013; D'Souza et al., 2022). Weight loss, and/or the maintenance of lean body mass, have also been identified as the main factors associated with the adoption of a plant-based diet (Najjar & Feresin, 2019; Ivanova et al., 2021). Compared to ethical and environmental motives, health-related motives were assumed to be driven to a greater extent through self-interest (Beardsworth & Keil, 1992; Hopwood et al., 2020). The degree of interest and health consciousness has increased due to rising levels of various chronic illnesses and diseases, and obesity. Moreover, it is often argued that many of these rises are associated with high consumption of meat-related products (Dyett et al., 2013; Tuso et al., 2013)

The vegan diet should be rich in whole grains, vegetables, fruit, legumes, nuts and seeds as these contain essential vitamins, minerals, energy, protein, iron, zinc, and calcium (Mann, 2014; Tuso et al., 2013). Fortified foods containing vitamin B12, calcium and vitamin D are strongly encouraged, otherwise additional supplementation may be required (Mann, 2014; Tuso et al., 2013). Vitamin B12 is needed for blood formation and cell division; deficiencies can cause nerve damage and macrocytic anemia (O'Leary & Samman, 2010). Generally, individuals are not at risk of a protein deficiency if they are consuming enough energy and eat combinations of protein-based foods such as beans with brown rice, as not all plant sources contain the essential amino acids found in animal protein (Mann, 2014; Mariotti & Gardner, 2019). Iron bioavailability is reduced in plant-based foods, so incorporating a variety of foods such as spinach, kidney beans

and cashews is important (Mann, 2014; Tuso et al., 2013). Fatty acids that vegans are most likely to be deficient in are omega-3 fatty acids as plant sources can be less readily available for some, and suggested replacements include incorporating flaxseed oil, walnuts, and canola oil (Tuso et al., 2013).

Alongside diet, other factors influence health, including physical activity, alcohol consumption and smoking (Tuso et al., 2013). Most commonly, vegans in pursuit of health lean towards having more home-cooked meals, mostly using low- or lower-fat product alternatives, with their main aim being to make nutritious meals (Dyett et al., 2013; Tuso et al., 2013). Vegans generally practice lifestyle behaviours that contribute to a favourable profile regarding low chronic disease diagnoses (Craig, 2009). However, Tuso et al. (2013) point out that "Vegetarian or vegan diets adopted for ethical or religious reasons may or may not be healthy" (p. 62). Here, research shows that health-driven vegans tend to be more conscious of what they eat, compared to ethical or religiously motivated vegans, who may not base their food choices on what is typically deemed 'healthy' food, with higher consumption of 'junk' food that is labelled vegan.

The sole consumption of plant-derived foods has been adopted by some individuals to prevent disease, disease management, and curative purposes (Trapp et al., 2010). The prevalence of chronic diseases in vegans is low, indicating that plant-based diets may reduce the risk of morbidity (Craig, 2009; Dyett et al., 2013; Lindbloom, 2009). Vegan individuals generally have lower body mass index profiles and a lower prevalence of obesity in both children and adults (Bakaloudi et al., 2021). In their study sample, Radnitz et al. (2015) found the proportion of overweight and obese participants was 33.5%, which is lower than the general population in the United States (69%) and Canada (60.5%), where most of the sample resided. Additionally, a cross-sectional study found that vegans had an average body mass index (BMI) of 23.6 compared to non-vegans who had a mean BMI of 28.8; an ideal BMI is suggested to be between 22.5 and 25 (Tonstad et al., 2009). Vegans are also found to have lower cholesterol, lower blood pressure, reduced risk of cardiovascular disease and diabetes (Bradbury et al., 2013; Pettersen et al., 2012; Spencer et al., 2003; Tonstad et al., 2013). Furthermore, some medical practitioners agree that a vegan diet in the western world can potentially reduce the number of medications they take for a variety of chronic conditions associated with body weight, risks of cancer, and cardiovascular conditions (Tuso et al., 2013; Hever & Cronise, 2017).

Orlich et al. (2013) conducted the largest study on the health effects of both vegan and vegetarian diets. Overall, they highlight the death rate for vegans was reduced by 15%, whereas, other

studies with smaller samples found there was no survival advantage for those following a vegan diet (Key et al., 2009; Key et al., 1998). Essentially, some consumers view plant foods as having a health “halo” over them, meaning that food labelled as vegan *must* be healthy (Benson et al., 2018). This particular perspective can also result in an increase in consumer consumption (Benson et al., 2018). However, it is also important to note that while the vegan diet has many benefits due to its rich content of fibre, folic acid, vitamins C and E, potassium, magnesium, and various other phytochemicals, it can also be limiting (Craig, 2009). For example, the vegan diet can pose greater challenges for vulnerable groups, such as pregnancy issues related to lactation, infancy, childhood and adolescence energy and nutrient requirements which, unless well-planned, are typically higher and may be difficult to obtain from a vegan diet (Craig, 2009). Furthermore, more research identifying the nutritional status of pregnant females following a vegan lifestyle would enable dietitians to form practical strategies to support optimal health for both mother and baby (Brown et al., 2020).

In addition, it has been noted that plant-based diets may influence our mood and mental health due to their rich nature in fruit and other antioxidant-rich foods, which are positively associated with increased mood (Beezhold & Johnston, 2012; Beezhold et al., 2014). As highlighted by Beezhold et al. (2014), there is a positive relationship between individuals adopting a plant-based vegan diet and reduced levels of anxiety in both males and females, compared to those following an omnivorous diet. In contrast, for those without depression, research found an increased diet quality was protective against depressive symptoms (Lee et al., 2021; Bremner et al., 2020; Jacka et al., 2017). This suggests that a high-quality plant-based diet, rich in whole foods, may be preventative against depressive symptoms (Lee et al., 2021). Generally, those adopting a vegan lifestyle are reported to have better quality sleep, partake in exercise and are more conscious of what they consume (Hargreaves et al., 2021; Segovia-Siapco et al., 2019; Allès et al., 2017).

Lavalee et al. (2019) argues there is conflicting evidence against the association between plant-based dietary patterns and depression. For example, meat consumption has also been associated with lower depression and anxiety compared to meat abstention (Dobersek et al., 2021). The reasoning for conflicting findings is not yet fully understood but could be due to the lack of heterogeneity in the measurement of nutrition patterns (such as self-report) and that diet quality, rather than patterns, needs to be further explored (Ljungberg et al., 2020). Additionally, some may suffer from depressive symptoms when following the diet, resulting from nutritional deficiencies, as it can be more challenging to consume enough vitamin B12, folate, and omega-3 (Modlinska et al., 2020).

## ***Environmental concerns***

Environmental motivators comprise considerations based on environmental protection, climate change, sustainability, and insufficient resources (Janssen et al., 2016). Arguments for climate change often suggest reducing animal products by consuming a more plant-based diet, which is linked to concerns about, and opportunities for, minimising carbon emissions. The increased research on areas pertaining to healthy eating, alongside a healthy planet, is a growing field of literature (Brouwer et al., 2022; D'Souza et al., 2022; Twine, 2018).

The environmental impact a vegan lifestyle upholds is being brought to both the government and society's attention on a more frequent basis due to the increasing number of people who are choosing to adopt and transition towards a more plant-based diet (Ploll et al., 2020). However, this is a slow, but gradual process. At present, animal-based productions make up 83% of the world's farmland, largely exceeding vegetable substitutes, which contributes to 58% of food emissions (Banyte et al., 2022). In contrast, beef production requires much larger quantities of resources than plant-based foods such as rice, legumes, and potatoes, 18% more water and 163% more land, as well greater carbon and nitrogen emissions (Chai et al., 2019). Here, it is important to highlight that it is estimated that greenhouse gas emissions will rise by 150% of current emission levels once we reach 2030 (Chai et al., 2019). Yet, larger numbers of people transitioning from a meat-based diet to a vegan diet could have a transformative effect on the environment as the lessening demand for meat production would see an 8.1 billion metric tonnes' reduction in CO<sub>2</sub> emissions annually (Godfray et al., 2018). Furthermore, vegans adopting this diet, with the environment in mind, often consume more sustainable food products which require less processing, water, and resources (Chai et al., 2019; Alae-Carew et al., 2022). Environmental concerns and sustainability are determined as being more important to millennials (born between 1980-1994) and Generation-Z individuals (1995-2010) (Hiroshima University, 2021). However, counteractive to this sustainability notion is the amount of packaging that is required for some vegan products and how the carbon footprint of these still needs to be carefully considered as there are currently issues linked to their production (Heller & Keoleian 2019).

## ***Ethical beliefs and values***

Cherry (2006) states that if an individual becomes vegan, based on health beliefs and values, they are more likely to adopt the diet, rather than the full lifestyle by which those following for ethical pursuits are motivated to follow. In addition, Hopwood et al. (2020) suggests individuals following the vegan diet are less likely to find long-term success, compared to those following the

lifestyle. The motivational factors that cause a person to follow a vegan lifestyle are nuanced and based on various personal convictions and philosophical beliefs. More specifically, a philosophical belief is a non-religious belief that someone believes strongly about and concerns a central aspect of their life (McKeown & Dunn., 2021). It is in this sense, that veganism at its foundation, can be understood as a philosophy and more than just a diet for many. Rather, it is a lifestyle that aims to exclude all forms of exploitation, animal cruelty, animals for food, clothing, or any alternative purpose (Greenebaum, 2012; Cole & Morgan, 2011). Hence, according to the Vegan Society (2022), the lifestyle promotes animal-free alternatives for the benefit of the environment and animals. In a more holistic manner, the diet is a subset of the lifestyle, which is structured around the philosophy of animal rights (McKeown et al., 2021). Consequently, many vegans have strong philosophical and ethical views on this lifestyle and view some of those doing it for 'health' reasons (e.g., losing weight) as being wrong (McKeown et al., 2021). Janssen et al. (2016) claim vegetarians are more likely to transition to a vegan diet for ethical reasons, after deciding omitting meat is not enough, as the dairy and egg industry also involve animal cruelty (Mann, 2014).

### *Family and friends*

The likelihood to adopt veganism is often derived from perceived social norms (D'Souza et al., 2022). Families and peers have a strong influence on lifestyle behaviour, and this results from informational conformity (change in our personal opinions or behavior that occurs when we conform to people whom we believe have accurate information) and the socialisation process which leads to individuals adopting rules, values and social norms conforming them to group membership (same values and beliefs as their families and peers) (McLeod, 2014; D'Souza et al., 2022). Families and peers often have one of the strongest impacts on what we consume, behaviours we display and lifestyle choices we choose (Lawrence et al., 2010). For example, social networks are a dominant factor when employing actions, which are needed for making sustainable lifestyle changes (D'Souza et al., 2022). Take, for instance, pressure from social groups which can have a strong influence over people when they are in the process of adopting a vegan diet (D'Souza et al., 2022). These forms of peer pressure are linked to a person's desire to feel connected, a sense of belonging, and upholding of similar values to their friends and family members. Therefore, they are more likely to conform and make changes to their lifestyle when surrounded by like-minded people (Connon, 2018).

### *Culture and Religion*

Food is often used to retain and display one's cultural identity, where people are exposed to different foods growing up due to their cultural heritage and family background, and these food

preferences result in a pattern of food choices within a cultural or religious group (Reddy et al., 2020). Plant-based diets are most prominent and practised in India with Hinduism, Jainism and Buddhism. All these religions follow the concept of 'Ahimsa', meaning show kindness and non-violence towards all living bodies (Mace & McCulloch, 2020). Some claim their religion informs their ethical and moral decisions relating to their diet (Lindeman & Vaananen, 2000). Religious motivation is typically associated with more support for animal welfare, and they rarely support killing animals for human purposes (Ngo et al., 2021). For example, several religions restrict various food groups, most commonly meat, or how the animal is killed (Kim et al., 2008). Individuals following a vegan diet with religious motives generally show the most concern in food preparation for religious gatherings (Ngo et al., 2021). Furthermore, unlike ethical or environmentally motivated vegans, religious vegans generally only partake in the dietary component, not the whole 'lifestyle' (Janssen et al., 2016).

Overall, food is an important part of cultural heritage and national identity; it connects us to people and places while bringing individuals together across the globe (Reddy et al., 2020; Wright Lucero et al., 2021). Additionally, religious beliefs and cultural heritage generally lead to greater levels of motivation and dietary adherence, more so than health-related reasoning (Ngo et al., 2021). Rothgerber (2013) claims that vegans' philosophical outlook rejects traditional values, such as, cultural, economic, and social norms. Furthermore, these values may be perceived as a threat to society by challenging the normative moral order about the status of animals (Judge & Wilson, 2019). These perceptions of vegan-based values can be threatening in various ways, which may also inevitably impact upon interpersonal relationships. Twine (2014) points out that one challenge some vegans face is a reluctance to speak out, or create a fuss in a manner that would cause them to be seen as difficult. In addition, some vegans struggle to receive approval from their family as some parents might view this dietary choice as a rejection of their upbringing. Grandparents are often confused or may attempt to dissuade their grandchild against veganism (Beardsworth & Keil, 1993; Jabs et al., 2000). Overall, veganism has been known to challenge some cultural values. For example, a qualitative study conducted by Kemper (2020), found that meat and three vegetables was a part of many participants' upbringings, and, given New Zealand's history and association with farming and agriculture, the vegan diet can be quite confronting for some families.

### ***Economic drivers and barriers***

Adopting healthier and more sustainable diets could be beneficial for protecting the planet's natural resources and reducing dietary-related mortality rates. For instance, the greatest cost

reductions when compared to a standard omnivorous diet have been seen in the high-grain vegetarian and vegan diets, reducing weekly grocery costs by 22-34% (Springmann et al., 2021). Adoption of a high grain vegan diet in western societies would reduce overall food costs, reduce food waste, benefit individuals' health and wellbeing, reduce the strain on the healthcare system, and benefit the planet overall (Springmann et al., 2021). Substituting meat for beans or legumes and increasing seasonal vegetables and whole grains is not only beneficial for the environment but costs less, has a greater shelf life, and reduces carbon emissions (Drew et al., 2020).

The cost of food is generally more affordable when it is purchased in season. Furthermore, canned food with longer shelf life tends to be a more affordable option. When food was measured on the basis of weight or portion size, the average grains, in-season fruits, vegetables, and dairy foods are often less expensive than most protein-based foods, high-saturated fat foods and those with added sugar and/or sodium (Frazão et al., 2012). Hence, when pursuing the vegan diet in many westernised cities, a motivating factor for many is the affordability of the diet (Ngo et al., 2021).

In contrast, the cost of veganism can surprise many as there is a much wider variety of products available today, such as meat alternatives, fake meat, and various other products which are expensive (Kemper, 2020). Cost, convenience and the time required to prepare meals have been cited as barriers to following a plant-based diet (Kemper, 2020). Additionally, vegan food options when dining out were viewed as a barrier and/or challenge to following the diet (Lea et al., 2006). Sixty-five percent of consumers who were willing to try protein alternatives said that availability was important to them in deciding to purchase plant-based products (Clark & Bogdan, 2019). When products were unavailable at consumers' main shopping destination, it was seen as a barrier to purchasing plant-based products. Therefore, availability is a motivator, and unaffordability and unavailability are barriers to consuming more plant-based products.

## **Influential information sources for vegans**

### ***Health Professionals***

Healthcare professionals are classified as the experts within their field of study, hence the reason why many individuals turn to them for dietary and lifestyle advice (Hever et al., 2017; Gamble, 2008). There has been evidence that the vegan diet gives many health benefits towards reducing obesity rates, as well as reducing the chance of diabetes type two and various other concerning conditions (Gamble, 2008). Le and Sabaté (2014) examined epidemiological research and found



hypertension risk in vegans was 75% lower than non-vegans, and risk reductions for all cancer by 14%. However, some practitioners are also aware of the potential risks the vegan diet poses for those who are not well-educated, such as dietary inadequacy of vitamin B12, iron, calcium, protein, and various other nutrients that are easier to attain from a diet that incorporates animal products (Gamble, 2008).

It is important to note that some vegans may not adopt the vegan diet based on health, ethical, environmental, or cultural reasons, but rather are motivated by disordered eating (Modlinska et al., 2020). Healthcare professionals may be concerned that this choice functions as a socially acceptable way to legitimise food avoidance (Bardone-Cone et al., 2012). Bardone-Cone et al. (2012) compared individuals with and without an eating disorder history, while also noting their current and past motives behind adopting a plant-based diet. Consequently, they found that the majority of participants perceived an eating disorder was associated with the dietary adoption. Overall, Bardone-Cone et al's (2012) study shows that both vegan and vegetarian diets may appeal to people with eating disorders because they like to control what they eat, and the diet can be flagged as a way for people to disguise an eating disorder (Bardone-Cone et al., 2012; Zickgraf et al., 2020). Further evidence suggests that around 50% of patients with anorexia nervosa follow some form of plant-based diet, compared to around 6-34% of adolescents and adult women who do not present with eating disorder issues (Bardone-Cone et al., 2012; Zickgraf et al., 2020).

When seeking advice or information on the vegan diet from a healthcare professional, it is important for the professional to maintain an awareness of their personal beliefs or bias toward certain diets, and to always act in the best interest of the patient (Clark et al., 2021). When properly addressed, healthcare professionals, such as registered dietitians, should provide accurate and valid information to highlight the dietary benefits and risks when following a vegan diet (Clark et al., 2021).

### ***Media representation of veganism***

#### *Classic print and broadcast media*

Masterman-Smith et al. (2014) analysed media coverage and report that media coverage is doing more damage than good as the vast majority of media avoids the fundamental concern vegans have around animal suffering, and ethical grounding. British newspaper articles from 2007 have presented the vegan community as militant, or oversensitive, and other media coverage reports that vegan diets are difficult to sustain and another 'trend' (Cole et al, 2011; Masterman-Smith et al., 2014). Furthermore, Brookes and Chalupnik (2022) analysed broadsheets, tabloids, and

newspaper articles which often defined vegans as strict and linked to self-deprivation. For example, articles published via The Times (2018) newspaper used words to describe vegans as “Violent”, similarly, the Independent (2020) wrote “If you thought that vegans were annoying...”, and the Sun (2019) quoting a woman suggesting her vegan diet “brought on menopause early” (Brookes & Chalupnik, 2022). Cole et al. (2011) attributed the media’s silencing among western societies as a reflection of the humancentric culture. The privilege extends from the consumerism of animal products to the immense profits and power the global animal industry obtains (Masterman-Smith et al., 2014). The media remain largely impervious to research, policy positions of animal advocacy, food security, health, and environmental leaders, who are urging the transition towards more plant-based diets (D’Silva, 2013; De Boer & Aiking, 2011).

The media tends to trivialise veganism, further suggesting the widespread public awareness of animal suffering occurring within the animal industry, yet no recognition of the globally growing animal advocacy movement (Masterman-Smith et al., 2014; Munro, 2012). In contrast, the lived reality of veganism, as depicted in positive articles and research, portrays a far different story about the nutritional benefits of a vegan diet, popularity, growing health sector support for more plant-based diets, and increasing food accessibility and options for vegans (Iacobbo & Iacobbo 2006; Crook 2006;). Even though the media has a widespread influence, as technology progresses, documentaries, podcasts, and social media are becoming increasingly popular as a source of information for lifestyle choices and dietary advice (Wilding et al., 2018; McGivern, 2014). However, within a New Zealand context, minimal literature is available on the media representation. Briefly, Harris and Morgan (2021) from the Nutrition Society of New Zealand found across popular media outlets such as, NewsHub and Newstalk ZB the term ‘plant-based’ was rising in popularity although not compared to the global scheme of things.

### *Movies films and documentaries*

Movies and films on platforms such as Netflix and television are influential on a wide audience (Rannamets, 2013; Waisanen & Durlak, 1967). For example, popular documentaries on Netflix such as ‘Game Changers’ (2019) and ‘What the Health’ (2017) have provided insight into plant-based diets and have the potential to influence individuals who are thinking of transitioning their dietary behaviours (Hartwell et al., 2021). Based on Google search trends covering a five-year period (2017-2022), Hartwell et al. (2021) contend that both films were associated with an increased interest in vegan diets, which emphasised the need for more thorough research regarding plant-based diets and their health benefits, especially in relation to chronic diseases. Here, many researchers agree that film and media are influential sources of information, and

seeking advice from health professionals is still advocated as best practice (Leask et al., 2010; Hoffman et al., 2013; Kapoor et al., 2017; Ventola, 2014).

### *Rising influence of peers, internet, and social media*

The world's social networks reflect a consumer's personality which influences their purchases, as well as those who are socially conscious and have concerns about their food, lifestyle, and health choices (Rana & Paul, 2017). Additionally, an important element of an individual's dietary choices and behaviours are influenced by the sources of information to which they have access (Hopwood et al., 2020). Social media, which is available in the vast majority of countries, has had an increasing impact on peoples' eating behaviours and lifestyle habits. Here, the vegan diet has continued to be presented as a health-conscious choice and is commonly associated with the 'healthyfood' hashtag (Pilař et al., 2021).

Holmgren (2017) identifies platforms such as Facebook, YouTube, TikTok and Instagram as the preferred online platforms for sourcing and sharing information regarding the vegan lifestyle. People are most likely to change behaviour after seeing content on social media which has an emotional effect on them in either a positive or negative way (Holmgren, 2017). Online social networks have become integrated in people's everyday lives, where users are spending more and more time on these platforms through interacting and engaging with other users (Pilař et al., 2021). The most popular reason social media is used for sourcing information is that it provides interaction with others, as well as using it to self-educate (Holmgren, 2017). Social media can influence what consumers purchase and consume, as well as being used as a tool for improving food literacy and encouraging healthier and more sustainable eating habits (Pilař et al., 2021). Media outlets take advantage of the rising interest in diets, and this may be linked to the rise in vegan-friendly 'meat' alternatives and dairy-free product demand (Hartwell et al., 2021). While promoting the vegan diet generally promotes a healthier lifestyle, patient-centric care is not overly considered within the social media context (Hartwell et al., 2021).

Influencers with a large following base have a great impact on consumer behaviour as they aim to build trust with their followers and pass on their knowledge, experience, opinion, attitudes, and values through social media (Pilař et al., 2021; Hoffman et al., 2013). Those interested in veganism and healthy eating are generally impacted by influencers online (Pilař et al., 2021; Lynn et al., 2020). Influential information sources have the ability to adapt and change with time as we shift and grow in our ever-changing environment (Zhou & Lin, 2016). However, it is important to note that influential information is ubiquitous nowadays, with the internet easily accessible for many, various platforms for social media news, constant communication with peers, and

continued development of media-savvy technology (Anderson & Rainie, 2018; Dwivedi et al., 2021).

### **Analysis of existing qualitative research on Veganism**

In previous qualitative research outside of New Zealand, the adoption of plant-based diets was reported commonly among individuals who transitioned to the diet at an early age, either as a child or young adult (Jabs et al., 1998; Beardsworth et al., 1991; Christopher et al., 2018). Additionally, those pursuing the diet with ethical motives often made the transition following a relevant traumatic experience or conversation, for example, after watching a film on animal cruelty (Christopher et al., 2018). Christopher et al. (2018) discusses how the adoption of vegetarianism and veganism may trigger negative or positive reactions among individuals' friends and family. For instance, one study found most of its participants received support from their friends, yet some were subject to negative remarks by their family members (Beardsworth et al., 2008). Hence, some researchers argue that vegans may adopt or change their dietary motives to help mitigate the persistent challenges associated with complying to this marginal identity (Christopher et al., 2018; Fox & Ward., 2008).

North et al. (2021) carried out a qualitative study on motivations behind vegan, vegetarian and omnivore diets within an Australian population. A sample of 701 participants contributed to the study and individuals self-expressed the diet they follow, then wrote why they chose this diet. North et al.'s (2021) analysis indicated that motivations were similar across the three dietary groups, however, for vegans and vegetarians the most common motivator was animal welfare, compared to omnivores which was taste and enjoyment. Similarly, Janssen et al. (2016) researched motives of consumers following a vegan diet and their attitudes towards animal agriculture. Firstly, the study revealed 89.7% of participants following a vegan diet were driven by animal-related concerns. Secondly, personal wellbeing and health was mentioned by 69.3% and, thirdly, concerns for the environment was a primary motive for 46.8% of participants. Additionally, 81.8% of respondents mentioned more than one motive. Janssen et al. (2016) discovered animal-related motives were described as a concern for animal welfare, and other ethical aspects related to animals. Moreover, self-related motives such as health were often driven by weight-loss or curiosity, and environmental motives were driven by a concern for climate change, depletion of natural resources, and environmental protection.

Existing qualitative research available on key motives and influential information sources is scarce within a New Zealand context. Milfont et al. (2021) analysed data from a 20-year longitudinal

study; The New Zealand Attitudes and Values Study (NZAVS) which documents a rise in the adoption of plant-based diets, among other studies (Neville, 2019). The NZAVS containing over 47,000 participants found 94.1% of New Zealand respondents consume meat, while 5.8% are vegan or vegetarian. This is further supported by the percentage of meat-free eaters rising from 4% in 2014 to 10% in 2018 (Milfont et al., 2021). However, these studies are often limited by the size and representativeness of the samples. With the majority of vegans residing in New Zealand expressing greater concerns about animals, their health, environmental concerns, more often women, and generally attain liberal political views, similarly to those globally following the diet (Milfont et al., 2021). New research concerning vegans from low socioeconomic groups and of diverse ethnicities, focusing on Māori and Pasifika within a New Zealand context, should be further explored, as this group often has greater prevalence of health risks and diseases (Came et al., 2018)

## **Summary**

Firstly, as highlighted in the discussion above, there is a significant lack of literature that explores the key motivators and the sources of influential information regarding the lifestyle accessed by New Zealanders. Secondly, with global numbers of vegans increasing, it is important to determine what is happening in New Zealand, and the research conducted for this thesis provides a small insight into why some New Zealanders are making the choice to transition to a vegan diet and lifestyle. Furthermore, gaining a deeper understanding of the impacts resulting from changing trends could help dietitians in better meeting the needs of their clients. In addition, the same argument could be made for health providers and retailers, who could make economic gains simply by providing more accurate information to consumers, which better supports their needs and demands related to food sources. In addition, filling the gap in evidence surrounding vegan individuals' food and lifestyle choices, motivations and influencers through research, could play a critical role in investigating future nutritional adequacy, concerns, and benefits.

## Chapter 3: Methodology

This research project adopts a qualitative approach in order to speak to participants while sitting in the comfort of their own homes or other environments, in a manner that makes qualitative research more interactive, humanistic and holistic (Katz-Buonincontro, 2022; Tenny et al., 2022). Consequently, one of the many strengths concerning qualitative research is its ability to better explain processes and patterns of human behaviours, experiences and attitudes (Sutton & Austin, 2015). Therefore, it is better suited for allowing participants to express how they feel or think towards certain concepts and topics discussed through their own words, enabling deeper understanding of experiences, context and phenomena (Tenny et al., 2022; Wong, 2008; Gill et al., 2008; Cleland, 2017). Furthermore, it allows the researcher to ask questions which cannot be easily put into numbers to understand one's experience (Cleland, 2017). Given this research study aims to understand and further explore individuals' key motivators and sources of information following a vegan lifestyle, a qualitative approach is best suited, as it allows for open-ended questions to be discussed in detail, conversations to flow, and comments to be further probed (Tenny et al., 2022; Cleland, 2017; Wong, 2008).

This chapter begins by describing the qualitative in-depth focus group sessions and the rationale for utilising this method. Afterwards, the selection of participants is presented, followed by details regarding recruitment, and implementation. Lastly, an overview of the focus group data collection and analysis is presented.

### Study Design

Some guidance was received from Massey University's Nutrition and Dietetics programme regarding the main research question, however, the main aim and objectives were identified by the primary researcher, with the focus being: Motivators and Influencers that contribute to a vegan lifestyle in New Zealand. However, it is important to note that this topic and related issues were identified and developed further by the researcher, including the overall goals and focus group questions. Furthermore, ethical approval for the research was granted through the Massey University Human Ethics Committee, Southern A, Application 22/11. Finally, written informed consent was obtained from all participants before commencing the study.

The qualitative method of focus groups was considered the best way to collect data, as they are useful for generating information on collective views (Krueger & Casey, 2014), the meanings that hide behind those views, and further understand or seek explanation on participants' experiences,

attitudes and beliefs, in a way which would be more difficult through direct questions or surveys (Morgan, 1998; Gill et al., 2008). Additionally, group size is an important consideration for focus group research, and several researchers suggest that it can be better to slightly over-recruit, than under-recruit, rather than risk having an unsatisfactory discussion. They also advise that each group will most likely have two non-attenders (Stewart & Shamdasani, 2007; Gill et al., 2008; Morgan, 1998; Wong, 2008). Similarly, Gill et al. (2008) suggest an optimal focus group size is six to eight participants, but they can work well with as few as three as participants get more opportunities to speak, and sessions may be less chaotic. The venue for focus groups is also important to note as it should ideally be accessible, comfortable, private and free from distractions (Gill et al., 2008; Krueger & Casey, 2014). Krueger and Casey (2014) suggest selecting focus group times and invite participants to attend any one of the scheduled times, asking what times are most convenient to ensure reciprocity, hence, this is why some focus groups had more participants than other sessions.

Focus groups are useful for qualitative studies, as they enable the researcher to better understand thinking patterns, vocabulary used, expressions, attitudes, and body language of a select sample of the population on a specific topic (Longhurst., 2003; Morgan, 1998; Gill et al., 2008; Krueger & Casey, 2014). Initially, a pilot focus group was held with Massey University students from the College of Health prior to the research focus groups being conducted. Pilot testing is defined as a small study to test research protocols, data collection, recruitment strategies and various other research techniques in preparation for conducting the main study (Hassan et al., 2006; Breen, 2006; In, 2017). Furthermore, it is encouraged to validate the study feasibility, help revise the question structure to decide whether more, or less, questions should be included, learn about effectiveness as a moderator, and identify problem areas and deficiencies prior to the implementation of the full study (Hassan et al., 2006; Breen, 2006; In, 2017). Discussion is encouraged in focus groups because a conversation or comment made by one participant may cause a cascade of responses which otherwise would not have been discussed in one-on-one interviews or through a questionnaire (Longhurst., 2003; Krueger & Casey, 2014). The goal is to achieve data saturation, whereby no new themes or information arises, hence there is no 'ideal' sample size (Longhurst., 2003; Hennink et al., 2019). Yet, as previously mentioned, an optimum number of participants in each group is approximately six to eight, as this allows for diversity and still enables adequate participation and discussion from everyone present (Longhurst., 2003; Gill et al., 2008).

Several conversations were had with supervisors to determine the set of focus group questions put to participants. Further, in preparation for identifying relevant questions that would aid in providing answers to the main aim and objectives of this study, the primary researcher conducted a preliminary examination of questions used by past studies. Overall, it was decided that the questions developed needed to be short, natural, and open-ended, otherwise referred to as semi-structured (Leung et al., 2009; Breen, 2006; Gill et al., 2008). In addition, it was deemed best to start with questions that participants could easily answer and then proceed to more challenging or sensitive topics (Gill et al., 2008; Britten, 1995; Breen, 2006). This can allow participants to build up confidence and rapport, which often generates rich data, and the discussions may probe the discovery or elaboration of information that is important to participants, which otherwise would not have been previously thought of by the research team (Gill et al., 2008; Breen, 2006; Krueger & Casey, 2014).

### ***Focus Group participant criteria***

In total, eight focus groups were conducted and each focus group consisted of three to eight participants. The inclusion criteria for participants required them to be:

- Adults 18 years or older
- Vegan for at least 12 months or more
- Fluent in English as the focus groups would be conducted using English as the main language

Eligible participants were defined as those currently excluding all animal-derived products from their diet and/or lifestyle for a minimum of 12 months, living in New Zealand, and able to converse in fluent English. Data on eligible participants were obtained through email confirmation prior to focus group commencement. The recorded variables were age, years following a vegan diet, ethnicity, and gender (see Appendix 6) These variables were recorded for various reasons. For example, having a minimum age of 18 years was important due to ethical requirements. The number of years that participants followed a vegan diet was considered critical as this would indicate how much experience they had to draw on during the focus groups, as well as their rationale behind their lifestyle choices.



## Recruitment

Recruitment was undertaken using the popular social media platforms of Facebook 'Vegans of Aotearoa', and Instagram's 'Earthling Ruby' page to post an advertisement with information about the research study (see Appendix 5). The rationale for recruiting participants via social media was due to factors such as the ease of access to online communities, and being able to recruit participants from diverse backgrounds. Several authors also support the use of social media for participant recruitment, as it not only has the ability to reach a wider audience, more specifically generation-Z and millennials, who are underrepresented in research studies, but also is a more time and cost-effective method (Gelinas et al., 2017; Darko et al., 2022; Khatri et al., 2015; Arigo et al., 2018; Benedict et al., 2019).

**Table 1: List of Focus Groups and Number of Participants in Each**

Focus Group Number	Number of Participants
One	6
Two	4
Three	6
Four	7
Five	8
Six	4
Seven	3
Eight	3

As the Table 1 demonstrates, there was a range of participants who were involved in the focus groups. Numbers varied between each due to no-shows and working around participants' schedules to best suit their busy lives, however, each group still provided rich data.

### ***Focus group recruitment process***

More specifically, the recruitment process for focus groups occurred in the following manner:

1. A social media advertisement (pre-approved by Massey University Ethics) was posted on two Facebook forum pages (Auckland Vegans, Aotearoa Vegans). This post occurred

twice, the first in June 2022, and the second in July 2022. A separate post was made once on the researcher's own Instagram page in June 2022 (Earthling Ruby).

2. Each post contained the researcher's contact details and potential participants were encouraged to email the researcher to express their interest.
3. When expressions of interest were received, the researcher would email each participant an Information Sheet, Consent Form, and also query their availability to ascertain suitable days/times.

The Information Sheet that was sent to each participant notified them of a \$20 voucher that they would receive after participating in the focus group to thank them for their time and participation.

### ***Focus Group Facilitation***

To prepare for leading focus group sessions, I undertook research to ensure I had a sufficient level of understanding regarding qualitative research methods and ethics (Longhurst., 2003; Morgan et al., 1984; Richard et al., 2021; Santhosh et al., 2021). Additional discussions were also had with both the primary and secondary supervisors for this study. Here, it was decided that a pilot study with student dietetic colleagues would be ideal for testing the research questions (i.e. clarity, understanding etc.), which could then be used to inform any revisions made for the actual participant-based focus groups. Moreover, to aid with additional feedback, all three supervisors of this study were present as observers during the pilot focus group.

After the pilot was conducted, several revisions were made to the original questions. For example, it was clear that some of the questions were not open-ended enough and some were 'leading', in that they inadvertently reflected a position or opinion when they should have been neutral. Hence, revisions to the wordings of some questions occurred (see Appendix 2).

All eight of the focus groups took place virtually on Zoom and all were conducted by myself as the main researcher in July 2022. Focus group discussions were digitally recorded on Zoom, uploaded to a computer, and then imported into Otter.ai online software (version 2.3.72) for transcription purposes.

Focus groups included three to eight people and session durations lasted between 30 to 90 minutes. The following provides an overview of the focus group process:

- Each session commenced with verbal consent from participants to partake in the study, with all participants confirming they had read the Information Sheet and Consent Form. However, for the purpose of clarity, at the start of each session an overview of the research study goals was reiterated. Participants were also invited to ask any questions they might have prior to beginning.
- They were recorded for transcription purposes.
- For ‘icebreaker’ purposes, the research moderator gave an introduction, including their academic pursuits and purpose of the study. The participants were also encouraged to introduce themselves as none were known to the researcher and the majority did not know one another prior to the focus group.
- During each focus group, follow-up questions were used to probe for further insight (see Appendix 2)
- At the conclusion of each focus group session, participants were invited to provide a verbal summary and share any of their final thoughts or feedback.
- The moderator used Otter software to transcribe the recording and read through the session to ensure consistency and accuracy.

The recordings were then checked for accuracy by the researcher before being coded using NVivo 12 software (version 12, 2022; QSR, Melbourne, Australia). Audio recordings, transcriptions and all other focus group-related notes were stored on password-protected computers. Participants’ names were removed from the transcriptions and replaced with pseudonyms to preserve anonymity (see Appendix 6). It is also important to note that there were some inconsistencies between what was advised in the Information Sheet regarding the number of participants in each session, and what actually occurred, with some sessions as few as three, and others containing up to eight people. The reason why this happened was primarily due to non-attendance, peoples’ schedules and availability. As such, concessions were made to fit them into focus group times that were suitable for them. Despite sessions ranging from three to eight participants, each focus provided a wealth of in-depth information, which has aided in answering the main research question for this study.

## **Data Analysis**

After focus group transcripts were checked for accuracy, they were uploaded into NVivo (version 12, 2022; QSR, Melbourne, Australia). NVivo is a software program used for qualitative research and, specifically, it can be used for the analysis of focus groups to organise, analyse, and sort data. Furthermore, it enables the identification of themes and patterns to be coded, and key

information to be appropriately classified. Data analysis was conducted through the method of thematic analysis using a constant comparative approach. According to research experts, data saturation becomes evident when the same topics and issues are being addressed. Hence, this process was followed when conducting focus groups with participants, and repetition of data was noticed after eight sessions, with the data points outlined in the Results chapter (Wong, 2008; Krueger & Casey, 2014; Saunders et al., 2018). Additionally, an inductive approach was followed, meaning the findings were data-driven, allowing an interpretation of themes through systematic processing (a method of drawing conclusions from the specific to general concepts) (Thomas, 2006; Patton, 1990).

Firstly, initial open codes were identified in a systematic fashion across the entire data set, collating relevant data (quotes from the transcript) and dividing them into appropriate categories (Boeijie, 2010; Krueger & Casey, 2014). For example, an open code 'Driving motives behind following a vegan diet' had quotes related to participants' key motives adopting, and maintaining a vegan diet. Additionally, data was continuously compared and contrasted through constant comparison, which enabled new categories to be formed if new data did not fit under pre-existing open codes. Afterwards, axial coding commenced, whereby categories were derived from the relationship between the codes developed in the open-coding stage. The data (quotes) were placed under appropriate axial codes in order to determine dominant research elements. For example, under the open code, 'Driving motives behind following a vegan diet' were axial codes such as, 'the role of religious beliefs and values in vegan choices', and 'extending a vegan diet to vegan lifestyle'. It is important to note that some of the original open codes were collapsed during this phase if they overlapped with more appropriate open codes. Lastly, reflective coding took place; this is where findings were linked together to form points of discussion and key findings from the focus groups. For example, some reflective codes included 'sources of information' and 'key motivators behind following a vegan diet'.

This chapter has discussed the methodology and study design underpinning this research, including the methods used concerning recruitment, data collection method, focus group facilitation and data analysis. The following chapter goes on to highlight the main findings for this research.

## Chapter 4: Results

First, this chapter begins by highlighting the relevant findings to the research question and provides an overview of participant data concerning driving motivations. Second, influential sources of information following the vegan diet are explored. Lastly, common challenges and barriers to following the vegan diet are presented.

Forty-one male (9.8% male) and female (90.2% female) vegans from New Zealand participated in eight mixed-gender focus groups containing three to eight participants in each group. Participants were largely of New Zealand European descent (n=32, 78%), followed by New Zealand Māori (n=8, 19.5%), and the remaining German, Indian, French, Scottish and Filipino (2.5%). Participants were comprised of Generation-Z (n=23, 56%), Millennials (n=13, 31.7%), and Baby Boomers/Generation-X (n=5, 12.1%). The average duration following a vegan diet was 4.6 years, participants' following the vegan diet for 10 or more years making up 7.3%, 5 to 9 years making up 41.4%, and less than 5 years vegan 51.2% (see Appendix 6). In focus group seven and eight two participants did not attend their allocated time-slot resulting in smaller focus groups (n=3), and in focus group four and five there was more participants than planned (FG7: n=7; FG8: n=8) as participants could not make previously allocated times, so attended a session which suited them better.

### **Driving motives behind following a vegan diet**

The 'driving motivators' discussed by participants focusses on vegan choices influenced by health and promotion, environmental issues, ethical beliefs and values, accessibility and social drivers. Within this study, multiple motivators, or influential pathways to veganism, were discussed. Driving motivators generally evolved over the period of time following a vegan diet for many participants.

### ***Health and nutritional benefits of the vegan diet***

Among participants, health-related concerns were a common driving force. Participants often defined health as feeling better within oneself, and more diet-focussed rather than the vegan lifestyle. The majority of participants with health as their primary motivator were mainly driven by personal health goals, however, it also included participants who required specific nutritional needs, and the desire to improve variety and balance in their diet. The vegan diet was also used as a tool for improving the physical, mental, and medical outcomes of participants (e.g., allergies, deficiencies, digestion, chronic illnesses).

The personal health goals identified by the primary researcher were in relation to body image or reducing acne. For example, participant responses from focus group three focussed on skin and improvements in energy levels:

FG3R4: I guess I was motivated by like, I wanted to improve my energy levels, eat healthier, like more vegetables and clear my skin up too.

FG3R3: I went vegan to help with my skin and everything because after coming off the pill, my skin was horrific. So I decided that I wanted to cut out all dairy and I was already vegetarian, so I thought I might as well fully commit and become fully vegan.

Similarly, focus group five also noted skin improvements and increased energy levels, however, also noted weight reduction since following the vegan diet:

FG5R3: ... Improved like my skin I used to get bad acne and now it's all cleared up and my digestion feels better and, I've had no issues come up.

FG5R6: I've had my fat percentage coming down. I feel healthier, I've been able to sleep better and I've had tons more energy.

In contrast, other participants among other focus groups reflected more on the nutrient aspects of the vegan diet, which allowed them to incorporate more variety and view food as 'fuel' rather than calories. For example, FG5R6 noted:

I've had a really good increase with my health because I found just as well, similar to what FG5R7 was saying is that over time, eating vegan meant I stopped focusing on calories and restrictive diets and like really, really, you know, hard-core exercising. And I've actually found a more gentle way to balance and add variety into my diet.

The majority of participants were aware of the nutritional concerns to be mindful of when excluding animal products from their diet, such as iron. For instance, some claimed the diet had improved their iron levels and increased motivation to be more mindful of what they consume. Here, FG7R2 noted:

I used to have a history of anaemia and low iron before I turned to my vegan lifestyle and ever since I get my bloods done on an annual basis, I've not had anything that's been of

concern. So no low, low iron since, I would put that down to being much more selective about what I'm consuming.

Generally, participants motivated by the health benefits of following a vegan diet purchased cookbooks when making the transition to veganism. Participants claimed it made cooking more enjoyable and interesting as meals became more diverse. For instance, some participants stated:

FG7R3: my love of cooking... that was a key motivator as well... I follow lots of vegan cooks and chefs and get lots of ideas.

FG7R1: after switching vegan, it's like, oh, cooking is exciting and there's so many different things.

In addition, many health-driven participants were motivated by digestive issues, allergies and medical conditions. The vegan diet enabled them to overcome challenges they faced with their health, hence, keeping them motivated to sustain this way of living. In focus group three FG4R3 noted:

I went vegan initially as I have a lot of stomach issues. And I sort of naturally cut down just on what I was intolerant to, and there wasn't much left and so yeah, I just kind of made the connection with I guess the animals and how they feel things too and shouldn't be killed for us to consume.

Similarly in focus group seven FG7R3 noted:

It was originally for health reasons, in my mid 20s, I started getting allergies, and then got really bad reflux and decided to start cutting down on various things to try and stop it...It definitely helped.

Lastly, increased energy levels participants experience following a vegan diet was another common driver. Some participants were motivated to make the transition and improve energy levels, while others weren't originally motivated by the energy benefits associated with a vegan diet and over time realised the benefits it had on their health and wellbeing. For instance, two participants in focus group three stated:

FG3R4: " I guess I was motivated by like ... I wanted to improve my energy levels, eat healthier like more vegetables and clear my skin up too"

FG3R2: “I personally, I just feel like my energy is way better on a vegan diet than it would be eating, like animal protein...”

### ***Environmentally conscious vegans***

Environmentally conscious participants were often mindful of the effect their actions had on the environment, and actively tried to minimise their impact. These participants noted they were motivated by sustainability concerns, climate change, wanting to reduce negative environmental impacts the meat industry has on our planet, and improve the overall natural environment. Generally, participants following the diet for environmental reasons were either solely focussed on the sustainability aspect, or also driven by ethical-related reasons such as animal rights and welfare.

For example, FG1R3 states how their motivators have evolved from being solely ethically based (animal welfare, animal rights and personal beliefs) to also incorporating environmental concerns:

My reasons for being vegan now are ethical and also environmental. I'm against industrial production of anything...

In contrast, other focus group participants were primarily driven by environmental concerns, in particular, FG2R4 discussed how farming and “dirty dairying” were the most impactful issues causing them to make the transition to a vegan lifestyle:

... it was actually more of my environmental concerns around farming and the damages to our soils and environment like emissions. At the time, there was a lot of information around dirty dairying, and how bad cows were for the New Zealand environment.

More commonly, across all focus groups, the environmental concerns mostly related to being conscious of one’s carbon footprint, understanding more about the meat industry, and wanting to do better for our planet. For example, FG3R4 stated:

...due to environmental concerns around my carbon footprint, emissions and all the documentaries saying how reducing meat can be such an important factor for sustainability purposes

Similarly, FG4R4 noted:



...really focus on the environment and reduce my carbon footprint and purchase food in less packaging.

In addition, FG5R2 also commented on the carbon footprint, however, also mentioned being uncomfortable consuming meat:

I'm not really comfortable with eating animals, like it's the most impactful thing on the environment, and if I exclude it from my diet I'm reducing my carbon footprint you know and being more conscious about the planet.

### ***Ethical beliefs and values as a vegan***

Ethical beliefs and values refer to instances where participants simply noted they were vegan for 'ethical' reasons. This included the use of terms such as ethics, morals, religion, culture, and values. More detailed responses noted that animal lives were equally as important as human lives. Once participants made the connection between animal cruelty and the practices that occur in the meat industry as well as the environment, they expressed their confusion at not being able to understand why others would choose not to follow a vegan lifestyle.

Across all focus groups animal rights, welfare, and cruelty were popular topics of conversation. For example, FG1R6 discusses how once they made the connection between the cruelty that is associated with animals within the meat industry, consuming animal products was not an option:

FG1R6: ...realities of you know animal cruelty, I kind of made that connection for myself that actually, you know, those are animals' lives and made those connections about the environment, environmental impact, and you know, all of the kind of cruel practices in the in the [meat] industry...

Similarly, FG2R3 views all life as equal and once making that connection going vegan was an overnight transition:

FG2R3: All Lives Matter. And it's not just human life. And it was an overnight just a switch, literally, just a switch...

FG5R7 explained how veganism was a religious belief, claiming every life deserves equal respect:

I guess it's, in some ways like it, there's a little bit of a religious belief, like, I feel like every life form of life on the planet deserves respect. And the idea of harming another life ... doesn't really sit well with me.

Equally, FG6R1 discussed how animals feel the same emotions and pain as humans', therefore, it makes no sense for us to consume them as they are equally as important as human lives:

...really thought about how we treat animals, as humans, like how we view certain animals, like, why do we eat animals and love other species of animals, when really, they are just all the same, they experience the same emotions, like they all feel pain and suffering, and they can feel joy as well and great happiness...

Similarly, FG7R2 discussed how it makes no sense that we have house pets which we would not consume, yet animals which are not commonly considered 'house pets' it is acceptable to purchase for consumption:

Just the process of them essentially being bred for us to kill and eat them, and the treatment that they go through. Like some animals we have as pets but others we feed to kill then eat, it just doesn't make sense anymore.

Additionally, participants following the vegan diet driven by ethical beliefs and values, generally followed the lifestyle as a whole, excluding products tested on animals, not just food products. For instance, in focus group five, R1 noted:

FG5R1: I refuse to put any demand on the market for animal products.

In addition, FG4R2 also mentioned they avoid purchasing beauty products tested on animals, not just animal-derived food:

I definitely try to avoid buying anything like tested on animals specifically, that's probably what I look at for cosmetics.

Many ethically driven vegans were vegetarian prior who, at some point, realised they wanted to be more active in their pursuit of avoiding harm to animals and the environment. Consequently, they decided to take their diet choices a step further. For instance, FG5R7 noted once they

made the connection that all harm was not being avoided while being vegetarian, they became motivated to go vegan:

I think the initial reason was just sort of having that realization that actually like I wasn't avoiding all animal harm from being vegetarian.

Similarly in focus group four, R7 stated how they were vegetarian prior to going vegan:

I've been vegan for about six or seven years, but I was vegetarian before that...

In focus group six, some participants discussed how they were vegetarian at first as the vegan diet seemed too challenging with regard to how restrictive and well-planned the diet needs to be, for example, R1 noted:

FG6R1: So I actually went vegetarian first for about a month, because I thought going vegan was too hard or too difficult... I watched this other documentary called earthlings on YouTube. And that really, like just sort of solidified for me, like, I just couldn't justify eating dairy and eggs anymore...

### ***Social promotion and accessibility***

Largely, friends and family, online trends, events such as world vegan month, and the increased availability of vegan products have been motivators, or attributing factors to following a vegan diet for many participants across all focus groups. For instance, a number of participants across some focus groups who have been vegan for more than ten years, talked about the differences they have experienced regarding barriers to food availability and convenience over the course of the last decade, in comparison to modern times. For example, FG2R4 explains how many more barriers and challenges there were when following a vegan diet many years ago:

FG2R4: ...vegan for 19 years, how much the change in stigma allows people to become vegan more easily? Because there used to be a lot more barriers to becoming vegan. So now it's like people have to make less of a conscious decision.

Similarly, in focus group five R3 discusses the influence the increase in vegan popularity has had on vegan-friendly food products available, making the diet more versatile:

I went vegan six and a half years ago. There wasn't many vegans compared to now, like, it just wasn't really normal. And it was pretty much only tofu. There wasn't any like fake meat products or anything like that.

Moreover, in contemporary times, large companies are becoming increasingly more aware of the heightened demand for vegan-friendly alternative products and, as a result, most of the participants have found it easier and more convenient to follow this diet. Across all focus groups participants discussed the increase in vegan products making the diet more accessible with supermarkets selling a greater variety of vegan products, for example:

FG2R1: I found that there's so many different products in the last year that actually, so many companies have branched out and created some products that wouldn't be vegan, they've made an alternative that is, so I found that a really easy way to not feel like I'm missing out on anything.

FG4R2: it's just so easy to be vegan now, like at this point in time with all the constant new vegan products coming out.

Some younger participants (Generation-Z and Millennials) were originally motivated to follow the vegan diet by peers, family and friends. For instance, some mentioned being pressured into the diet, however, many continued following the lifestyle once they began to learn more about the animal industry and formed their own beliefs and values. For example, in focus group six, R2 noted:

So I've been vegan for seven years now, I think I actually kind of got peer-pressured into it. Because my sister went vegan, and her whole friend group went vegan

Social media platforms provide audiences an insight into content creators' lives, from food to exercise routines, and everything in-between. Largely, female participants under the age of 26; Generation-Z (51%) were motivated to become vegan based off watching YouTube videos created by influencers they looked up to, or wanted to look like. For instance, in focus group one, R2 mentioned:

I first went vegan as more of a diet choice. I was just like looking into different diets, and I guess got quite influenced at the time by social media accounts I would follow, and influencers I guess I would look up to or aspire to look like.

Similarly, in focus group seven R2 noted:

...when I first went vegan, it was more influenced by at the time it was very like trending like seven years ago, there was like the low carb or low fat, high carb, like it was all of that going around. So I was very like watching YouTubers and they were all going vegan.

In summary, common drivers were health-related, environmentally driven, ethically bound or for the younger proportion of participants, motivated by social elements. Generally, most participants across most focus groups found they had more than one motivator once they made the transition to a vegan lifestyle, for example, in focus group four, R4 notes:

FG4R4: I'd say that my reasons have kind of changed over time. So it's less about like health and it's more about animals, and definitely the environment...

Similarly, in the same focus group, R5 mentioned:

... I went vegan originally for the planet, like I learnt a lot about the environmental aspects through school, and how damaging it is like regarding all the emissions and natural resources. But then I really learned about all the animal issues as time went on and how harmful and cruel it is, so it's all incorporated in my motives.

In focus group two, R2 discussed how their motivator transitioned from an aesthetically driven mindset to a more holistic outlook and wanting to create a positive impact on the broader picture; animals and the environment:

Originally, I was following an Instagram influencer, who was vegan...and I thought, oh, that's, maybe I'll look into it and potentially go vegan, but that was for an aesthetic kind of motive... I have done more research over the last two, three years and realized it was so much more than that, it was about making a positive impact on our planet, resources and animal welfare.

### **Sources of information for the vegan diet**

There was a wide variety of influential information sources identified by participants. These sources were commonly used to increase their knowledge on the diet and/or lifestyle. Participants noted that information sources generally helped inform what foods to include in the diet, benefits

of going vegan, not only for personal reasons, but also external factors such as animal rights. Common sources of information included health professional advice or knowledge (doctors, dietitians and nutritionists), the media; news, film, social media. Additionally, careers, education and peers were also popular influencers. Participants generally gathered information from not just one, but various sources and platforms. These sources are outlined in further detail below.

### ***Health professionals as a vegan information source***

There was a small portion of participants who prioritised sourcing information from a health professional regarding the vegan diet's nutritional adequacy, benefits, and concerns of which to be aware. Generally, those seeking professional advice were adolescents advised by their parents, or interested in nutrition, and the health benefits which can occur when following a plant-based diet. For example, across most focus groups, participants mentioned visiting the doctors, booking in for an appointment with a dietitian/nutritionist, or self-sourcing academic information from health professionals:

FG1R3: I've also gone to nutritionists, dietitians just to make sure that I'm getting the right balance of food...

FG5R7: I go to doctors for nutrition because they have so many summaries like written about, like specific aspects of vegan health. It's like a, essentially, like a collective of I think over 100 Vegan health care professionals...

FG8R1: I went to my GP, I just got like, my first blood test. And I mentioned I went vegan so she had a chat to me as well about like, the nutrients to look out for...

With the increased availability and accessibility of health professional information, a small portion of participants across all focus groups also gained knowledge on the vegan diet from platforms such as books and podcasts. For example, in focus group five, R7 mentioned:

...books are sort of my main information sources, I had a really amazing book that was written by two American dietitians and it was a great sort of bible around nutrition. I also do listen to quite a few podcasts and I follow quite a few vegan doctors, researchers, dietitians, just to kind of stay up to date.

## ***Media representation of the vegan diet***

In urban times, the media encompasses anything from printed paper to television news, and social media. Sourcing information from classic media was not as common as social media, or the internet. This could be due to the lack of information the media shares regarding the vegan diet due to its challenging societal norms, or most participants being under the age of 30 and users of social media.

### *News and print media*

No participants discussed gathering information regarding the vegan diet from reputable news and print media. This could be due to the lack of information shared on these platforms regarding veganism in a positive tone, or due to the majority of participants across all focus groups being under the age of 30.

### *Film and documentaries*

Across all focus groups, vegan films and documentaries were popular motivators and sources of information regarding the vegan diet. Documentaries provided information on the benefits the vegan diet can give from a nutritional perspective, and showed the negative impact consumption of animal-based products has on the environment and animal welfare. The rise of subscription streaming services such as Netflix, have dramatically increased the popularity and accessibility of vegan films and documentaries. Popular documentaries stated in all focus groups were *Cowspiracy* and *Seaspiracy*, for instance:

FG6R1: I watched the documentary *Seaspiracy* on Netflix in March of last year. And that kind of opened my eyes to, you know, what was going on with the fishing industry. And it really made me think about like, animals, as well, like the sentence of animals.

FG4R7: since going vegan, I've like watched Netflix documentaries on veganism such as *Cowspiracy*...

### *Social media and internet*

Social media was popular among participants across all focus groups, especially amongst Generation-Z. However, while some social media channels provided an insight into veganism and animal cruelty, it was not always deemed reliable, credible, or constructive. For example, two instances in focus groups four and three note:

FG4R4: I got fed a lot of misinformation at the start. I think I was kind of fed just through other influencers, who decided to go vegan but didn't really research it ...before I went vegan, I didn't really know anything about like nutrition or food. So I think I just kind of automatically went on to high carb low fat because of Freelee the Banana Girl. Which was a lot of fruit, barely any fat and quite restrictive.

FG3R1: I actually got my information from social media. I was 17 at the time, and I just saw all this stuff on social media about animals in horrible conditions and getting hurt and fit-looking influencers and I guess at the time I wanted to look like them which is a really toxic mindset now I look back...

### *Education and careers*

Among focus groups, many participants were either working or studying at university. I found their area of work, and/or study had an influence on where they gathered their information, for example, in focus group three where two participants note:

FG3R1: I got older and started studying nutrition; that's when I started actually looking up proper information, scientifically backed information.

FG2R1: I went to university two years ago, I did the sociology of food, which was quite interesting because it talked about like, what food actually is and what the processes are of eating and the harming of animals.

### *Peers*

In some focus groups, participants sourced the majority of their information from vegan friends and family at the starting point of their vegan journey. For example, in focus group five R7 explains:

My main source of information at the start was the same person (flatmate) who got me introduced to veganism. So he was super passionate about it and more on the same style that I was very environmentally focused. So I knew I could trust what he had done, because he did the research and he spent the time behind the computer actually double-checking it all.

### **Challenges and barriers when following a vegan diet**

The common challenges and barriers discussed by participants related to health concerns, family values, cultural values, relationships, and judgement within and outside of the vegan community. In addition, cost and accessibility were also discussed. Despite not all participants facing



challenges or barriers, the majority of participants faced at least one barrier when following the vegan diet. Participants had to adopt an additional motive to overcome these challenges.

### ***Health concerns***

Despite participants experiencing significant nutritional benefits, as previously noted, it also sparked conversation around concerns. The most commonly discussed concerns were regarding vitamins and minerals, protein inadequacy, and weight maintenance. Across all focus groups vitamin B12 and iron were commonly brought up by participants. For example, in focus groups four and five, participants mention being low in B12, which had not been an issue prior to going vegan:

FG5R2: ...my iron is fine, but I have really, really low B 12, which I've never struggled with before.

FG4R2: I just get really low on B12 ever since going fully vegan and I occasionally get low iron

Additionally, across some focus groups, a small group of participants mentioned issues around food intake. In focus group one, R3 mentioned difficulty getting in an adequate amount of protein due to the more carbohydrate-heavy foods they consumed since going vegan:

The biggest issue I have is because I'm quite a small person, I physically can't eat enough protein. If I eat like beans, and potatoes, the potatoes are going to fill me up and I'm not getting enough protein from the beans because potato, because beans are carbs and protein. So I have to really think about my diet to make sure that like I'm getting enough of the protein and not just filling up on too many carbs...

Additionally participant R2 in focus group five discussed how they struggled to maintain weight due to the low calorific content of the foods they were eating (mostly plant-derived wholefoods):

I struggled to, like put on weight and maintain weight. And so for me, it was like, actually really hard for me to be focusing on that on a student budget. With like being vegan, I was just really personally struggling with that.

In contrast, FG2R1 noted how they struggled to sustain a health body weight, and gained weight on the diet due to the increase in starch-based foods they were consuming:

So I've actually struggled to maintain a healthy weight being vegan because I just love starchy stuff. And I'm not a salad girl.

### ***Family and cultural values***

Family and cultural values were the most common challenge when following the vegan diet for many participants. Across several focus groups, participants discussed their family viewing it as them turning against their upbringing, being disrespectful to the farming industry, or simply confused. For instance:

FG5R8: I went vegan, I was in high school... my family was like, not supportive at all because I come from a family of farmers ... it was like a big no no, Mum wouldn't buy any vegan alternatives.

FG5R1: I come from a Kiwi family and so much so that when I went vegan, it was very misunderstood. Like no one understood why.

FG4R1: I definitely have found it a barrier, like my family, I have dairy farmers in my family, and they definitely blocked me on Facebook for a good year. And I wasn't allowed to go visit their farm and things like that. So it was pretty harsh in that sense, just like losing, I guess, family.

Participants with a mixed ethnic background across most focus groups claimed it was difficult to incorporate foods which were an integral part of their culture. In addition, their families could not fathom why they would choose to follow the vegan diet when it goes against their culture. For instance:

FG1R3: So if I don't eat Greek yogurt, am I still Greek? And if I if I don't eat feta, am I still Greek? So that was actually the hardest thing was actually those connections of food and how food relates to who you who you might see or perceive yourself as being culturally.

FG3R6: I'm from Germany. And that's a very meat-heavy food culture. So yeah, that was definitely a barrier to me. Because when you look up vegan recipes, a lot of is curries and other things that aren't necessarily what you, like, have at home.

FG4R7: My parents did have a bit of a shock because they're like, you can't give up dairy, dairy is such a big part of our culture, which it is, and I'm Indian.

FG8R2: my barriers are mainly around what I said around my culture. It's very, very difficult, especially when you're mixed race, to kind of feel like you're enough already...

### ***Judgement within and outside of the vegan community***

For some, veganism is just following the vegan diet, while others encompass the whole lifestyle, for example, excluding animal-derived cosmetics, bags and clothing items. Within the vegan community, there are strong opinions around what one should be doing in order to identify as vegan, else they aren't doing it 'right', for example:

FG2R1: When I say fully vegan, I'm talking in terms of diet, I can't say that I go to extreme lengths for clothing, and then materials and stuff like that. Like if it's marked... but I'm not like, well, I can't get it. I've had other people who are also vegan kind of point out, I'm doing wrong. And I'm like, whoa, shit. I'm doing my best.

FG5R8: ...I get so destroyed like, it's so ripped into...

Outside of the vegan community, omnivores were typically discussed as being judgemental or stigmatising vegans for their lifestyle choices. Across most focus groups, some participants mentioned struggling with the judgement and/or stigma associated with the vegan diet:

FG5R7: I think it's still something that is reasonably stigmatized...

FG4R2: ... and the chef just thinks I'm a difficult person who's vegan.

FG7R2 So I think in terms of the culture of accepting veganism, there's still some way that we need to, to make it a little bit more inclusive and just the stereotypes as well, that comes with veganism like people will assume that I'm a hippie or that I'm judgmental. It can be a little bit frustrating.

FG5R7: other people at school would sort of make mean comments about being vegan.

### ***Cost and accessibility***

In contrast to some participants claiming the vegan diet has been more cost effective, as they have incorporated more beans, legumes and grains into their diet, others claim they have found it more expensive. For example, meat alternatives generally have more processing involved leading to a greater cost. In addition, some participants claimed the diet requires planning ahead, such as checking if places you are visiting have vegan options. Some examples in two focus groups mentioned were:

FG6R4: like a lot of the meat substitutes, they tend to be more pricey. So if you're eating lots of vegetables, and like you say, legumes and grains and things like that, then it works out really quite cost-effective.

FG5R1: when I went vegan, I was in third year second year of uni. So I was on quite the student budget. So going vegan then wasn't the most affordable option. So that was quite a barrier for me.

This chapter has presented key findings from the eight focus groups conducted. Although this cohort may not be representative of all vegans, these results show New Zealand vegans' most popular driving motivators are related to health, environmental concerns, ethical beliefs and values, or social influences. Commonly, sources of information were health professionals, social media or personal research. In addition, the most apparent challenge faced was going against cultural norms, and many family members misunderstood the meaning of veganism. The following chapter goes on to discuss the research studies findings in further detail.

## Chapter 5: Discussion

The aim of this study was to examine dietary or lifestyle motives, and influential sources of information for vegans living in New Zealand. The researcher employed a qualitative approach to investigate the research question with focus group participants on Zoom. Participants were asked a mixture of open-ended and close-ended questions. As highlighted earlier, there is currently a lack of information concerning this topic from a New Zealand perspective. Therefore, this research was necessary to provide a better understanding of veganism within a contemporary New Zealand context, while also endeavouring to guide future research. In this chapter, the key motivators for adopting and following a vegan diet are discussed, followed by influential information sources, after which challenges and barriers to following the vegan diet are explored.

### **Key motivators for adopting and sustaining a vegan diet**

This study concluded key motivators for veganism as discussed across all eight focus groups were health, environmental concerns, and animal welfare. This is also supported by Janssen et al. (2016), whose study was conducted in Germany. However, our findings differed, in that this New Zealand-based study found the environment to be more popular motivators when compared primarily to health. This thesis found that concerns about animal welfare were significant, and originated primarily from female participants, whereas males were generally motivated for environmental or health-related reasons. Environmental motives commonly included concerns around carbon emissions, global warming, farming industry and the mass production of meat. For participants pursuing the vegan diet based on health-related reasoning, it became evident that their motivation was being driven to a greater extent through self-interest. For example, health-related motives concerned one's personal health goals, such as improving skin (reducing eczema and acne), allergies or intolerances, and aesthetic aspirations.

It was found that participants were commonly influenced by more than one key motive after learning more about the diet. Most participants found that following the diet with more than one motivator caused them to have stronger opinions, and less likely to give in when challenges and barriers to the diet presented themselves (such as peer pressure or food accessibility). Similarly, Christopher et al. (2018) discuss how the adoption of veganism may trigger negative or positive reactions among individuals' friends and family. For instance, one study found most of its participants received support from their friends, yet some were subject to negative remarks by their family members (Beardsworth et al., 2008). Hence, some researchers have argued that

vegans may adopt or change their dietary motives to help mitigate being marginalised (Christopher et al., 2018; Fox & Ward., 2008).

Participants involved in this thesis generally followed the vegan diet, rather than the whole 'lifestyle', when driven by health and nutritional concerns. Unlike those following the diet with ethical motives (commonly related to animal rights and welfare), most health-focussed vegans were not as vigilant when it came to excluding products tested on animals (i.e. beauty products), or would remove leather goods from their lifestyle. In addition, some of those following the diet for environmental purposes discussed how fake leather was not as good for the environment due to the quality breaking down more quickly, hence, they would rather purchase real leather which stands the test of time.

Additionally, the more evident health-conscious vegans leaned towards home-cooked meals, and typically felt that cooking their own food was more enjoyable since making the switch to the vegan diet. While, approximately half of the participants in this study experienced enjoyment in their meal preparation, stating their love for cooking and getting creative. This was mostly due to being able to cook to personal preferences and avoid reduced availability of food items some faced when dining out with friends. Other previous studies, such as Kemper's (2020), stated the opposite, where their participants found cooking to be a challenge and/or inconvenience. Similar to Lea et al. (2006), our participants also found that vegan food options when dining out were often a barrier and/or challenge to following the diet, especially on social occasions where food is such an integral element. Common barriers and/or challenges discussed amongst the participants were not wanting to be that person who makes a fuss, receive negative judgement for their personal choices, or go against social norms (that is to eat meat). Comparable to McLeod (2014) and D'Souza et al. (2022), findings showed that the minority of Generation-Z participants were influenced by their peers to adopt a vegan diet, which also had a strong impact on their lifestyle behaviour. Here, it is interesting to note the impact that peer relationships can have on informational conformity and socialisation processes which, in turn, can lead to individuals adopting rules, values and social norms that steer them towards greater adherence to group membership. Families and peers often have one of the strongest impacts on what we consume, behaviours we display and lifestyle choices we choose (Lawrence et al., 2010). Cannon (2018) sums this up succinctly, noting how people are more likely to conform and make sustained lifestyle changes when surrounded by like-minded individuals.

Furthermore, in this study, it became apparent that friends and family were the most common barrier, or challenge for participants, and participants generally had more than one motive to help mitigate this. For instance, participants from a large farming background often found it difficult to attend family events, in fear they would be verbally attacked, and not understood. To the best of our knowledge, this is a unique finding that has arisen from this study, as no previous literature on farming heritage within one's culture being a barrier to veganism could be found. Rather, the closest topic associated with this point stems from Bryant et al. (2022), who discusses farming instead as a motivator once people make connections with factory farming and animal lives.

Environmental motivations were often expressed by participants. Fox and Ward (2008) note that environmental motives seem to be more of a consequence of the behaviour rather than a driving force. However, the findings from this thesis highlight how the environment was a direct motivator for following the diet. For example, environmentally conscious vegans were driven by a concern for climate change, protecting the environment, and reducing their carbon footprint. Similar to Hiroshima University (2021), environmental concerns were more commonly discussed among Generation-Z and Millennial participants, further supporting their interest in sustainable veganism. This was particularly evident in focus group discussions concerning oat milk versus almond milk, where participants shared their opinions on following the diet for environmental reasons; with many claiming they would choose oat over almond milk as it requires less water, and resources to be made for consumption.

The quotes obtained from many participants in the focus groups (as shown in previous chapter) revealed that approximately half were vegetarian before making the decision to go vegan. This finding was similar to Janssen et al. (2016), where their choice was commonly driven by ethical reasoning, after making the decision that omitting meat was not good enough, as well as their concerns surrounding the issue of animal cruelty that can be involved in the dairy and egg industries (Mann, 2014). Parallel to previous studies, this research found that participants who were bound by ethical beliefs and values followed the vegan lifestyle approach, which aims to exclude all forms of exploitation, animal cruelty, animals for food, clothing, or any alternative purpose (Greenebaum, 2012; Cole & Morgan, 2011). Moreover, ethical beliefs were popular among those who followed a religion, expressed empathy towards animals, and viewed animals as equals.

## **Influential sources of information for vegans**

Approximately 20% of participants made regular visits to either a nutritionist, doctor or dietitian for advice, or reassurance regarding their dietary choices, nutritional adequacy, and a general health check-up. In contrast, the most popular information sources for the majority of participants (80%) were documentaries, social media, the internet, and known contacts (friends and family). Of these, the more popular sources were documentaries on Netflix which were found to be a confronting, but impactful source of information. Films such as, 'What the Health', 'Game Changers', 'Cowspiracy' and 'Seaspiracy' were popular among participants (Hartwell et al., 2021). In particular, participants noted how they gained a deeper understanding from watching these sources, such as the environmental benefits of a vegan lifestyle, animal welfare, and the nutritional benefits that come with a plant-based diet.

This research found that Facebook, YouTube, TikTok and Instagram were the preferred online platforms for sourcing, information-sharing, and incorporating changes regarding the vegan lifestyle. This finding was similar to Holmgren (2017), who found individuals are most likely to change their behaviour after seeing content on social media. More importantly, Holmgren notes how these platforms can have an emotional effect on viewers in both positive and negative ways. For example, some participants claimed they went vegan overnight, or made the transition from a vegetarian to vegan diet immediately after viewing content on social media due to the emotional impact it had on them. Some female participants in our study claimed social media had a toxic effect on their relationship with food, and initially when they went vegan it was driven by restricting food groups. However, they did mention once healing their relationship with food, the vegan diet made them view food as being nutrient-rich rather than a source of calories. Furthermore, there is little to no research that has focused on examining Generation-Z vegans in conjunction with social media and influencers. Hence, I found that some Generation-Z females in our study were largely influenced and gathered a majority of their information from 'influencers' who they admired or wanted to emulate. However, it is important to note that, in general, these participants were fundamentally being driven by health-related goals (Pilař et al., 2021; Lynn et al., 2020).

## **Challenges and barriers following a vegan diet**

Despite the vegan diet having many positive outcomes for most participants, some faced complications regarding vitamin B12, iron, and protein intake. Complications presented themselves resulting from the reduced availability of vitamin B12 and iron-rich foods in a vegan diet (Craig, 2009). The majority of participants were aware of being vigilant with their vitamin B12 and iron, by either getting regular blood tests to check up on their nutritional adequacy or taking



supplements to prevent inadequacy. In addition, a small portion of participants mentioned protein-rich foods were more carbohydrate heavy, such as beans and legumes, when compared to animal protein in their previous diet. Here, one participant commented they had to be more mindful of preparing their meals to ensure they did not just fill up on carbohydrates and make room for protein-rich foods. In contrast, several participants claimed they had experienced lost hair, or struggled to maintain a healthy weight following a vegan diet as it was less calorific (Craig, 2009).

In addition, those with a strong cultural heritage struggled to find food alternatives to integral products in their upbringings, for example: feta cheese, Greek yoghurt and German meats. While issues around food and eating preferences may seem inconsequential to some, there is literature that supports the notion that food is an important part of cultural heritage and national identity. Furthermore, it connects us to people and places, while also bringing individuals together across the globe (Reddy et al., 2020; Wright Lucero et al., 2021).

On a similar note, religious beliefs and cultural heritage generally lead to greater levels of motivation and dietary adherence, more so than health-related reasoning, commonly due to the fact they viewed animals as equals (Ngo et al., 2021). However, a number of participants claimed their omnivorous families did not understand what was involved in the vegan lifestyle, and either avoided it or would bombard participants with questions. Among the younger participants (under 30 years), some stated their friends would joke or make insulting remarks regarding their dietary choices as a vegan. Here, a previous study by Twine (2014) found that vegans were often reluctant to declare their preference for vegan food as they did not want to be perceived as 'fussy' or unreasonable. This was similar to our research study as many participants expressed feeling uncomfortable when in situations where they had to reject food. Here, one participant described an instance where food was prepared for them by a host who went to extreme lengths to try and accommodate their dietary requirements, but had included eggs and dairy into their food without recognising the difference between vegetarianism and veganism.

Further challenges and/or barriers participants mentioned were cost and convenience when following a plant-based diet. Participants in our study following a student budget mentioned concerns around purchasing nutritionally adequate food, as plant-based alternatives can be more expensive. However, in contrast, older participants recognised that despite some meat alternatives being more expensive, purchasing basic food items, such as beans and legumes, can be very affordable. Furthermore, the vegan diet can be inexpensive if well-prepared, but for those wanting quick and easy meals on a budget, the vegan diet could raise some issues (Springmann et al., 2021; Ngo et al., 2021). To our knowledge, no scholarly literature investigated

cost and convenience within a New Zealand context, therefore, this was an interesting discussion which could be further explored in future research.

## **Conclusion**

This research investigated the facilitators, influential information sources, and challenges which participants faced when following a vegan diet in New Zealand. The chapter highlights findings from focus group participants, who indicated that health, environmental concerns, and ethical beliefs and values were the most prevalent motivators for pursuing a vegan lifestyle. Popular information sources discussed included seeking advice from health professionals, social media, the internet, and known contacts who were following the vegan diet. Connected to this is Generation-Z, who are leading the rising trend of vegan followers. Furthermore, evidence suggests that the growing prevalence of vegan diets is advantageous to consumers who show a desire to normalise their diet within social settings, as well as demonstrate how it benefits the environment and peoples' health overall. The following chapter presents a summary of this thesis, including the main conclusions and recommendations stemming from the findings.

# Chapter 6: Conclusion and recommendations

## Achievement of research aim and objectives

The overall aim of this research was to better understand the key motivators and sources of information for New Zealanders following a vegan diet. To achieve the aim, three main objectives were identified (in Chapter 1) to guide the research process, which included: identifying key motivators used by vegans, investigating their lead sources of information, and identifying the potential benefits/challenges for vegans who follow the diet. Key motivators identified were health and nutritional concerns, more deeply linked with an individual's personal health goals, environmental concerns and interest in sustainability for the planet, and ethically bound motives, commonly related to animal welfare, culture and personal values. Influential information sources were most commonly sourced online via the internet, social media platforms (YouTube, Facebook and Instagram), or documentaries (via Netflix). However, several sought knowledge from health professionals, classic media or known contacts who influenced their decision to become vegan. The majority of participants faced a minimum of one challenge in their time as a vegan, most commonly related to going against their family or cultural upbringing. Moreover, it was common for multiple motivators to be established over time and further motivate individuals to follow and advocate for veganism, despite the barriers or challenges they faced.

## Research impact

To my knowledge, this study is the first in New Zealand which investigates individuals' key motives and influential information sources after following a vegan diet for twelve or more months, and aged over eighteen. Previous studies within New Zealand have simply documented a rise in the adoption of plant-based diets, among other studies (Neville, 2019; Milfont et al., 2021). With increasing evidence showing a plant-based diet can provide a combination of health, environmental and ethical benefits, increased awareness is the first step towards making any change. Findings from this research will hopefully guide future studies within this field and increase consumers' knowledge of convenient strategies to achieve a nutritionally adequate plant-based diet.

## Strengths and limitations

This research provides novel insights through a qualitative analysis into key motivators and influential information sources for vegans in a New Zealand context. Several strengths stemming from this research include how the findings captured have provided a deeper foundation for further

analysis amongst this growing area of interest in New Zealand. More specifically, this involves: key motivators such as personal health interests, environmental concerns (e.g. global warming, and reducing carbon footprints), and ethical concerns related to personal beliefs, culture, animal rights and wellbeing. In addition, I also found that popular sources of information came from the following channels, in the order of most to least commonly used: Social media platforms, self-help internet searches, documentaries, and peer-to-peer information-sharing. Furthermore, I also found common challenges to following the vegan diet were: nutritional inadequacy, cost and accessibility, and unsupportive social networks (e.g. family, groups, and communities). A particular strength came from conducting eight focus groups with a range of participants from 21 years to 58 years, from various backgrounds, provided the opportunity for rich conversations, which otherwise would not have been shared with quantitative study designs. Moreover, while some may consider virtual focus groups to present limitations (which are mentioned below), this study found that conducting focus groups on Zoom enabled more participants to be involved in the study and participate from all across New Zealand in the comfort of their own home and/or environment. Also, all participants had their video camera on which enabled face-to-face rapport building and better emulated natural conversations (Keen et al., 2022).

This study had several limitations. Firstly, a limitation of this study was the discrepancies between focus group numbers; some groups had as little as three, while others were as large as eight. This was due to participants' busy schedules and trying to fit this study into their day, while also being accommodating. Smaller focus groups enabled participants to form greater connection and discussion between one another, while the larger groups tended to have dominating individuals take the lead in driving conversations. Groups with eight participants may have caused some to contribute less and may have prevented further insights to be shared (Krueger and Casey, 2014). With this in mind, having an equal number of participants among focus groups may have also allowed for more comparisons to be formulated and further analysed by the researcher. In addition, conducting focus group sessions virtually caused some technical challenges, such as audio cutting out, or participants not being able to join on-time due to internet connection difficulties, which interrupted the natural flow of conversations (Keen et al., 2022). Due to the qualitative approach taken for this study, it was also not possible to gather data that captured the voice of all vegans residing in New Zealand. Hence, it would be interesting for future research to attempt a representative study to confirm some of the findings highlighted and discussed in this thesis. Furthermore, some participants were gathered through the primary researchers Instagram account with respect to potential for sampling and response

bias that may have resulted from the recruitment. Also, the study had a very high proportion of females compared to males (n=4), and most participants in the 20 to 30 years age range.

### **Recommendations and future directions for research**

With an increasing number of individuals transitioning to a vegan diet, further qualitative and quantitative research should be undertaken to develop greater insight into veganism within a New Zealand context. Another issue raised in the findings of this research suggests that there exist many negative stereotypes and misinformation surrounding the vegan diet, therefore, it would be beneficial to provide vegans with a greater voice in popular media and literature to combat this phenomenon. Furthermore, given the main aim of this research to better understand the key motivators and sources of information for vegans residing in New Zealand, future research could involve further examination of:

- More research concerning vegans from low socioeconomic groups, food-insecure households and of diverse ethnicities, focusing on Māori and Pasifika in NZ, and which captures relevant similarities and differences.
- More research focussing on vegan males as they are often depicted as a minority. This would be useful to determine whether males are less commonly vegan due to the way that the role of meat and masculinity are typically portrayed in the media.
- Further research in the area of nutritional adequacy within vulnerable populations, such as pregnant or adolescent females.
- Identifying the nutritional status of pregnant females following a vegan lifestyle. This would enable dietitians to form practical strategies to support optimal health within the vegan community. Moreover, dietitians should be able to provide advice to assist those adopting a vegan diet, and ensure they are doing so safely.

In addition, introducing vegan-related nutritional education at primary school could encourage children to be more accepting of diverse diets as a social norm, thus removing barriers to acceptance as young adults. Furthermore, vegan diets could be integrated into existing school campaigns, such as Healthy School Lunches Programme (Ka Ora, Ka Ako) and Garden to Table. More effort could be made for dietitians to actively promote plant-based recipes through media, with an emphasis on more nutritional, lower-cost meat-free alternatives, for example, Eat Well For Less New Zealand, which is a government-funded television series promoting healthy eating in New Zealand on a budget. Moreover, dietitians could become involved in work projects

alongside school cafeterias and tuck shops, in order to provide vegan-based meals in a manner that makes them more mainstream and non-exclusive.

In summary, this research has provided an in-depth discussion on the factors relating to the motivators and influences which contribute to following a vegan lifestyle within the New Zealand context and effectively contributes to the growing body of knowledge on this topic.

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# Appendices

## Appendix 1: Consent Form

What are the key motivators and sources of information for those following a vegan lifestyle?

### FOCUS GROUP PARTICIPANT CONSENT FORM

1. I have read, and I understand the purpose of this project and the information noted in the attached 'Project Information Sheet'. I have had the details of the study explained to me and my questions have been answered to my satisfaction. I understand that I may ask further questions at any time.
2. I have been given sufficient time to consider whether to participate in this study.
3. I understand participation is voluntary and that I may withdraw from the study at any time.
4. I understand that I have an obligation to respect the privacy of the other members of the group by not disclosing any personal information that they share during our discussion.
5. I understand that all the information I provide will be kept confidential to the extent permitted by law, and the names of all people in the study will be kept confidential by the researcher. *Note: There are limits on confidentiality as there are no formal sanctions on other group participants from disclosing your involvement, identity, or what you say to others in the focus group. There are risks in taking part in focus group research and taking part assumes that you are willing to assume those risks.*
6. I agree to participate in the focus group under the conditions set out in the attached 'Project Information Sheet'.
7. I understand that the focus groups will be recorded for the purposes of transcription and agree to having my focus group comments recorded.

Declaration by Participant:

I \_\_\_\_\_ hereby consent to take part in this study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 2: Focus group questions

1. Firstly let's start by sharing our names, something about yourself, and perhaps your favourite plant-based meal to cook? (opening question)
2. How long have you each been following a vegan lifestyle and/or diet?
3. What does a vegan lifestyle mean to you? How would you define it?
4. Why/what made you consider becoming vegan
5. What ultimately influenced your decision to become vegan?
6. Do you have friends and/or family members who are also vegan?
  - a. If yes: Do you think that being surrounded by others who are also vegan or at least having them for support made your decision to become vegan easier? Do you find it easier to associate with vegans?
  - b. If no: How does this affect you? Do you think that it is easier to associate with vegans?
7. What stereotypes do you know of that are associated with veganism?
  - a. How do you respond to these stereotypes? Do you accept or reject them?
8. What do you see as the benefits of maintaining a vegan diet?
9. Does mindfulness, the psychological concept of focus of attention and awareness, influence what foods you consume? (i.e. are you very health conscious – meaning you only consume certain foods because they are presumed to be healthy?)
10. What are some of your favourite vegan-friendly foods?
11. What would you say are typical breakfast, lunch, dinner, dessert, and snack foods for vegans?
12. 10. Do you believe that there are health benefits to being vegan?
  - a. If yes: What and why?
  - b. If no: Why not?
13. Do you believe that there are some potential health concerns associated with adopting a vegan diet?
  - a. If yes: What and why?
  - b. If no: Why not?
14. Do you find the vegan diet hard to follow/does it take more effort?

15. Did you do any research on the diet or use sources of information before adopting the lifestyle? If so where did you go (online, health professional, friend etc.)
16. Are there any cultural factors that influence your vegan diet and lifestyle?
17. Lastly, do you have any other comments you would like to share about the vegan diet or your experience with being vegan?

## Appendix 3: Information sheet

### INFORMATION SHEET

This study aims to explore key motivators and sources of information for those following a vegan lifestyle and/or diet. Please read through the information provided below before deciding whether or not to participate.

#### Researcher Introduction

Ruby Alexander is a postgraduate student in the College of Health at Massey University. Ruby is conducting this study as part of her Master of Science in Nutrition and Dietetics degree. Ruby is supervised by Dr Rachel Batty, Professor Pamela von Hurst and Associate Professor Cathryn Conlon, from the School of Sport Exercise and Nutrition at Massey University.

#### Why is this research important?

An increasing number of people are making the transition to a vegan diet in order to reduce their consumption of animal products and benefit their health and mental wellbeing. This research study will contribute a wealth of nutritional and dietary information pertaining to the vegan diet and lifestyle motivations.

The study will also establish any differences between lifestyle and dietary motives associated with adopting a vegan diet. The chosen focus group qualitative data collection approach will provide vegan respondents with a safe space to share in depth insights into the factors that influence their diet and lifestyle..

#### Who am I looking for?

I am looking for a minimum of 36 participants who have been following a vegan lifestyle and/or diet for a minimum of 12 months to participate in this study.

#### *To participate you should:*

- Be aged 18 years or older
- Speak fluent conversational English.
- Currently residing in New Zealand
- Following a vegan lifestyle and/or diet for a minimum of 12 months

You will be given a \$20 voucher for your time.

What is going to happen?

Participation in this study involves attending one focus group session with the researchers which will take approximately 90 minutes and will be audiotaped. This focus group will involve 4 to 8 participants following a vegan lifestyle and include broad questions on why you adopted the vegan lifestyle, how you are managing to maintain it and where you gather information regarding the lifestyle and/or diet (such as key nutrients). Additionally I will discuss your views on the lifestyle and/or diet. Once all focus groups have been conducted the data will be analysed. Findings will be reported upon and used to guide future research. The focus group will be held at Massey University Albany campus and arranged at a time that suits all potential participants. Alternatively, focus groups will be held digitally, using Zoom software for video calling. All involved will attend the call from a suitable location of their choosing.

What will happen to the information you provide?

All information collected during this study will be confidential and will be used only for the purposes of this project. To protect your privacy your real name will not be used anywhere. Instead, I will use an anonymous ID code to label any information relating to you such as the transcribed information from the audio-taped interview, or any reports or articles produced. Access to any information that links your personal details to the ID code will be stored in a locked filing cabinet at Massey University and restricted to members of the research team.

After completion of the data collection, the study findings will be written up as part of the main researcher's Master of Science Nutrition and Dietetics thesis project. Results of this project may be published or presented at conferences or seminars. No individual will be able to be identified.

Audio recordings will be stored on the researcher's passcode-protected laptop and hard drive. The research will use these audio recordings for transcription. Transcripts will be stored safely on the researcher's computer. No hard copies of the transcripts will be shared beyond the research team. Consent forms will be stored in a locked filing cabinet in the HNRU. The primary researcher will have access to the consent forms and research data. This information will be located and stored on the primary researcher's laptop. Data consent form and research data information may be shared (during meetings or via email) when appropriate with supervisors:



Both project data and consent forms will be stored on a private laptop belonging to the researcher. This laptop is passcode-protected Any raw data on which the results of the project depend will be retained in secure storage for 5 years, after which it will be destroyed.

A summary of the project findings will be available to all study participants. All participants will be sent this information via email or a personal letter.

What are the benefits and risks of taking part in this study?

- You will receive a brief report summarising the main findings of the project via mail or email.
- You will be reimbursed for associated costs such as travel) with a \$20 voucher.
- The principal benefit of taking part in this study is that you will contribute to future research on the vegan lifestyle.
- It is not envisaged that there will be any discomfort or risks to the participants as a result of participation.

Who is funding the research?

The School of Sport Exercise and Nutrition at Massey University.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study at any stage;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;

Project Contacts

If you have any further questions or concerns about the project, either now or in the future, please contact: Ruby Alexander, [ralexander@massey.ac.nz](mailto:ralexander@massey.ac.nz) or primary supervisor Dr Rachel Batty [R.batty@massey.ac.nz](mailto:R.batty@massey.ac.nz)

*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 22/11. If you have any concerns about the conduct of this*

*research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee:  
Southern A, telephone 04 801 5799 x 63363, email [humanethicsoutha@massey.ac.nz](mailto:humanethicsoutha@massey.ac.nz).*

## **Appendix 4: Screening tool**

All participants eligible will have to meet the following criteria:

- Aged 18 or over
- Speak fluent conversational English.
- Currently residing in New Zealand.
- Following a vegan lifestyle and/or diet for a minimum of 12 months

As part of the participant screening process, individuals who reply to the Facebook post will be called by the researcher to reconfirm they meet the project criteria.

## Appendix 5: Social post on Facebook

Hello Vegans of Aotearoa!

I am a postgraduate student in the College of Health at Massey University. My fellow researchers and myself would like to invite you to take part a study which aims to explore key motivators and sources of information for those following a vegan lifestyle.

Participation in this study involves attending one focus group session with the researchers (you will be reimbursed for your time, and food/beverages will be provided if held in person). The focus groups will include broad questions on why you adopted the vegan lifestyle, how you are managing to maintain it and where you gather sources of information regarding the lifestyle (such as meeting dietary needs).

The information I gather will hopefully be able to guide future research and increase awareness around not only the vegan diet, but lifestyle as a whole!

Please note to be eligible to participate in this study you must be;

- Aged 18 or over
- Speak fluent conversational English.
- Currently residing in New Zealand.
- Following a vegan lifestyle and/or diet for a minimum of 12 months

If this sounds like something you'd like to participate in we'd love to discuss further to confirm you meet the eligibility criteria and answer any questions you may have

Please send an email with your contact details to the email below:

[ruby@xxx](mailto:ruby@xxx)

## Appendix 6: Overview of participants

### Focus Group One

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG1R1	3	23	F	NZ
FG1R2	7	23	F	NZ
FG1R3	5	49	F	NZ/Māori
FG1R4	1	24	F	NZ
FG1R5	3 ½	26	F	NZ
FG1R6	3 ½	22	F	NZ

### Focus Group Two

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG2R1	1	33	F	NZ
FG2R2	1	23	F	NZ
FG2R3	6	58	F	Indian/NZ
FG2R4	19	38	F	NZ

### Focus Group Three

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG3R1	5 ½	22	F	NZ
FG3R2	10	36	F	NZ/Māori
FG3R3	1	24	F	NZ
FG3R4	1 y 1 m	23	F	NZ
FG3R5	1 ½	23	F	NZ
FG3R6	5 y 4 m	33	M	German

### Focus Group Four

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG4R1	3	21	F	NZ
FG4R2	5	28	F	NZ
FG4R3	5	22	F	NZ
FG4R4	6	23	F	NZ
FG4R5	5 ½	22	F	NZ
FG4R6	7	26	F	NZ
FG4R7	6 ½	33	F	NZ/Māori

### Focus Group Five

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG5R1	3	23	M	NZ/Māori
FG5R2	2	23	F	NZ
FG5R3	6 ½	24	F	NZ
FG5R4	7 ½	24	F	NZ
FG5R5	3	21	F	NZ
FG5R6	1 ½	56	F	NZ
FG5R7	13	28	F	NZ
FG5R8	7 ½	36	F	NZ

### Focus Group Six

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG6R1	1	31	F	NZ/Māori
FG6R2	7	23	F	NZ/Scottish
FG6R3	2	22	F	NZ
FG6R4	1	49	F	NZ

### Focus Group Seven

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG7R1	1 ½	34	F	NZ
FG7R2	4 ½	25	F	NZ/Māori
FG7R3	7 ½	44	M	NZ

### Focus Group Eight

Participant Code	Years Vegan	Age	Gender	Ethnicity
FG8R1	1 y 1 m	22	M	NZ
FG8R2	1 ½	33	F	Filipino, Māori, NZ European, French
FG8R3	5	24	F	NZ

As the above Tables demonstrate, there was a range of participants who were involved in the focus groups. For example, ages ranged from 21 to 58 years, there was 4 male and 37 female participating across all 8 groups, the most common ethnicity was New Zealand, however, there were participants with Māori, French, German, Scottish and Indian heritage as well. Across all focus groups the average duration following a vegan diet was 4.6 years total.