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The Environmental and Social Impact of Kaivolution's Services

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

Food insecurity and food waste are two significant issues within New Zealand. In order to address these two issues organisations like Kaivolution rescue and redistribute food to community groups who help those in need. Kaivolution rescues edible food from food retailers that would otherwise be thrown away, and redistributes this rescued food to community groups who assist whanau who are food insecure. The purpose of this thesis is to examine the social and environmental impact of Kaivolution's food redistribution service. Three of Kaivolution's stakeholders were chosen to participate; Kaivolution volunteers, community groups who receive the rescued food, and whanau who receive the food from the community groups. Semi-structured interviews were used in order to gather data. The key findings showed that for Kaivolution volunteers there was an increase in awareness of social issues like poverty, food insecurity, and homelessness. The findings also showed that the participants volunteering with Kaivolution had increased feelings of belonging, and increased social networks, both contributing to a heightened sense of wellbeing. The key findings from both the community groups and the whanau had significant overlap. Key findings from these participants illustrated how the process of colonisation has negatively impacted Māori who are more prone to food insecurity within Aotearoa. Other groups vulnerable to food insecurity included university students and children from various ethnicities. The findings also highlight the failings of our current social welfare system to provide enough resources for basic living. Community groups often step in to assist food insecure whanau in a culturally and social sensitive community approach to food redistribution. Such an approach promotes a sense of community, builds social relationships, and enhances whanau sense of self-worth and belonging.

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“Let your vision be world-embracing, rather than confined to your own self.”

-Bahá'u'lláh

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Chapter 1: Introduction and Literature Review

In Aotearoa today, both food insecurity and food waste are pressing issues. In response to food insecurity and food waste food rescue organisations like Kaivolution and community organisations have been set up to utilise perfectly good food that would otherwise be thrown out by food retailers in order to assist whanau experiencing food insecurity. This thesis will consider how Kaivolution's food rescue services effect the volunteers at Kaivolution, community organisations and the whanau they assist.

This chapter is split up into seven sections. Section 1 'Poverty in Aotearoa' highlights the nature of poverty in Aotearoa and how various intersecting phenomena effect its prevalence like colonisation. Section 2 'Poverty and Food Insecurity' will explore food insecurity as one of the main consequences of poverty in Aotearoa. This section will highlight how prevalent food insecurity is in Aotearoa, some of the causes of food insecurity, and the various consequences often associated with food insecurity. Within this chapter food is shown to be more than just a means for physical sustenance, section 3 'The Socio-Cultural Importance of Food' highlights this notion by exploring the social and cultural significance of food particularly for Māori. Section 4 'Food Banks and Food Rescue Development' highlights how food banks and food rescue came about in response to food insecurity and poverty. This section highlights the difference between food banks and food rescue and how each has certain strengths and limitations. Some food rescue organisations like Kaivolution aim to minimize the environmental impact of food waste rather than solely addressing food insecurity. Section 5 'Food Waste and the Environment' addresses this aspect of food rescue and explores the financial cost of food waste both globally and in Aotearoa as well as how food waste negatively impacts the environment. Section 6 'The Environment and Health and Well-Being' then highlights the connection between our environment and our health and wellbeing. The final section 'Research aims' will reiterate the focus and scope of this thesis, state the research aims, and provide a brief overview of the whole thesis.

Poverty in Aotearoa

Poverty in Aotearoa is a significant issue right now. Analysis of literature has shown that poverty is complex and not one definition or measurement can adequately describe the full scope of what poverty is. One current definition present in literature is that poverty can be split into two constructs; absolute and relative. As elaborated on by Hodgetts and Stolte (2017) absolute poverty refers to extreme poverty where the necessities needed for survival cannot be met. Although this definition may be useful in some cases, it can also be problematic when applying to different contexts where the necessities of life may vary in cost and form. For example in colder localities heating, adequate clothing, and higher housing standards are more of a necessity compared to warmer places. Hodgetts and Stolte (2017) elaborate on another definition called relative poverty for this very reason. Relative poverty is usually calculated at the national level using the nations 60% median household income as a benchmark to determine how much of the population is receiving inadequate income. Although not a complete measure of hardship, relative poverty also provides some indication of income inequality within a given country. Income inequality are large differences between families/individuals income in a particular setting (Baron, 2017), the more dispersed the incomes are the more income inequality there is thus impacting the median income which is the benchmark used to determine relative poverty. This illustrates that relative poverty could reveal insights into how other social conditions interact with poverty.

The absolute and relative definitions and measures of poverty place income at the centre of this phenomenon. Notions of relative poverty act as a catalyst to explore how constructs within both the micro and more importantly the macro level impact poverty like societal values, norms, and laws (Brady, 2009). Enabling poverty within New Zealand to be examined in a broader sense, acknowledges the influence culture, history, societal values, laws, and political systems have on poverty while also appreciating the individual factors like income, gender, ethnicity, and age. Through such a lens questions may arise like;

which families do not have sufficient resources? What opportunities are families missing out on? Which ethnic and cultural groups are missing out? Is employment the solution? With definitions and measures of poverty that focus on income alone, it is all too easy to fall into the trap of conceptualizing poverty without incorporating the narratives of those facing the problems (Stephens, 2013). Stephens (2013) argues that defining and measuring poverty particularly within New Zealand could be placed into categories ranging from household types, age, number of children in each household, ethnicity, housing tenure, and workforce status. Doing so may uncover whether there is a correlation between these categories and poverty, allowing the true extent of poverty within New Zealand to be examined. Further exploration may also provide insights around poverty's causes and consequences and how our current societal values, norms, and other contextual factors contribute to the issue.

Quantifying poverty and income disparity within New Zealand may provide further insights into poverty's prevalence in our society. According to Perry (2017) poverty rates in New Zealand were at 15% of the New Zealand population in 2016, compared to 9% in 1984. According to Perry (2017) 15% equates to 682,500 individuals living in poverty in New Zealand, with a third of these people or 220,000, being children. The makeup of this group living in poverty is not proportionate to the population's ethnic demographic. Māori and Pacific populations are 2-3 times more likely to experience poverty and be living in a state of material deprivation and hardship compared to Pakeha and Other ethnic groups (Perry, 2009, 2015, 2017). Of the 220,000 children living in poverty, 34% or 1 in 3 children, are of Māori and Pacific descent, however taking into account housing costs this number increases to 290,000 children, or 42%, which is one of the highest rates in the developed nations (Perry, 2017). There was also evidence to suggest that sole parents and beneficiary families are also overrepresented within these poverty statistics. Sole parents were shown to be four times more likely to experience material hardship and deprivation compared to two-parent families, and beneficiary families were five times more

likely to experience material hardship than non-beneficiary families (Perry, 2009).

Another way of quantifying poverty within New Zealand is through the examination of 'precariat' statistics by Guy Standing (2011). The precariat is an emerging class of individuals who live precarious lives, share a sense that labour is instrumental to live, take what they can get in terms of employment and experience low job security. As a result those within the precariat are void of community, enterprise, and governmental benefits, often lack private earnings, and are not a part of an occupational community due to job insecurity. Standing (2011) goes further saying that being a precariat leads to feelings of alienation from others and uncertainty around income in the near future. Groot, Van Ommen, Masters-Awatere, and Tassell-Matamua (2017) explain that 606,000 New Zealander's (or one third of the population) live within the precariat and struggle to meet their everyday needs. From this precariat population, half (303,000) live on \$15,000 or less a year which many have expressed is insufficient in meeting the needs of everyday life (Groot et al., 2017). Thus, just because some form of employment exists it does not equate to a poverty free life. Therefore should solving unemployment be the sole focus to alleviating poverty or is job security combined with adequate wages within the workplace more of a pressing issue? Further examination of the precariat group shows that in 2013 Māori over the age of 15 within the precariat totalled 120,500 which is 23% of the total Māori population (Groot et al., 2017). This highlights the overrepresentation of Māori in yet another statistic that is associated with low job security and income insecurity. From this precariat group of Māori most were found to be living in areas associated with high deprivation. The quantitative information mentioned paints a grim picture and shows that Māori, Pacific, and sole parents, with or without jobs are overrepresented in poverty statistics compared to other ethnic and social groups.

The causes for overrepresentation of Maori in poverty statistics can be attributed to an array of interconnected and intersecting phenomena, one very

pertinent to New Zealand is the process of colonisation. As theorised by Sotero (2006) colonisation is the domination of a group of people by another more powerful and is successful if the following elements are present; physical/psychological violence, segregation/displacement, economic deprivation, and cultural dispossession. Colonisation in Aotearoa has resulted in 200 years of deliberate separation and confiscation of Māori land from Māori. Māori populations identity is interwoven with their connection to their land. And as a result Māori are able to express notions of culture, spirituality, and have a heightened sense of belonging (A. Durie, 1998; McNeill, 2017). Not only has land confiscation hindered Māori in this regard but it has also stopped Māori from utilizing the land for cultivation and gathering resources, thus losing their economic-base (Reid, Taylor-Moore, & Varona, 2014). Through colonisation Māori have lost the ability to share resources and capital with one another which was once a mode of operation between hapu (Reid et al., 2014). Two hundred years of land confiscation has dispossessed Māori of their culture, resulted in economic deprivation, stripped Māori of political power, and displaced Māori within their own country causing them to be in one of the most vulnerable positions in Aotearoa (Reid et al., 2014). The establishment of a now foreign society for Māori has meant that welfare systems, health sectors, educational institutes, and society as a whole are built upon the values of the early colonial government (King, Rua, & Hodgetts, 2017). Such values stem from neoliberalism which causes economies and societies to be founded upon a competitive and individualistic framework putting the wealth in the hands of a few, generally those who are in power (Hodgetts & Stolte, 2017). Thus minority groups in particular Māori are now forced to function within a societal structure that does not reflect or even appreciate their values and beliefs. In a recent survey 70% of Māori expressed that connection to their culture was important, 34% had visited their marae in the past 12 months, 55% speak some te reo, 84% connect with whanau not living with them on a monthly basis, and 66% feel the need for spirituality in their lives (Statistics New Zealand, 2013). These statistics show that Māori wellbeing goes beyond just material means and highlights the importance of connection to culture. It highlights the need for economic resourcing and

structural changes in a society that privileges Pakeha over non-Pakeha in order to allow Māori the autonomy to engage with their cultural practices.

The consequences often associated with poverty are serious, complex, and can be ongoing. In a colonised society like Aotearoa it is not surprising that some are better off than others, particular those who are indigenous, poverty exists and the consequences are pressing. This can be shown through a high representation of Māori and Pacific populations in poorer outcomes including; health, employment status, income levels, and hardship rates (Marriott & Sim, 2015). Marriott and Sim (2015) constructed a report that draws on statistics in New Zealand to show the indicators for inequality of Māori and Pacific populations. It shows that Māori have a 7 year lower life expectancy than non-Māori, Māori will more likely smoke cigarettes than Pakeha and Pacific populations. It shows that both Māori and Pacific suffer from obesity, have lower incomes, attain a lower level of education, and are three times more likely to be unemployed compared to the rest of the population. Besides the physical effects, although related, of being overrepresented in poverty related statistics there is also a constant psycho-social impact, feelings of social exclusion, cultural disconnect, and racial discrimination that restrict Māori populations from accessing all of life's opportunities and navigating society as they see fit (Bécares, Cormack, & Harris, 2013), which is a prerequisite for being considered free from poverty (Boston & Chapple, 2014). All of these inequality indicators illustrate that the actions of the individuals cannot solely be attributed to their overrepresentation in these statistics rather it is an intricately linked outcome of the effects colonisation has had and continues to have in Aotearoa (Hodgetts & Stolte, 2017).

The outcomes of poverty effect many in Aotearoa. Government and other stakeholders with power need to move towards understanding and alleviating poverty. As mentioned by Hodgetts and Stolte (2017) change at governmental level often is enacted by those who control most of the wealth, however the most prominent mode of operation is that economic gain is prioritized over the

best interests of others. In order to reprioritize this, consciousness needs to be raised as to how human beings are; negatively impacting the environment, perpetuating negative outcomes of historical events like colonisation, shaping societal forces, creating political endeavours, and promoting spaces for cultural expression (Hodgetts, Stolte, Nikora, & Curtis, 2010). If this consciousness is raised and priorities shifted, government and other stakeholders with power will realize the influence they have on society and take collective responsibility for negative outcomes related to poverty (Hodgetts et al., 2010).

Poverty and Food Insecurity

One of the main impacts of poverty, relative to focus of this thesis, is food insecurity. Food insecurity is defined as limited or uncertain access to sufficient, readily available, nutritionally adequate, and safe food, or the inability to acquire such food in a socially acceptable way (Parnell & Gray, 2014; Regional Public Health, 2011). For people in the precariat, food insecurity is an outcome of insecure access to income and employment, thus access to food varies depending upon employment status and all too often leaves people anxious as to whether they can afford their next week's food bill (Standing, 2011). According to the Ministry of Health (2003), around 40% of the New Zealand population experienced food insecurity with half of this group only able to afford to eat properly "sometimes", whilst the other half ran out of food due to a lack of available resources. A more in depth and recent look into the prevalence of food insecurity in New Zealand has revealed that certain populations have higher rates of food insecurity than others (University of Otago & Ministry of Health, 2011). The 2008/09 national survey for adult nutrition conducted by the University of Otago and Ministry of Health (2011) shows that 36% of Pakeha experience moderate to low forms of food insecurity compared to 64% of Māori and 74.7% of Pacific populations experiencing moderate to low forms of food insecurity. Research also found that Māori, Pacific, sole parents, and younger age groups experience food insecurity more often as a direct result of their low socioeconomic status (Carter, Lanumata, Kruse, & Gorton, 2010). Those

individuals who have low socioeconomic status often spend a higher percentage of their income on food and struggle to purchase the most nutritious option as it is often out of their price range (Regional Public Health, 2011). Thus, it is not surprising that the Regional Public Health (2011) found that Māori and Pacific have a high dependency on the cheaper and less nutritious food alternatives like fast-food chains, and other instant meals. These cheaper alternatives have been found to contribute to negative health outcomes like obesity, diabetes, heart disease, stroke, and many others (Ashakiran & Deepthi, 2012). Other researchers also support the role of socioeconomic factors to food insecurity, and claim that food insecurity is an outcome of an unequal society that favours Pakeha over non-Pakeha hindering Māori and Pacific populations from being food secure (Hodgetts & Stolte, 2017; Jackson & Graham, 2017; Regional Public Health, 2011).

The consequences of food insecurity impact many aspects of life according to Jackson and Graham (2017). Who explain that food insecurity is something experienced by the whole family and causes feelings of anxiety and stress for parents who cannot provide sufficient food for their children. For these families, food insecurity results in shame and worry for the parents as they may be viewed as inadequate or useless parents, but also social exclusion for the children, as they could not fully engage in all the normal things like shared lunches at school and communal eating (Jackson & Graham, 2017). Feelings of shame and worry are psychological stressors and contribute to negative mental health outcomes like anxiety and depression, the presence of such negative health outcomes have strong correlation to food insecurity (Carter, Kruse, Blakely, & Collings, 2011; Jones, 2017). Children who experience food insecurity are also shown to have behavioural issues like lashing out at teachers and their peers, which can also be attributed to teasing and bullying from being different and socially excluded (Olson, 1999). This then lends itself to school becoming a place children despise rather than a place of learning and making friends. Jackson and Graham (2017) also found that those suffering from food insecurity were subject to stigma around not being able to feed your children and around

not being able to invite friends over because you do not have enough food to offer, further contributing to feelings of inadequacy, embarrassment, shame, social exclusion, and stress. Facing such stigmas will only make it harder for those facing food insecurity to reach out for help in a society embedded in these stigma (King et al., 2017). This has been shown to be the case as experiences of food insecure individuals and families, in particular Māori and Pacific, when reaching out to government welfare agencies are often negative and disempowering (Hodgetts, Chamberlain, Groot, & Tankel, 2014).

As argued already, food insecurity can affect our interaction's with society, our emotions, and mental state. Unsurprisingly, there are physical consequences of food insecurity. Poor nutrition causes a change in blood pressure, iron levels, cholesterol, and body weight, adverse changes to these can cause a variety of health problems related to the cardiovascular and respiratory system (University of Otago & Ministry of Health, 2011). University of Otago and Ministry of Health (2011) showed that these health problems effect all parts of the body from fatigue, stress, pregnancy complications, heart disease, to the development of diabetes. The prevalence of Māori and Pacific populations in statistics related to low income and food insecurity also resemble their over-representation compared to non-Māori in lower life expectancy, disability, cardiovascular disease, cancer, respiratory disease, diabetes, infectious disease, suicide, oral health, mental health, infant health, and unintended injury (Marriott & Sim, 2015; University of Otago & Ministry of Health, 2011) . It is evident that food insecurity is more often associated with low-income and poverty stricken populations, thereby contributing to negative health outcomes.

The Socio-Cultural Importance of Food

Food is significant beyond sustenance, and is often associated with culture, social relationships, and identity construction (Graham, Hodgetts, & Stolte, 2016). Food has socio-cultural significance, it allows for people to practice and connect to their cultural heritage, feel a sense of belonging, and continually form their sense of identity. These significant connections to food come from the preparation,

eating, sharing, and cooking of the food, it is a communal process (Graham et al., 2016). For example within traditional Māori communities kai is grown, gathered, and distributed within whanau, hapu and iwi, which solidified concepts of manaakitanga (caring relationships through sharing) and enabled hapu and iwi to collaborate in order to be kaitiaki (guardians) of their environment (Wham, Maxted, Dyll, Teh, & Kerse, 2012). This communal and holistic food system facilitates the generation and continuity of Māori knowledge, identity, relationships, and a sense of belonging, beyond food as a simple item to be consumed (Wham et al., 2012). People who are food insecure are void of this opportunity to connect with traditional food systems, which can hinder ones social interactions with others, and result in social and cultural exclusion. Within Māori culture, food or 'kai' is more than just a means for physical sustenance but an indispensable part of cultural practice (Wham et al., 2012). As mentioned previously, for Māori the effects and consequences of colonisation now means they are overrepresented among the food insecure. Therefore the consequences of food insecurity for Māori go beyond the physical but prevent the ability to engage with cultural practices like the process of hangi, which is a well-known part of culture. This and the previous section highlights the physical, emotional, psycho-social, and cultural effects of food insecurity. In order to combat food insecurity, charitable organisations have set up practices to provide food for those in need. It is to this section I will now turn.

Food Banks and Food Rescue Development

Food banks, run by charitable organisations, have been providing food to those in need in New Zealand, Australia, Canada, and the United States of America for at least three decades (McIntyre, Tougas, Rondeau, & Mah, 2016). With increasing numbers of people experiencing food insecurity in New Zealand, the demands on emergency food organisations is growing (Utter, Izumi, Denny, Fleming, & Clark, 2018). Food banks serve an important purpose and give food to those who are food insecure, the majority of whom are beneficiaries or low-wage earners (St. John, Wynd, & Child Poverty Action Group, 2008). According to

St John et al (2008), the users of food banks highlight the effects of unavoidable expenses like rent, transport, and other utilities which leave people with little disposable income to purchase basic needs like nutritional food, or purchasing cheaper, yet poorer-quality foods (St. John et al., 2008). Food banks are often used as a last resort for many families and even after allocated food parcels, families are still left with inadequate amounts of food (New Zealand Council of Christian Social Services, 2008). The New Zealand Council of Christian Social Services (2008) argue that access to food banks for some is difficult, food banks are often only open during the day which limits access for people and whanau who are at work. Also, food banks are often not situated next to every home therefore transport can be an issue for those without access to transport or who are housebound, due to illness or disability. Another barrier faced by food bank users is the fear of social stigmatization and feelings of shame, inadequacy, and humiliation (St. John et al., 2008). To combat this social marginalisation, Dalma et al. (2018) found that providing meals at schools for children, rather than engaging families through Foodbanks or even food vouchers, resulted in less embarrassment and feelings of social stigma, whilst also raising the awareness of food insecurity within the school personnel. Although food banks act as an immediate solution to food insecurity they are limited in their ability to address long-term structural causes of food insecurity (Bazerghi, McKay, & Dunn, 2016; Graham, Hodgetts, Stolte, & Chamberlain, 2018). Foodbanks are a short-term solution because they are unable to access large amounts of nutrient dense products like dairy, vegetables, and fruit (Bazerghi et al., 2016) and have difficulty providing perishable foods.

For instance, traditional food banks tend to deal mainly in non-perishable goods that could be stored and handled without the need for refrigeration. However, food rescue organisations like Kaivolution in Hamilton, are able to collect fresh food and redistribute it quickly (Lindberg, Whelan, Lawrence, Gold, & Friel, 2015), which enables them to provide more nutritious yet perishable food such as fresh fruit and vegetables (Miroso, Mainvil, Horne, & Mangan-Walker, 2016). In response to the limitations of food banks, the notion of 'food

rescue' came about. It is a relatively new concept that has developed globally over the last decade as a response to the co-existing problems of unnecessary food waste and widespread food insecurity. One reason for the existence of excess food waste can be attributed to food retailers over production of food and poor food waste management (Facchini, Iacovidou, Gronow, & Voulvoulis, 2017). The production and waste of surplus food is proportionate to the lack of awareness of food insecurity, poverty, and the environmental impact of food waste (Midgley, 2014). This illustrates that food retailers are unaware that their food waste is connected to food insecurity, poverty, and environmental wellbeing. Despite this, food rescue initiatives like Kaivolution seek to work alongside food retailers to turn food waste into a solution for food insecurity through redistributing surplus food to organisations who work alongside whānau in need (Kaivolution, 2018; Midgley, 2014).

Food rescue was made possible in New Zealand by the enactment of The Food Act 2014 which allows food donors to donate food in good faith, with limited risk of prosecution if someone gets sick from consuming their food (Miroso et al., 2016). Similar legislation has been enacted in other countries including the United States of America, Canada, and Australia and is known as "good Samaritan" legislations (Miroso et al., 2016). Such legislation has allowed the food rescue industry to expand rapidly over the last decade in over 25 countries (Reynolds, Piantadosi, & Boland, 2015). In most major cities in New Zealand there is a food rescue initiative underway, Kaivolution in Hamilton, is one of the 14 food rescue groups listed by Love Food Hate Waste New Zealand (2017) who partner with local councils and government in order to minimize food waste.

Food rescue initiatives are part of a shift towards a community food security framework that brings social justice groups together with emergency food providers to seek a solution for food insecurity and food waste (Wakefield, Fleming, Klassen, & Skinner, 2013). Himmelheber (2014) argues that this community approach has the potential to empower recipients of rescued food as they become part of the solution to unnecessary food waste. Food rescue also

takes on characteristics unique to 'community mobilisation', an approach that empowers stakeholders in the community like food retailers and Kaivolution, to encourage community engagement in responding to food insecurity while also reducing the impact of food waste on the environment (Kim, 2005).

A common criticism of food rescue and redistribution initiatives is that it discourages the government from addressing the structural causes of food insecurity which is a valid point. However, Miroso et al. (2016), argues that food rescue and redistribution offers a positive short-term response to the current issues of food waste and food insecurity. It is not the role of Foodbanks to solve the structural problems that lead to food insecurity in the first place (Lindberg et al., 2015). Food rescue initiatives like Kaivolution are well aware of the structural causes of food insecurity and aim to raise awareness around such structural causes through collaboration with food retailers, community groups, and their own staff. Furthermore, Graham, Stolte, Hodgetts, and Chamberlain (2018) argue that some food rescue initiatives emphasis on nutrition ignores the complex realities faced by people living with food insecurity and the decisions that they need to make to meet their daily needs. They conclude that providing food that is enjoyable to eat, in a compassionate, warm, socially acceptable, and culturally sensitive way is more important than meeting strict dietary requirements. Food rescue initiatives most obvious aim is providing food to the food insecure, however certain food rescue initiatives like Kaivolution aim to rescue food for the purpose of lowering food wastes environmental impact. The next section will address food wastes impact on the environment.

Food Waste and the Environment

The reduction of food waste from a social justice point of view, sits alongside the need to recognise the environmental issues of food waste. Gustavsson, Cederberg, Sonesson, Van Otterdijk, and Meybeck (2011) produced an extensive report for the Food and Agricultural Organisation of the United Nations (FAO), which touches on the nature of food waste and what they refer to as a global food waste epidemic. Globally one third (33%) of the food produced for our

consumption is wasted, equating to approximately 1.3 billion tonnes per annum. This includes food wasted in both developed and developing countries both of which contribute between 600-700 million tonnes to this global approximate. Conversion of this finding to a monetary value totals approximately \$US 680 billion for developed countries and \$US 310 billion in developing countries per annum. Of this food 30% is cereals, 50% are root crops, fruits and vegetables, 20% for oil seeds, 20% for meat and dairy, and 35% for fish. Although developed and developing countries have similar food waste weight totals they occur for very different reasons. In the report it states that developed countries waste most of their food in the post-harvest and processing stages. This is attributed to high product standards needed for sale, wasteful retail management, and consumer behaviour. In developing countries most of the food wasted comes from the harvest and processing stage. This is attributed to the lower levels of harvesting equipment and technology, lack of adequate food storage, and less efficient harvesting skills compared to developed countries. This difference in food waste between developing and developed countries showed that the consumers of developing countries wasted 6-11kg of food per year per capita compared to 95-115kg per year per capita for developed countries. In response to this, developed nations have a higher number of environmental groups that run initiatives to lower food waste like Kaivolution.

A closer look into New Zealand's contribution to these global statistics has revealed that both household and industry generated 327,000 tonnes of food waste in the year 2011 (Reynolds, Miroso, & Clothier, 2016). This translates to a monetary value of \$NZ 568 million for the food waste of 2011. Although Reynolds et al. (2015) found that comparatively New Zealand wastes less food per capita than other developed countries, considering the prevalence of poverty and food insecurity, much more could be done to further reduce food waste and distribute it to those in need.

The production of food involves the use of resources such as water, energy, land, chemicals, and materials (Tonini, Albizzati, & Astrup, 2018). Thus, such a loss of resources through food waste impacts on the environment through

its needless use of water, energy, land, and material for its production, processing, harvesting, and consumption. The main burden on the environment associated with food waste is during the wasted food's production and the land used (Tonini et al., 2018). Food waste in New Zealand in 2011 contributed to the generation and loss of 4.2×10^6 tonnes of carbon dioxide (CO₂) emissions, 4.7×10^9 m³ of water, and 29×10^3 TJ of energy (Reynolds et al., 2016). These statistics do not incorporate a value for the area of land used for wasted food in New Zealand, further insight into this may provide another angle to view the potential impacts and future benefits of reducing food waste in New Zealand.

Considering the monetary loss, CO₂ generation, water loss, and energy cost expended as a result of food waste the cost on the environment is evident. Another strand of thinking is through the exploitation of natural resources in order to produce food that could be produced at a lower environmental cost in other countries. Countries vary in climate and geographical makeup, thus different countries can support the production of different foods at lower environmental costs, for example New Zealand has the ability to produce dairy at a lower environmental cost than other countries but cannot produce fruits and vegetables specific to tropical climates in the same way (Foster, Green, & Bleda, 2007). Foster et al. (2007) further supports this notion and explains that collaboration, unified action, and creative alternatives need to be explored in order to allow countries to work together to produce and feed their countries in an environmentally sustainable way. For example, tomatoes need a lot of water to grow thus countries with a very low water supply should import them from other countries with more wet conditions at an accessible price. In order for this to work Foster et al. (2007) explains that countries must decide what must be locally produced and what must be globally imported in order to lower the impact on the environment. Thus a behavioural shift from putting economic benefit before environmental benefit is being asked of populations. This may seem like a utopian idea in a world governed by neoliberalism, but literature highlights that preventative measures needed to lower food waste and its impact on the environment must promote collaboration, collective action, and unified

vision across a variety of stakeholders in order to see this shift (Foster et al., 2007; Gustavsson et al., 2011). Food rescue is an effective way to engage many stakeholders and raise their consciousness around the environmental cost of food waste and a cost effective way to provide food to the food insecure (Reynolds et al., 2015). On the surface the impact food waste has on the environment extends from CO₂ emissions, to water wastage, to the abuse of our land to name a few. However as individuals who interact with the environment constantly, it is inevitable that we will be impacted in a variety of ways. The next section will highlight how our health and well-being is impacted by food waste's impact on the environment.

The Environment and Health and Well-being

The environment and its impact on the health and well-being of individuals and communities are wide in scope indeed. From a scientific perspective, evidence suggests that the condition of our environment and the use of its resources directly impacts our health and well-being. For example through the waste of water, energy, and CO₂ emissions access to fresh water, a decrease in energy availability, and air pollution become more apparent (Nelson & Prilleltensky, 2010). In turn, impacting the prevalence of disease, adequate consumption of safe water, the reduction of air quality, and the access to energy for healthy living (Nelson & Prilleltensky, 2010).

When I talk about health and well-being, I define it as “not merely the absence of disease or infirmity” (Misselbrook, 2014, p. 582) but a concept that allows for the “ability to pursue our life story without insurmountable obstruction from illness” (Misselbrook, 2014, p. 582) and with full strength. Māori health and well-being models for example, embody a holistic approach to health, which always involves the environment. Maori health models like Te Wheke (Pere, 1991) and Te Whare Tapa Wha (M. Durie, 1998) both illustrate that one's social, emotional, spiritual, and physical wellbeing are all interlinked and connected to the physical world we live in. Similarly, the ecological model of human development and well-being also leaves room for the idea that the

interaction one has to their environment impacts other aspects of their lives (Bronfenbrenner, 1979). Furthermore, the social sciences has a history of seeing the environment as an important part of one's identity for example William James (1890) Theory of Self and Charles Horton Cooley (1902) Looking-Glass Self Theory both explain that we are organic with the environment. All too often health and well-being models are founded upon individualistic notions of an individual's health, such a view fails to encapsulate the various other determinants of health like our interaction with the environment, social support, income, substandard housing, and education to name a few (Cochran, 2017). Thus, the spiritual and cultural connections one has with the environment and how this impacts on their wellbeing is also often not given due significance (Panelli & Tipa, 2007). A more in depth look into health and wellbeing and how this is connected to the environment is necessary in order to understand the indirect impact food waste has on an individual. Considering the context of my thesis to Aotearoa, I will be using literature specific to Māori as they are overrepresented in food insecurity and poor health outcomes, and value connection to the environment.

The Māori way of viewing and relating to the environment is through creation narratives where according to Māori, Papatūānuku (Mother earth), Ranginui (Father sky) and their children (gods) brought life as we know it into this world, thus everything within this world began from the same source including us as human beings (Johnson, 2013). That is human beings and the natural environment, are a direct result of Rangi and Papa, and humans in particular were a creation of Tane Mahuta. Based upon this narrative, Māori have direct whakapapa links to nga atua (Maori gods) and reflects the understanding that all life and natural resources like trees, rivers, wind, and the sun, are connected to the same life source, Rangi and Papa. This means that if we abuse the natural environment, like we do through the overproduction of food, we are essentially abusing ourselves as the natural environment and human beings share the same whakapapa through Rangi and Papa (Johnson, 2013).

For Māori, home is traditionally a place that is connected spiritually and physically to the natural environment (Jade Sophia Le & Virginia, 2016). Here these connections to the rivers, mountains, or other parts of the environment are drawn upon and used as a space to connect with one another, share knowledge, engage in cultural practice, transmit culture, and act as a sense of continuity from one generation to the next (Panelli & Tipa, 2007). They also provide an identity and a place of belonging for Māori (Wendy & Remana, 2011). In order for this environmental connection to function values like kaitiakitanga must be viewed as significant. Kaitiakitanga is an important concept about environmental guardianship from a Maori perspective. Kaitiakitanga can be defined as the care and protection for the environment and natural resources (Wendy & Remana, 2011). Kaitiakitanga is about ensuring responses to environmental issues are approached in a culturally sensitive way in order to safeguard the environment for the next generation (Forster, 2013; Johnson, 2013). Kaitiakitanga acts as a guideline for how people should interact with the environment (Johnson, 2013).

In a world that prioritizes economic benefit over socio-cultural benefit the concept of kaitiakitanga can cause tension with economic imperatives which look to exploit resources for economic gain with little regard to the effects on the environment. For Maori however, kaitiakitanga provides a framework for considering the balance between economic benefits with the long term and sustainable care for the environment. Some literature suggests that in order for kaitiakitanga to be present and overcome these norms Māori knowledge and experiences must continually be advocated for and kept at the forefront of initiatives and policy related to the environment (Wendy & Remana, 2011). Voices from a series of hui held around Aotearoa for small and large owners of land revealed that there needs to be more emphasis on achieving a balance between use of land for viable business whilst still maintaining cultural connection and preserving the environments well-being (Dewes, Walzl, & Martin, 2011). Also voiced was the idea that we must exercise values associated with kaitiakitanga when managing our land, and that when land is handed down

from tipuna it should be held onto in order to allow connection with this land to continue for those who affiliate with it (Dewes et al., 2011).

Based on the literature thus far it is evident that the state of our environment directly impacts on our health and wellbeing be it physical, cultural, or spiritual. Through analysis of Māori literature, we can see that for Māori the environment is interwoven into the fabric of their lives and identity and is intimately linked to their health and wellbeing. The models for health and wellbeing (Te Whare Tapa Wha, Te Wheke, and Bronfenbrenners Ecological Model) alongside Māori concepts like kaitiakitanga support this statement. In this regard the role that Kaivolution plays is an important one as it lowers the impact food waste has on the environment and promotes more environmentally sustainable practice among those they engage with.

Research Aims

Based on the literature, initiatives like Kaivolution helps address food insecurity which is one of the main impacts of poverty and a real issue in Aotearoa particularly for Māori. Kaivolution also ensures that the environmental impact of food waste is minimized which promotes the physical, cultural, and spiritual wellbeing of Aotearoa and those who populate it. Therefore, my research has two objectives. Firstly, I will explore the role Kaivolution, as a food rescue initiative, plays in minimizing food wastes impact on the environment. Secondly, I will also explore how Kaivolution redistributes rescued food to community organisations who serve those in need.

Thesis Structure

The remainder of this thesis will consist of a methodology chapter, and two chapters of key findings, followed by a conclusion chapter. The next chapter is titled 'Methodology' and starts by introducing the researcher, explaining and providing rationale as to why a qualitative method was used, and describing the specific qualitative tools used to gather the data eg. semi-structured interviews.

This is followed by background information about Kaivolution, an introduction of the participants, the recruitment process, and the data analysis procedure. The following chapter is titled 'Key Findings from the Kaivolution Volunteers'. This chapter analyses and discusses the main findings from the data collected from three Kaivolution volunteers. The findings cover both the social and environmental impact of Kaivolution's food rescue and redistribution service through the lens of Kaivolution volunteers. This chapter will be followed by the 'Key Findings from Whanau and Community Groups'. Due to the overlap and similarity of findings from community groups and whanau they were discussed within one chapter. These findings highlight the impact of colonisation, the nature of food insecurity, and the various benefits associated with the community groups approach to food redistribution. The last chapter 'Conclusion' will bring together all the main findings of the thesis as one coherent whole.

Chapter 2: Methodology

This chapter will highlight the qualitative approach that was used in order to complete this research. The chapter will begin by explaining the researcher's worldview, which will be followed by rationale as to why a qualitative approach to research was adopted. The chapter will also explain the specific type of qualitative research used, the planning, recruitment of participants, nature of the participants, and the general research process. The chapter will conclude by describing the data analysis process and ethical considerations of the research.

Researcher

Acknowledging that the researcher's values, beliefs, and worldview effects the nature of any research is important. Therefore, understanding the researcher's worldview will help understand how it may have influenced the outcomes and processes within this thesis.

I am 25 year old male, married and I have a 7 month old son. My father is Iranian and he left Iran to come to New Zealand as a refugee due to the religious persecution of Baha'is in Iran. My mother is Pakeha who was born and raised in Hamilton, New Zealand. I have a younger brother who like me was born and raised in New Zealand. As a member of the Baha'i Faith I have been exposed to teachings and acts of service in the community that allow me to understand the negative and positive forces at work within our society. As a Baha'i my aim is to use my faculties to contribute to the material and spiritual advancement of humankind. Through working alongside those who desire to see positive change I am continually developing my capacity to critically think about the world's past, present and future circumstances. A lot weighs heavy on my conscience and I am constantly searching for new ways of contributing to the advancement of humanity in all spheres of my life. Another opportunity to promote the best interests of those who are most vulnerable within New Zealand has arrived in the form of my master's thesis.

Working alongside Kaivolution last year opened my eyes to a new way of contributing to environmental preservation whilst also collaborating with various community organisations in Hamilton. The amount of individuals and families in need of food within Hamilton is astonishing. Kaivolution enables many organisations, who aim to promote the wellbeing of the marginalised, to reach more and more people.

I hope to live a coherent life free from contradictions in the sense that all parts of my life are interconnected and aim to contribute to the betterment of humankind. I have felt that collaborating with Kaivolution has and will lend itself to the development of a piece of research that is embedded in action and will enhance the functioning of Kaivolution and their recipient organisations as well as meeting the needs of people experiencing food insecurity, whilst reducing the impact of food waste on the environment. I feel passionate about this opportunity and see it as the best use of my resources within academia.

Qualitative Methodology

As opposed to other forms of research methodology like scientific psychology and quantitative research in which variables are measured independent of their context, a qualitative approach to psychological research acknowledges the influence people, time, place, and context have on social factors (Yardley, 2017). Due to the area of research and nature of the research questions I will consider, a qualitative approach that acknowledges the influential nature of contextual factors was advantageous. A qualitative approach to research allowed me to explore in depth and through narrative interviews, the 'hows' and 'whys' related to certain social issues and food waste (Dahlberg & McCaig, 2010). This enabled the knowledge shared to be context dependant (Yardley, 2017), which further shed insights into the deeper structural and socio-cultural influences around these issues (Dahlberg & McCaig, 2010). This approach also recognised that knowledge is influenced by our culture, language, perspectives, and worldview (Yardley, 2017). Therefore, an approach to research that allows the participant to

share their lived experiences, cultural values, and worldviews is crucial in being able to investigate such research questions.

Ethnography is one area of qualitative research and involves the study of social interactions, behaviours, and perceptions within particular groups (Reeves, Kuper, & Hodges, 2008). An ethnographic approach to qualitative research enables the research to explore certain “social phenomena, rather than setting out to test hypotheses about it” (Reeves et al., 2008). Due to the complex nature of food insecurity and food waste and the variety of stakeholders engaged to discuss these two broad areas an approach that enabled participants to share their own lived experiences was needed. An ethnographic approach ensured that I was able to collect a body of data that more accurately reflected the variety of experiences from the participants without setting preconceived categories prior to data collection or hypotheses that heavily influenced the way the research was conducted.

Another area of qualitative research is a narrative approach. This approach to research provides the researcher with a framework by which they can investigate human experience through their stories (Webster & Mertova, 2007). Such a framework implies that people organize their experiences into narratives told through stories, it also assumes that the stories told encompass ones past and present experiences, values, and beliefs (Moen, 2006). This approach to research views the participants as collaborators and co-creators of the research process and findings (Moen, 2006). Such an approach ensures that the participant is able to discuss their own experiences and share stories that are relevant and significant in relation to the research aims and objectives.

In order to explore the relevant research areas related to food insecurity and food waste in the time the research was to be completed, an approach to research that was aligned with the characteristics of ethnography and narrative research whilst also being structured was needed. The next section will address the specific qualitative tool adopted.

Semi-Structured Interviews

Semi-structured interviews often follow a series of open-ended questions that address the main areas of the research, but still allow for probing questions to be used at the researchers discretion in order to allow the participant to tell their story their own way with prompts from the researcher (Cohen & Crabtree, 2006; Dahlberg & McCaig, 2010). Semi-structured interviews have various advantages, some of which this research benefitted from were in depth exploration, sensitivity, low cost, and access to more participants (Dahlberg & McCaig, 2010). The use of semi-structured interviews enabled more in-depth exploration of topics around food insecurity and food waste. It did so by enabling the participants to feel free to share what they felt was necessary by using open-ended questions around set topics. Due to the sensitive nature of issues around food insecurity like poverty, lower incomes, and potential stigma around receiving 'handouts', participants needed to feel comfortable in order to share. Semi-structured interviews allowed for this to occur through its flexibility. I was able to conduct an interview that could adjust to cater for the needs of the participants life narrative, whilst still addressing the main areas of the research. This enabled rapport, trust, and confidence to be built between the researcher and participant making sensitive topics easily discussed and allowed our conversations to flow according to the life narrative of my participants. The use of a semi-structure interview schedule meant probing questions could be used during the interviews to ensure participants elaborated on ideas relative to this research. I found that the flexible yet structured nature of this research approach catered for all the participants, the open-ended questions and probing questions that were used to guide discussion helped the participant and researcher have a genuine and comfortable conversation around the main areas of this research.

Prior to the interviews I prepared a set of open-ended questions (Appendix G) that would help guide discussions in a way that covered all the main areas of the research. Due to the unique nature of each conversation with the participants, the set of open-ended questions were left broad in order to allow for a range of topic areas to be covered during the interview.

Background to Kaivolution

In 1993 the Hamilton City Council formed the Hamilton Community Environmental Programme in response to Hamilton's increased desire to see positive change in the local environment (GoEco, 2018). Conscious of this growing desire in the community the Hamilton Community Environmental Programme channelled individual's skills, talents, creativity, and energy to contribute positively to the environment, which in turn, gave rise to an increase in environmental groups and organisations in Hamilton. In 2002, the Hamilton Environment Centre Trust (HECT) was established with a focus on empowering and encouraging positive environmental action across Hamilton. In 2010 the HECT widened its focus to encompass the wider Waikato area and changed its name to Waikato Environment Centre Trust (WECT).

The Waikato Environment Centre Trust (WECT) have a range of activities including community education about environmentally sustainable practice and behaviours, an e-waste initiative that reuses and recycles second hand electronics, a retail store that sells environmentally friendly products, and a food rescue initiative called Kaivolution.

There has been a subsequent name change, from Waikato Environment Centre Trust to GoEco. GoEco (2018) is a charitable trust and relies on funding from around 10 different sources to carry out their different initiatives. GoEco also relies heavily on volunteers for the functioning of their organisation and has a handful of paid staff who conduct administration, apply for funding, and ensure all initiatives are running effectively. GoEco's (2018) mission is to be the voice for the environment, be a hub for learning, and enable positive change to occur whilst keeping community empowerment, inspiration, and integrity as central values to their work.

GoEco’s most well-known initiative is a not for profit food rescue initiative called Kaivolution (2018). Kaivolution works alongside food retailers and producers to ‘rescue food’ that is good enough to eat, but surplus to the food retailer’s requirement or not good enough to sell due to high selling standards, like broken packaging, being too close to the best before date, or not looking presentable like ‘odd shaped fruit’. Kaivolution redistributes the ‘rescued food’ to a variety of Hamilton based community organisations that assist individuals and families in need. Kaivolution has two goals; to protect the environment by reducing the amount of food waste that goes into landfills, and to redistribute surplus food to help feed people in the community who are in need. Food waste can be defined as edible food that has been thrown away or discarded due to the behaviour of the retailer or consumer, and usually occurs during the retail or final consumption stage (Gustavsson et al., 2011). Below is a pictorial representation of Kaivolution’s impact.

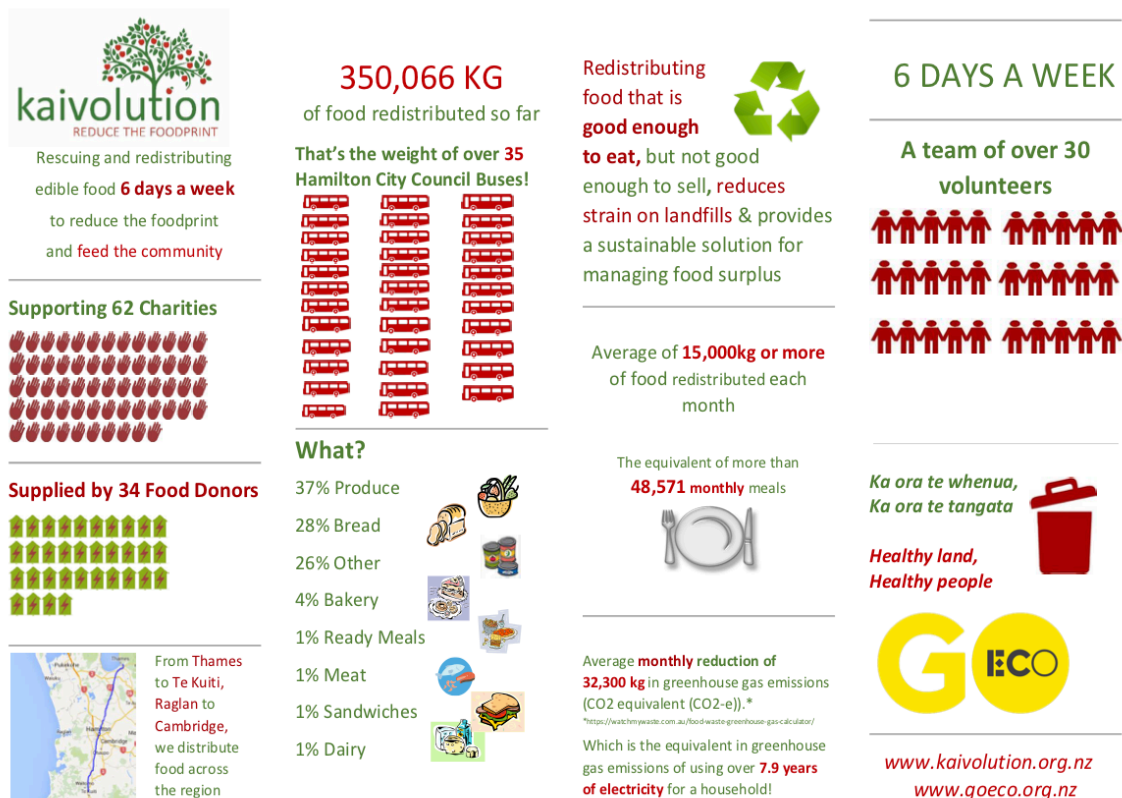


Figure 1. Kaivolution- Reduce the foodprint, by Kaivolution, 2017.

As shown in figure 1 both of Kaivolution's goals are being met. Since its inception in 2014 figure 1 shows that they have prevented 350,066kg of food from going to landfill and redistribute it to 62 charities who work for individuals and families in need. Thus, not only is there an environmental impact of food rescue via a decrease in greenhouse gas emission and decreasing landfill usage, but there is also a social impact, whereby Kaivolution on average provide 15,000kg per month of rescued food to various community organisations who distribute to those in need.

Participants.

In order to fulfil the research aims, I interviewed three of Kaivolution's stakeholders. Exploring the research aims across a variety of Kaivolution's stakeholder groups allowed this research to consider the environmental and social impact of Kaivolution's food rescue and redistribution service.

The three stakeholders involved include:

- 1) Kaivolution volunteers- The volunteers rescue, pack, and redistribute the surplus food to the recipient organisations. Kaivolution relies heavily on volunteers to function. Thus, Kaivolution volunteers will shed light on how they perceive the environmental impact and what effect it has had on them. They will also be able to talk about whether their awareness of social issues like food insecurity has changed and how they think food rescue has served to aid in these issues.
- 2) Community groups - The community groups/organisations redistribute rescued food from Kaivolution to those who are experiencing food insecurity. Community organisations play an integral role in being able to analyse and identify the social impact Kaivolution's rescued food has on recipient individuals and whanau. They are also able to share whether engagement with food rescue has influenced their organisations engagement with Kaivolution's environmental message of minimizing our environmental footprint.

3) Whanau- The whanau that are at the receiving end of the rescued food from Kaivolution through the community groups, may rely on, appreciate, and be positively impacted by this service. Thus, whanau will be able to shed light on the impact on their life. Although whanau who receive this food may not necessarily prioritize environmentally friendly options over meeting the necessities of life it is important for Kaivolution to know, whether the end users of the food, engage with their environmental message.

Due to ethical considerations and the promise of anonymity I did not gather in depth demographic information of my participants. However, the table below provides some information about the participants in order to help the reader follow the remainder of this research.

Table 1

Information on Participants

Stakeholders	Pseudonym	Description
Kaivolution volunteers	Alex	Help collect, pack, and redistribute food to community groups
	Kahu	
	Kim	
Community group	Community group 1 (CG1)	Provides daily community meals for anyone to attend
	Community group 2 (CG2)	Distributes food parcels to whanau in their own neighbourhood
	Community group 3 (CG3)	Provides food parcels as part of their wrap around services to whanau in need
Whanau	The Moke whanau	Receive rescued food from Community group 2 (CG2) in order to feed their whanau
	The Rangi whanau	
	The Kani whanau	

Recruitment.

In order to gather the qualitative data needed to fulfil the research aims I interviewed three Kaivolution volunteers, three representatives from community groups, and three whanau who receive the food. The recruitment process began by approaching Kaivolution and asking permission to distribute information sheet's to Kaivolution volunteers (Appendix A). Once interest was expressed to participate in the study some Kaivolution volunteers contacted me directly through email whilst others sent their contact details to me via Kaivolution's administrative staff. Once I made contact I arranged a time and place suitable to them for an interview to take place.

With the help of Kaivolution and my supervisor three community groups were chosen that best reflect the variety of Kaivolution's clientele. However, due to the disproportionate representation of Māori in statistics related to food insecurity, community groups who work closely with Māori were preferable.

Upon selection of the community groups I composed a letter (Appendix B) for Kaivolution to send to the community groups explaining the purpose of the research and inviting them to participate via an interview with a representative from their organisation. Once these community groups responded, I was able to contact the representative from their organisation. This process ensured that initial contact was made by someone with an existing relationship. When contact was made with the representative from the community group I sent through an information sheet (Appendix C) and consent form (Appendix D) for them to read. With those organisations and people who expressed interest in participating in my research, I arranged a time and place suitable for them to conduct a face-to-face interview.

In order to interview the whanau who, receive food from the community groups I sent or gave in person a letter (Appendix E) to the same community groups I had interviewed asking for access and assistance to approach the whanau assist. If the community group accepted I requested that they relay an information sheet (Appendix F) and consent form (Appendix D) to their clientele

to gauge interest in participation. Interested clientele were contacted via phone, email, or an in person visit in order to arrange a time and place suitable for an interview. All three of the individuals and whanau who I interviewed were recruited through one community group as the others were unable to put me in contact with members of their community.

Research process.

Either on the day or the day before the interview I contacted the participants via email, text, or call to make sure that they were still available and happy to participate. Some participants found this useful as they had forgotten and others appreciated chatting some more about the research. Prior to the interview day I also printed off an information sheet and consent form to take to the interviews. Although I had already sent these forms via email I took some extras along just in case they had not read or printed off the consent form. Some participants utilised the consent form I had taken, whilst others printed their own. Some participants also took the information sheet and re-read it prior to the interview commencing.

Upon arrival at the interview location I made sure to introduce myself and had small talk in order to break the ice. Before the interview commenced, I made sure that the participants fully understood the nature of the research and research process. I did this by ensuring they understood the information sheet and had thoroughly read the consent form. After introductions, small talk, going over the information sheet if they had not previously, signing the consent form, and asking if they had any further questions I asked if it would be ok for me to record the interview. I requested to digitally record the interview as this would allow me to be fully engaged in the conversation without taking notes. Digital recording also enabled me to actively listen and be better equipped to construct probing questions that built on what the participant was saying. During one of the interviews I knew the recording was going to be difficult to transcribe as the interview was conducted in a noisy space with several people. Immediately after

the interview I took some notes while the conversation was still fresh in my mind in anticipation of a poor-quality recording.

Once the conversations had concluded I asked the participants if they had any comments or further questions, most of the participants made a comment about one of the topics discussed during the interview and/or gave thanks for the opportunity to participate. I explained to the participant what would be done with the recorded interview, if they had any final questions, and thanked them for contributing to the construction of this research. All nine interview recordings took approximately 25-45 minutes to complete.

As mentioned on the consent form upon completion of the interview the participants had one week to request their interview transcript and to make any changes. None of the participants requested to do so. All of the participants requested a summary of the findings on the consent form. A summary of the findings was sent via email or given to the participants in person once the research was completed.

After every interview I made sure that I reflected on what worked and did not work in order to adjust my approach to be more effective for the next interview. An assumption I had prior to interviewing the recipient organisations and end-users of the food rescue and redistribution programme, was that I would be interviewing one-on-one. This was not the case and for most of these interviews it was two or more participants, therefore I had to print extra consent forms and information sheets in order to inform the participants about the research. I also had to facilitate group discussion, which I was comfortable doing but not expecting, in a way that would allow all to participate whilst still remaining on topic. The use of more creative probing questions in order to guide discussion were needed as the same probing questions used in previous one-on-one interviews were not as effective. As a result of this reflection I made sure to ask how many would be attending the interview in order for me to be prepared.

Another reflection I had after conducting the third interview was that once or twice I had unconsciously used statements that may have been imposing

my own beliefs. I do not feel that this significantly impacted on the nature of the interview but rather brought things up that the participant felt irrelevant to speak to. In order to minimise this occurring, I listened more attentively and used what the participant had said to guide discussion. As opposed to bringing in my own beliefs or stating what I wanted to hear in order to facilitate conversation.

Data Analysis

In order to analyse the data collected from the interviews with participants I employed an approach known as thematic analysis. Thematic analysis is an approach used to analyse, interpret, and identify themes within a qualitative data set (Clarke & Braun, 2017). Thematic analysis allowed the data within this research to be understood in a manner that was unbounded by rigid theoretical frameworks but rather ensured that data formed the themes and findings that were relevant to the participants and researcher in relation to the research topics. As mentioned by Braun and Clarke (2006) there are different approaches to thematic analysis two of which are inductive and theoretical thematic analysis. As mentioned previously an approach that was unbounded by a rigid theoretical framework was preferable due to the diverse range of participants and broad research questions. Thus, an inductive thematic analysis was used. An inductive approach to thematic analysis is one that avoids the construction of pre-existing codes and themes for data analysis but rather utilizes the data to construct the codes and themes (Braun & Clarke, 2006). Although an inductive thematic analysis was used it was impossible to be fully inductive as the researcher analysing, collating, and identifying the themes is affected by their cultural beliefs and worldviews. Being conscious of this as a researcher helps ensure the data analysis process accurately reflects the participants views. Once I had transcribed the interviews I used the six phases of thematic analysis defined by Braun and Clarke (2006) to analyse the data from the interviews:

1. I first started by reading the interview transcript in order to better understand the content of the interview. I re-read the interview transcripts several times in order to become thoroughly acquainted with

the content. As I read the data I continually added side notes to the points that were significant to the participant, relevant to the research area, and other interesting points. Due to there being three sets of three different stakeholders, I analysed each stakeholder group individually rather than the whole data set.

2. I then went through all the interview transcripts again and made codes for the significant, interesting, and relevant points I noted in phase one. For the coding process I used coloured post it notes to roughly categorize codes of the same nature.
3. Once I had coded all the interview transcripts I went through and collated the codes into themes. I then transferred the themes, codes, and dialogue into a table on Microsoft excel. I made a table for each of the three stakeholders.
4. Upon completion of the tables I then reviewed the themes and reshuffled certain codes to better group the codes into their respective groupings. This helped refine the groupings of codes and enabled new themes to emerge that were a more accurate reflection of the theme within the data set.
5. Once each theme had been reviewed and all the appropriate codes were grouped together I named each theme to best reflect the nature of the codes. I then briefly wrote about each theme in order to make better sense of how they relate to each of the other themes.
6. In order to portray the themes as a cohesive written piece I organised the themes in a logical order ready for written analysis and discussion. I selected the relevant themes and began analysing and discussing them within the written form and linked it back to the research questions and relevant literature. Although this was straight forward for the Kaivolution

volunteers, for the community groups and individuals and whanau there was overlap of themes. Subsequently both stakeholders (community groups and individuals and whanau) were grouped together within one chapter as the themes had significant overlap.

Limitations of the Research

As with all research there are limitations. Within this thesis there were a few main limitations which are as follows. One of the limitations present within this research is related to the sample size. Due to time constraints I was unable to engage with more than 9 total participants. Therefore, the findings within this thesis may not be reflected in the narratives of all who are food insecure, volunteer with food rescue organisations, or among community groups. Also, due to recruiting community groups and whanau who identify as Māori some of the research findings are limited in terms of their application to other ethnic groups.

Another limitation is one related to the researcher. As the composer of this piece of research I was in charge of collating, analysing, and discussing the data from the participant interviews. During this process I tried to remain objective without allowing my own beliefs, bias, culture, and worldview to impact how I perceived the dataset. The impact my own worldview as a researcher can have on the interpretation of the findings can never be eliminated only minimized through being conscious of the fact, thus it is a limitation.

Although some research limitations exist acknowledging they exist as is the case here ensured that the credibility of the research was not undermined.

Ethical Considerations

With the help of my supervisor I submitted an ethics application to the University of Waikato Human Research Ethics Committee. This process ensured that my research safeguarded the interest of all involved particularly the research

participants. Once my ethics application had been accepted I started my research.

To the best of my ability I aimed to keep any personal information that could identify participants, organisations, and other individuals spoken about during interviews strictly confidential. This was done by using coded names, or pseudonyms, for the participants or organisations at the point of data collection. The coded names for the Kaivolution volunteers and whanau who receive the food were personified in order to better engage the reader. For example, “The Rangi whanau said” or “Community group 2 mentions that”. Upon transcription of the interview any information that identified individuals or organisations were also reworded for example, “the Duncan family on 17 Waikato street get a couple of food parcels a day” would be reworded to “a family in Fairfield receives two food parcels a day”. Although this process of coding and rewording statements may assume anonymity in some circumstances in this case it will not. This is due to the small number of suitable participant organisations and volunteers, thus details around services provided, depictions of opinion, and certain viewpoints may provide others with an ability to identify one another. All participants were reassured that this may be the case as well as presenting it on the consent form.

Throughout the research I ensured that all participation from participants was voluntary. I did this by asking someone who had an existing relationship and also was a mutual contact to briefly introduce the research process and gauge interest before we were able to contact each other. I made sure that the participants understood the research aims, purpose, procedure, and where and what the findings were going to be used for. This was achieved through verbal communication as well as making available to participants an information sheet and consent form for reading. I ensured this occurred before organising a time and place for an interview. I reiterated to the participants that they had the right at any point of the research to withdraw with no consequences and their data would not be used. I also asked prior to interviews commencing if it was still ok

to record the interview. These processes ensured the participants knew their rights in the research and felt comfortable and safe to participate.

Chapter 3: Key Findings from the Kaivolution Volunteers

This chapter analyses and discusses the key findings from the interviews with Kaivolution volunteers (KV's). There are eight key findings that will be discussed with relation to my research focus, which examines the social and environmental impact of Kaivolution services. The opening theme is titled 'personal motivation and benefits', within this theme the motivating factors for and benefits of engaging with Kaivolution will be discussed. The second theme is titled 'change in awareness /consciousness of social issues'. This theme addresses the changes in thoughts and awareness of social issues. The third theme will also address a 'change in awareness/consciousness' but from an environmental perspective. The fourth theme is titled 'environmentally friendly behaviour' and will examine how the participants have or have not minimized their environmental footprint as a result of engaging with Kaivolution's food redistribution service. Theme 5 is titled 'empowering and disempowering environments', within this theme participants share how certain environments hinder or promote the practice of environmentally friendly behaviour like composting. The sixth theme is titled 'the environmental impact and nature of food retailers', in this theme participants shed insight into how the behaviour of food retailers/producers like supermarkets, restaurants, orchards affect the environment. The final theme is titled 'government, food rescue, and community groups' where participants share about the role government can play in addressing and the role they play in perpetuating the issue of food waste and its impact on the environment. It also explores how Kaivolution acts as a forum for many community and environmental organisations to come together and collaborate to solve certain social and environmental issues. It is important to note that the pseudonyms given for the KV's do not reflect any of the characteristics of the actual participants, like gender or ethnicity.

Personal Motivation and Benefits

This theme touches on the motivating factors and benefits that KV's experienced as a result of working with Kaivolution. These motivating factors include a means

to gain more self-confidence within the workplace whilst also being able to contribute to the community, raising the awareness of others around environmental issues, and to fulfil personal goals like volunteering once retired.

Kahu explains his/her motivation for engaging with Kaivolution:

I have always been a conservationist in my spare time. I retired a bit early with the intention of doing more of that work while I am still fit and able...The reason I am doing this work is because I already had all of those (environmental) beliefs and those understandings but I certainly do my best to influence others. That's all I can do.

Kaivolution seems like a good fit for Kahu since conservation type work has been a key part of their life anyway. Kahu uses his/her engagement with Kaivolution as a space to share their environmental beliefs with others. This is in contrast to the main motivational factors from the other two participants. Kim expressed that the source of their motivation comes from the satisfaction and sense of fulfilment from giving to those in need. As stated by Kim:

I just think it is probably one of the most satisfying things I have done. I have done a lot of jobs that I have been paid for, and if you can afford to volunteer I think it is a no brainer.

Alex also states:

I thought that it (volunteering) was a nice way of getting over myself and putting something back into the community. It is actually as much for me as anything else you know giving myself a bit of confidence getting back out there in the work mode.

Motivating factors for volunteering with Kaivolution included fulfilling personal goals within the sphere of conservation work, gaining personal confidence, and experiencing positive emotion like satisfaction and fulfillment. For example, Alex mentioned volunteering provided a 'nice way of getting over myself' by this the participant meant coming to terms with a debilitating illness that had prevented them from engaging in a workplace. As Kaivolution

volunteers, my participants were clear about the importance of their work and how it contributed to their general sense of life satisfaction, and increased self-esteem. According to research, volunteering also lowers depressive symptoms, increases life expectancy, and promotes cognitive and physical functional ability (Anderson et al., 2014; Yeung, Zhang, & Tae Yeun, 2017). Anderson et al. (2014) adds that these benefits come from the fact that volunteering is a social, physical, and cognitive activity generally within a collective setting which also promotes a sense of belonging, community, and support. Such findings are supported by my research participants as suggested by Kim:

I have met some really neat people amongst the volunteers. I actually have friends now that were volunteers, and people from all over too. You wouldn't run into them otherwise, yea it is really cool.

And this from Alex:

It's a good way of integrating into the community and learning about Hamilton. I left Hamilton for 21 years and I have only been back for 18 months...And I didn't have any networks here and networks take years to build. I had that in Waiheke Island and Auckland but not in Hamilton... Yea to find out what's really happening on the ground with people.

Both these participants stressed the importance of developing their social networks through Kaivolution and how it contributes to their general sense of health and wellbeing as individuals. The health benefits of developing social networks is highlighted in Māori health models like Te Wheke (Pere, 1991), Te Whare Tapa Wha (M. Durie, 1998), and non-Maori health models like Bronfenbrenner's Ecological model (Bronfenbrenner, 1979). All three of these models highlight how our social settings are intimately linked to our health and wellbeing. Increasing social connections and feelings of belonging to community contributes to increased positive health outcomes (Umberson & Karas Montez, 2010). Volunteering therefore provides my participants with an increased sense of community connectedness that contributes to their health and wellbeing (Anderson et al, 2014).

In light of the research focus and literature this theme touched on the emotional, social, and personal benefits as well as the motivational factors among participants. The next theme goes beyond this and addresses the change in awareness/consciousness around social issues for my participants.

Change in Awareness/Consciousness of Social Issues

One objective of this thesis was to consider the awareness/consciousness of social issues such as food insecurity and poverty for volunteers of Kaivolution. In this theme, I will reflect upon my participants' change in awareness/consciousness around these issues.

For Alex and Kim, they both expressed that engaging with Kaivolution has opened their eyes to the enormity and widespread nature of food insecurity and poverty in Hamilton especially, and New Zealand more broadly. Alex mentioned that talking with the community organisations increased their awareness of how the food is being passed onto whanau in need and reflected the struggles of poverty and according to Alex, what is “really happening on the ground with people”. Alex went on to explain that they have been so overwhelmed in their work that Alex has encouraged her mother to become a volunteer. The importance of encouraging her mother to volunteer with Kaivolution stems from Alex's mother being ambivalent to the notion of food insecurity and poverty. Similar to Alex, Kim also stated that engagement with Kaivolution enabled them to see the importance of how much food was being rescued and redistributed. When reflecting upon the scale of food insecurity and poverty, Kim replied “I think it took me a little while to get my head around the size of the problem”. Kim then went on to explain that hearing stories from the community organisations about individuals and whanau receiving the food enabled him/her to realise ‘the size of the problem’ (food insecurity) and really understand the social impact of Kaivolution's food redistribution service. For Alex and Kim seeing and hearing about the impact food redistribution has on the community from engaging with Kaivolution and the community organisations enabled them to be more aware of the social issues like food insecurity and poverty. As Alex states:

Yea to find out what's really happening on the ground with people. Because a lot of people say there's a lot of poverty in Hamilton, and a lot of people say that's ridiculous there's no excuse to be, there's a lot of people that think it is not real. It is real...you kind of don't think it's in your own back yard. It really is a first world problem.

Here Alex highlights that many do not think poverty is a real social issue. However literature highlights, food insecurity, a consequence of poverty, is really a "first world problem" and in our "own back yard" and affects 41% of families in New Zealand (University of Otago & Ministry of Health, 2011). The connection between both food insecurity and poverty is not surprising, as Food is often sacrificed by families to ensure they prioritise expenses like rent, transport and other utilities (St. John et al., 2008). The increase in awareness of Alex around the existence of poverty raises valuable insights into the benefits of engaging with food redistribution agencies like Kaivolution. It shows that being exposed and engaging with such organisations increases understanding around the nature of issues like food insecurity.

Kim states:

I think the worlds changed a lot, in that the people who were ok and making their way, they are not anymore. It is kind of like it's going up through the layers. You hear of people who have good incomes and they are still not making ends meet. It is just getting worse.

Kim continues with a story of a solo parent struggling to makes ends meet for his children, "Yea of course he is working too. Those are the stories and you think oh my god. You think there is people out there and that is their daily life". This is an interesting statement by Kim and reflects the notion of the working poor and food insecurity among solo parents. Kim highlights that although in employment, this parent is unable to meet the needs of their children without the assistance of organisations like Kaivolution. Such a finding is consistent with research into the state of poverty generally and food insecurity especially, where in New Zealand approximately 40% of whanau experiencing material hardship are

working families (Perry, 2017). The common misconception among OECD countries is that employment is the solution for poverty however, research suggests otherwise (Perry, 2017). Other literature that highlights the prevalence of the working poor is the new emerging class called 'the precariat' and the 'working poor' (Standing, 2011). The precariat is defined as a group of people who experience insecurity in income and employment. For example, a person in the precariat can work in seasonal or temporary work and earns low level income and can be considered part of the 'working poor' (Standing, 2011). Thus, the notion of the precariat supports the idea that employed people, can still experience material deprivation and that employment is not the only answer to poverty. Employment also needs to ensure people work enough hours to earn a wage that allows them to meet their needs. Seasonal and temporary work conditions make supporting oneself or their family a lot more difficult.

In addition to the working poor, solo parents, unsurprisingly, are four times more likely to experience some form of material hardship and therefore food insecurity, compared to a two-parent family (Perry, 2009). This is consistent with Kim's statements that a working solo parent has to utilize Kaivolution as a way to provide for their family. Students are also not exempt from food insecurity as one of my participants explain.

Alex adds:

A community organisation came in and said last night they hit their record number of meals provided at 100. They said it is not just homeless people they were students who didn't have the dependency of their parents and they slip between the cracks. She was saying that they fed the student and he came back and thanked them once he had completed his thesis, because he was struggling just to finish his education. You know we are not just feeding homeless on the street but a whole range of what we class as needed. For my mum who is this average middle-class western women who didn't believe in it, but volunteering has opened her eyes.

To know that students were also struggling came as a surprise to Alex and her mother. It is well known that tertiary students often experience various levels of poverty for a time period, but the nature of food insecurity for students is compounded by the high cost of university fees, high rents, and reduced governmental and parental support (Gallegos, Ramsey, & Ong, 2014).

For students, solo parents, and the working poor, the experience of food insecurity and poverty is more than an individual self-negligence issue, but rather a structural societal issue. Alex unpacks the criticism individuals suffering from poverty are often criticised for by stating:

People are really struggling, there is still a disbelief that if they (the precariat) can smoke cigarettes and buy alcohol then how can they be so poor and what about their kids? It is not that simple. It is a whole social issue.

What Alex is saying in this quote is that poverty is more than just the sum of an individual's poor choices but rather a complex social issue. Poverty is often a social issue that is conceptualized without including the narratives of those facing the problem (Stephens, 2013). The viewpoint that Alex expressed leaves room for broader conceptualization of poverty. It allows for poverty to be seen as a social issue that is intimately linked with culture, historical events, political systems, laws, and societal values. This is very important in New Zealand as Māori and Pacific populations are overrepresented in poverty statistics (Perry, 2009, 2015, 2017). Thus, such a viewpoint allows for major events like colonisation to be examined in light of this poverty statistic rather than prescribing the issue as simply a Māori issue. It also enables the social determinants of health to be considered in light of poverty. For example that poverty is perpetuated by and a result of poor educational outcomes, low wage jobs or insecure work, poor housing which causes illness, and inaccessible healthcare to name a just a few (Wilkinson & Marmot, 2003).

Development of this viewpoint also enabled Alex and Kim to reflect on how their increase in understanding of social issues has allowed them to appreciate what they have and realise their own privileges.

Alex states:

Well I guess it is privilege I guess that's what we do have. We moan about things and you know I say it's a first world problem. Hello. You know we only know what we know. But when things change like what Kaivolution is doing, changing opinions, clearer understanding of what is going on.

Kim adds:

Yea definitely I have come from a background like that I have never been without anything. And if I have it is not something I need anyway. I have lived more simply and am so grateful for what I have got.

Both Alex and Kim express that they are from well off backgrounds and for them going without the necessities of life is rare. Both Alex and Kim share that engaging with Kaivolution has made them aware of their own privileges and that they actually fair better off than a large portion of society, thus, promoting a sense of gratitude for what they have. Research from Kawecka Nenga (2011) illustrates how volunteering provides a space for interacting with individuals from different demographics, which can reveal certain privileges. As a result, Kim is more grateful for things that she has. Alex states that "we only know what we know" and that a significant role that Kaivolution plays is raising awareness around social issues like poverty and food insecurity. Literature highlights the importance interacting with others from different demographics and engaging in spaces like Kaivolution can have on developing your ability to critically reflect on the nature of social issues like poverty and food insecurity (Bozalek & Biersteker, 2010; Krumer-Nevo, Weiss-Gal, & Monnickendam, 2009). Krumer-Nevo et al. (2009) illustrates that a multidisciplinary approach to understanding social issues like poverty is needed, which includes theoretical knowledge, self-reflection, practical knowledge, and practical experience within organisations like

Kaivolution. Aspects of this are consistent with the experiences of my participants, resulting in understanding on a deeper level of the causes and impact social issues have on others as well as enabling them to make changes and contribute to alleviating such issues.

In summary I have reflected upon the evolving nature of my participant's awareness/consciousness around poverty and food insecurity. It showed that by engaging with Kaivolution as a volunteer they were more able to fully understand the complexity of these issues and were also able to appreciate the privileges they have. Moving on from this theme, the next theme will highlight the change in awareness/consciousness among the participants around environmental issues like Kaivolution's message of minimizing food waste.

Change in Awareness/Consciousness of Environmental Issues

Another aim of the thesis is to examine the change of awareness in participants towards environmental issues like food waste as a result of Kaivolution's food rescue initiative. All three of Kaivolution's volunteers mentioned that they already knew a little about food waste, but did not know just how large the issue of food waste was.

For example, Kahu states:

If you go out you will see on many occasions, what you get given is bread and food that is still usable, but alongside that a lot of food is still wasted and given to the pigs. A lot of this stuff is still usable. They still waste a lot of perishable food.

The amount of food being wasted that is still edible was upsetting and shocking for all three of the participants, especially around the handling of perishable foods like bread, fruit, vegetables, and meat by food retailers. Kim adds "I think the first thing you have to get your head around is the immense amounts of bread the supermarkets waste and generate. It's humongous. It is quite upsetting". Food waste from retailers like supermarkets and restaurants is not a new thing. Globally one third (33%) of food produced is wasted which equates to

1.3 billion tonnes per year, with a significant proportion of this waste attributed to food retailers (Gustavsson et al., 2011). Seeing and distributing the food waste first hand has made the participants more aware that high selling standards, wasteful retail management, and consumer behaviour all contribute to the large quantities of edible food being thrown away every day.

Alex states:

Well I mean it's great because all that was going to landfill before. People have started to come on board, more and more people...It has definitely helped me have a deeper understanding of community because until you are in there finding out, you're actually not realising what Kaivolution and GoEco are really doing. Otherwise I wouldn't have really known what they were doing and they are doing a lot around waste minimization, and education. There is a lot going on...It has opened my eyes to the broader outlook of what they (Kaivolution) are doing and developing.

Through Kaivolution's consistent presence and engagement with a variety of stakeholders within the community, Alex claims that more and more people are beginning to "come on board" and become aware of what Kaivolution is trying to achieve. As a result of engaging with Kaivolution they have also come to understand that addressing food waste through food redistribution has evolved into something much larger than just food waste minimization. It has become a platform to educate others around a variety of environmental issues and also realise the broader impact Kaivolution is having. The success of linking food waste to environmental issues has been shown by Boulder Food Rescue, an organisation similar to Kaivolution but run overseas (Sewald, Kuo, & Dansky, 2018). Boulder Food Rescue have been able to educate and engage communities in order to promote food waste minimization through workshops and through providing access to food for low-income areas. Both the experiences of Boulder Food Rescue and Kaivolution are consistent with the literature in that food rescue is part of a shift toward initiatives that encourage community collaboration with the likes of various environmental, agricultural, and social

justice groups in order to solve a variety of issues through the redistribution of rescued food (Wakefield et al., 2013). Thus, the organisations, volunteers, and other individuals involved in food rescue are able to appreciate the broader impact of food rescue as it is often a tool to solve more than one problem.

Kahu states:

I certainly talk a lot about food rescue and the current unsatisfactory system and share my experience with them. I don't know how much that influences them but I have made a lot more people aware that there is a food rescue process in Hamilton and that it is highlighting the otherwise appalling level of wastage.

The above quote shows that Kahu is using volunteering with Kaivolution as a platform to share her experience of food rescue and to raise awareness around the high levels of food waste. This is important to note as one of Kaivolution's primary aims is to increase engagement with their environmental message of minimizing food waste. Food rescue initiatives can encourage collaboration between a variety of community stakeholders to ensure food rescue occurs (Himmelheber, 2014; Kim, 2005). Consistent with my participants experiences is that Kaivolution is situated as being a driving force in raising awareness around the environmental impact of food waste and the importance of rescuing food for redistribution.

In summary, I have highlighted the evolution of my participants' awareness/consciousness of food waste and minimising food waste as a result of volunteering with Kaivolution. Following on from these key messages, the next theme will address the behavioural changes for my participants as a result of their experiences in volunteering for Kaivolution.

Environmentally Friendly Behaviour

This theme explores the nature of my participants' environmentally friendly behaviour in relation to their engagement with Kaivolution. Within this theme insights shared from both the KV's and community groups (CG's) will be

incorporated due to the overlap and similarity in findings. As a result of volunteering with Kaivolution, my participants reflected upon a change in awareness around environmental issues. Kim shares how her behaviour reflects this change in experience and attitude when purchasing items like those in non-recyclable packaging. As Kim states:

If I buy a product and I really like it but I hate the packaging I do something about it. I contact the people because I do not like the way they package it...We have tremendous amounts of power and we need to use it. Because the packaging is just scary.

As shown by Kim, simply buying items that are not packaged appropriately is not enough. Kim goes further and approaches food producers about their packaging in order to educate them about more environmentally friendly alternatives like corn-starch-based packaging which look like thin cardboard boxes which are compostable. Kim states that in order for change to occur we must realise the power we have to influence others around us. As a result of engaging with Kaivolution, Kim now feels empowered to approach food retailers and producers in order to try promote environmentally friendly packaging instead of non-recyclable packaging. Further insights as to whether or not Kim's approach had an effect on food producer's food packaging would reveal valuable learnings. Although Kim did not reveal whether their approach to encouraging environmentally friendly packaging worked, Kim's actions speak to the unique nature of food rescue as an initiative that encourages all stakeholders to feel as though they are contributing to the problem and empowering them to take action in whatever form they feel fit (Kim, 2005). For Community Group 2 (CG2) who redistribute food from Kaivolution to their community members experiencing food insecurity they saw that some of their whanau were not utilising certain types of food so they came up with a creative solution to help address this, CG2 explains:

What would be good and what we have wanted to do, is run some sort of classes around what you do with your leftovers. Cooking classes for

people. Because there is still a lot of wastage because people don't know how to cook leftovers. It is a one meal one deal...You get strange things. Whanau get eggplant and that is not a staple for any family in this community. When they get it they look at it and say what is this? Slice it and fry it. Give it a go cuz. When they go to the supermarket they see how cheap they are. It opens their horizons.

As a result of engaging with Kaivolution, CG2 have expressed that their community is being exposed to foods that they have never seen before, thus cooking and eating those foods is also foreign to them. CG2 would like to start a cooking class in order to teach their community how to better utilise the foods they are getting and also utilise the leftovers from meals. It is not surprising that this is the case as many lower socio-economic neighbourhoods have only a limited variety of food available to them for example, more deprived areas have a higher amount of fast-food outlets and a lower amount of supermarkets which sell a larger range of food (Pearce, Blakely, Witten, & Bartie, 2007). For many of the CG's community they are "blown away" by the level of food waste and want to help contribute, Community group 3 (CG3) elaborates:

Whenever I explain where it (rescued food) comes from they (whanau) are just blown away. They say wow we just thought you throw all that stuff away. I often swap, they will give me fruit from their trees or something, so swapping is probably the only thing I can see.

Food swapping has enabled CG3's community an opportunity to give back and help address food insecurity and food waste. Although Kim and CG2 were inspired by Kaivolution's practices, Kahu was aware of food waste through personal upbringing and practices:

I grew up in a small town and that (minimizing food waste) was easier in traditional village communities. That (minimizing food waste) would happen as a matter of force because people couldn't store food in those days...We were already very strenuously aware (of food waste) and don't waste food or buy plastics. That's always been part of the way that we

live. We live simply by choice, we grow our own food. That's just who we are...I was raised to it.

Kahu (Kaivolution volunteer) shares that due to a lack of food storage and living within a smaller community sharing excess food was easier to do and also encouraged. As a result of Kahu's knowledge of food waste and upbringing she wanted to be a part of something that responded to food waste initiatives which is where Kaivolution became important:

I would generally work with people who share those interest to a varying degree. The various groups that I am a part of are often exchanging garden produce and things as well, so they are people of that frame of mind...It's (exchanging garden produce) something gardeners always do. My partner's retirement entertainment is a small hobby orchard so we have a lot of excess fruit at times and because I was already engaged in Kaivolution we now bring in excess fruit and veg that are left.

For the most part Kahu already adopted and came from backgrounds that encouraged an environmentally friendly lifestyle so connecting with Kaivolution seems logical. Kahu shared that her upbringing has enabled them to grow their own foods as much as possible, use recyclable packaging like wax paper, compost food waste, and share produce with others. One small change is that Kahu is now able to give excess produce from their family orchard to Kaivolution. For Kahu, Kim (Kaivolution volunteer), and some of the Community Groups, Kaivolution has become a platform to learn about, continue to, and feel empowered to implement environmentally friendly behaviour in their lives. However, when discussing food waste with CG2 they mentioned:

The thing about recycling (reusing food) is that poor people have been recycling for ever because they have had to...They are all contributing to it (food waste minimization) aren't they by eating the food. We are all part and parcel of that whole thing. People are contributing to the environment by in fact eating the food. I think that gets lost, that fact gets lost... While other people can claim that we have done so much tonnage

(redistributed tonnes of potential food waste), so too can the ones at the grassroots. They contribute too. That's what I get on the ground anyways.

CG2 explains that those who receive and consume the food at the "grassroots" are in fact also contributing to food waste minimization by simply eating it. Also mentioned by CG2 was the notion that "poor people" have been recycling food for ever because they have no other alternative. What CG2 is implying is that food waste for those who are food insecure is not a significant issue as they have been resourceful with what food they do have. Research supports this notion and highlights that household food waste is higher in high-income homes (Stefan, van Herpen, Tudoran, & Lähteenmäki, 2013), and that for those with little money food waste is often minimized (Watson & Meah, 2012). Although CG2's community are minimizing food waste by consuming the rescued food pushing this environmental angle may undermine the notion CG2 raised that the food insecure have to use food sparingly in order to get by.

As mentioned already all three Kaivolution volunteers already knew something about food waste and shared how they each engage in environmentally friendly behaviour like buying environmentally friendly packaging and swapping produce from their gardens. For CG2 encouraging their community to try new foods like eggplant, and learning how to cook these foods through cooking classes, has contributed to reducing food waste. While CG3 highlights how their whanau are swapping redistributed food with fruit from their trees. Finally this theme highlighted that for the food insecure minimizing food waste is not by choice, but a necessity due to their financial circumstances. The next theme will delve deeper into what and how certain environments encourage or restrict environmentally friendly behaviour.

Empowering and Disempowering Environments

Certain environments make it easier for people to make environmentally friendly choices. Kahu shared his/her views on sharing produce like home grown fruit and vegetables with others, minimizing food waste, and composting:

I grew up in a small town and that (distributing excess food) was easier. In traditional village communities that would happen as a matter of course because people couldn't store food in those days...You know when I was a kid there was no plastic and I remember when plastic first came along. The butcher cut it and wrapped it in wax paper and then wrapped it in brown paper and you took it home, it was often a little soggy but you could compost it. We didn't live in a high-rise building, no one did, so we put things in our compost bin or burnt it in our fireplace. Sliced bread was wrapped in wax paper, and the paper was heated so it could stick together on the folds. Most kids had it for their lunch. That's wax paper and it has been more than once. You can compost it quite easily.

Kahu shares that before the times of comprehensive food storage, plastic food packaging, and living in urban settings they would share food, use compostable food packaging like wax paper, compost as much as possible, and burn appropriate rubbish in their fire. Therefore, had less rubbish to put out to go to landfill. Once urban settings came along less emphasis was put on this way of life as it was costly, subsequently landfills became the predominant form of waste disposal as it was the most economic and efficient (Taiwo, 2011). Kahu shares that for the most part cities with high-rise buildings do not have compostable areas therefore landfill is the most utilised form of waste management. Literature from Zaman and Lehmann (2011) support Kahu's statement but also add that due high population density and high waste production in cities it is difficult to manage their waste in an environmentally friendly manner, thus resorting to landfills. Also shared was Kim's frustration around a lack of environmentally friendly options when it comes to waste management at their rental property.

Kim shares:

You've got no choice, there is no choices, you can't put out a bucket with all your vege scraps. I don't have a garden or compost bin so I have no way to get rid of it apart from the rubbish bag at the gate.

Although aware of the environmental benefits of composting Kim is unable to put it into action due to the constraints of urban living. The only form of waste management is landfill as a garden for composting is not viable due to living at a rental property. Much debate has gone on regarding the environmental sustainability of cities and urban environments. Many scholars (Taiwo, 2011; Yigitcanlar & Kamruzzaman, 2015; Zaman & Lehmann, 2011) argue that the functioning of our cities in many developed nations do not promote the wellbeing of the environment as they destroy natural areas and deplete natural resources, however they also argue that if cities are managed correctly they can function in an environmentally sustainable way. Experience from Kim suggests that cities like Hamilton do not serve to promote environmentally friendly options like composting for city dwellers. However, for Kahu learning to apply their environmentally friendly behaviour learned from their small-town upbringing to an urban setting was less of a problem.

Within this section participants highlight how certain environments like cities, rentals, and smaller rural settings all have unique characteristics that either empower or disempower environmentally friendly behaviour like composting. The next section will highlight how some of the Kaivolution volunteers perceive the environmental impact of food waste and how food retailers are interacting with food waste.

Environmental Impact and the Nature of Food Retailers

Within this section the environmental impact related to food production and waste is discussed as well as how food retailers and food producers contribute to the perpetuation of environmentally harmful practice.

Kahu expresses:

A Kaivolution staff was talking about picking up 200kg of tomatoes because they would have been ploughed up because the supermarkets wouldn't buy them because they could not sell them at a profit...It was a market garden who contacted Kaivolution. But how much of this

(ploughing fields of produce instead of harvesting due to low selling prices) goes on and people just plough it themselves. I mean that is better than putting it into landfill though.

Based on literature and the statement from Kahu through rescuing and redistributing food that would otherwise be thrown out landfill volume and CO₂ emissions are reduced (Reynolds et al., 2016). However, as mentioned in the literature wasted food also means the resources used for production are wasted. Kahu then elaborates on the environmental impact of ploughing perfectly edible produce “Yea well the fertilizer used, energy, water. There is always going to be some waste. If we had good systems to set up so that waste got diverted and used”. In order to produce food resources like water, land, chemicals, and energy is needed. Thus, food that is needlessly wasted, like the market garden that was going to plough their fields due to an inability to make a profit, would have contributed to environmental pressures of water wastage, energy consumption, and the exploitation of land in order to grow produce (Tonini et al., 2018). Through Kaivolution becoming known to the community this market garden was able to contact Kaivolution in order to utilize the food that would have been ploughed and wasted.

Another strand of thinking was raised by Kahu:

I was just saying to an MP New Zealand does not need to import lemons from the US when we have lemons growing on trees in people’s backyards. We do not need to import cakes from Scotland. We do not need to import strawberries in mid-winter from Australia. Given that this is perishable food, given the air miles, the storage, and the unnecessary nature of it.

This notion of importing unnecessary products adds to the body of literature present in the chapter 1. Countries vary in climate and geographical makeup and also vary in the types of food they can produce in an environmentally friendly and efficient way (Foster et al., 2007). Therefore, Kahu raises an interesting point that importing produce that is already available in our

own country or perishable foods that can be grown locally during the right season like strawberries is unwise. Within New Zealand Saunders, Barber, and Taylor (2006) explains that the most environmentally friendly way to provide dairy, sheep meat, and apples to consumers is by utilizing our own rather than exporting and importing the same products cheaper. The nature of importing produce is that it requires fuel, storage facilities, and energy this is often referred to as “food miles”(Mundler & Criner, 2016). Therefore, importing foods that are available but not utilized in New Zealand is not environmentally friendly practice. Rather, systems could be put in place similar to Kaivolution in order to utilise the “lemons growing on trees in people’s backyards” as mentioned by Kahu. Weber and Matthews (2008) on the other hand suggests that sourcing everything locally may be an inefficient use of resources and that more needs to be done to evaluate the efficiency of food production.

Food retailers and producers play a role in the perpetuation of systems that prioritize economic benefit over environmental benefit. This is illustrated by Kahu’s example of the market garden considering to plough “200kg” of tomatoes because no food retailer would purchase them at a profit. A reason for such behaviour could be due to the high selling standards that is imposed on food retailers which also then influences consumer behaviour (Gustavsson et al., 2011). Alex (Kaivolution volunteer) also expresses that many marketing techniques are implemented in order to maximize sales, some of which result in the unnecessary waste of food.

Alex states:

Marketing, they would rather throw it out or pass it on because they would rather be overstocked than understocked. Psychologically they have to fill shelves or it doesn’t look good. People don’t realise that.

Food retail sales techniques are there to maximize sales in order to make a larger profit. Having full shelves is just one example. According to Alex and Kahu odd shaped vegetables and fruit is another example of perfectly edible food that is being wasted due to the “psychology” of marketing, however some

supermarkets like Countdown are beginning to sell them at a lower price (Countdown, 2018). Organisations like Kaivolution enable the wasted food from food retailers to be utilized however, like Alex mentions:

They are out there to make money they are not a charity, but have become a charity in a lot of ways.... Bin hopping was a big thing once people realised what was being thrown out. Why is it being thrown out when people are hungry? You know that is all starting to change and supermarkets have to change and don't want to be seen as the bad guys that's probably why they are giving it away to green initiatives.

Such an assumption lends itself to questions like, will food retailers want to try to develop better food waste management systems when they are perceived as an organisation that gives to those in need? Further research will allow such questions to be examined in order to uncover the impact of engaging with Kaivolution for food retailers. The issue of food waste and general environmental issues is also the responsibility of the government, which will be touched on in the next theme. The next theme will also show how Kaivolution has acted as a catalyst for community groups to collaborate with one another.

Government, Food rescue, and Community Groups

Within this theme both Kahu and Kim speak to the current state of governmental awareness around environmental issues and social issues. Kahu addresses the current state of waste management in New Zealand:

We can't keep doing this (perpetuating poor waste management systems). Nobody is really showing a huge commitment to stopping it, government makes gestures of it but there is huge screams against it.

Evident from the quote is feelings of frustrations from Kahu towards the lack of commitment from government to implement new ways of managing and minimizing waste in New Zealand. However, with shifts towards focusing more on climate change, environmental conservation, and renewable energy sources

at the governmental level (Labour, 2017; Yigitcanlar & Kamruzzaman, 2015) some individuals like Kahu are not losing hope.

Kahu adds:

We are seeing some signs of change in government. Even though national got the most votes they didn't get in and we are seeing policies that are trying to change things around. I haven't given up hope yet.

Although some may still remain hopeful that government can promote positive change others lean more towards community organisations like Kaivolution for a way forward. Kim shares the following:

I think people have got to the point where they don't have high expectations of the government fixing everything anymore, so this is why different organisations pop up and say we will do it ourselves, and that's what I like to see Kaivolution making things happen...If it wasn't for the companies that support and give food it wouldn't happen because it is costly, it does cost.

Kim gets the impression that some have given up hope that our government can solve various issues like food insecurity and food waste and that is why organisations like Kaivolution pop up to fill this void. Literature highlights that it should not be the role of foodbanks and food rescue organisations to solve the structural problems that lead to food insecurity and poor food waste management as it could potentially discourage government from taking action (Lindberg et al., 2015). Organisations that rescue and redistribute food like Kaivolution offer a positive short term solution to food insecurity and food waste (Miroso et al., 2016). However the same organisations also need to be aware and raise the awareness of others around the structural causes that lead to issues like food insecurity and food waste. Kaivolution is achieving this through collaboration with a variety of stakeholders which as seen from the previous themes is increasing the awareness of environmental issues like food waste whilst also raising awareness of social issues like food insecurity.

Alex shares the following story:

The police said that they are always having to arrest a family that is always stealing food from the supermarket and it is because they are hungry. They get annoyed because they have to spend hours of time writing reports and it's because they are hungry and trying to feed their family. So, the police said to this community organisation is it ok if we get a couple of families so you could get some food and supply a box. They said no problem. Then they will go out to others in need as well. We are like a tunnel that branches out.

This story shows how the New Zealand police were able to collaborate with another community organisation. As Alex shares Kaivolution is like a “tunnel that branches out”, showing that Kaivolution is like a platform for various organisations to collaborate in order to solve issues that arise from food insecurity. In this example food insecurity led to a family resorting to crime for nutritional sustenance, this was recognized by the police who then got in contact with an organisation who could assist the family. During food distribution Kaivolution's recipient community organisations come in to collect the food which, acts as a space for them to interact. Alex says that “agencies get to know the other agencies” and “chat to each other asking how their weeks are going” which provides the community organisations with opportunities to work alongside and learn from one another. Stakeholders becoming more connected and collaborative is an outcome characteristic of a community approach to food rescue and redistribution (Kim, 2005).

Chapter Summary

In this chapter we addressed the various findings from the three Kaivolution volunteers primarily, but also considered some insights from CG2 and CG3. These themes included the motivating factors for and personal benefits from volunteering with Kaivolution. These ranged from a desire to see environmental and social change to experiencing feelings of fulfilment and gratitude. The participants also shared how their awareness and consciousness around

environmental and social issues like food waste and food insecurity has changed as a result of engaging with Kaivolution. Due to previously knowing about environmental issues most became more aware of social issues like poverty and food insecurity as opposed to the environmental issues like food waste. Empowering and disempowering environments were also identified as some of the participants expressed cities do not promote environmentally friendly behaviour compared to rural and smaller village settings. A variety of behavioural changes from living more simply to being more critical of purchasing non-recyclable plastics was also shown to be an outcome of engaging with Kaivolution as a volunteer. Other insights shared by participants showed the extent of Kaivolution's environmental impact as well as the nature of food retailers, which showed the unnecessary nature of importing foods that are already available here in New Zealand, the wasteful behaviour of food producers, and food retailers like ploughing fields due to a drop in selling price. Further insights were shared that highlighted the interplay between governmental awareness and action for social and environmental change and the presence of organisations like Kaivolution. This showed community organisations fill an important void due to the government being perceived as inadequate to solve social and environmental issues, however both government and community organisations are needed in order to address these issues. Finally, chapter three also touched on the fact that Kaivolution acts as a "tunnel that branches out" and connects organisations together encouraging collaboration. The next chapter will examine the insights gained from interviews with three community groups who access rescued food from Kaivolution.

Chapter 4: Key Findings from Whanau and Community Groups

In this chapter I will reflect upon the key findings identified by the three community groups who were recipients of Kaivolution services, and three whanau who receive the food from those community groups. The community groups assist food insecure whanau like low-income families, solo parents, and welfare beneficiaries. The insights shared by the community groups and whanau touch upon the lived realities of the food insecure, the complex nature of food insecurity from their experiences, the benefits of food redistribution, and a heightened sense of community. This chapter is made up of 5 key analytical sections, followed by a summary of this chapter: Section 1 is titled 'Colonisation' and will address how whanau participants perceive the impact of colonisation has had on Māori. Section 2 is titled 'The Nature of Food Insecurity' and unpacks how and who food insecurity effects. Section 3 is titled 'The Benefits of Food Redistribution' and explores how a community approach to food redistribution differs from that of mainstream social welfare systems and benefits this approach has. Section 4 is titled 'Creating Community' and describes the heightened sense of community that has develop as a result of the community approach to food redistribution. Section 5 is titled 'Community Groups and Food Retailers' and identifies how community groups collaborate with food retailers in order to access more food that would otherwise be thrown out. Following section 5 will be a summary of the chapter.

Colonisation

As argued in previous chapters food insecurity is a complex issue and is not solely an outcome of individual actions (Brady, 2009). This theme will explore the consequences and experiences of the Rangi whanau in relation to colonisation and how it has placed Māori in an insecure position within their own country. Poverty for Māori is a result of almost 200 years of colonialism, which has left Māori bereft of an economic base from which to provide economic security

today. The following narrative from the Rangi whanau explains very clearly the effect colonisation has had on Māori:

I'm afraid to say it but that is how the Pakeha have made us (Māori). I get so sick and tired of the Pakeha who say Māori are no good and we are this and that and the worst of the lot. Who made us like that? If we had it fair and even. If we didn't have to follow their way we wouldn't be in this problem, we wouldn't be in this situation, where our kids are lost. The Pakeha made it so they took us off our marae, off our land, took us off everything and told us you be good. But we are not going to give you any money, help, or nothing...You know that (collecting and sharing kaimoana) is the natural thing. That is a natural thing for us Māori. Because of our hapu, tribe, whakapapa, ancestors, tupuna, and location. They get their resources from the land.

The lived experience from the Rangi whanau accurately reflects literature on the topic of colonisation. Colonisation led to the deliberate confiscation of Māori land by Pakeha. As mentioned within literature Māori health and wellbeing is interwoven with their connection to their land, it allows Māori to express notions of culture, spirituality, and forms their identity and sense of belonging (A. Durie, 1998). Not only is there a cultural and spiritual disconnect as a result of land confiscation but access to land also enables Māori to gather resources, use the land for agriculture, and "look after each other" as mentioned by the Rangi whanau. The primary mode of operation between hapu and iwi encompassed the sharing of resources and capital with one another, thus without the ability to do so this way of being was lost (Reid et al., 2014). The consequences of this process has stripped Māori of their economic-base (Reid et al., 2014) and in the words of the Rangi whanau has stripped Māori of their "marae" and "land", and replaced it with no "money" and "no help, or nothing". The ongoing process of colonisation has resulted in the dispossession of Māori culture and language, economic deprivation, and has placed Māori in a vulnerable position within their own country. The Rangi whanau continues:

So, what do you have to do to live? You have to do what you have to do to live. The majority of the time it is not the right way but when you get put into a situation where you can't do nothing to better yourself because you haven't got money to go to university, you go to school and get picked on by the teachers and strapped for speaking Māori. So, when they finally bought in kohanga Māori I was against it. What hypocrites the Pakeha to say we are going to take this away from you and now they are trying to give it back to us, but because a lot of the young ones didn't go through that there is a big gap. I have seen little Pakeha kids come up to me and whaikorero Māori better than me. When I talk to my old people they say hypocrites because they have changed the dialect of different tribes whereas in the end to talk to each other we have to go to Pakeha because we all know how to talk to that.

The above quote from the Rangi whanau illustrates the past and present struggles for Māori to navigate within the current society and do what “you have to do to live”. For the Rangi whanau implementation of measures to address injustices to Māori like Kohanga Reo (early childhood education centres) run the risk of ignoring the cultural disconnect for older Māori that has resulted from years of colonisation. For Māori, te reo Māori (Māori language) is important and is interwoven with the sharing of history, values, and cultural beliefs (Eketone & Gibbs, 2006; Statistics New Zealand, 2013). The Rangi whanau continues stating that:

It is too late to blame all of that but what I am saying is the biggest crooks is the government no matter who is in government at the end of the day their biggest thing is not the people it is 'when I retire I want to be a millionaire'. Did Key's (prime minister) do well? Not really, not as far as the poor people but as far as the business people, foreigners, immigrants, Chinese, they had to have 1million plus before they could come. Where is everyone else apart from the rich white people or the lucky Māori who kept their land and was able to do this and that and the tribes that were able to keep their lands and are doing well but all the ones that didn't

where are they? Well you only have to look in the slums, dumps, and poor areas and you will find Māori, there is white people suffering now too.

The Rangi whanau shares that in order to move forward governmental focus needs to shift away from prioritizing the needs of the “higher people” like “rich white people” and “the lucky Māori who kept their land” and focus more on those who you struggling within the “slums, dumps, and poor areas”. The consequences of such a focus has contributed to the overrepresentation of Māori in negative health outcomes, unemployment, low-income levels, and hardship rates (Marriott & Sim, 2015). These inequalities illustrate that the government perpetuates the play on effects of colonisation today and the values of our settler society. Such values stem from the neoliberal framework which values competition and individualism, which is foreign to Māori who traditionally valued a collaborative, holistic, and communal way of life (Hodgetts & Stolte, 2017). With the establishment of a foreign society that reflects the beliefs and values of early colonial government, health, education, and welfare systems subsequently are foreign to Māori (King et al., 2017). For example, Māori often have many negative experiences within the current welfare system which prevents Māori from getting the assistance they need (Hodgetts et al., 2014). Thus, it is not surprising that Māori are overrepresented in many negative statistics including poverty which is one of the main determinants of food insecurity.

Within this theme the consequences of colonisation for Māori were discussed which includes a society built upon neoliberal values and beliefs for the benefit of one group, Pakeha in this case, to the detriment of Māori. As mentioned, the perspective of the Rangi whanau and relevant research illustrates how colonisation has contributed to the nature of many social issues like food insecurity in our contemporary society. Moving on from the Rangi whanau I want to consider the perspective of food insecurity from the community groups and other whanau participants.

The Nature of Food Insecurity

In this theme both perspectives from community groups and whanau will be discussed to unpack the nature of food insecurity in their lives and communities. The theme will start by highlighting the widespread nature of food insecurity from working families, to solo parents, to children, to university students. The behaviours and consequences as a result of suffering from food insecurity will also be discussed. This will be followed by exploring how seasonal differences and the cost of living effects food insecurity. This theme will also address the alternative measures people go to when looking for food assistance.

All three community groups (CG's) provide a community service that tends to the needs of the vulnerable like low-income families, solo parents, and beneficiaries. All interviewed CG's expressed that food insecurity is an issue that effects not just the homeless and unemployed but those who are employed, parents, students, homeowners, and the elderly. For example, community group 1 (CG1) who offers a community meal every night mentioned:

We serve those who, own their own home, can cover mortgage but do not have enough for anything extra, we see those in rentals, those who have no accommodation, students, sometimes university students or WINTEC (students), families, and individuals.

Community group 2 (CG2) states that:

Working couples where mum and dad are working they were just as appreciative of those food parcels and when we say food parcels we mean a standard banana box fill of food.

Community group 3 (CG3) adds:

You will get some of the elderly that are quite humble, 'aw I only need a little give it to someone else who would need it who has kids,' so they will pull themselves back and you know they haven't got kai.

All CG's highlight the widespread nature of food insecurity. Not having access to sufficient resources for adequate levels of food is one of the main impacts of poverty. Literature shows that close to 700,000 individuals within New Zealand are classified as living in poverty a large portion of which are Māori, Pacific, sole parents, or beneficiaries (Perry, 2017). Alongside this is an emerging class called the precariat which highlights that those who are employed can also struggle to make ends meet due to temporary, insecure, or seasonal employment, otherwise known as the 'working poor' (Standing, 2011). The literature and the insights shared by all CG's reflect the University of Otago and Ministry of Health (2011) findings that 41% of New Zealand families are food insecure and is a reality that is faced by a wide range of individuals in our communities. Mentioned by whanau was the nature of food insecurity within their lives and its impact on the children. When asked how the food impacts on the community the Moke whanau shared:

I am on my own and I am on a benefit and I'm really struggling to get food in my house. I am trying to help my mother as much as I can and my daughter has a lot of health problems as well and my family have lost all their money through investments...When you have lots of kids, this is a whole meal (packet of buns). You give that to a family of five kids or six and they do a lot with it.

As a solo parent household with lots of kids, the Moke whanau highlight just how difficult it is to deal with illness within the family. This highlights the importance organisations like Kaivolution play in assisting whanau in similar positions. When asked the same question the Rangi whanau adds:

A lot are solo parents... my niece and them, with all the kids, it's helping them out for food and lunches and things like that. It is a good thing, it'll be a sad day if that was ever taken away for us or for me and my families.

For the Rangi whanau it would be a "sad day if that (Kaivolution's food) was ever taken away" as they utilise the food to help feed their children. Both quotes from the Moke and Rangi whanau reinforce the importance groups like Kaivolution

and community groups play in assisting whanau who are food insecure. Within Aotearoa 41% of families are facing some form of food insecurity due to a lack of resources (University of Otago & Ministry of Health, 2011). Other research also highlights that Māori, Pacific, and solo parents are twice as likely to be food insecure compared to Pakeha (Carter et al., 2010; University of Otago & Ministry of Health, 2011), such research reflects the experiences shared throughout this thesis. A large majority of the extended whanau of participants have multiple children, the Kani whanau explains the consequences of food insecurity on the children within their home:

He (a child under 10 years old within the Kani whanau home) would guard his food with his life and be hunched over it and right in close. So you don't really realise the impact that it has on a child having food and water withheld. Those traumas (having food and water withheld during childhood) haven't fully come to light yet.

The experiences of the Kani whanau show that the consequences of food insecurity within families can have lasting emotional and mental effects on children which impact how they behave around food. Research supports the experiences of the Kani whanau that children who experience food insecurity are more likely to experience behavioural and developmental problems like impulsive behaviour and low self-control (Vaughn, Salas-Wright, Naeger, Huang, & Piquero, 2016). The trajectory of a child's development is dependent on their social, cultural, and physical surroundings (Chilton, Chyatte, & Breaux, 2007), the Kani whanau add to this point:

The neglect, food will definitely be at the top for that, you know if you have got a family where alcohol and drugs are involved you are going to for sure have children who go without often, not just food but clothing and all necessities of life. They definitely have gone without. You can tell which ones have been neglected more than others not just from looking at them but from their behaviours when it comes to food.

We can see how such neglect manifests itself in lasting emotional trauma for children which, effects child development and behaviour and also results in negative health outcomes later in life like depression, obesity, and drug and alcohol abuse (Chilton et al., 2007). Thus, the insights from the Kani whanau around the behaviour of children around food is completely warranted considering the whanau background. The Kani whanau shares of some of their household behaviours in relation to food:

If someone can't eat their food they (the children) are waiting to share whatever is left over. They won't leave the table... Also, we freeze what we can freeze and what we know we are going to use. If we are not going to use it we give it away."

The narrative above shows that at times there is not enough food for the household and that excess food is stored for later, shared amongst one another, or given away to others who need it. Such behaviours, although not exclusively, are characterized as a form of rationing in order to get by with minimal food, which also depicts whanau as self-sufficient which is a narrative that bypasses feelings associated with food insecurity like shame and judgement (Graham, Hodgetts, et al., 2018). Whanau rationing or being self-sufficient may mask the severity of and undermine their experiences with food insecurity. Beyond the impact on a child's behaviour in relation to food is how whanau use the redistributed food.

All three whanau share that the food they receive is utilised to feed the children, the Moke whanau shares, "I find it mainly useful for the kid's lunches", and the Rangi whanau adds, "You know kids are going to school without lunches and stuff like that and having nothing in the weekends". For the Moke whanau and the Rangi whanau the food received from CG's has not only helped alleviate the effects of food insecurity on their children but it has also allowed their children to go to school with lunch. Research suggests the children who come to school hungry or with no food are unable to learn as effectively as others (Expert Advisory Group on Solutions to Child Poverty, 2012) and are also likely to have

psychosocial problems like lashing out at teachers, fighting other students, and stealing (Olson, 1999). Such consequences may also further socially exclude the children as they cannot engage with school in appropriate ways (Jackson & Graham, 2017). Furthermore, research suggests that parents often experience anxiety, stress, worry, and embarrassment as a result of not being able to feed their children (Jackson & Graham, 2017). The insights from the whanau and research imply that the social impact of children receiving redistributed food minimizes negative mental and emotional outcomes for the parents whilst also ensuring children are going to school fed and with food. It also helps alleviate the consequences associated with experiences of food insecurity for children like developmental and behavioural issues.

Within another group in society lays food insecurity of a different nature. CG1 shares insight into their interactions with tertiary students who are food insecure “We just had one of our students who graduated this year and she has been coming for 3 years, studying fulltime, and working part-time and she would come when she needed to (get food)”. CG2 who used to distribute food parcels on university campus but now focuses on her own community adds, “See I do the university too, I am in your fullas carpark, I am at the village”. Such quotes highlight that tertiary students are also affected by food insecurity. For CG2 they bring Kaivolution food in their car to the university carpark and distribute it from the car boot to students who need it. In contrast CG1 has seen tertiary students come to them and utilise their services when they need food. Research from the United States of America highlights that tertiary students are affected by food insecurity as a result of lower income support (Hughes, Serebryanikova, Donaldson, & Leveritt, 2011), an inability to manage finances sufficiently (McArthur, Ball, Danek, & Holbert, 2018), and a lack of food assistance on campus (Chaparro, Zaghloul, Holck, & Dobbs, 2009).

Everyday CG2 goes to Kaivolution at the end of the day to take whatever food is left over that other community organisations have not taken. CG2 shares, “in nearly a year last week was our worst week, which meant the demand (for food) was huge from the other 73 organisations (recipients of food from

Kaivolution". The quote from CG2 is suggesting that the demand for food is so high that Kaivolution is unable to evenly distribute food among the community groups. This was not the case in previous years. CG2 also shared that since January and February 2018, these food donations have not included fruit or vegetables. Literature also supports this and shows an increase in experiences of poverty (Perry, 2017) as well as an increase in experiences of food insecurity (Utter et al., 2018) within New Zealand particularly for Māori. Thus, it is not surprising that many food banks and community groups are reporting an increase in demand for food (Auckland City Mission, 2018).

Subsequently community groups have adjusted how they assist their community. CG3 adds:

Definitely, some (food) we have to put aside for the next couple of days because the need is more urgent for this family of eight and we have got a family of four so the need is greater so we then support that family.

The high demand for food has meant organisations like CG3 are having to make judgement calls on what type of family deserves to be prioritised, which is based on the severity of their food insecurity (insert "drop off" quote analysis). With this notion in mind the CG's further unpacked how the demand for food has changed, when asked if there were any seasonal changes to demand for food CG2 states:

Ah yes more in the winter. More Kai in the winter. I get people coming to my house in the middle of the night for food...Summer is less because there is more daylight hours and the kids aren't home. Winter they are home because they are cold so they need to eat more. Definite seasonal changes.... Yea not only the food, but in winter everybody's power bill goes up so there is less money to spend on kai. They have to pay for power for heat and sadly that means that the food bill is going down.

The dialogue above highlights the pressures that families face during the winter months. The fact that CG2 has people coming to their house in the middle

of the night in winter shows just how severe the pressures are for food insecure families. During winter children are spending less time outdoors and more at home and consume more food. During winter, power is a necessity to heat the home which means that for CG2's community less money is left for more disposable expenses like food. Pressures for families during colder months are higher as the consequences of not paying for power and rent include negative health outcomes like asthma and over-crowding to minimize expenses (Auckland City Mission, 2014). For many individuals and families in need, prioritizing where money is spent is needed, CG3 explains further that:

The majority of our families may not be educated, don't have employment, they are not accessing their right entitlements, which means they are not able to meet the necessities or basics such as food which is usually last on the list next to rent and power... It is higher on their list to have a roof over their heads, they can also get kai from whanau or somewhere else.

With priority going to expenses like housing and power over food it is clear that in winter months little will be left for the food bill. Poor quality housing and the cost of renting within New Zealand has meant that heating within the winter months is expensive, subsequently for low-income families more of their income is used during winter to survive (Howden-Chapman et al., 2012). Therefore, less is left for other necessities like food and healthcare. For many families from CG3 the increase in cost of living is adding pressure to meet their basic needs like food, CG3 explains:

Even the need for healthcare. It is growing because cost of living is increasing. It's effecting our whanau in huge ways in terms of food. Like we said food is the last on the list but because the cost of healthy kai, petrol, and everything has gone up. Our whanau has defiantly put that (food) last on the list...They will then all go and live together because they can't afford to rent or the power, so they will all go and live together, and

then with that there is the health needs that need to be addressed as well. There is a sign of struggle out there for our family.

The increase in value of petrol prices, healthcare, power, rent, and healthy kai mean these necessities are becoming out of reach for CG3's families. As power and rent increase some families have had to move in with each other in order to help pay for these expenses, which has led to overcrowded homes. Other research has also shown that a common response to an increase in cost of living for low-income families is to combine households (Graham, Hodgetts, et al., 2018). Over-crowding can then impact the health and wellbeing of individuals in the home. Auckland City Mission (2014) explain that overcrowding is often accompanied by higher rates of reoccurring respiratory and skin conditions, living with bedbugs, vermin, and cockroaches due to cluttered conditions, and a mental and spiritual toll on the individuals living in such conditions. With overcrowding becoming a source of negative health outcomes more families will need healthcare. However, as it is out of reach many will go without which results in ill-health becoming entrenched in households, thus hindering their ability to go to school, work, and access resources exacerbating poverty and food insecurity (Auckland City Mission, 2014).

For some families and individuals, struggling to meet the basic needs of life are a result of not knowing about social services and can lead to them taking alternate means to gain resources, CG3 explains:

A lot of the people who are coming from there (Iwi-panel, a Māori based iwi justice initiative) are stealing kai, they don't know that services are available or else they probably wouldn't do it. When they come through our service they have access to that... They are getting younger, they are stealing food, and they are also ripping off gas stations so they are not paying gas just putting it in and going. They do not know that all of these services exist... You don't want to admit that you can't feed your family so you go out and do something and try not to get caught rather than let

others know. It makes them feel like they are not good enough and failed as a parent and lose confidence.

It is not surprising to hear that people in poverty are resorting to crime as the literature clearly links the two phenomena in spite of available services (Gibb, Fergusson, & Horwood, 2012). As mentioned by King et al. (2017) the current welfare system is formed upon values and ideologies that come from early colonial government are often considered punitive in approach. Thus, many Māori have negative experiences with social services and often feel stigmatized and whakama, which does not allow Māori to navigate social services with ease. As many of the CG's serve predominantly Māori and with Māori overrepresented in statistics related to poverty it is not surprising that CG3 has found that theft as a means to provide is preferred over engaging with or learning about social services

Within this theme the nature of food insecurity was described as intimately linked to other issues like living costs, housing arrangements, healthcare, general poverty, colonisation, and the current systems which we live in. This illustrates how food insecurity is a whole 'social issue' rather than an isolated phenomenon. Current systems aimed at addressing food insecurity have proved inadequate. The next theme will unpack further the limitations of our current welfare systems and also discuss the benefits that a community approach to food redistribution has had on whanau and community groups.

The Benefits of Food Redistribution

This theme will explore the benefits of a community approach to food redistribution. The theme will start by sharing experiences of whanau in relation to mainstream social welfare services and the limitations they have when assisting those in need. Following this the community approach to food redistribution will be discussed in relation to how it overcomes the limitations within our current welfare systems and how it caters to the needs of community in an appropriate way. The perspectives of both the community groups and

whanau will be incorporated. The Rangi whanau shares their thoughts and experiences with charitable organisations:

There was a lot of those places (charitable organisations), Salvation Army and all those sorts of things, once upon a time you could go there (charitable organisations) without a WINZ letter. Now you need a WINZ letter for that. Believe it or not that again cuts off poor.

The experiences of the Rangi whanau show the detrimental effect of incorporating government bureaucracy like WINZ letters has on access to food assistance. These limitations disempower individuals from engaging with such welfare systems. This has shown to be the case as food insecure whanau, particularly Māori and Pacific often experience feelings of inadequacy, shame, embarrassment, and stigma when engaging with governmental social welfare systems and other bigger food banks (Dalma et al., 2018; Hodgetts et al., 2014; St. John et al., 2008). Thus, approaching WINZ for a letter to then go and engage with charitable organisations may stop whanau reaching out for help. This then leave whanau in a precarious situation, the Rangi whanau add:

What do you have to do? You have to go out and steal and rob you got to go and do all sorts of things and then oh he's a bad bugger and all the time he is only trying to feed his family or trying to make a life and that is why a lot of us (Māori) end up in jail. All these young people are getting into problems.

Due to negative experiences with many welfare services and too many prerequisites to access help the Rangi whanau and Gibb et al. (2012) express that for many resorting to crime is perceived as the only way to survive. Statistics from the Department of Corrections (2018) also support claims from the Rangi whanau and show that 51% of the prison population are Māori compared to 33% Pakeha and 12% Pacific. The Rangi whanau also describe another aspect of engaging with WINZ:

'Oh, you don't go to course (educational institution)' so they (WINZ) make you go. When you do go to course it is beneficial to those who want to go there but it is not to those who don't want to go there or who get put there to fill in their dole papers. Some of them are going there with a negative outlook, sometimes it works good for them but a lot of the times it's 'aw I'm not going today' and then next minute 'oh I didn't get paid'. You look at things and you say aw well I got to do what I got to do, you can't keep fighting the system or you go down.

As mentioned above WINZ requires some individuals to attend a course in order to access the help they need. However, this can prove particularly tough for those who have negative experiences with educational institutions or just want to enter the workforce. From a young age those who suffer from food insecurity and hardship often have negative experiences within educational institutions as limited access to food inhibits their ability to learn effectively, participate in school lunches, and causes behavioural issues, all of which lead to social exclusion (Expert Advisory Group on Solutions to Child Poverty, 2012; Jackson & Graham, 2017; Olson, 1999). From a historical perspective, schools in Aotearoa were founded upon values and beliefs that marginalized Māori culture and language, thus Māori achievement within these systems were inhibited (A. Durie, 1998). The emergence of today's education system stems from the same values and is still unable to be a source of empowerment and educational achievement for Māori, thus many have negative experiences (King et al., 2017; Marriott & Sim, 2015)

There are many limitations to such an approach when helping others. In order to counter many of the limitations mentioned by the Rangi whanau community groups in collaboration with Kaivolution have popped up to address food insecurity in a more sensitive way. Kaivolution has provided food to the three CG's to utilise in order to feed those who are food insecure whilst not judging those whanau in need, not involving government bureaucracy, and avoiding other negative experiences often associated with main stream social

welfare systems like WINZ. All three CG's said that their primary goal is to cater to those in need in a sensitive and effective way as CG1 states:

It is not our place to know why people come, but we make it our business to make sure that those that come feel welcome and treated with respect and dignity and that they leave us with a full puku.

CG3 explains:

There is a big difference between the food parcels through the Christian bank, where they think they (whanau) are entitled to get the first one (food package) but for the second one they have to fill in WINZ forms and budgets... Whereas here they (whanau) can get support and we see the need out in the community, hence Kaivolution supports them in this way.

CG1 aims to make sure that their community feels as though they are respected and are treated in a dignified manner, whilst also ensuring that they have access to food. This is achieved by welcoming individuals without questioning their intentions for coming to receive food. CG3 explains that they are conscious of the limitations within other food assistance services and are able to overcome these due to them truly understanding the needs, preferences, and reality of their community. CG3 highlights that some food banks require a WINZ letter in order to get help. Food banks like The Salvation Army (n.d.) require a WINZ letter or bank statement in order to profile what sort of assistance the individual needs. However, another approach is a non-judgemental community approach to food redistribution, one that transcends the limitations of mainstream social welfare systems like WINZ and the bigger food banks mentioned by Graham, Stolte, et al. (2018). Often certain welfare services place too much emphasis on meeting the dietary requirements of individuals rather than providing food in a compassionate, warm, and sensitive way (Graham, Stolte, et al., 2018). According to Graham, Stolte, et al. (2018) a non-judgemental approach allows the complex realities faced by those who are food insecure to be understood. The experiences shared from the whanau who engage with the community groups are consistent with the literature on a

community approach to food redistribution. The Rangi whanau explains how their community organisation differed from that of WINZ and organisations run by those outside of their community:

“What the cousin (community organisation food redistributor) is doing is better than what a lot of other people (WINZ and other food assistance organisations) do...It (previous food assistance organisations) wasn't that good. The one before her was choosy when you got it (food).”

The Moke whanau also shared their experiences in regards to CG2's approach to food redistribution stating they achieve their goal “without getting up in people's faces”, meaning not being too intrusive and questioning why they need food assistance. The characteristics that define many of the CG's approaches to food redistribution reflect those of a community framework. Such initiatives aim to empower and collaborate with stakeholders within the community to respond to social issues like food insecurity (Himmelheber, 2014; Kim, 2005). Thus, individuals and whanau who have the desire to see change within their communities are able to gain access to resources from organisations like Kaivolution. Therefore, initiatives emerge and are run by those who understand the nature of their own communities and are able to better cater for those within their communities in culturally and social sensitive ways. This bypasses many negative experiences whanau experience with agencies like WINZ and enables those who are food insecure to feel comfortable to reach out to organisations like Kaivolution and community groups for help without strings attached.

This approach has also empowered the recipients of the food to give back. For the Moke whanau they are now volunteering with the community organisation they receive help from and help pack some of the rescued food and distribute it to those who need it within their own neighbourhoods. For the Rangi whanau upon receiving the food they divide it up and distribute it to their whanau around Hamilton. A different approach is implemented by the Kani

whanau, they utilise the food to empower children to give back to those in their community. The Kani whanau elaborates:

In this house the only thing they are responsible for is their own space in their room. So, they are not used to service, so we felt that it was an important thing for them to learn so that is what we teach them.

What we try and do is give back in different ways, one of the ways is we share it with neighbours, we share it with homeless people...It is a really good thing for the boys to do because they really get something out of sharing what they have, some boys have the heart for it and others who don't, learn to give... For somebody like him (child who is overprotective of his food) to learn to actually give that food to someone else is major.

The Rangi whanau add:

About five of my families I drop off for because they all have kids and whatever help they can get they are more than appreciative. Every little bit that the family get they are more than appreciative, they all have little kids.

In the Kani whanau excess food is redistributed to their neighbours and others within their community who are food insecure. As expressed by the Kani whanau this teaches the children how to give back, be detached from what they have, and in turn oppose behavioural tendencies like being over protective of food. The Rangi whanau although experiencing food insecurity also share food with extended whanau which is a phenomena that defies the individualistic narrative present within neoliberal discourse (Hodgetts & Stolte, 2017). As expressed by the Rangi whanau previously and Reid et al. (2014) giving and sharing resources is a value practiced by Māori and was a way for hapu and iwi to connect with one another and gather food. Encouraging children to share their resources with others connects the Kani whanau back to Māori values within contemporary society whilst also helping them overcome behavioural issues like being overprotective of their food. Within the context of this theme, the Kani

whanau illustrates how a community approach to food insecurity gives whanau the ability to utilise the food in ways that address the issues relevant for them with no strings attached. This is also experienced by CG3 in that they are able to overcome the limitations of other food banks and address issues relevant to their community, CG3 explains

What's good about Kaivolution is that it is accessible every day. Most of the food from food parcels from food banks can only be accessed at certain times of the year. You can access Kaivolution for them (whanau in need) every day.

An inability to access food banks at particular times may come down to food banks lack of resourcing, limited opening hours, and an inability for foodbank users to access information about the food banks (Bazerghi et al., 2016). Collaboration with Kaivolution has enabled CG3 to operate in a manner that enables those in need to have access to food especially when other foodbanks are inaccessible. The inaccessible nature of food banks is pertinent for working families (working poor) in particular as they often operate during working hours (New Zealand Council of Christian Social Services, 2008). Also food banks are not near all those in need, therefore those who are housebound from disability, illness, or lack of transportation may find it difficult to access food banks (St. John et al., 2008). Thus, Kaivolution assisting CG3 enables such limitations to be overcome and provide those in need with another alternative to access food. CG2 highlights the importance of access for those in need:

We call it our kaumatua and kuia run, whereby my vehicle is set up inside like a fruit and vegetable shop and we go to their homes or places where they stay. Another volunteer has a list of everything and goes knocking on all their doors so they don't have to come out. 'Oh, I will have two apples a banana and a bunch of broccolis please' and that will be delivered back to their door. So, we do things like that.

CG3 adds:

A lot of it is they are too shy, too much pride there to ask for help. We don't wait for them to ask, we do a scan and have a look around and ask questions. We will offer it rather than them ask for it all the time.

Both CG2 and CG3 highlight how they are able to cater for whanau in need within their community in sensitive and effective ways. As per the literature review food rescue and redistribution reflects characteristics unique to 'community mobilisation', which is an approach that empowers community stakeholders to collaborate in order to solve issues like food insecurity (Kim, 2005). Evident in the dialogue above collaboration between Kaivolution and the CG's has resulted in the ability for the CG's to respond to calls for help within their own respective communities. This helps ensure that approaches to assist the food insecure are culturally sensitive, socially acceptable, and compassionate. Thus, transcending other limitations like feelings of stigma, shame, guilt, and embarrassment all too often experienced within other social welfare services.

This section touched on the benefits of a community approach to food redistribution for whanau and the community groups. The section showed that access to food for community groups enabled them to respond to the needs of whanau within their community in ways that were culturally and socially sensitive, which transcended the limitations of other welfare services in society. This community approach to food redistribution not only provides whanau with food assistance but empowers and encourages community stakeholders to collaborate in order to solve social issues like food insecurity. The next theme will look deeper into how this approach to food redistribution has contributed to a heightened sense of community.

Creating Community

This theme will highlight how the CG's have become more connected as a result of a community approach to food redistribution. The theme will also highlight how a community approach to food redistribution has increased social networks among the food insecure, promoted social wellbeing, and enable cultural

community events to take place. Literature highlights that food has significant socio-cultural importance and can be used to bring people together, express culture, and form identity (Graham et al., 2016). Redistributing food for most of the CG's has been more than just meeting dietary requirements. For CG1 food is central to their functioning but has enabled much more to happen as a result:

Everyone needs to be a part of or have a sense of belonging within a community. And I do know that we do help and support that happening. Often, we may have people come, not necessarily for a meal but they come just to sit and connect with others. So, you know in that way we are all about linking communities and strengthening. Through food.

As a result of engaging with those in need CG1 has been able to create a space whereby food brings individuals in need together. As mentioned people attend their meals not only to eat but also to connect with others and sometimes solely to connect with individuals. Other research has also illustrated that communal spaces for eating like that of CG1 provides individuals with an opportunity to socialize with others reducing social isolation, whilst also providing nutritious food (Iacovou, Pattieson, Truby, & Palermo, 2013). The Social Report by the Ministry of Social Development (2016) reported feelings of loneliness/social isolation within New Zealand, this group was primarily made up of low socio-economic groups and sole parent families. Literature supports this finding and highlights that for many experiencing food insecurity there is a sense of othering from those in society often perpetuated by prejudice and stigma within society, thus those who are food insecure do not have access to much support and social structures within society like workplace interactions and social/culturally sensitive welfare systems (Martin, Maddocks, Chen, Gilman, & Colman, 2016). Some of the other CG's have also noticed that through food redistribution to those in need an increase in social interactions and a sense of community has emerged.

CG2 shares:

It's building community, because she (individual who redistributes the food) floats around and they all know she's coming they all are aware. It has made them more aware of community... And everyone around the houses have big fences and hide behind them. But with Kai delivered to their house they are more open to accepting people coming to their house because kai is coming.

The above quote highlights that for CG2 whanau are becoming more aware of community and are overcoming hesitations about having them come to their home. This hesitation may stem from a sense of shame or embarrassment when asking for help or opening up about the fact that they are food insecure (Dalma et al., 2018; Hodgetts et al., 2014). This approach by CG2 is re-establishing a sense of community connectedness that has become foreign due to an individualized way of life perpetuated by our neoliberal society (Hodgetts & Stolte, 2017). CG2 continues:

You know the neighbours next door are seeing them deliver food and they go aw you are getting kai too. So, they start little conversations you know, even if it's just has whaea been yet? They are starting to talk a little bit and hopefully it builds and builds.

Both quotes above illustrate that through CG2 delivering food to their community many of those in need are starting to connect with one another. By approaching people within their community who are food insecure people are socializing more and developing relationships with others in similar positions. Thus, increasing social networks and a sense of belonging between members of their community. Both CG1 and CG2 express similar trends in relation to a heightened sense of community among their clientele. Literature supports these findings stating that community food redistribution initiatives aim to not only feed those in need but also increase social networks (Iacovou et al., 2013; Roncarolo, Adam, Bisset, & Potvin, 2015). This two-pronged approach is of particular relevance as food insecurity affects individuals physically due to a lack of nourishment but also mentally and socially. Food insecurity causes anxiety,

stress, and embarrassment as failure to provide for yourself and others is often stigmatized within society as an indication of laziness, unintelligence, and being useless (Jackson & Graham, 2017). Thus making it harder for those in need to reach out for help and subsequently build social networks (King et al., 2017). This approach also enables the socio-cultural importance of food to be appreciated as food is integrated into a community setting which provides individuals the autonomy to utilise the food how they deem significant. For Māori in particular food is more than just a means for physical sustenance it is viewed as an indispensable part of their cultural practice (Wham et al., 2012). For example the communal preparation, eating, and sharing of food for Māori enables cultural knowledge to be passed on, feeling a sense of belonging, and forms their own identity, which also reinforces insights shared by CG1 (Graham et al., 2016).

Within CG2's community the food is also being used for community events, they explain "there is a hangi going down soon and the bread is going down there. When there is a hangi, kaupapa, or tangi going on it (food from Kaivolution) goes there". As a result of CG2 receiving rescued food they are now able to redistribute it and help assist community events like Hangi and Tangi occurring. Within Māori culture such events hold significance for example hangi is not simply a cooking procedure but rather an event that brings people together through preparing kai with each other, gathering resources from the land, a space to learn from elders, and allows cultural knowledge to be shared (Tawa, 2013). As Māori are overrepresented in many negative statistics related to health and well-being due to the effects of colonisation and cultural disconnect it is significant to see that with help from Kaivolution and CG's Māori cultural events like hangi and tangi are being supported.

Cultural community events like hangi, and other spaces for people to connect and share food lend itself to a heightened sense of community and identity. CG1 states explicitly that through this process they have noticed change in the individuals "it can assist with their health and wellbeing being part of community...Through this we have seen a change in people, we have seen people's overall health and wellbeing start to come back up". As argued in the

literature health and wellbeing is “not merely the absence of disease or infirmity” but rather a concept that allows for the “ability to pursue our life story without insurmountable obstruction from illness”(Misselbrook, 2014). With this definition in mind and being attentive to the holistic nature of Māori health and well-being models like Te Whare Tapa Wha (M. Durie, 1998) and Te Wheke (Pere, 1991), we can suggest that individuals may have experienced a change in their social, emotional, spiritual, and physical wellbeing. Such a change can be attributed to the various insights shared within this theme some of which are; developing a sense of belonging, practicing cultural practices, connecting with other individuals, and receiving food. All four of these notions are intimately linked to the four domains within the Māori health and well-being model, like Te Whare Tapa Wha, and reflect the outcomes associated with a community framework for food redistribution. This theme illustrated the impact food redistribution has had on the social relationships and sense of community among the community groups and their communities. In order to continue to redistribute food, access to food needs to be consistent. The next theme will discuss how engaging with Kaivolution and their message of minimizing food waste has enabled the community groups to take steps to collaborate with food retailers.

Community Groups and Food Retailers

This theme will examine how the three CG’s perceive food waste from food retailers. The theme will then explore some potential ways and ideas CG’s could engage with food retailers in order to access food that would otherwise be wasted. When asked about the amount of food that would otherwise be wasted being given to Kaivolution by food retailers CG2 replied:

Blown away!... There is probably more that is being thrown out. They are all the restaurants because they are not community or people minded. And this is it. Food outlets right across the board need to be aware (of food insecurity), they really do. I suppose there are people out there that don’t give a stuff that people are hungry. That kind of attitude is just not

ok. It can happen to any family regardless of what level you think you are at. And they need to be aware of that. In my opinion it is not ok to think that way. Food is edible for human consumption or for the animals.

For CG2, engaging with Kaivolution has opened their eyes to the scale of food waste by food retailers. With food insecurity still widespread, realising that a lot of other food retailers may also be throwing out edible food is hard for CG2 to fathom. CG2 implies that it is due to their lack of community mindedness and awareness of social issues like food insecurity. Although this may be the case literature also adds that much of the food waste from food retailers is a symptom of poor waste management systems, high selling standards, and related to consumer behaviour (Gustavsson et al., 2011). For some food retailer's government bureaucracy may also limit their ability to donate their food waste to food redistribution organisations. However in 2014 New Zealand enacted The Food Act which minimized the risk of prosecution for those retailers who are donating food to food redistribution organisations like Kaivolution. In the previous chapter the KV's perceived food retailers as organisations that prioritize economic benefit over environmental or community benefit. CG3 thinks they should collaborate with other food retailers as well:

It is getting the others (food retailers) on board. I know there is food banks and stuff like that. I know we used to get, he worked for Coupland's (bread company), what was usually left and dumped in bins he would bring them to the agencies and drop them off, which he was allowed to do. Other organisations like that should do that, it would be mean.

Besides Kaivolution, CG3 has had other food retailers donate food directly to their organisation, which was deemed to be useful. In the above quote CG3 highlights that reaching out to food retailers may minimize food waste but also provide CG's more food to redistribute to those in need. For CG1 reaching out to food retailers and the community in general has been successful in increasing the

amount of donated food to their organisation whilst also minimizing the food waste from the donors. CG1 states:

Every now and again we have had cafes, we do have another big food establishment that donate, so before coming to us, they would throw out their food. Others will be partnering with a piggery, but there is more of an awareness now (of organisations addressing social issues). Even individuals and families, I have had families that are looking at restocking their fridge and freezers and they have donated meat which is really good meat.

People out in the wider community have emailed and called in and have said we have food that we don't need or are restocking, can we donate it? It is often farmers (laughs). We do not want to throw this food out can we bring it to you (says farmers).

Through engaging with their community and various stakeholders CG1 has connected with farmers, cafes, and families. This has enabled individuals and food retailers an alternative means to utilize their excess food instead of throwing it out, therefore minimizing food waste. Such actions support the food rescue and redistribution approach of Kaivolution.

All three CG's suggest that raising the awareness of social issues like food insecurity and poverty with food retailers has resulted in some companies redistributing their excess food. The final section will summarize all aspects of this chapter.

Chapter Summary

In this chapter the insights and experiences shared by three whanau and three community groups relating to food insecurity and food redistribution were discussed. The chapter highlights how the overrepresentation of Māori in many negative statistics related to food insecurity stems from the consequences of colonisation that have placed Māori in a vulnerable position within Aotearoa. Colonisation has stripped Māori of their culture, identity, and economic base,

and has forced Māori to exist within a society that is foreign to them. The chapter also highlighted the complex nature of food insecurity and that it affects a variety of people from home owners, students, parents, elderly, the employed, the unemployed, children, and Māori more so than other ethnic groups. Due to an increase in living costs and the limitations within our social welfare system more and more people are now struggling to buy food. Thus, the demand for food from organisations like Kaivolution, has increased dramatically. The community groups shared that through Kaivolution they are able to access more food to distribute to their communities as demand appears to be increasing all the time. The importance of Kaivolution compared to foodbanks, has meant that community groups can distribute food into their communities in ways that are sensitive and appropriate minimizing feelings of embarrassment and stigmatization often experienced when whanau engage with mainstream social welfare services. Through distributing food, the community groups have also been able to create social spaces and cultural events like hangi preparation, for their neighbourhoods to connect with each other which has in turn contributed to a heightened sense of community and wellbeing. The community groups also expressed that raising the awareness of food retailers and community members around social issues like food insecurity has increased the amount of food donated to their organisation. The next chapter will highlight future areas of research and conclude this piece of research.

Chapter 5: Conclusion

The final chapter will bring the main findings within this thesis together as one coherent whole which will then be followed by some future areas of research. In New Zealand poverty and food insecurity affect a large cross section of our population. With Māori disproportionately represented in such statistics. Many community organisations have emerged in order to address food insecurity due to the various inadequacies of other mainstream social welfare systems. Organisations like Kaivolution aim to reduce the environmental impact of food waste by distributing rescued food to community groups who help those in need. Thus, the aim of this thesis was two-fold; first, was to examine how three groups of Kaivolution's stakeholders engage with Kaivolution's message of minimizing food waste, and second, to examine the social impact of Kaivolution's food rescue services have across the same three groups.

The key findings from the Kaivolution volunteers revealed valuable insights into the benefits of volunteering and the effectiveness of Kaivolution's food rescue service. My research showed that volunteering increased feelings of belonging to a community and increased social networks, promoting overall wellbeing. The research also showed that engaging in a service that deals with people from different demographics can challenge volunteers' unconscious assumptions and prejudice like homelessness being an outcome of individual actions. This raises valuable insights into how voluntary positions like food redistribution can contribute to the elimination of prejudice and develop the ability to critically think about social issues like food insecurity and poverty. The Kaivolution volunteers already had some interest in environmentally friendly behaviour, subsequently their lifestyle already reflected this. However, as a result of engaging with Kaivolution many of the volunteers further refined their environmentally friendly behaviour, for example, not buying certain foods due to packaging. For many of the Kaivolution volunteers engaging with Kaivolution raised questions around what is the government doing in relation to food waste and how are the structures within society addressing the issues of food waste.

The research highlighted that many environments within our current society like cities, rentals without gardens, and high-rise apartments do not allow those who want to compost and share food to do so with ease. This then gave rise to the environmental impacts of food waste within our current setting and how food retailers are also contributing to this issue. The environmental impact of wasted food is not exclusively related to overuse of landfills but also the energy, water, time, and land used to produce such foods. This thesis highlighted one instance where 200kg tomatoes were to be ploughed due to a price drop in tomatoes. However due to Kaivolution's food rescue services this waste was diverted and distributed to community groups who help those in need. In order to minimize food waste this research highlighted that government also needs to help reshape the current food waste management systems, many of the participants have felt let down by government in this regard. Hence why organisations like Kaivolution pop up in order to address issues they feel are not being adequately addressed by government such as food waste. A common criticism of this is that it may not encourage government to take action as the issue is already being taken care of. Or it could provide the government with a working model to support in order to help minimize food waste.

The key findings from both the community groups and whanau were very similar with both groups saying basically the same things. The process of colonisation was one main theme that emerged. Colonisation resulted in the confiscation of land from Māori, stripping Māori of their economic base and resulting in cultural disconnect. With the formation of a government that is founded upon neoliberal values Māori have been placed in a vulnerable position in their own country. Consequently, Māori are overrepresented in statistics related to poverty and food insecurity. The experiences of both community groups, whanau and research, highlighted that although Māori are overrepresented in food insecurity statistics, so too are the employed, working families, the elderly, and students. The consequences of which result in poor physical health, social isolation, children disengaged at school, and feelings of inadequacy and shame. This research showed that experiences associated with

mainstream social welfare systems are punitive, culturally insensitive, and elicit feelings of shame and inadequacy for Māori in particular. Thus, many community groups have emerged that are run by those who are indigenous to their communities and understand the reality of those who are food insecure. Therefore, the assistance and delivery of their service is culturally and socially sensitive, consequently overcoming the limitations of other mainstream welfare services. Besides physical benefit of having enough food community groups and whanau highlight that a community approach to food redistribution also increased social networks, social relationships, a stronger sense of community, and enabled cultural events like hangi to take place. All of which contributing to an increase in overall wellbeing. In order for the community groups to continue to distribute food to whanau the community groups highlight that raising the awareness of food retailers around social issues like food insecurity and poverty may enable more food waste to be redistributed to whanau in need.

The insights shared by Kaivolution volunteers, community groups, and whanau highlight the effectiveness this approach to food rescue and redistribution has on minimizing food waste, but even more so addressing food insecurity. It shows the important role that initiatives like Kaivolution can play in minimizing food waste through enabling community groups to serve those in need. It also highlights the pitfalls of our current social welfare systems and illustrates how community groups are assisting food insecure whanau in ways that current measures cannot. This research also uncovered some aspects which would warrant further exploration.

Further research will uncover other findings also relevant to this topic. Many aspects of this research spoke to the nature of food retailers and how they engage with Kaivolution and community groups. Research into how food retailers interact with community groups and how they engage with Kaivolution's environmental message of minimizing food waste may add an alternative perspective. It may also uncover some of the other driving forces behind why food retailers have food waste and enable community groups and

Kaivolution to collaborate with more food retailers in order to rescue food to distribute to those in need.

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Appendix A

Information Sheet for Kaivolution Volunteers

The Social and Environmental Impact of Kaivolution

An Invitation to Participate in Research

Hi my name is Kesian Paymani and I am a second year masters student at The University of Waikato. This project is part of my master's thesis and aims at examining the environmental and social impact of Kaivolution's service.

Kaivolution is an organisation that rescues food and disperses it to organisations throughout Hamilton for redistribution to people in need.

Kaivolution is a not-for-profit organisation that relies on donations and sponsorship to survive, so any research and insights about the benefits of their service will be invaluable when attracting funding, volunteers, and other resources. As one of their volunteers, you are in a unique position to provide us with insights that will assist them to continue to provide this valuable service.

I invite you to participate in an interview. The purpose of the interview is to gather qualitative data in order answer two main areas of focus. The two main areas of focus are 1) the environmental impact, and 2) the social impact of Kaivolution's service. The interview will consist of questions about changes in awareness, consciousness, behaviour, thoughts, and the quality of life of Kaivolution volunteers with regards to the environmental and social impact of food rescue.

The Research Process

The interviews will take no longer than an hour to complete and will be done in one sitting, at a time and place that is convenient to you. Following data collection, any information pertaining to individuals will be coded and remain confidential in the data analysis and results presentations.

If at any point during the research process you do not feel comfortable participating or wish to withdraw you have the right to do so and none of your information or interview data will be used in the research project.

The interview will be recorded and you will receive a copy of the transcript of your interview if requested so you can make comments or request amendments. You will have one week from receipt of the transcript to do this.

Both Kaivolution and the University of Waikato will have a copy of the final report. You may request a copy of the final report or a summary of the findings.

The data gathered during this research will be held in a secure location at the University of Waikato for at least five years as per the University's policy.

We invite all participants to feel free to ask as many questions as needed during the course of their participation. If you have any questions, please contact the researcher or supervisors.

This research project has been approved by the School of Psychology Research and Ethics Committee of the Faculty of Arts and Social Sciences, University of Waikato. Any questions about the ethical conduct of this research may be sent to the convenor of the Research and Ethics Committee (e-mail ethics@waikato.ac.nz).

This research will be conducted voluntary and will not be sponsored or receive funding.

Yours sincerely

Researcher

Kesian Paymani , ksp14@students.waikato.ac.nz

Supervisor

Dr Mohi Rua, mohi.rua@waikato.ac.nz

Senior Lecturer,
School of Psychology,
University of Waikato.

Appendix B

[Date]

[Name of Contact Person]

[Name of Organisation]

Dear [insert name of contact person],

Hi my name is Kesian Paymani and I am a master's student from the University of Waikato. I am undertaking a master's thesis and will be working alongside Kaivolution, an organisation that rescues food and disperses it to organisations throughout Hamilton. This master's thesis is being supervised by Dr Mohi Rua from the University of Waikato

This thesis aims at examining the social and environmental impact of Kaivolution's service. I hope to uncover whether or not there is a change in awareness, consciousness, behaviour, thoughts, and quality of life for Kaivolution's stakeholders. I will do so through the lens of the environmental and social impact. I will fulfil these aims by conducting semi-structured interviews with a variety of Kaivolution's stakeholders. The findings will be presented in a final report, which both Kaivolution and the University of Waikato will have a copy of.

I humbly request your permission to interview a representative from your organisation. The interview will consist of questions about how your organization or individuals within have changed in behaviour, thoughts, functioning, attitudes, and quality of life as a result of engaging with Kaivolution's food distribution service. A copy of the interview transcript will be provided if requested to all organisations who partake in the interviews in order for comments and amendments to be made, you will be given a one week period upon receiving the transcript to do so.

There are some important points for you to note in order that the collection of data for this interview remains as viable as possible.

1. Following the interview any information pertaining to individual agencies and your organisation's name will be coded and remain confidential in the data analysis and results presentations.
2. A consent form will be sent with this letter. Signing the consent form will ensure you understand your rights as a participant in this study. This consent form will be signed at the time and place of the interview, before commencing.
3. This research project has been approved by the School of Psychology Research and Ethics Committee of the Faculty of Arts and Social Sciences, University of Waikato. Any questions about the ethical conduct of this research may be sent to the convenor of the Research and Ethics Committee (e-mail ethics@waikato.ac.nz).

Yours sincerely,

Researcher:

Kesian Paymani (ksp14@students.waikato.ac.nz)

Supervisor:

Dr Mohi Rua (mohi.rua@waikato.ac.nz),

Senior Lecturer,

School of Psychology,

University of Waikato.

Appendix C

Information Sheet for Representatives of Recipient Organisations

The Social and Environmental Impact of Kaivolution

An Invitation to Participate in Research

Hi my name is Kesian Paymani and I am a second year master's student at The University of Waikato. This project is part of my master's thesis and aims to examine the environmental and social impact of Kaivolution's service.

Kaivolution is an initiative run by GoEco that rescues food and disperses it to organisations throughout Hamilton for redistribution to people in need.

Kaivolution is a not-for-profit initiative that relies on donations and sponsorship to survive, so any research and insights about the benefits of their service will be invaluable when attracting funding, volunteers, and other resources. As one of their recipient organisations, you are in a unique position to provide us with insights that will assist them to continue to provide this valuable service.

I invite a representative/s of your organisation to participate in an interview. The purpose of the interview is to answer two main areas of focus. The two areas of focus are 1) the environmental impact; and 2) social impact of Kaivolution's service. The interview will consist of questions about changes in awareness, consciousness, behaviour, thoughts, and the quality of life of those who engage with Kaivolution in your organisation. These changes will be talked about with regards to the environmental and social impact of food rescue.

The Research Process

The interviews will take no longer than an hour to complete and will be done in one sitting, at a time and place that is convenient to a representative/s from your organisation. Following data collection, any information pertaining to individuals

or your organisation will be coded and remain confidential in the data analysis and results presentations.

If at any point during the research process you or your organisation do not feel comfortable participating or wish to withdraw you both have the right to do so and none of your information or interview data will be used in the research project.

The interview will be recorded and you will receive a copy of the transcript of your interview if requested so you can make comments or request amendments. You will have one week from receipt of the transcript to do this.

Both Kaivolution and the University of Waikato will have a copy of the final report. You may also request a copy of the final report or a summary of the findings.

The data from the research will be held in a secure location at the University of Waikato for at least five years as per the University's policy.

We invite all participants to feel free to ask as many questions as needed during the course of their participation. If you have any questions, please contact the researcher or supervisors.

This research project has been approved by the School of Psychology Research and Ethics Committee of the Faculty of Arts and Social Sciences, University of Waikato. Any questions about the ethical conduct of this research may be sent to the convenor of the Research and Ethics Committee (e-mail ethics@waikato.ac.nz).

This research will be conducted voluntary and will not be sponsored or receive funding.

Yours sincerely

Researcher

Kesian Paymani , ksp14@students.waikato.ac.nz

Supervisor

Dr Mohi Rua, mohi.rua@waikato.ac.nz

Senior Lecturer,

School of Psychology,

University of Waikato.

Appendix D

CONSENT FORM

A completed copy of this form should be retained by both the researcher and the participant.

Research Project: A look into the Environmental and Social Impact of Kaivolution services.

Please complete the following checklist. Tick (✓) the appropriate box for each point.	YES	NO
1. I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.		
2. I have been given sufficient time to consider whether or not to participate in this study		
3. I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet		
4. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without penalty		
5. I have the right to decline to participate in any part of the research activity		
6. I know who to contact if I have any questions about the study in general.		
7. I understand that this interview will be recorded and a transcript made of the recording.		
8. I understand that the information I provide could be used in future academic publications.		
9. I understand that a copy of the interview transcript will be made available if requested and I am able to make amendments and comments for change for one week after receiving the transcript.		
10. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
11. I wish to receive a copy of the findings.		

Declaration by participant:

I agree to participate in this research project and I understand that I may withdraw at any time. If I have any concerns about this project, I may contact the convenor of the Psychology Research and Ethics Committee (Dr Rebecca Sargisson, phone 07 837 9580, email: rebecca.sargisson@waikato.ac.nz)

Participant's name:

Signature:

Date:

Declaration by member of research team:

I have given a verbal explanation of the research project to the participant, and have answered the participant's questions about it. I believe that the participant understands the study and has given informed consent to participate.

Researcher's name:

Signature:

Date:

Appendix E

[Date]

[Name of Contact Person]

[Name of Organisation]

Dear [insert name of contact person],

Hi my name is Kesian Paymani and I am a masters student from the University of Waikato. I am undertaking a master's thesis and will be working alongside Kaivolution, an organisation that rescues food and disperses it to organisations throughout Hamilton. This master's thesis is being supervised by Dr Mohi Rua from the University of Waikato

This thesis aims at examining the social and environmental impact of Kaivolution's service. I hope to uncover whether or not there is a change in awareness, consciousness, behaviour, thoughts, and quality of life for Kaivolution's stakeholders. I will do so through the lens of the environmental and social impact. I will fulfil these aims by conducting semi-structured interviews with a variety of Kaivolution's stakeholders. The findings will be presented in a final report, which both Kaivolution and the University of Waikato will have a copy of.

I humbly request your permission to interview clientele from your organisation. The interview will consist of questions about how their engagement with Kaivolution services has impacted their views, thoughts, and behaviours of the environment and food waste, but most importantly as Kaivolution's end users how it has affected their quality of life. If your clientele are interested in participating I ask that you relay an information sheet and consent form to them and accompany me to introduce myself for the first time. Following this I will arrange a time and place suitable to them for an interview. A copy of their interview transcript will be provided to them if requested in order for comments

and amendments to be made, they will be given a one week period upon receiving the transcript to do so.

There are some important points for you and your clientele to note in order that the collection of data for this interview remains as viable as possible.

3. Following the interview any information pertaining to individual agencies and your organisation's name will be coded and remain confidential in the data analysis and results presentations.
4. A consent form will be sent with this letter. Signing the consent form will ensure the participant understands their rights in this study. This will be signed at the time and place of the interview, before commencing.
3. This research project has been approved by the School of Psychology Research and Ethics Committee of the Faculty of Arts and Social Sciences, University of Waikato. Any questions about the ethical conduct of this research may be sent to the convenor of the Research and Ethics Committee (e-mail ethics@waikato.ac.nz).

Yours sincerely,

Researcher:

Kesian Paymani (ksp14@students.waikato.ac.nz)

Supervisor:

Dr Mohi Rua (mohi.rua@waikato.ac.nz)

Senior Lecturer,

School of Psychology,

University of Waikato.

Appendix F

Information Sheet for Clientele

The Social and Environmental Impact of Kaivolution

An Invitation to Participate in Research

Hi my name is Kesian Paymani and I am a second year masters student at The University of Waikato. This project is part of my master's thesis and aims at examining the environmental and social impact of Kaivolution's service.

Kaivolution is an initiative run by GoEco that rescues food and disperses it to organisations throughout Hamilton for redistribution to people in need.

Kaivolution is a not-for-profit organisation that relies on donations and sponsorship to survive, so any research and insights about the benefits of their service will be invaluable when attracting funding, volunteers, and other resources. As one of their end users, you are in a unique position to provide us with insights that will assist them to continue to provide this valuable service.

I invite you to participate in an interview. The purpose of the interview is to gather information around two main areas of focus. The two main areas of focus are 1) the environmental impact, and 2) the social impact of Kaivolution's service. The interview will consist of questions about the impact receiving Kaivolution's food has had on your whanau and your life and how your interactions with the environment may have changed.

The Research Process

The interviews will take no longer than an hour to complete and will be done in one sitting, at a time and place that is convenient to you. Following data collection, any information pertaining to individuals will be coded and remain confidential in the data analysis and results presentations.

If at any point during the research process you do not feel comfortable participating or wish to withdraw you have the right to do so and none of your information or interview data will be used in the research project.

The interview will be recorded and you will receive a copy of the transcript of your interview if requested so you can make comments or request amendments. You will have one week from receipt of the transcript to do this.

Both Kaivolution and the University of Waikato will have a copy of the final report. You may request a copy of the final report or a summary of the findings.

The data gathered during this research will be held in a secure location at the University of Waikato for at least five years as per the University's policy.

We invite all participants to feel free to ask as many questions as needed during the course of their participation. If you have any questions, please contact the researcher or supervisors.

This research project has been approved by the School of Psychology Research and Ethics Committee of the Faculty of Arts and Social Sciences, University of Waikato. Any questions about the ethical conduct of this research may be sent to the convenor of the Research and Ethics Committee (e-mail ethics@waikato.ac.nz).

This research will be conducted voluntary and will not be sponsored or receive funding.

Yours sincerely

Researcher

Kesian Paymani , ksp14@students.waikato.ac.nz

Supervisor

Dr Mohi Rua, mohi.rua@waikato.ac.nz

Senior Lecturer,
School of Psychology,
University of Waikato.

Appendix G

General Interview Structure and Transcript

Introductions

The general topics I wish to address during the interviews are:

Talk about their role in their organisation and how they are associated with Kaivolution.

Talk about the link between Kaivolution's food rescue and social good

- Has Kaivolution's food rescue affected others? How?
- Has being engaged in Kaivolution's food rescue affected you? How?
- Explore; changes in quality of life, behaviours, awareness of social issues, as a result of engaging with Kaivolution's food rescue.

Talk about the link between Kaivolution's food rescue and the environment

- In your organisation or own life has there been any change with how you perceive or think about the environment?
- Has there been any change in behaviours, actions, or initiatives put in place to lower the impact of food waste on the environment? Or other actions and behaviours related to bettering the environment?

*This set of questions did not act as a set of rigid questions but rather an overview of the topics and general structure of the interviews conducted.