‘Walking the Tightrope’ Pregnant Women & Malnutrition in Aotearoa:

How the Sustainable Development Goals 2 &5 Reframe the Current Discourse

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Abstract

In 2015 a new global development platform, called the Sustainable Development Goals (SDGs) were launched and for the first-time developed nations were included in the development agenda. Poverty, food insecurity and inequality in the developed world are now encompassed within this global platform and are open to international standardisation and critique. This presents significant challenges for developed/western countries who have previously looked outwards at developing nations as the subject of the development gaze. This desk-based study explores how developed countries are responding to this new paradigm by looking at a case study in Aotearoa, New Zealand. This case study focusses on SDGs 2: empowerment & 5: food security to address how we can reframe the current discourse on pregnant women and malnutrition in Aotearoa.

Using a critical discourse analysis (CDA) to interrogate the current discourse across three platforms this study has three key findings (themes). Firstly, pregnant women are singularly responsible for ensuring adequate nutrition; secondly, a healthy pregnancy requires women to be educated to adhere to complex food guidelines; and lastly the use of fear and monitoring of women to motivate adherence. An overarching or 'grand theme' which is summarised as 'walking a tightrope' finds that women are expected to achieve unrealistic nutritional targets within the realities of everyday life. However, the SDG's provide an opportunity to reframe the 'problem' of malnutrition in pregnancy to one of food security and empowerment of women. This 'reframing' more appropriately addresses the complexity of issues which underlies malnutrition and provides a framework for government and social policy to robustly address malnutrition for pregnant women. This report therefore concludes that this new global focus on developed countries presents a significant opportunity for them to adopt development frameworks to achieve the SDGs.

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Lastly, I want to thank the wonderful women I have had the privilege to walk beside through their journey into motherhood. This project is motivated by my wish to see women and children; our future, nourished and well.

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Acronyms

BMI	Body Mass Index
CDA	Critical Discourse Analysis
CEDAW	United Nations Convention on the Elimination of All Forms of Discrimination Against Women
FAO	Food and Agriculture Organization of the United Nations
GAD	Gender and Development
GDP	Gross Domestic Product
MFAT	Ministry of Foreign Affairs & Trade
NCD	Non-Communicable Diseases
OWG	Open Working Group
SDG	Sustainable Development Goals
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization
WID	Women in Development

Chapter One: Introducing the Study

1.1 Introduction

In 2015 the United Nations (UN) launched the Sustainable Development Goals (SDGs), which for the first time included developed nations. The Secretary General's synthesis report of December 2014 reinforced that the goals are universally applicable, stating that "all countries will need to change, each with its own approach, but each with a sense of the global common good" (Ki-Moon, 2014, p. 14). This presents significant challenges for western countries and reflects earlier points made by Escobar (1999) who argues western nations look outwards, with developing nations as the subject of the development gaze[1]. There is clear evidence that the SDGs and the subsequent development agenda are applicable to Western countries. One example of this is Aotearoa, where there is a documented reduction in levels of wellbeing for vulnerable families, with the greatest effects experienced by women and children[2]. Issues of poverty, food security and inequality are growing in Aotearoa, which are key targets within the SDGs, however there are few studies to date which explore the impact of the SDGs in relation to Aotearoa.

This desk-based report seeks to address, in part, this gap. It contributes to the literature by investigating the role of the SDGs in reframing current discourses in developed countries as well as the potential of the SDGs to hold governments to task in the international arena (Charlton, 2016; Hawkes & Popkin, 2015). This case study has been chosen due to the importance of maternal nutrition for future generations and increasing concerns about the rise of maternal malnutrition in Aotearoa. Pregnant women are recognised as an especially vulnerable population with their nutritional status used as an indicator of the food security status within a population (Headey, Oliver, & Trinh Tan, 2014). Increasing levels of malnutrition experienced by pregnant women in Aotearoa is concerning and may indicate

[1] See Escobar 1999 who argues this regarding how the North positions the South.

[2] See references for further research showing a reduction in wellbeing in Aotearoa. (Bell, Swinburn, Amosa, Scragg, & Sharpe, 1999; Bowers, 2009; Carne & Mancin, 2012; Carroll, Casswell, Huakau, Howden-Chapman, & Perry, 2011; Pearce, Richardson, Mitchell, & Shortt, 2011; Roy, 2016; UNICEF Office of Research, 2017; Wynd, 2005)

issues within the wider population. Furthermore, the current management is failing to reverse this trend. Therefore, the SDGs (particularly goal 2 & 5) are especially relevant to this context and will be the focus of this report.

This chapter introduces the study and interrogates the literature surrounding malnutrition in pregnancy. Section 1.2 includes a personal statement of the motivations behind the study. The research aim and questions follow. Section 1.4 outlines the research problem and reviews the body of literature exploring malnutrition in pregnancy, it highlights the connections between nutrition and inequalities and concludes that malnutrition during pregnancy is an increasing concern. This section concludes with an outline of the report structure.

1.2 Personal statement

This research stems from a desire to improve outcomes for women and their families. I have been working as a registered midwife in secondary and tertiary services for several years and have found that pregnant women's health is worsening; this is predominantly due to poor nutrition and lifestyle. In my work, I am often all too aware of the realities of women's lives, access to resources, levels of self-esteem and confidence, as well as the restrictions on their ability to make decisions over their own bodies. As health professionals, my colleagues and I are often frustrated by 'being the ambulance at the bottom of the cliff", yet we continue to respond to public health concerns by 'educating women' as per the current mantra of personal responsibility and choice-based rhetoric. This response often fails to acknowledge the lack of access to appropriate resources for families to live healthy lives. The high levels of poverty, vulnerability of younger women, and chronic ill health, suggests underlying power structures which affect women's abilities to achieve wellbeing. It is these underlying drivers of poverty and poor health which are not well recognised or responded to which need to be addressed (Lanumata, Heta, Signal, Haretuku, & Corrigan, 2008).

The previous national government promoted Aotearoa as a 'wealthy industrialised nation' and a net exporter of food and aid (Ministry of Agriculture and Trade [MFAT], 2008)[3]. However, when

[3] While carrying out this research Aotearoa has had a change of government in November 2017.

working with families who live in small damp flats or young pregnant women living transiently or in cars this image of a 'wealthy industrialised nation' collapses. This led me to question how a country can be considered 'developed' or 'wealthy' if food insecurity, poverty and hunger effect so significantly affect our most vulnerable? (De Schutter, 2014; O'Brien, 2014; Graham Riches, 1997; G. Riches, 2011; Graham Riches & Silvasti, 2014a, 2014b; Silvasti & Riches, 2014; Wilde, 2011). I further reflected that the categorisation of a 'developed' nation is often uncritically used to imply that there are no development issues such as poverty in developed countries. This categorisation is also used to position and legitimise the dominance of 'developed nations' over 'developing nations'(Escobar, 1999). This dualist categorisation of 'developed' vs 'developing' countries also obscures the recognition of the global nature of problems such as climate change and inequalities which are driven by consumption and increasingly liberalised economies. The SDGs therefore present an opportunity to apply development frameworks and theories globally and to generate a more nuanced understanding of how developed countries are functioning to recognise and respond more effectively to poverty and inequality.

1.3 Research aim & questions

Increasingly, pregnant women in Aotearoa are unable to achieve the dietary intakes recommended by the Ministry of Health (Morton et al., 2014). The recent governments response continues to target the perceived educational or individual deficits, yet this is failing to improve outcomes (Davies et al., 2014; Growing up in New Zealand, 2014; Wall et al., 2016). When the issues are considered in relation to SDGs, (goals 2 & 5) I argue that it is simplistic to view pregnant women's poor nutrition as an individual deficit/a lack of knowledge. If the issues are to be truly addressed, then a more nuanced understanding of the problem is required. That is, the problem must be reframed as one of food insecurity and disempowerment of pregnant women. This then leads me to my research aim:

Aim: The aim of the research is to critically assess the dominant discourse surrounding malnutrition experienced by pregnant women in Aotearoa with reference to SDG 2: Food security & 5: Empowerment.

This project has one main research question:

1. How can SDG 2 & 5, which seek to achieve 'food security' & 'women's empowerment,' reframe the dominant discourse on malnutrition of pregnant women in Aotearoa?

This research question is then broken down in two sub-questions:

i. What is the current discourse surrounding malnutrition of pregnant women in Aotearoa?

ii. Through the application of the Sustainable Development Goals 2 and 5 what challenges to this discourse become evident?

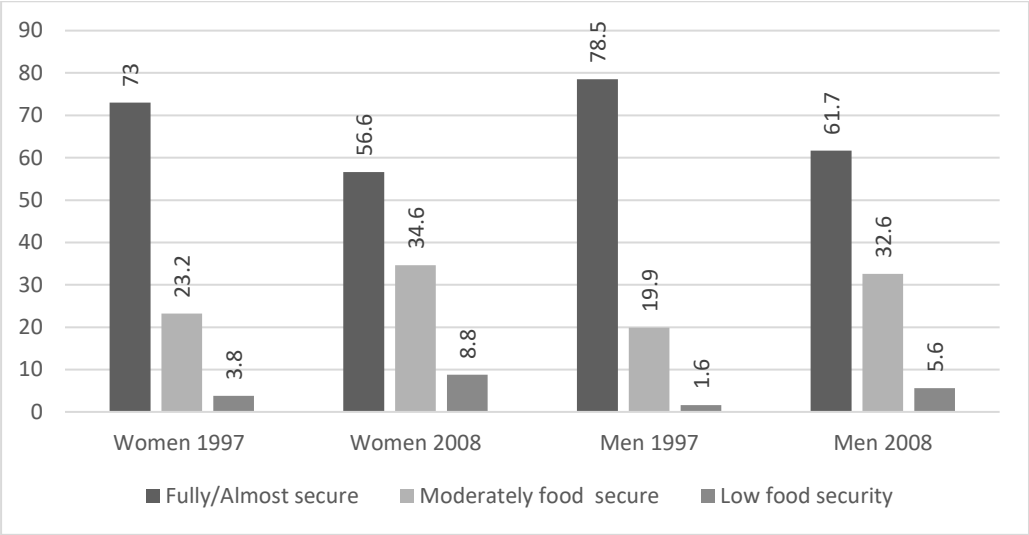
1.4 Outlining the research problem

In Aotearoa there is increasing inequalities with resulting rising levels of poor health and wellbeing. There have been a number of criticisms of poor leadership by the previous government resulting in the stalling of attempts to regulate the food industry, and a political climate in which poverty in Aotearoa is framed as poor individual choice (Carroll et al., 2011; Grant, Wall, Yates, & Crengle, 2010; Pearce & Dorling; Wilson, Signal, Nicholls, & Thomson). While Aotearoa is widely recognised as a wealthy developed nation, with a growing economy and a high level of food exports, food insecurity is a growing concern (Bell et al., 1999; C. Smith, Parnell, Brown, & Gray, 2013; M. Smith & Signal, 2009). The latest national nutrition survey in 2008/2009 reports that food insecurity is increasing in the general population (University of Otago & Ministry of Health, 2011). This is driven by a lack of access to healthy foods caused by high food prices (Boland & Gibbons, 2009). These nutritional surveys are only collected every ten years but have shown reductions in nutritional health and wellbeing (Hamilton, Mhurchu, & Priest, 2007). The trend shows that this is a particular concern for women and vulnerable families with food security concerns increasing with higher neighbourhood deprivation after adjusting for age, sex and ethnic group (University of Otago & Ministry of Health, 2011)[4]. Table 1, describes the

[4] The term vulnerable refers to families or individuals whose wellbeing is at risk of harm now or in the future primarily due their exposure to poverty. While it is a contested term further discussion of this term falls outside of the focus of this report.

food security findings for men and women from the national nutrition survey of 2008 and compares this with the previous national nutrition survey in 1998. This indicates a growing trend where women and men are both increasingly food insecure, however women are more food insecure than men in both 1998 and 2008 and this is growing at a faster rate for women.

Table 1: A Comparison of the National Nutrition Survey 1998 to 2008.



Source: (Russell, Parnell, & Wilson, 1999; University of Otago & Ministry of Health, 2012)

This shows a growing food security concern across the population but one which particularly impacts on women this is most likely related to women being increasingly poor. The National Council of Women has identified poverty as the major economic issue facing women, with women more than one and a half times more likely than men to live in a household with a total annual income of $30,000 or less (National Council of Women of New Zealand, 2012). Given this, poor women who are pregnant face greater concerns.

When women become pregnant they can become more vulnerable economically, socially, and physically, especially if their home environment is already stressed. The importance of nutrition during pregnancy cannot be overstated, it is increasingly recognised as a time when health inequities can be transmitted onto the next generation through malnutrition (Wall et al., 2016). Both the wellbeing of the mother, the long-term health of the infant and the labour and birth outcomes are affected by nutrition,

specifically micronutrient deficiencies such as iron [5](Greig, Patterson, Collins, & Chalmers, 2013). Problematically "most pregnant women …do not adhere to nutritional guidelines in pregnancy, with only 3% meeting the recommendations for all four food groups" (Morton et al., 2014, p. 1). In particular, only 21% of women are able to meet requirements of lean meat, meat alternatives and eggs suggesting that maintaining healthy nutrition especially for expensive foods is difficult (Morton et al., 2014). This means that pregnant women's health and wellbeing is being adversely affected by malnutrition with likely poorer outcomes for infants.

One of the most common forms of malnutrition faced by pregnant women is 'hidden hunger'. Hidden hunger is where key micronutrients such as iron are lacking in low quality, high energy diets. Simple put in terms of calorific intake people are getting enough to eat however the food is of poor quality. The current trend in Aotearoa shows a decline in consumption of meat which may explain increasing levels of iron deficiency for women of childbearing age (Gibson, Heath, Limbaga, Prosser, & Skeaff, 2001). Within the global context, iron deficiency anaemia (IDA) in Aotearoa is considered to be within the mild category- affecting 5-19% of pregnant women (World Health Organisation [WHO], 2008). A further study concurred with these figures, but found that while the prevalence of iron deficiency for women of child bearing age can be seen as mild it is of significance when compared to global figures (Ferguson et al., 2001; Heath, Skeaff, Williams, & Gibson, 2001). The National Nutrition Survey data found a disturbing national trend with ferritin (iron stores) deficiency prevalence among girls and women over 15 years of age more than doubling from 3% in 1997 to 7% in 2008/2009, even a mild level of iron deficiency impacts on women's cognitive function, quality of life and most importantly, pregnancy and birth (Ferguson et al., 2001; Gibson, Heath & Ferguson, 2002; MOH, 2006, 2008a; Russell, Parnell, & Wilson, 1999). Therefore, the current prevalence of iron deficiency amongst women across the developed world is concerning, and this is also impacting on women in Aotearoa

[5] See further references which detail the importance of nutrition for pregnant women. (Brabin, Hakimi, & Pelletier, 2001; Gibson, Heath & Ferguson, 2002; Greig, Patterson, Collins, & Chalmers, 2013; Haram, Nilsen, & Ulvik, 2001; Hercberg, Galan, Preziosi, & Aissa, 2000; Rasmussen, 2001; Wall et al., 2016)

(Blumfield, Hure, Macdonald-Wicks, Smith, & Collins, 2013; Broek, 2003; Greig et al., 2013; Kozuki, Lee, & Katz, 2012; C. Smith et al., 2013).

Zinc deficiency is another result of 'hidden hunger' increasingly common in Western diets. Like iron deficiency this is thought to be indicative of changing food consumption patterns (Gibson et al., 2001). A study in Dunedin found low levels of zinc among women who were of child bearing age (Gibson et al., 2001). There is also evidence of vitamin B12 deficiencies resulting from diets low in meat or animal products due to cultural practices or poverty, with significant impact during pregnancy on maternal and fetal wellbeing (Mearns, 2012). The response to hidden hunger in Aotearoa has been to achieve optimal nutrition through dietary supplementation however this 'nutritionalist approach' is unlikely to improve overall wellbeing, nor does it empower women to gain access to an appropriate and adequate diet (Davies et al., 2014). Rather than supplementation addressing poor dietary intake can address the cause of malnutrition (Gibson, Heath, & Ferguson, 2001; Gibson et al., 2001; Gibson, Heath, & Ferguson, 2002; Heath et al., 2001). Further papers also demonstrate how important long-term, high-quality diets are for women's health and wellbeing (Elias, 2007; Elias, 2011; Elias, & Green, 2007; Greig et al., 2013).

The rise of obesity is another outcome of poor nutrition. Obesity can be understood as a form of malnutrition resulting from a poor diet which has energy dense low-quality foods (Shetty, 2008). Obesity in a population is strongly linked to an obesogenic environment, where culture, employment opportunities, the local housing market and factors such as access to transport and healthy food impact on food accessibility and choices (Pearce & Dorling, 2006; Pearce et al., 2011). Particularly obesity in women is on the rise, from 20% of the population in 1997 to 27% in 2008 (Ministry of Health, 2008a). In South Auckland local obstetric guidelines have had to amend the application of the national referral guidelines due to the pressure on secondary care services. High numbers of obese and morbidly obese pregnant women now considered the 'new normal', and are regularly cared for within primary care services (Counties Manukau District Health Board, 2013). Within this context the application of food security and empowerment frameworks are highly relevant so as to gain a more nuanced understanding of why food insecurity particularly for women is increasing even as our food exports and GDP grows.

A national report submitted to the World Food Summit states that as an exporting nation "New Zealand as a country is not food insecure" (MFAT, 2008, p. 3). The report points to small pockets of poverty and hunger due to reduced access, with attempts to alleviate these through social welfare programs (MFAT, 2008). This stance posits that small pockets of individuals are unable to take advantage of a high level of food security in the population. This is broadly representative of how the prior government had responded to growing concerns around poverty and food security. Often within the health sector and sometimes within social welfare services food insecurity is understood as being due to poor choices, a deficit in education or budgeting skills, or an individual deficit in capacity (New Zealand Network Against Poverty, 2000). This explanation can further stigmatize and disempower vulnerable people and families.

1.4.1 Malnutrition & inequalities in Aotearoa

Malnutrition and inequality are linked, persistent and growing in Aotearoa. A sharp rise in inequality, especially income inequality, occurred after economic reforms in the 1980s which liberalised the economy (Parnell, 2001; M. Smith & Signal, 2009). The economy, formerly one of the most regulated in the world, quickly became one of most open. This liberalisation was enacted through the cessation of government subsidies, a change in focus from social to economic policies and removals of controls on wages, prices, and interest rates and the reform of taxation (M. Smith & Signal, 2009). The now globalised market meant that the domestic market competed internationally in terms of the price of foods and the cost of living. Due to reliance on trade and its small nation status Aotearoa continues to be vulnerable to globalisation which has not been mitigated by social policy (Pearce & Dorling, 2006). Reduced access to quality foods through a reduction in purchasing power has led to the growth of an obesogenic environment with increased consumption of nutritionally poor, cheap, energy dense foods for low income earners. Major modifiable causes of death in Aotearoa are high cholesterol, blood pressure and BMI, as well as inadequate vegetable and fruit intake (Laugesen & Swinburn, 2000; Stefanogiannis et al., 2005). A global survey found that in Aotearoa one in every six citizens ran out of money for food in 2011-12, a higher prevalence than in the US or Australia and foodbanks such as the

Auckland City Mission have been reporting record demand for their services (Collins, 2014; Wynd, 2005).

Concentrated areas of people of low socio-economic status highlight geographical inequalities that are increasingly causing tensions within communities and within health service provision (Pearce et al., 2011). The correlation between economic status, poor nutritional health, and poorer health outcomes established through global studies, align with patterns occurring in poorer areas of Aotearoa (Darmon, Ferguson, & Briend, 2003)[6]. Low socio-economic status impacts dietary choices and thus affects nutritional health (Bell et al., 1999; Block, Scribner, & DeSalvo, 2004; Rush, Puniani, Snowling, & Paterson, 2007). In a key Aotearoa midwifery textbook low socioeconomic status is itself seen as a major risk factor for iron anaemia and thus malnutrition (Boland & Gibbons, 2009; Elias, 2007; Elias, 2011). This demonstrates why hidden hunger is more prevalent within low socio-economic areas with implications for health practices in these areas – namely higher levels of supplementation is recommended and have had limited success in correcting some deficiencies (Elias, 2007; Elias, 2011).

The correlation of socio-economic status and ethnicity means a double burden is carried by ethnic minorities (Rush et al., 2007). For example, of Māori living in South Auckland 57% live in decile 9 and 10 rated areas (Wang & Jackson, 2008)[7]. For Pacific people in South Auckland 73% live in decile 9 & 10 areas (Wang & Jackson, 2008). For Pacific families when a new-born baby is brought home, 39.8% of Pacific families in a study from Auckland experienced a lack of money that meant they ran out of food at times (Rush et al., 2007). Areas of high socioeconomic deprivation in South Auckland have a corresponding increased prevalence of disease and hospital admissions, with rheumatic fever, sexually transmitted infections, respiratory tract infections, and asthma on the rise (CMDHB, 2013).

[6] Further references which evidence the correlation between economic status and poor health both in Aotearoa and globally. (Drewnowski & Darmon, 2005; Freisling, Elmadfa, & Gall, 2006; French, 2003; McKay, 2004; Metcalf, Scragg, & Davis, 2006; Ricciuto, Tarasuk, & Yatchew, 2006; C. Smith et al., 2013; Turrell & Kavanagh, 2006) (Carroll et al., 2011; Egger, Swinburn, & Amirul Islam, 2012; Laugesen & Swinburn, 2000; Morland, Wing, Diez Roux, & Poole, 2002; Pearce & Dorling, 2006; Pearce et al., 2011; Salmond, Crampton, King, & Waldegrave, 2006; Swinburn et al., 2011)

[7] The term decile refers to a geographical area or mesh block which has been given a decile rating according the relative socioeconomic deprivation of an area as reported in the New Zealand Index of Deprivation Report. Decile 1 represents the areas with the least deprived scores and 10 the areas with the most deprived scores.

This section has outlined how inequality, which has grown under neoliberal policies, impacts on nutrition, with evidence from research in Aotearoa.

1.4.2 Dietary advice

The response to increasing levels of malnutrition has been to target education and offer dietary advice within primary care services. For pregnant women, midwives are advised to tailor nutritional advice to meet the social, geographical, and economic constraints of women's lives (Elias & Green, 2007; Boland & Gibbons, 2009). There are several problems with this approach. Firstly, the complexities of dietary messages make the role of health professionals providing relevant, easily understood and clear dietary advice challenging. Tailoring advice to constraints within women's lives requires a high level of knowledge and expertise in motivational interviewing which is not part of the midwifery skill set. Furthermore even when delivered by a knowledgeable expert dated research from England found that while nutritional information increased women's knowledge it was unable to change eating behaviour (Anderson, Campbell, & Shepherd, 1995). New Zealand evidence also indicates a failure of dietary advice to improve outcomes (Brough et al., 2015; Morton et al., 2014; Wall et al., 2016; Yin, Dixon, Paterson, & Campbell, 2014). I argue that while providing tailored advice attempts to acknowledge the constraints in women's lives, it does not respond to the drivers which are disempowering women to achieve food security. Providing tailored dietary advice focusses on the woman as needing to make improved choices rather than viewing malnutrition as a consequence of marginalisation and injustice resulting from an unequal distribution of power (Anne C. Bellows & De Lara, 2016). Similar patterns can be seen globally in the provision of contraception or safe sex practices. Focussing simply on education does little to challenge or address the reasons why a person may not be able to put into action their new knowledge. Despite this dietary advice is still the dominant response to chronic malnutrition in the population, while robust social and political policies continue to be discussed their implementation does not appear to be likely.

1.5 Summary

In summary, research on women of child bearing age demonstrates how increasing levels of malnutrition is impacting on women's health, and this can explain increasing rates of obesity. Advice

for women must consider the socio-economic and geographical realities which affect women's access to an adequate diet. However dietary education and advice has failed to reverse negative dietary trends and it is suggested that this is due to increasing levels of inequality in which women have limited choices. The next chapter interrogates the food security literature which provides a framework to investigate how inequity of access especially for women impacts on nutrition. I will argue that this framework challenges the current discourse around malnutrition for pregnant women in Aotearoa. However, before this section I will next briefly outline the structure of this research report.

1.6 Research project outline

This research report is organised in seven chapters. Chapter 1 introduces the research problem and establishes the context in Aotearoa in which pregnant women are increasingly malnourished. Chapter 2 follows with a critical assessment of the food security literature. Particular attention is paid to food security in developed nations and the gendered elements of food security with greater impacts experienced by women. In Chapter 3 the empowerment literature is evaluated and the theoretical frameworks which will be drawn on in this study are assessed. Chapter 4 begins with an analysis of the SDGs and the universalist approach arguing that the SDGs are highly relevant to developed nations. Chapter 5 details the methodology for CDA analysis and identification of the articles. In Chapter 6 three key findings are detailed from the discourse analysis as well as one overarching theme, these findings are considered in relation to notions of empowerment from a food security approach. Concluding the report Chapter 7 identifies the way forward, finding that the SDGs can reframe the current discourse around malnutrition in pregnancy. This has the potential to improve outcomes for women with implications also for the focus of development.

Chapter Two: Conceptualising Food Security

> Different forms of malnutrition co-exist within most countries; while dietary risk affects all socio-economic groups, large inequalities exist in nutritional status, exposure to risk and adequacy of dietary energy and nutrient intake, between and within countries (Food & Argiculture Organisation of the United Nations [FAO] & WHO2014, p. 3).

2.1 Introduction

SDG 2 aims to "end hunger, achieve food security and improve nutrition, and promote sustainable agriculture" (United Nations, 2015a, p. 1). This presents a global problem which is far more complex than just how to feed more people. In order to achieve food security both countries and communities need to ensure everyone has access to sustainably produced, quality food which enable all to lead healthy and fulfilled lives (Tiffin, 2014). This process is inherently gendered and political (Papan & Clow, 2015).

This chapter is presented in 5 sections. Section 2.2 describes how food security has previously been conceptualised leading to current understandings of the term which is detailed in section 2.3. The consequences of food insecurity – malnutrition, hidden hunger and famine provides insight into how food insecurity can affect a given population and is outlined in section 2.4. Section 2.5 analyses how the literature conceptualises food security/insecurity in developed countries. Section 2.6 focus turns more directly to gender and food security by outlining the reasons why women are more often food insecure comparative to men. The conclusion reviews how this literature contributes to a discourse of food security as it is understood in SDG 2. This chapter answers research sub-question ii by describing the frameworks and theories behind SDG 2 and highlighting the challenges to its application in developed countries demonstrating also how this goal could change the discourse in development countries particularly Aotearoa.

2.2 Food security history & development

Food security has been central to the development agenda and the concept has been well interrogated within the academic and policy literature. The term food security was first used at the World Food Conference in 1974. This conference established an international agenda of forums and policies which defined the then global food crisis as occurring due to low food supply (FAO, 2003; Horton, 2009). In 1981, Sen, transformed this analysis by identifying poverty, capacity, and development as key to achieving food security. He stated that;

> Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there not being enough food to eat. While the latter can be the cause of the former, it is but one of the many possible causes (Sen, 1981, p. 1).

Sen acknowledged the importance of food availability but also problematizes causes related to access and utility such as food distribution, capacity, and equity. This work critiqued the assessment of food security during this period which relied on gross calculations dividing total food production by head of population to assess security status. Further analysis of food crises and famines supported Sen's findings, concluding that food crises are caused by problems of access to food as well as food production and supply (Devereux, 2006; Devereux, 2014; Maxwell & Slater, 2003; Ó Gráda, 2009). Table 2 outlines the development of the food security concept from the 1970s.

Table 2: Food Security Concepts From 1970

	Key concerns:	**Key concepts:**
1970s	• Malthusian fears about food supply unable to meet rapid population growth (Malthus, 1807). • Food crises in 1970s led to price hikes (Maxwell & Slater, 2003; Slater, Sharp, & Wiggins, 2008).	• Food availability and food production (Walters, 2015). • Self-sufficiency at the international and state level. • Food security calculated by dividing food production by calorie consumption per head of population (FAO, 2003, 2008).
1980s	• Famine caused by lack of equity in food allocation • Importance of different food types (Shetty, 2003; Prakash Shetty, 2009). • Chronic food insecurity vs transitory food insecurity (Pangaribowo, Gerber, & Torero, 2013) .	• Individual entitlements: the power of an individual or groups to access a quality diet as based on historical, social and economic determinants (Sen, 1981). • Food security is determined by purchasing power (Millennium Project Task Force on Hunger, 2004; The World Bank, 1986). • Economic growth with equal distribution and the processes that govern economies generate food security (The World Bank, 1986).
1990s	• Poverty eradication is critical to improve access to food. • Protein-energy malnutrition, food safety and minor nutrient requirements are key (Slater et al., 2008).	• Individual need access to full range of nutrients in their diet (Maxwell & Slater, 2003; Slater et al., 2008) . • Food security as series of practical actions (Millennium Project Task Force on Hunger, 2004) . • Food preferences, socially or culturally determined (FAO, 2003).
2000s	• Social deprivation. • Consumption and demand. • Sufficient access to quality foods as reflective of an individual's access to power i.e. economic power (Tiffin, 2014). • Physical access and affordability, safety and nutritional balance.	• All should be able to access and safe and nutritious diet (Reynolds, 2016). • Food distribution underlines access (Tacoli, Bukhari, & Fisher, 2013). • Focus on food policy. • Food sovereignty movement: people have rights to quality foods produced sustainably. • Food insecurity as a social and political construct (Devereux & Maxwell, 2001).

2.3 The food security framework

> Food security, at the individual, household, national, regional and global scales is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996, p. 1).

Resulting from this work since the 1970s is the robust and widely used definition established in 1996 by the FAO as well as the food security framework as described in Table 3. This definition of food security is the most useful and most frequently cited definition, it describes an extensive and complex understanding of food security. It specifies that food must be of a quality and quantity that allows everyone to meet their dietary needs and food preferences. This reflects the growth of the nutritional science field and includes the nearly two billion people globally whose lives and wellbeing are adversely impacted by malnutrition (Kristof, 2009; Shetty, 2008; Shetty, 2009).

Table 3: Food Security Framework: Four Pillars of Food Security

Availability:	Sufficient quantities of food are physically available. Determined by production, trade and stores.
Utility:	Appropriate use of food. Determined by safe food practices, preparation, and knowledge.
Access:	Sufficient economic and physical access to food for activity and health. Determined by resource allocation, food security and access to decision making power.
Stability:	Each of these three pillars requires permanency to ensure a food secure context can be maintained.

Sources: (FAO, 2008; Slater et al., 2008; Tacoli et al., 2013 ; Tiffin, 2014)

Further to meeting the definition of food security, a food secure context must also meet the four pillars of food security as per Table 3. That is a food secure context has sufficient availability of food, food is appropriately and safely used, there is sufficient access to sufficient quantity and quality of foods

and lastly these pillars are stable over time and seasons. This framework provides analysis of a given context which reveals underlying cultural, political, and economic factors which influence the four pillars of food security. This analysis can be further developed to reflect the distribution of access to power, for example purchasing power, political status, and capacity.

There have been a number of policy responses to food security across four scales of food security (global, national, household and individual). Table 4 summarises these food policy responses from the literature which have been established or are based on developing countries. The development of a national and strategic food policy response in developed countries has been yet to be widely /systematically adopted. These policies reflect the 1996 definition which requires the many scales of food security to be operating concurrently.

Table 4: Policy responses to food security

Scale:	Policy responses:
Global	• Strengthening intergovernmental agreements. i.e. SDGs and inclusion of food security framework in trade agreements and negotiations. • Building widespread public awareness of global food security concerns. • Strengthening advocacy organizations & increase civil society participation • Ensuring adequate monitoring and evaluation mechanisms for food security indicators. • Recognising a global concern for women, children and older persons. • Regulation of the food & nutrition industry. • Removing stigma and victim blaming for hungry/vulnerable people.
National	• Empower women and girls • Increase availability and access to micronutrient rich locally available foods. • Enhance the bioavailability of these micronutrients in the diet • Nutritional programs i.e. supplementation • Set the minimum wage as a living wage. • Collect accurate data to inform policies. • Monitor housing and living costs. • Development of national food security policy with national indicators and monitoring with an integrated policy response.
Community	• Improve nutrition for vulnerable groups. • Develop a life-cycle approach to ensure adequate nutrition at sensitive ages. • Decentralize data analysis, decision making & implementation by local communities working within a national guideline
Household	• Educational inputs and the promotion of the awareness of nutrition-related health problems. • Home based food production • Improve position of women within household decision making

Sources: (Bellows, Núñez, Lara, & Socorro, Babu & Pinstrup-Andersen, 1994; 2016; De Schutter, 2012a, 2012b, 2016; FAO & WHO, 1992)

2.4 Food insecurity

Simply put, the "absence of food security" for a portion of the population results in food insecurity (Millennium Project Task Force on Hunger, 2004, p. 33). Therefore, food insecurity is likely to be caused by inequity of access to sufficient and appropriate foods for vulnerable groups within a

food secure population. The section below explores how uncorrected food insecurity manifests initially as malnutrition for pockets of the population but can then lead to widespread food crises and starvation.

2.4.1 Malnutrition

Malnutrition can be understood as either over or under nutrition and is caused by insufficient foods as well as diets based on the wrong type or quantities of food (Shetty, 2008). Therefore, both obesity and stunting are forms of malnutrition. A more specific form of malnutrition is *hidden hunger*. Named because of its high impact but lack of visibility, hidden hunger refers to a form of malnutrition connected to micro-nutrient deficiency such as iodine, iron and vitamin A (James & Rigby, 2012; Kimura, 2013; Mourey & McMahon, 2012). Hidden hunger is thought to impact up to 2 billion people with implications for mortality and morbidity; however, it remains hidden due to the continued focus on hunger, calorie consumption, and quantity of foods (Slater et al., 2008).

Individuals experiencing hidden hunger are argued to be exhibiting signs of food insecurity linked to poor access (Popkin, 2006; Popkin, 2008; Popkin & Gordon-Larsen, 2004; Seligman, Bindman, Kanaya, Kushel, & Vittinghoff, 2007; Tiffin, 2014). An example of this was during the world food crisis in 2007 where prices for basic food stuffs rose drastically, impacting directly on the global poor. Studies of this food crisis provide evidence of a form of malnutrition in which calorie consumption remained constant, but poverty grew, dietary diversity was reduced, and child malnutrition increased (Headey et al., 2014). This shows that the consumption of fresh fruit and vegetables, which is directly related to socioeconomic status, is likely to decrease in food insecure contexts such as experienced during the 2007 food crisis (Bouis, Eozenou, & Rahman, 2011; Drewnowski & Darmon, 2005; Egger et al., 2012; French, 2003; Martin & Ferris, 2007; Parnell, 2012)

At the global scale, patterns of food production, supply and access have had a widespread impact on how people value, consume and conceptualise food (Tiffin, 2014). One example of this is 'The Nutrition Transition'. The Nutrition Transition describes a global shift where increased prosperity and urbanisation has led to a transition from traditional foods and physically demanding lifestyles to low-cost foods and sedentary lifestyles (Jha, Gaiha, & Deolalikar, 2014; Maxwell & Slater, 2003; Popkin, 2006; Popkin, 2008; Popkin & Gordon-Larsen, 2004; Slater et al., 2008; Tiffin, 2014). The rise

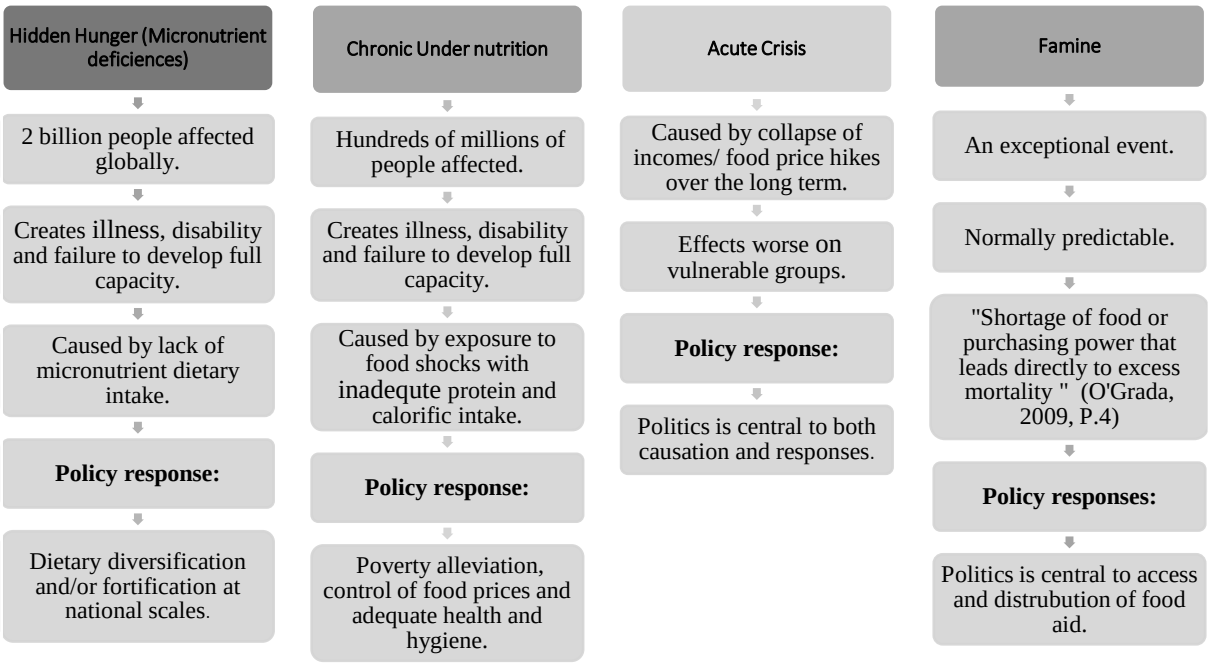
of NCDs (Non- Communicable Disease) such as diabetes and cardio vascular disease is linked to the nutrition transition with increased levels of malnutrition caused by the overconsumption of energy dense foods (Hawkes, 2005; Popkin, 2006; Popkin, 2008; Popkin & Gordon-Larsen, 2004; Slater et al., 2008). Now the majority of deaths in developed and developing nations are caused by NCDs with diet as a key risk factor (Smith & Signal, 2009).

However not all individuals grappling with the drivers of the nutrition transition are experiencing malnourishment. Individuals who can retain a high level of purchasing power and whom are empowered within their community and home environments can withstand fluctuations in global food prices to achieve adequate food access.

2.4.2 Malnutrition to food crises

Development literature has rigorously investigated how food insecurity leads to food crisis and famine (Devereux, 2006; Devereux, 2014; Shetty, 2008; Shetty, 2014; Young, 2012). Food crises was initially understood as non-political and caused by environmental crises, new understandings now point to politics and power as central to both causation and response. Figure 1 collates key aspects of the escalation of forms of food crises.

Figure 1: Forms of Food Crises



Sources: (Devereux, 2006; Devereux, 2014; Devereux, 2001; Headey et al., 2014; Herman, Kelly, & Wash, 2011; Millennium Project Task Force on Hunger, 2004; Shetty, 2008; Shetty, 2014; Slater et al., 2008; Ó Gráda, 2009)

A nutritional crisis develops through four stages: initially households adapt to preserve resources; they then limit food consumption, the household will then exploit all possible means of survival with severe food restrictions and finally, when all reserves are exhausted, mortality from malnutrition and infectious diseases occurs (Mourey & McMahon, 2012). Young children, elderly, chronically ill and pregnant and lactating women are the most nutritionally vulnerable to sharp price increases which affect access to food for those with low purchasing power (Martin & Ferris, 2007; Martin & Lippert, 2012). A developing food crisis will first present in these groups and if not corrected would spread across the population. Pockets of malnourished groups such as pregnant women therefore may be the first signs of a threatened or actual food crises developing, reflecting vulnerability across the food system (Headey, Oliver, & Trinh Tan, 2014).

2.5 Food Security as a developed country concern

> The absence of comprehensive statistics on food insecurity can be interpreted as non-recognition of the severity of food insecurity as a policy issue (Riches & Silvasti, 2014 in Arcuri, Brunori, & Galli, 2016, p. 1).

The study of food insecurity in developed countries runs counter to the rhetoric of prosperity, equality and egalitarianism which is central to many developed countries identities and political authenticity. But there is increasing food security concerns affecting vulnerable populations in developed countries (Bouis et al., 2011; Burchi, Fanzo, & Frison, 2011; Hawkes, 2005; Hawkes & Popkin, 2015; O'Brien, 2014; Graham Riches & Silvasti, 2014a). Developed countries often define food security as a temporal issue for small portions of the population. For example in Aotearoa the recent Minister of Social Development explained that, “some groups of people at some stages of their life can experience food insecurity” (Ministry of Social Development, 2002, p. 1). While it is clear that food insecurity in developed countries is not as severe and is present in smaller portions of the population than in developing countries, the data shows it is an increasing concern which is contributing to mortality (Bouis et al., 2011; Burchi et al., 2011; Hawkes, 2005; Hawkes & Popkin, 2015; O'Brien,

2014; Graham Riches & Silvasti, 2014a). Food insecurity issues in developed countries is often driven by lack of household income caused by rising rates of poverty and inequality (Bouis et al., 2011; Burchi et al., 2011; Hawkes, 2005; Hawkes & Popkin, 2015; O'Brien, 2014; Graham Riches & Silvasti, 2014a). The roll back of state responsibility for welfare provision and the absence of strong social policies which control costs such as housing are also contributing factors (Dowler, 2016). The proliferation in wealthy countries of a "complex and sophisticated" emergency food systems i.e. food banks, which "encompass a broad range of actors and resources" marks the failure of governments to provide the basics for citizens (Arcuri et al., 2016, p. 1). Alongside this failure to provide for citizens, governments have not developed strong national policy-based responses or when insecurity occurs effective monitoring systems to prevent or learn more about concerns and evaluate effective responses.

2.6 Gender and food security

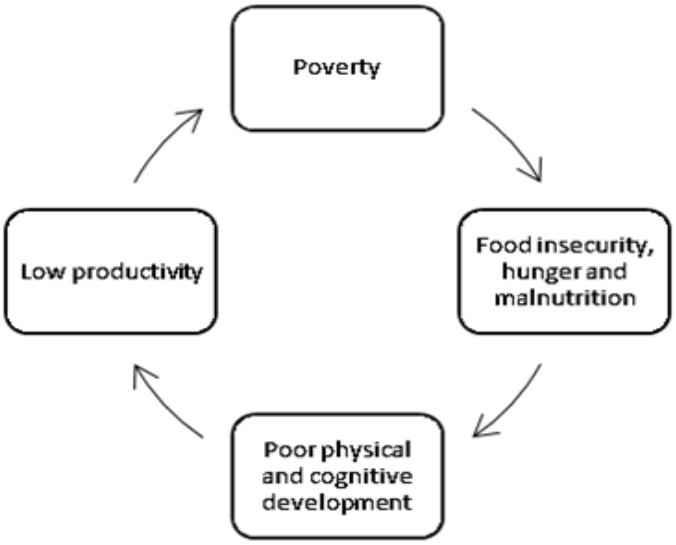
> Gender empowerment is the single most important determinant of improved nutritional outcomes: a cross-country study of developing countries covering the period 1970– 1995 found that … 55 percent of the gains against hunger during those twenty-five years [was attributable to] an improvement of women's situation within societies (Smith & Haddad, 2000 in Bellows & De Lara, 2016, p. xix).

In both developed and developing nations women are more likely to experience malnutrition and food insecurity (Martin & Ferris, 2007). Globally women are the key to attaining food security, they are the main producers of food as well as often being the primary food makers in the home (Allen & Sachs, 2012). However, women can have limited resources to buy food and reduced decision-making power over food. Thus, the problem of empowerment of women and the problem of food security are linked and are intergenerational with "maternal and child under-nutrition identified as the primary pathway by which poverty is transmitted from one generation to the next" (Qureshi, Dixon, & Wood, 2015, p. 395). The section to follow outlines the ways in which food security affects women. Specifically, I consider the literature in relation to women and hidden hunger before moving on to identify how the household or family unit impacts on women's ability to attain food security.

2.6.1 Women & hidden hunger

Women are normally able to maintain adequate calorific intake but when in crisis their ability to attain a high quality and nutritious diet, which is especially required for a healthy pregnancy reduces (Gibson et al., 2002). As levels of crises are heightened due to globalisation, there is increased pressure for women to participate within productive and formal roles to generate income. But as women are less able to procure pay equity they have reduced purchasing power comparative to men. This exposes female workers to a greater risk of food insecurity and to the poverty nexus as shown below in Figure 2. This figure shows how women experiencing malnutrition are even less able to generate income due to reduced cognitive ability, productivity and capacity caused by micronutrient deficiencies (Horton & Ross, 2003).

Figure 2: Poverty Nexus



Source: (FAO, 2008, p. 2)

Women can also be extremely time poor, as they are expected to manage multiple roles, Moser outlined women's many responsibilities and saw them as having 'triple roles' or a 'double burden'. She argued women's roles fall across reproductive, productive and community management roles (Moser, 1989). Because many women are time poor, this can lead to a change in diet to produced, packaged 'fast foods' as previously described as the nutrition transition. The poor nutritional value of these foods has led to growth in the nutritional field with a specific market focus "on the nutrient composition of

foods" with additives supplementing high energy, low nutritional value diets (Leach, 2012; Scrinis, 2013, p. 16). An example of this is fortification, where synthetically manufactured vitamins are added to foods. This is presented as a cost effective and marketable method of improving diets, however it bypasses women's role and status as providers of traditional meaningful foods as well as reducing the full benefit of foods such as fresh fruit and vegetables which contribute to a range of health benefits (Kimura, 2013; Patel, Bezner Kerr, Shumba, & Dakishoni, 2015). These narrow technical solutions which focus on food products, also neglect the social drivers of undernutrition (Patel et al., 2015).

2.6.2 Women, food & the household/family unit

While the term 'household' can reflect a number of different forms of family units, the household is primarily an economic unit involved in food preparation, consumption, and child rearing (Varley, 2008). The distribution of resources within a household depends on an individual's bargaining power and this can cause inequalities with both economic and social consequences (Quisumbing, 2003a). The household unit therefore is a particular site in which inequitable allocation of resources has a particular impact on women's nutritional intake due to social and cultural norms which discriminate against women (Brody, 2015).

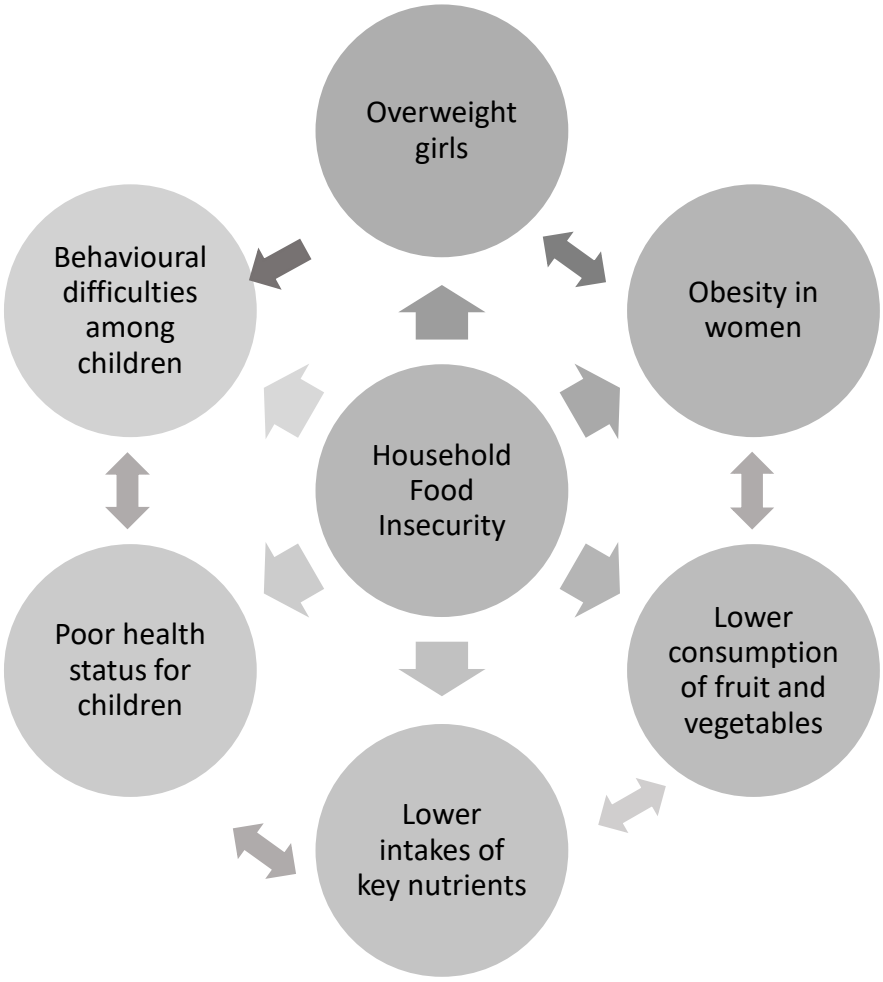
Inequitable intra-household allocation of food can often be enacted by women themselves. According to perceived need women will allocate more nutritious foods to infants or men, and in times of stress, will act as 'shock absorbers' restricting their own dietary intake (Brody, 2015; Hansford, 2010; Leach, 2012). In an example exploring the impact of drought in Zimbabwe in 1994/5 it was shown that women and girls nutritional status declined but men's remained unaffected (Quisumbing, 2003b). Furthermore, in poorer households, women with a lower level of status within that household were affected to an even greater extent (Quisumbing, 2003a, 2003b). This shows the important role of women in managing household food security and indicates how women's nutritional status can be an indicator of wellbeing for the wider population[8].

[8] While this is an example from the developing context there is a dearth of literature from developed countries – yet in many instances the point remains true.

The deleterious impact of household food insecurity on women and children is evident in the data from developing countries. Inequitable allocation of food can results in instances where a 'double burden' of malnutrition is occurring. This is where malnutrition in the form of under nutrition of infants and obesity of women exist within the same house (Hansford, 2010). However, households where key relationships are based on partnerships are the most food secure, even when income is lower (Lemke, Vorster, Jansen Van Rensburg, & Ziche, 2003). Patel et. al. describes a case study in Malawi in which chronically food insecure families were involved in a project to address high levels of domestic violence and alcohol abuse (Patel et al., 2015). This project facilitated a space which explored traditional gender roles and encouraged changes to these roles, for example, teaching men to cook (Patel et al., 2015). In-depth interviews with women following the project showed improved partnership in decision making processes, shared work in household tasks and improved health and happiness within the home. Most importantly malnutrition rates also declined (Patel et al., 2015). This local project suggests that by responding to root causes of inequality within the home, food security can be improved within a community and a region.

In developed countries food insecurity in the home can affect women in similar ways. There is some evidence to suggest women are shielding men from the effects of food insecurity in New Zealand by prioritising nutrient rich and more expensive foods for men and children and at times even going without (Parnell, 2001). Figure 3 outlines the consequences of household food insecurity in developed countries. This figure conceptualises how malnutrition effects women with increased consumption of high energy foods such as bread or simple carbohydrates resulting in reduced nutrient intake and increased levels of obesity for women in households which are food insecure (Allen & Sachs, 2012; Hansford, 2010; Inglis, Ball, & Crawford, 2005; Martin & Lippert, 2012; Papan & Clow, 2015). This partially explains data from developed countries in which dietary intake data for pregnant women did not reach recommended levels for folate, iron, or vitamin D, despite increased energy intakes reported (Blumfield et al., 2013). This interestingly supports the claim that both women in the developed and developing nations are more vulnerable to food insecurity and increasingly in both realms obesity is impacting on women differently to men.

Figure 3: Emerging Evidence of Household Food Insecurity



Source : (James & Rigby, 2012; Mourey & McMahon, 2012; Parnell, 2012)

This analysis has provided evidence of how global factors such as the nutrition transition has had different impacts on individuals within the same household based on gender and age (Jha et al., 2014). This indicates that power inequalities can increase food insecurity at the household level. Thus, this section has explained the prevalence of 'hidden hunger' through investigating the 'hidden pathways' which disempower women in attaining food security.

2.7 Conclusion

This chapter has answered in part research sub-question ii by describing the frameworks and theories behind SDG 2 and highlighting the challenges to its application in developed countries. This demonstrates how the SGDs could change the discourse in development countries particularly

Aotearoa. The food security literature has developed over time to conceptualise food security as reflecting social, political, economic, and cultural factors. However, developed countries face challenges with responding to food security as it often poorly monitored and remains largely unacknowledged. As highlighted in the literature there are numerous threats to our global food production systems, suggesting accurate analysis and investigations of at risk populations are required in order to provide warnings for growing food crises in both developed and developing countries (Headey, Oliver, & Trinh Tan, 2014; Young, 2012). The reduced abilities of women to achieve food security requires a response which recognises "the constraints women face, the adoption of measures that help relieve women of their burdens, and the redistribution of gender roles in the discharging of family responsibilities" (Asian Development Bank, 2013, p.101). Thus, a focus on women's empowerment is likely to be the most effective pathway to food and nutrition security in both developed and developing countries. The following chapter will therefore conceptualise empowerment of women and develop an empowerment framework for food security.

Chapter Three: Conceptualising Empowerment

Power always belongs to the one who can make himself the master of words

(Rist, 2009, p. 78).

3.1 Introduction

The concept of empowerment has emerged out of key debates which explored the role of women in development. The historical analysis of these debates constructs women's roles in various ways, revealing the hegemonic processes and cultural bias which have historically underlined development concepts (Escobar, 1999). This has had real world impacts on the place, role and wellbeing of women and how they have been theorised as development actors. This chapter critically explores the empowerment model as defined by Kabeer which presented a shift in development thinking. At this time, empowerment was seen as a vehicle for women's development, where women were conceptualised as both agents of change within their own lives, and as agents of development working within communities.

This chapter also answers research sub-question ii by describing the frameworks and theories behind SDG 5 and highlighting the challenges to its application in developed countries. This demonstrates how the SDGs challenge and transform the discourse in developed countries, specifically Aotearoa. This chapter develops an analysis of empowerment theories and frameworks which inform SDG 5 in three sections. Firstly, section 3.2 outlines the changes in development theory and practice since the proliferation of empowerment literature in 1970s. Secondly section 3.3 explores how an empowerment framework could be understood within Aotearoa. Section 3.4 concludes with Aotearoa's obligations and expectations as a member of the international community with regards to empowering women.

3.2 Women in development: the path to empowerment

> If there are going to be changes in the way people live we have to pull it all apart
>
> (Midwife, 2016).

Prior to the 1970s, women's role in development was largely unnoticed, with women only visible in their roles as housewives and mothers (Rowlands, 1995; Rowlands, 1996). Kabeer describes how in even in development theory women were barely mentioned during this time (Kabeer, 1994). This was so persistent that it is only in recent decades that women voices have become part of the development project, with "their aspirations and struggles for a future free of the multiple oppressions of gender, class, race, and nation" seen as a "basis for the new visions and strategies that the world now needs" (Sen & Grown, 1987, p. 10). This shift mirrored changing political, cultural and economic hegemonies across which women fought for change. It also exposes the role of cultural hegemony in informing the theories and policies of development literature.

Mirroring the growth of feminism, the UN was pressured to usher in the decade for women commencing in 1975 (Stewart-Withers, 2007). This decade was of importance for the growth and integration of women's movements and groups. It was also a period which established an international focus on policies, declarations, and conventions – particularly the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) 1979 of which Aotearoa is a signatory. Boserup's seminal text published in 1970 paved the way for the WID movement which sought to bring recognise the role of women as key development actors (Boserup, 1986). However, during the late 1970s the limitations of the WID approach which included women, but didn't reflect on their structural oppression, become evident (Rowlands, 1995; Rowlands, 1996). In an effort to refocus on the relational aspects to women's oppression the Gender and Development (GAD) approach emerged with a focus on cultural and socio-economic inequalities (Parpart, Rai & Staudt, 2003). Thus, the goal of successful and equitable development with women and men as equal decision makers required the empowerment of women through the transformation of these unequal relationships.

One of the earliest usages of the term 'empowerment' in the development space was in Gita Sen and Caren Grown's (1987) work whereby Southern feminists wrote about the need to challenge patriarchy and the race, class and global inequities which lead to the oppression of women (Parpart, 2008; Parpart, 1987). This early text focussed on the lived realities of women and the need for transformation through collective action and consciousness raising. Empowerment theory has continued to evolve, with further investigations into the nature of power within society. This focus on power is developed through Kabeer's conceptualisation of empowerment as consisting of *power within*, *power to* and *power with.* Kabeer defines empowerment as:

> Empowerment is the process by which a person previously denied the ability to make strategic life choices and to exercise influence gains the capacity to do so. Empowerment involves three elements: (1) the power within – that is, changes in how women view themselves; (2) the power to exert change more broadly within society; and (3) the power to join with other women and men to reinforce the momentum for change (Kabeer, 2010, p. 105).

Through this definition and framework Kabeer critiqued the dominant understanding of *power over* which operates from a static sum-zero perspective in which power was wielded over resources and taken from others (Kabeer, 1994; Parpart, 2008). Empowerment debates were focussed on re-distributing power across all realms of society including critiquing and reordering the development agenda. Table 4 outlines the three forms of power which underlie gender empowerment theory. This level of analysis explores power from women's perspectives rather than looking at social indicators of power and thus provides a more diverse and relational view of power. In this analysis power is a fluid process based on relationships rather than being held within institutions and positions.

Table 5: Empowerment Framework

Power within	Power to	Power with
• The power in an individual to gain self- confidence, self - understanding and see themselves as capable. • Reflection, analysis, and assessment to uncover social construction of blaming individuals for social ills.	• The power to act to exert change. • The ability to exercise choice, claim resources, agency, and achievement.	• Power to join with men and women to reinforce momentum for change. • Responds to structural and attitudinal barriers to change • To work with others to control resources, agendas and make decisions

Source: (Kabeer, 1994; Parpart, 2003; Rowlands, 1996; Stewart-Withers, 2007)

Initially seen by the mainstream as overly radical and destructive towards traditional cultures, during the 2000s the 'empowerment' concept became subsumed within development institutions. Empowerment became a common term and its meaning was reframed. Empowerment was now externally driven, measurable and adapted to a neoliberal theory which celebrates women in their roles as consumers/producers (Cornwall & Edwards, 2014). This new definition of empowerment, *empowerment lite,* developed external processes to meet external objectives which were said to achieve the empowerment of women (Cornwall, 2016). This conflicts with the original essence of the term which insisted that empowerment could not be bestowed by others. True empowerment lay in the relationship between a women's sense of self (*power within*) and her capacity to act (*power to)* (Cornwall & Edwards, 2014, p. 4). This intrinsic, individually based relationship between the self and agency was what fundamentally impacted on an individual women's access to resources (Cornwall & Edwards, 2014). This was an individual process of self-discovery and enlightenment which then led to an external refiguring of contexts of oppression. It could not be imposed from above. In comparison *empowerment lite,* operating at a larger scale, enabled women to live better, with greater access to education, healthcare and resources, however still within contexts of inequity and oppression.

3.3 Empowerment framework for food security

> When space and time allows women "will seek ways to challenge and change their situation of oppression"(Mosse, 1993, p. 170).

Globally, food security affects women differently to men (Brody, 2015). Food security data in Aotearoa mirrors this, with 19% of women food insecure compared to just 12% of men (Carter, Lanumata, Kruse, & Gorton, 2010). Therefore, a closer examination of how food security affects women is required. Building on the models of empowerment as theorised by Kabeer I have developed a framework for critically exploring the gendered aspects of food insecurity in Aotearoa.

Using Kabeer's understanding of the forms of power that underpin empowerment, and drawing from the food security framework, Table 5 conceptualises women's empowerment within a food security context. It focusses on women's internal state (*Power within*), their capacity to act to respond to food security concerns (*Power to*) and to respond to more structural concerns with others (*Power with*). The food security framework comprised of the four pillars; access, availability, stability, and utility from Table 2, each of which have gendered dimensions and require analysis forms the vertical axis. This framework focusses on self-empowerment as the key to gender equity where women articulate their own needs rather than having them predicted and met on their behalf. It investigates divergence, diversity, and complexity, 'to pull apart' women's perspectives and experiences of food security. This reveals the processes which empower/disempower women, to identify ways forward, with women at the centre of analysis.

Table 6: An Empowerment Framework for Food Insecurity

	Power within:	**Power to:**	**Power with:**
Availability	Women recognize their right to sufficient quality and quantity of food.	Women can meet their food needs for sufficient quality & quantity of food.	Women can make change with others to improve the availability of food within their communities nationally and globally.
Access	Women understand how their wellbeing is connected to adequate access to food.	Women can negotiate adequate food access within their families and communities.	Women can make change with others to respond to factors which affect their access to food.
Utility	Women are confident and able to utilize food to meet their needs.	Women have resources to develop their knowledge around food utility.	Women can work with others to improve food utility in their communities.
Stability	Women possess self-confidence & self-esteem to recognize and voice concerns.	Women can meet threats to food security in the short, medium, and long term.	Women can work with others to respond the food stability threats in their community.

3.4 Empowerment in Aotearoa: obligations & expectations

While the early focus of the empowerment literature was based on working at the grass roots, it became clear that global and national spheres also impact on the poorest of the poor and those who were most disempowered (Parpart, Raj & Staudt, 2003; Sen & Grown, 1987). The growth of international apparatuses such as CEDAW in the 'Decade of Women' provided new women's movements with global structures to appeal too. Prior to this attempts to promote women's rights through international legal instruments had done little to establish a global consensus on women's rights, to mainstream women's rights, or to globally enforce those rights (Sardar Ali, 2002). CEDAW provides this global consensus on women's rights with an accompanying arm which supervised adherence (United Nations Women, 1979). Equality is a key goal of CEDAW, which uses a holistic approach to addresses women's roles in development processes and thus provides an globalised empowerment framework (Cook, 1994).

As a signatory to both CEDAW and the SDGs the government of Aotearoa has international obligations to remove discrimination towards women. The government is required to provide a socio-legal framework for women's equality, abolish all existing discriminatory practices and to eliminate discrimination in the "social and cultural patterns of conduct of men and women" (United Nations Women, 1979, Article 5).

In the 8th CEDAW report, covering the period from March 2012 to March 2016, the government reported on its interpretation of its obligations with regards to equality, health, and empowerment of women. The reports states that the government is "committed to ensuring all women have the opportunity to realise their strengths and achieve social and economic success" (Ministry for Women, 2016, p. 2). It addresses the persistent pay equity gap by providing an explanation of the complexity of creating social change, and concerns around inequitable structures in society. The reports states that, "the remaining gap is driven not by a conscious disregard for the law, but by a complex mix of factors, such as occupational and vertical segregation, patterns of employment and unconscious bias" (Ministry for Women, 2016, p. 9). The report continues that, providing women with improved career opportunities and greater access to resources to enable them to advance their careers is the way forward (Ministry for Women, 2016).

The previous Minister for Women likewise made the case for the "equal participation of women in the labour market", and called for women to "further integrate within the workforce" in a recent health conference (Blue, 21st April, 2015). While the former minister recognised inequitable societal structures impacting on women's wellbeing the government policy was to encourage or force (through social welfare policy changes) women to integrate more fully within this environment (Blue, 21st April, 2015). Addressing issues of pay parity from this perspective has real world implications for women who seek equality but assert this right in a social context which requires them to integrate more within a recognised inequitable environment. This has impacts on women's sense of capacity, value, and self-esteem. It suggests an *empowerment lite* definition of empowerment which furthers a neoliberal agenda without challenging the drivers of oppression.

The reports comprehensively describes the position of women in Aotearoa. For health outcomes, equity is improving however there are still remaining gaps for Māori, Pacific peoples, people with disabilities and socioeconomically disadvantaged groups (Ministry for Women, 2016). This is due to exposure to different levels of health risks as well as access to, uptake of and experiences with health services (Ministry for Women, 2016). Further concerns for vulnerable women around food security and growing rates of inequality are not raised. Specific discussion of empowerment is mentioned only in terms of Aotearoa's role towards ensuring empowerment in developing nations. This suggests that despite inequitable outcomes for women within Aotearoa the empowerment concept is not considered applicable domestically. Therefore, while CEDAW presents an international obligation to remove discrimination towards women, the government's interpretation of women's empowerment limits this potential. Women in Aotearoa are navigating an increasingly globalised and inequitable society with growing instability and disempowering processes. Within this context both the SDGs and CEDAW present an opportunity for women to utilise the language of empowerment to their own benefit.

3.5 Conclusion

> We can't just keep doing what we are doing. We tell women, but they don't do things differently (Midwife, 2016).

This chapter has interrogated the role of women in development and the key advances in the literature which led to current understandings of empowerment. It has answered research sub question ii by describing the frameworks and theories behind SDG 5, and highlighting the challenges to its application in developed countries. This has demonstrated how the SDGs could change the discourse in developed countries, particularly Aotearoa. One example of this is the development of the framework for how food insecurity in Aotearoa can be viewed through an empowerment lens. An increased gaze on women in development has provided improvements for women but this has not always led to improved outcomes in the structural ways in which control over women's lives is maintained. This chapter provided evidence of how powerful framing of women and of empowerment within the

development discourse can exclude the voices and realities of women. The next chapter looks to the role of the SDGs as a new instrument of development.

Chapter Four: Development & the Sustainable Development Goals

4.1 Introduction

In September 2015 the then Minister for Foreign Affairs, Murray McCully, affirmed the government of Aotearoa's commitment to the newly established global development goals, stating that "New Zealand regards the achievement of the SDGs as a matter of fundamental importance" (McCully, 2015, p. 1). He set a challenge for "nations and organisations [to] do the hard work and make the hard calls that make the SDGs attainable" (McCully, 2015, p. 1). While acknowledging the importance of the goals for our Pacific neighbours, and Aotearoa's position as a leader in delivering overseas development, he did not comment on the central theme of universality underlining the goals and how this would apply within Aotearoa's domestic agenda. This government position failed to recognise the unique place of the SDGs which have been established as a universally transformative platform, in which the domestic policies of developed nations are a key focus. This marks a significant shift in development discourse, best summarised by the guardian article titled, 'The Sustainable Development Goals: We're all developing nations now' (Moore, 2015).

This chapter critically reviews the development of the SDGs and how the concept of universality came to the fore. The focus and spread of the SDGs specifically in relation to goals 2 and 5 and how these goals relate to the Aotearoa context are considered in section 4.3. Following from this, section 4.4 critically questions the government's stance on the goals. Lastly, an examination of the use of the SDGs as an advocacy tool highlights their potential role as an instrument of change.

4.2 The growth of the Sustainable Development Goals

The Millennium Development Goals (MDGs) achieved a reduction in extreme poverty for 1 billion people; a significant reduction in the proportion of undernourished people; and a 45% reduction in maternal mortality (since the 1990s) (United Nations, 2015b). Lessons learnt from the MDGs were fed into the development of the SDGs. This included a focus on tackling "root causes and do[ing] more to integrate the economic, social and environmental dimensions of sustainable development" as well as

the importance of targeting gender, economic inequality and the impacts of climate change (Ki-Moon in United Nations, 2015b, p. 4). The final MDG report recommended a global focus based on transformative change in order to respond to these global concerns (Osborn, Cutter, & Ullah, 2015). This marked the beginning of a universal focus from which the SDGs were developed. However this focus is not limited to only the globally recognised issues, all of the goals are to be understood as, "universal, indivisible and interlinked" (United Nations, 2015c, p. 31). While not yet widely critiqued in the academic literature, this 'universal, indivisible and interlinked' nature of the goals, presents a fundamental challenge for both developed nations and the nature of the development project itself (Osborn et al., 2015). The SDG rallying call of 'no one left behind', reflects these lessons and calls for a movement which recognises that in developed countries too - people are being left behind.

The SDGs were signed in 2015 by 193 countries (out of 195) after several years of negotiation. The development of the SDGs was a more representative and democratic process than the establishment of the MDGs. The Rio 20+ United Nations Conference on Sustainable Development initially established a resolution calling for an "inclusive and transparent intergovernmental process on Sustainable Development Goals that is open to all stakeholders" (United Nations Department of Economic & Social Affairs [UN DESA], 2012, p. 63). The UN also required this process to include, "the full involvement of relevant stakeholders and expertise from civil society, the scientific community and the United Nations system in its work, in order to provide a diversity of perspectives and experience" (UN DESA, 2012, p. 64). An Open Working Group (OWG) of the general assembly was tasked with this process in 2013. The OWG used an innovative constituency-based system of representation comprised of the 30 Member States (Open Working Group, 2012). The OWG then presented the 17 goals to the general assembly at its 68th session in 2014. This work resulted in a final document, *Transforming our world: the 2030 Agenda for Sustainable Development*, which was adopted at the UN Sustainable Development Summit in 2015.

The goals are of an extraordinary scope with 17 goals and 167 targets with further indicators which measure progress. They focus on poverty, health, education, and gender issues as global public goods, which are problematic in both developed as well as developing countries (Ki-Moon, 2014;

Hawkes & Popkin, 2015; United Nations, 2015c). While the SDGs are not legally binding, it is a requirement for all member states to develop "practicable ambitious national responses to the overall implementation of this agenda" (Osborn et al., 2015; United Nations, 2015c, p. 33). The practical implementation of the goals must account for "different national realities, capacities and levels of development as well as respect national policies and priorities" (Ki-Moon, 2014; Open Working Group, 2012; United Nations, 2015a; 2015c, Article 5; UN DESA, 2012). Governments are required to develop an ambitious approach and integrate these targets within existing national policies, processes and strategies (United Nations, 2015c).

There are many aspects of the SDGs which present challenges for developed countries. Firstly, there is an emphasis on equity for vulnerable groups which underlies all the SDGs. Goal 10, reduce inequality within and between countries, has a specific target, "By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average" (United Nations, 2015a, p. 1). This target, as well as goals around sustainable consumption and production, are in conflict with the economic model of growth, and social policy of many developed countries, many of which are reducing services for beneficiaries (Osborn et al., 2015; United Nations, 2015c).

Secondly, governments have a responsibility for reporting on and reviewing progress made which requires quality, accessible and timely data collection (Osborn et al., 2015). This level of accountability and visibility may be both technically and politically challenging for developed nations. The reporting mechanism challenges developed countries wider claims of having achieved a level of 'development' and prosperity. Comparing how citizens in developed nations fare in comparison to developing nations –could be used to influence and shame governments by advocacy groups, particularly in countries where inequality, poverty and climate change are actively repudiated (Osborn et al., 2015).

Lastly, the universalist approach of the SDGs which calls for the "widest possible international cooperation" sets a new challenge for developed nations to work with developing countries in a partnership (United Nations, 2015c, p. 9). Global solutions can be appropriated from developing nations

onto developed nations, destabilising the historical role of patronage between developed/developing nations (Moore, 2015). Having looked at how the SDGs have been formed and the possible impacts of the universal approach for developed countries, the following section explores unpacks the SDGs in Aotearoa as an example of how developed countries have responded to these challenges.

4.3 Sustainable Development Goals: relevance to Aotearoa?

Focussing on SDG 2 and 5 which set targets as to how nations should approach problems of food security and the empowerment of women, this section will focus on the most relevant targets for Aotearoa. While the goals and targets are highly applicable, see Table 6, below, the indicators are less so and it may be more appropriate in the NZ context to develop more relevant indicators by which the targets can be assessed.

Table 7: Sustainable Development Goals 2 & 5 with Relevant Targets for Aotearoa

Goal:	**Aim:**	**Key targets:**
Goal 2:	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
Goal 5:	Achieve gender equality and empower all women and girls.	5.1 End all forms of discrimination against all women and girls everywhere 5.2 Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Source: (United Nations, 2015a)

Goal 2 recognises that there is a global problem with "how we grow, share and consume our food" (United Nations, 2015a, p. 1). While most hungry people live in the developing world, the goal focusses on unsustainable food productions systems, malnutrition and overconsumption which directly respond to concerns in developed nations (Osborn et al., 2015). A key example of this is the target under

Goal 2 in which the "nutritional needs of adolescent girls, pregnant and lactating women" are required to be addressed (United Nations, 2015a, p. 1). Chapter 1 has already demonstrated how relevant this target is for women in Aotearoa. This target requires both specialists in nutrition and policy makers to think more broadly about solutions which address root causes of food security (Charlton, 2016).

Goal 5 aims to achieve equality and empower women and girls. The key targets for this goal are highly aspirational, for example both Targets 5.1 and 5C aim to end discrimination, gain gender equality, and achieve women's empowerment. However, critique has been aimed at the interpretation of empowerment within the SDGs which is seen to promote *empowerment lite*, with educational and economic goals at the centre of a female empowerment agenda. This conflates empowerment with a narrow set of economic returns that do not challenge the structural problems that women face as discussed in Chapter 3 (Denny, 2015). While this critique may prove accurate, the continued focus on empowerment is likely to be beneficial for women. The requirement of countries to gather sex and age disaggregated data is likely to reveal empowerment as a structural issue for women (United Nations, 2015c).

The SDG targets and indicators must be analysed to address those that are most relevant for Aotearoa and set an agenda which best captures the challenges for the country. The following section directly addresses the research question by identifying the current government discourse on the SDGs and identifying how the SDGs can influence this discourse.

4.4 Sustainable Development Goals: challenges and opportunities

> These are lessons about hard work and hard decisions, about choosing the right priorities and focusing on practical outcomes… you may be assured that New Zealand will play its full part. Governments and partners will need to …. move heaven and earth to make sure some of these projects are actually achieved (McCully, 2015, p. 1).

The previous government of Aotearoa had issued statements which declare strong support for the implementation of the SDGs as evidenced by Murray McCully the prior Minister for Foreign Affairs

and Trade (MFAT) (statement above). However, these statements are intended for the international sphere – relating to Aotearoa's position on aid and trade. Therefore – "choosing the right priorities" and "mov[ing] heaven and earth" is relegated to only international policies with little commitment demonstrated for aligning the SDGs with domestic policies by other portfolio holders within the previous government.

This recent position of the previous government has been assessed by reviewing the reporting documents submitted to the SDG platform. Official government reporting emphasises a focus on relationships in the Pacific with SDGs targets relating to sustainable fisheries, ocean environments, renewable energy, and the interests of Small Island Developing States (Barry, 2017b; Neilson, 2017; UNICEF, 2016). The MFAT website explains that international leadership on global policy issues, and supporting countries through the New Zealand Aid Programme is how Aotearoa will meet its SDG obligations (MFAT, 2017). In contrast to this the position on the domestic impact of the SDGs are much harder to find with only a smattering of broader and less specific statements across Aotearoa's government sites, documents, and policies. A summary of MFAT position statements in Table 7 reveal broad declarations which lack real information as to how voluntary national commitments have been registered, what they consist of, or (most importantly) what government agency is responsible for implementation and monitoring.

Table 8: Ministry of Foreign Affairs and Trade Statements on Sustainable Development Goals for Domestic Policy

MFAT statements on SDGs application to domestic policy:
"Government agencies are reviewing the goals and their alignment with existing government priorities"(MFAT, 2017, p. 1).
"Officials are currently working across different agencies to coordinate indicators and results measurement and reporting systems… to make a real difference"(Cooper, 2016, p. 1).
Through a joined-up approach, New Zealand will continue to prioritise efforts (Cooper, 2016, p. 1).
We have registered voluntary national commitments covering a range of the targets (Barry, 2017a, p. 1).

Former Deputy Prime Minister, Paula Bennett, identified SDG priorities as; growing the economy; improving living standards; health and education; creating jobs; increasing the supply of affordable housing; encouraging women in leadership; keeping our communities safe and protecting our environment (MFAT, 2017). However, how these priorities link with the specific goals and targets of the SDGs is not explained. They appear to be a continuation of existing government strategy and fail to align with the goals and targets themselves or even the underlying stance of the SDGs. This suggests a failure to fully engage with the goals across domestic policy. The current dissonance within the government's position indicates a potential point at which civil society can hold the government accountable to its promises. Noting this, Kawharu, (2017) calls for government to "signal priorities so that effort and direction" can be focussed on the SDGs for a unified response (Kawharu, 2015, p. 1).

4.5 The Sustainable Development Goals an instrument of change?

Given the slow-moving or non-existent stance of the government response in developed countries to the SDGs, various NGO groups and a small number of academics are working to highlight these issues. A report specially contracted by the UN to emphasis the universal design of the SDGs and the intention to target the domestic policy of developed nations states that due to already well-developed policies and welfare safety nets, the application of the SDGs requires "reforming existing policies", rather than "a more fundamental developmental challenge" (Osborn et al., 2015, p. 1). The following section looks at the argument for reforming existing policies vs. fundamental change made by NGOs and academics in Aotearoa.

The argument for 'a more fundamental developmental challenge' in developed countries is made by non-state actors like UNICEF. UNICEF, lobbied for fundamental changes to existing domestic policies in its key report which ranked outcomes for children in relation to the SDGs. (UNICEF Office of Research, 2017). The report concludes that the majority of rich countries are showing negative trends relative to key indicators such as - reducing inequalities, achieving good health and well-being (such as childhood obesity rates) and quality education (UNICEF, 2017). The "presence of countries such as Aotearoa and the United States in the bottom reaches of this league table is proof that high national income alone is no guarantee of a good record in sustaining child well-being" (UNICEF Office of

Research, 2017, p. 1). This report was widely published just prior to a national election with Aotearoa's low ranking in areas such as youth suicide becoming a key election issue (Fyers, 2017; Harris, 2017; Hollingworth, 2017; Maidaborn, 2017a, 2017b; Ramsey, 2017; Stone, 2017).

The failure to report on key measures and the poor ranking of Aotearoa compared to other developed countries was a key critique of the former government (Fyers, 2017; Harris, 2017; Hollingworth, 2017; Maidaborn, 2017a, 2017b; Ramsey, 2017; Stone, 2017). Concerns relating to the report were directed at government ministers during parliament oral question session as well as then deputy Labour leader, Jacinda Arden, using the report to attack the government with specific reference to the SDGs (Adern, 2017; New Zealand Parliament, 2017). In a further transformative call to action, UNICEF released a document which is summarised in Table 8 calling for change to the former government position. These examples indicate the increasing role of civil society and NGOs in using the SDGs to advocate for change.

Table 9: United Nations Children's Fund: Four Calls for Action on the Sustainable Development Goals

Four calls to action:
1. Translate the global goals into nationally relevant ones by setting its own national targets.
2. The government needs to determine who leads this process.
3.The government has a responsibility to share with New Zealanders its plans to implement and report against the SDGs
4. Public awareness of the 2030 Agenda is key to transparency, accountability, and good governance

Source: (UNICEF, 2016)

The argument for a 'reforming' approach was clear at a SDG Forum focussing on health and gender hosted by the New Zealand Parliamentarians' Group on Population and Development and attended by Family Planning New Zealand, New Zealand Treasury, Family Planning New Zealand, the Ministry of Foreign Affairs and Trade, and Hui E! (New Zealand Family Planning, 2017; NZ Parliamentarians on Population and Development, 2017). These discussions involved calling for refocussing on gender, using communities to add value and recognising that universal access to sexual

and reproductive health and reproductive rights is central to achieving the goals in Aotearoa and the Pacific. The meeting concluded that the presentations were very informative and interesting and required "further exploration by the NZPPD group" (New Zealand Family Planning, 2017, p. 1). With no goals or targets identified this group discussed existing practices seeking to align these with the SDGs rather than changing social policy and programmes. Either of these approaches could be used effectively to further the goals of the SDGs with these examples indicating how NGOs and civil society could become a considerable force in advocating for both conservative and fundamental change by using the SDGs as a global platform.

4.6 Conclusion

In conclusion, the SDGs represent a powerful push forward, building on the success of the MDGs. The strength of the SDGs is in the comprehensive approach of the 17 goals and 167 targets. The universalist approach presents a new way forward reflecting the democratic process behind the development of the SDGs as well as the necessity of a concerted global response to meet the distinctly global challenges of our time. The government of Aotearoa does not appear to have a fully formed response to the domestic requirements of the SDGs. However, it continues to reaffirm the value of the SDGs as well as the importance of Aotearoa's role in providing leadership. For the SDGs to work as they have been designed, the government needs to be held to account to ensure a cross governmental approach which meets Aotearoa's commitment, and there is some evidence to suggest that NGOs are working in this advocacy position. The SDGs represent a potentially transformative shift for developed nations to apply hard-learned developmental lessons and frameworks to complex and ingrained problems such as poverty, malnutrition and the empowerment of women (Kawharu, 2015). However, this will take a concentrated level of motivation and political focus (Hawkes & Popkin, 2015).

Chapter Five: Methodology

5.1 Introduction

This desk-based study uses Critical Discourse Analysis (CDA) to investigate the discourse surrounding malnutrition in pregnancy in Aotearoa. Due to the time and resource restrictions I have used an abridged form of CDA as illustrated in section 5.4.

A discourse is defined as "the social process in which texts are embedded" (Locke, 2004, p. 14). An example of this in healthcare is the construction of dominant health messages, hospital policies and health practices which make up a discourse within powerful institutions such as hospitals and professional colleges which directly affect health outcomes for women and families. The application of CDA reveals this discourse through "language as it is situated in a socio-historic context" which reveals the power relationships, assumptions, and bias (O'Leary, 2009, p. 270). As a discursive field, development theory is also interested in these relationships and thus CDA aims also marry with development aim.

This chapter establishes the methodology by which the discourse around malnutrition in pregnancy in Aotearoa will be analysed. Chapter 7 will conclude with an analysis of how this discourse can be compared with the literature review, thereby identifying how the SDGs can reframe this identified discourse.

5.2 Identifying articles

A wide literature search was initially conducted to collate the most relevant sources on malnutrition in pregnancy in Aotearoa. This identified a gap in the literature which consider critically malnutrition in pregnancy in Aotearoa. There is also a lack of research, government data and quality media publications which explore this issue. This is surprising given the high number of publications which are documenting the rise of NCDs, the connection between NCDs and dietary intake and an increasing body of literature which documents concerns about rising malnutrition for pregnant women and in the general population, see Chapter 1. This barrier to the research was overcome by including

analysis of a national online media platform, stuff.co.nz, and widening the search terms to include the wider subject of diet in pregnancy.

The three platforms chosen – media, government, and academia as well as the search tools used were designed to capture the limited data available. For each platform, the search terms were altered to allow for capture of the most relevant articles. See Appendix A for these search terms and the limitations of searches. The media platform, which used the search engine at stuff.co.nz, was problematic due to the high level of commentary on the website therefore social commentary and personal interest stories were omitted. Stuff.co.nz is highly relevant to capture the current public discourse as it hosts the websites for Fairfax's New Zealand newspapers, which reaches at least 2 million citizens each month (Fairfax Media, 2014; Wikipedia, 2017). The government and academic platform searches captured the health promotion discourse and information received by women from health providers as well as the current research drawn on by health professionals and the documents used to inform policy by the government. The following section describes the methodology for the text analysis.

5.3 Critical discourse analysis

CDA explores the relationship between language and power to reveal abuses of power and systemic inequalities in operation across society (Weiss & Wodak, 2002). It assumes that certain groups are privileged over others and if not sufficiently critical CDA itself may be implicated in the reproduction of forms of oppression (Locke, 2004). CDA theorists therefore aim to disseminate a critical awareness of language as a factor in domination (Fairclough, 1995). Particularly in health, discourse and narratives have powerful impacts. The language of health care and health promotion are established on a realm of assumptions around the subject, the problem, and the audience. These discourses rely on linguistic and sociological approaches. CDA conceptualises the role of discourse within society as both generating a 'problem' as well as providing a 'solution' the dualist nature of modern health systems are a prime example of this – the problem is often the patient or the disease with the solution being the doctor or medicine. This discourse operates in a reciprocal relationship with social institutions and structures, which replicate the framing of the discourse throughout society. This impacts on all of us but inequitably impacts on 'othered' groups especially indigenous people. Weiss

and Wodak further simplify this explanation by labelling discourse used in speech and text as a "social practice" which has a "dialectical relationship" with institutions and social structures (Weiss & Wodak, 2002, p. 13).

The social practice within text can by analysed to reveal assumptions and bias by:

1. Clarifying the theoretical assumptions with a text.
2. Identifying conceptual tools such as linguistics to identify connections with discourse and social structures or outcomes.
3. Define categories or "analytical concepts" which explain specific phenomena

(Weiss & Wodak, 2002, p. 13).

In order to apply this analysis I have to address my own "everyday assumptions, discursive practices and ideological propositions" (White, 2006, p. 173). In order to take a step back from the everyday Locke (2004) requests researchers to be distanced from the data, take a political stance and work from a self-reflective position(Locke, 2004). I have elaborated on my political stance and reflected on my motivations for this study in Chapter 1. The next section will detail how these points have been developed into text analysis tools.

5.4 Text analysis tools

For this project a CDA process has been developed drawing on work from a range of significant authors (Aldrich, Zwi, & Short, 2007; Fairclough, 1995, 2003; Janks, 1997; Locke, 2004; O'Leary, 2009; Weiss & Wodak, 2002; White, 2006). To practically apply the goals of CDA, I have asked these key questions of the texts:

1. How is the text positioned?
2. Whose interests are served by this positioning?
3. Whose interests are negated?
4. What are the consequences of this positioning? (Janks, 1997).

This analysis requires a two-step approach; firstly, a detailed analysis of sentence structures and words (specifically nouns and verbs), followed by a wider approach looking at themes (Fairclough,

1995). The goal of this analysis is to reveal the assumptions that form the ideological basis within the text, specifically:

1. Existential assumptions about what exists.

2. Propositional assumptions about what is, can, or will be.

3. Value assumptions about what is good or desirable (Fairclough, 2003, p. 55)

And secondly to reveal the ideological basis of the articles analysed, Jank's questions have been reframed to work within the limitations of this report:

1. What is the central theme in positioning the text? What is the 'problem' framed' as?

2. Who is the text directed to? Who is assigned responsibility for the 'problem'? (Janks, 1997).

To answer these questions an analysis of the texts looked at the use of pronouns, commonly repeated words, and phrases, as well as concepts and words omitted. Specific text analysis tools revealed patterns and themes in the text. Building on these key questions I have developed a table summarising Fairclough, Jenks and Locke textual analysis tools in Table 9.

Table 10: Text Analysis

Analysis of texts:
Identification of patterns, key words repeated which set up a "complex web of interconnectedness" across the discourse (Janks, 1997; Locke, 2004).
Identify how the social identity and relationships have been constructed (Fairlough in, Locke, 2004).
Analyse pronouns which stitch together the text and its meaning. This can identify who the 'problem' is directed to (Locke, 2004).
Assess the force of the text and its nature, as evidence of social and power relations (Locke, 2004, p. 47).
Identify the marginalised or hidden view through both the use of the words as well as the suppression of their opposites (O'Leary, 2009).
Identify which voices are included which voices significantly excluded? How are voices textured in relation to the authoritative voice? (Fairclough, 2003).
Identify ideological assumptions, what do authors commit themselves to in term of truth? What is an irrational assumption within the text? (Fairclough, 2003, p. 194)

Using this table I reviewed each document noting both consistencies and inconsistencies across the text. I marked sentences which summarised a key theme or the key findings of the document as well as key words which identified who the writing was directed at and how this group has been conceptualised. As I worked though the documents I noted distinct words and concepts were repeated often throughout the body of work. This repetition of common themes and words exposed a discourse which is surprisingly similar across the media, government, and academic realms.

I further developed this analysis by using quantitative analysis software to generate word clouds. MAXQDA software analysed all 30 of the documents and generated word clouds based on the frequency of word usage. Appendix C lists these results in table form. I also looked at the most common word associations which occur across each of the platforms. Appendix D lists common words which were removed from both results to increase the relevance of the findings.

5.5 Ethical concerns

Due to the desk-based nature of this research, ethical concerns required discussion and consideration rather than going through an Ethics Review Process. This research involves a subject which affects vulnerable women and their families. Therefore, an investigation of ethical concerns and a personal reflection on bias and research rigour is important. Massey University's Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants (MUHEC) is relevant and this section discusses how ethical considerations raised within this code have been met within this research report (Massey University, 2015).

Upholding Te Tiriti o Waitangi and its principles of partnership, protection and participation is especially relevant for research which investigates the health and wellbeing of citizens of Aotearoa. The desk based nature of this work means that direct partnership and participation is outside of the scope of this report. The principle of protection is directly relevant – MUHEC clarifies this as: "researchers actively protect Māori individual and collective rights, Māori data, Māori culture, cultural concepts, values, norms, practices and language in the research process" (Massey University, 2015, p. 5). This report has acknowledged this principal of protection by discussing research which examines the needs of Māori women and being mindful in terms of how the findings are presented so as not to re-stigmatise.

MUHEC requires researchers to explain any nature of personal conflicts in which the role of researcher may come into conflict with their professional interests. My professional role as a midwife, which was discussed more fully in the introductory chapter, means that I have an interest in prioritising the wellbeing of pregnant women within our society. I also have a range of professional experiences which can cause assumption and bias. However, as a researcher I am able to minimise this conflict by remaining as an "observer relieved of action" working from a perspective of 'second grade' critical constructions of discourse as one step back from the 'everyday discourse' within which I work (Weiss & Wodak, 2002, p. 11). I rely on personal reflection of bias and strong supervision to ensure that this conflict of interest is mitigated. To ensure rigorous research outcomes with CDA, critical reflective practice is essential. This requires paying attention to the values and assumptions which inform everyday practice as well as the personal impact of the researcher on the research process.

5.6 Conclusions

In conclusion CDA has been chosen as a research method as it is able to reveal power structures within the discourse which impact on health and health outcomes for pregnant women. The SDGs present an alternative framework to question this current discourse. This methodology has allowed me to identify the current discourse and narratives surrounding malnourished pregnant women in Aotearoa and the extent to which the frameworks of food security and empowerment in the SDGs provide an alternative and potentially transformative understanding. To remain highly critical this analysis requires an investigation of the political implications behind the 'social practice' of knowledge formation. The analysis of sources from media, government and academia is now presented in the following Chapter, Chapter 6.

Chapter Six: The Discourse: Nutrition for Pregnancy

> Midwives need to continue to be vigilant in educating women on the benefits of good nutrition and must also realise the limitation facing women which may prevent them from achieving this (Boland & Gibbons, 2009, p. 28).

6.1 Introduction

This chapter discusses the key findings from the application of CDA as described in Chapter 5. Three key findings have been identified which are reoccurring themes across the documents.

The three key findings are:

1. Pregnant women are singularly responsible for ensuring adequate nutrition.
2. A healthy pregnancy requires women to be educated to adhere to complex food guidelines.
3. The use of fear and monitoring of women to motivate adherence.

The texts analysed are surprisingly consistent across these key themes. Three of the texts include a 4th theme, by introducing the problem of access to quality foods for pregnant women (Boland & Gibbons, 2009; Ministry of Health [MOH], 2008b; Yin et al., 2014). However, all conclude that women require further education to achieve compliance with food guidelines, as identified within the three findings. This presents a tension which is demonstrated in the extract above from Boland & Gibbons (2009). While health professionals commonly recognise that women may be unable to achieve adherence to nutritional guidelines, there is still an expectation for women to comply. This discord highlights a further overarching or 'grand theme' which I have summarised as 'walking a tightrope' in which women are still required to achieve an unrealistic expectation and therefore can be set up to fail. The following sections discuss each of the three findings and conclude with a summary of how 'walking a tightrope' works to disempower pregnant women and reveals the power structures underlying the discourse around pregnancy and nutrition. These key findings answer research sub-question i, by identifying the current dominant discourse surrounding malnutrition for pregnant women in Aotearoa.

6.2 The discursive platforms: media, academia & government

As previously discussed, three different search platforms were used to identify key texts across the academic, media and government/policy disciplines. These three disciplines were chosen as the key sites at which a discourse is formed and replicated across society. Each of the disciplines seek to further agendas within the texts which make claims to truths (O'Leary, 2009). The following section will review the positioning of the texts within each discipline to identify how claims to truth are generated.

The media articles from the stuff.co.nz platform are consistently sensationalist and often use inflammatory and fear provoking language such as “diet overkill”, “can harm a growing baby” and “putting… their babies at risk” to engender an audience (Australian Associated Press, 2011, p. 1; Lambert, 2017, p. 1; Tasker, 2017, p. 1). In three of the media articles, women themselves are quoted discussing both their desires and difficulties during the pregnancy, advising other women as to how they should manage expectations admitting “overindulging in foods”, and being consumed with worry and anxiety (Essentialbaby.com.au, 2015, p. 1; Hartley, 2017; Warhurst, 2016). There is also contradictory information in the media texts reviewed which generates confusion and drama, creating a “confusing maze of dietary restrictions” which the media builds on to generate cheaply produced material (Corderoy, 2017, p. 1). This increases the stress on women navigating a dramatized discourse.

The government material falls into two fields. In the first field a clear health promotion agenda is directed at pregnant women, to clarify and detail a complex set of nutritional guidelines. The second field is to inform policy and health agendas by detailing key research which emphasises the importance of appropriate nutrition for the wellbeing of the pregnancy and the infant. This literature draws on the theme of the need to educate pregnant women to adhere to guidelines with the government positioned as the key authority of a complex and technical ‘problem’. Addressing pregnant women as isolated and autonomous individuals these guidelines are complex, only focus on pregnant women, and are designed to promote adherence.

The academic texts are the most diverse. Drawing from a range of academic and professional disciplines from midwifery to nutrition, the academic sources look at malnutrition in pregnancy from a variety of perspectives. While each research article has an agenda and a perspective on 'the problem' the articles still consistently ascribe to the three key themes identified. The academic nature of the work attributes importance to high quality data yet one included the voices of pregnant women in the text, with one further text investigating women's knowledge and beliefs about nutrition though a questionnaire (Okesene-Gafa, Chelimo, Chua, Henning, & McCowan, 2016; Paterson, Hay-Smith, & Treharne, 2016). This lack of engagement with pregnant women's voices indicates that the authority to describe 'the problem' rests with researchers.

When looking at the body of literature there is a limited discussion of food security despite the evidence showing concerns for women in Aotearoa over the last ten years (MOH, 2012). Malnutrition in pregnancy is consistently problematized as the responsibility of individual pregnant women rather than a national public health concern. This framing persists despite a uniform agreement across the texts that malnutrition in pregnancy is rising to concerning levels with impacts on infants extensively detailed. There is also a consensus that the current response is failing to improve women's wellbeing, despite this the three themes identified continue to frame the issue as one of personal responsibility and adherence to guidelines.

6.3 Quantitative text analysis results

Using MAXQDA analysis software the documents were also analysed quantitatively to assess both word frequency and most common word associations. See further tables listing the data on frequency in Appendix C. Commonly occurring words such as 'the' and numbers were removed to increase the usefulness of findings (See full list of removed words in Appendix D). In the word clouds for Figures 4-7 the size of the text corresponds directly to its frequency of use across the body of documents and the text placement is organised in alphabetical order. Figure 4 analyses all of the 30

documents demonstrating that the words ‘pregnancy’ and ‘pregnant’ together outweigh the references to ‘women’.

Figure 4: Word cloud Showing Word Frequency for All Documents

These results are further reflected in the thematic analysis in section 6.4 which follows. A further analysis of the texts looked at the most common word combinations of 3 words which had 3 or more letters. Across all 30 documents, ‘nutrition guidelines for’ was the most highly ranked, this is further discussed in section 6.5 and reflects the dominance of adherence to the nutritional guidelines as a key theme within the text.

Figure 5 shows the word frequencies across the 10 media documents – here again ‘pregnancy’ and ‘pregnant’ feature strongly. However, words such as ‘risk’, ‘avoid’ and ‘should’ feature more prominently in the media texts. This also concurs with the most common word combinations in these

documents which are – ‘The risk of’, this reinforces theme 3, further discussed in section 6.6, which describes the use of fear to motivate women to adhere to nutritional guidelines.

Figure 5: Word Cloud Showing Word Frequency for All Media Documents

In contrast to both previous word clouds for the academic texts in Figure 6, ‘pregnancy’ is the dominant word with ‘women’ far less often used. As well as this ‘dietary’, ‘intake’, ‘mg’ and ‘g’ also feature strongly as key words of interest. ‘The Ministry Of’ is the most frequent word combination followed by ‘college of midwives’ demonstrating the dominance of these institutions as authorities within the academic texts.

Figure 6: Word Cloud Showing Word Frequency across the Academic Documents

Lastly the government documents closely reflect the analysis of the full body of documents with women again being dominant as well as food. The most frequent word combination is ‘nutrition guidelines for’ again reflecting the broader body of texts.

Figure 7: Word Cloud Showing Word Frequency across the Government Documents

6.4 Theme one: pregnant women are singularly responsible for nutrition

Turning now to the three key themes. Theme one has been identified in answer to the CDA text analysis question from Chapter 5, 'who is the text directed to? Who is assigned responsibility?' Consistently across the body of documents pregnant women are the most referenced group. Health promotion texts from the government discipline are directed at pregnant women, 'you' and "your baby's health" with women being instructed that they "should" or "must" "choose" foods which "are best" to avoid a number of "risks" (MOH, 2017a, 2017b). In the academic texts the articles are directed at medical professionals or academics with the aim to change maternal diet during pregnancy (Watson & McDonald, 2009, p. 695). This singular focus on pregnant women when discussing nutrition during pregnancy does not take into account increasing research on the importance of preconceptual health as well as the role of paternal health as also impacting on infant outcomes (Davies et al., 2014).

6. 4.1 Framing identities of women who are pregnant:

Most of the articles refer to women as 'pregnant women' with the pregnancy itself denoting their status. Other subjects in the texts are described as "mums to be "or "pregnant kiwis" indicating that women are awaiting gaining a status as mothers and with the pregnancy itself the key identity in women's lives (Nakhle, 2015; Tasker, 2017). In contrast to this several academic articles describe the subject as, women who are pregnant or just women, indicating that womanhood is the primary identity of the subjects with the pregnancy existing alongside this identity (Boland & Gibbons, 2009; Okesene-Gafa et al., 2016; Wall et al., 2016; Yin et al., 2014). In three of the titles of the academic texts the subjects of the titles are maternal diet or the pregnancy thereby excluding women altogether as subjects (Brough et al., 2015; S. Morton et al., 2014; Wall et al., 2016). In the media and government texts only four reference pregnant women as the subject in the title with the 16 other texts deferring to the pregnancy itself as the subject of the article (Corderoy, 2017; MOH, 2008b, 2017a; Warhurst, 2016).

This dominant focus on the pregnancy as the key subject rather than women or pregnant women is also signified by the images which accompany the texts. Out of 10 articles which include photographs of pregnant women 80% of the articles have an image which crops the image to focus only on the pregnant uterus. Again this indicates that the subject of the text is the pregnancy itself as independent from women as whole citizens functioning within society. In contrast to this, two resources from the Ministry of Health show 'whole women' pursuing activities with other women indicating they perceive women as functional within a society (MOH, 2008b, 2017a). This suggests that the current discourse frames the primary identity of pregnant women in reference to the pregnancy rather than as fully participating and active women in society.

6.5 Theme two: a healthy pregnancy requires adherence to guidelines

Theme two has been identified in answer to the CDA text analysis question, *what is the central theme in positioning the text? What is the 'problem' framed' as?* Many of the texts prescribe the nutritional and food safety requirements women need to adhere to, to ensure a healthy pregnancy. These prescriptions include specific instructions for women who must "limit" or "avoid" unhealthy or unsafe foods (Food Standards Australia and New Zealand, 2016). The government and media texts discuss the

many complex and varied requirements required to achieve health. This advice is technical and specific down to the consumption of grams of micro and macro nutrients per day. Food is divided into food to avoid and foods which are best or healthier. This breakdown of food into grams, and good food vs bad food creates a rule book which abstracts the concept of health and nutrition into a calculation requiring management. Women's enjoyment of meals, the taste of food and spiritual or cultural meaning of foods is not emphasised as contributing to health and wellbeing in the texts.

The Ministry of Health nutritional guidelines is detailed in an 8-page booklet and includes many specific instructions, for example women should "eat … at least four servings of vegetables and two servings of fruit. If you do choose juice or dried fruit have no more than one serving per day" (MOH, 2017a, p. 1). Examples of what make up a serving of vegetables and fruit are detailed further. Perhaps the most confusing message is concerns around eating fish. Women are advised of the health benefits of seafood consumption, the risk of high levels of mercury, advised to limit consumption of fish with potentially high levels of mercury, very limited consumption of other fish and that recommendations may change over time (MOH, 2017a). These instructions require a high level of literacy, comprehension, and education to translate messages into everyday life.

6.5.1 Pregnant women as passive recipients of nutritional messages

As previously discussed pregnant women's identity as women and their voices within the texts are limited. The focus is instead on the 'voices of experts'. In the media articles the authority is often dieticians who justify their expert status by describing the complexities of eating the right foods during pregnancy. In the academic texts researchers analyse pregnant women's food frequency questionnaires and blood tests rather than discussing with women their knowledge and concerns around food and nutrition. These experts then describe the 'problem' as well as solutions based on these measures.

Several texts describe women as ignoring the guidelines, suggesting that they should be listening and compliant with the discourse rather than seeking active participation (Corderoy, 2017). Many of the texts recognise the failure of these nutritional messages and in response they call for, "women to be weighed more often", "women need to be given more information" and there needs to be

improvements to targeting specific groups of women more effectively (Tasker, 2017, p. 1; Wall et al., 2016, p. 1). Several texts hold women to account for "being mistaken over healthy diet" and for erroneous beliefs around 'eating for two' (Corderoy, 2017, p. 1; Hartley, 2017, p. 1). This framing posits that the authority is the researcher or the health professional who educate women as to what they should/should not eat with women failing to follow the guidelines. These are examples of how the discourse dictates acceptable behaviour to women rather than supporting them to improve diets during pregnancy.

6.5.2 Failure to adhere to guidelines leads to poor outcomes.

Most of the documents conclude that pregnant women's failure to adhere to these guidelines are leading to poor outcomes. Thus, defining women's behaviour as, 'the problem'. In contrast to this, some academic texts posit that 'the problem' is in meeting the extra nutritional demands of the pregnancy with adherence to the nutritional guidelines thus a necessity (Growing up in New Zealand, 2014; Davies, 2014). Thus, women are targeted as both the cause of the problem as well as the solution to the problem. If a failure to adhere to nutritional guidelines is the problem, then the solution is to work harder to get pregnant women to adhere. The literature positions pregnant women as requiring specific education around nutrition to generate this adherence (MOH, 2008b, 2014, 2016, 2017a, 2017b). Conversely many of the documents, both position education as the solution but also recognise its failure to create lifestyle change as documented in a number of studies (Davies, 2014)[9].

6.6 Theme three: fear & monitoring to motivate adherence

Many of the texts discuss the risks of failing to adhere to the nutritional guidelines. The repetition of the word 'safe' across most of the media documents suggests an action is required to ensure safety is maintained and that recommended action is always adherence to the guidelines. Specific instructions to women are focussed predominantly on the risk of harm to the baby and being 'on the safe side'

[9] Further references which detail the failure of education to improve lifestyles from the documents analysed. (Boland & Gibbons, 2009; Brough et al., 2015; Growing up in New Zealand, 2014; Morton, 2014; Okesene-Gafa et al., 2016; Paterson et al., 2016; Wall et al., 2016; Patricia E. Watson & McDonald, 2009; P. E. Watson & McDonald, 2010, 2014; Yin et al., 2014)

(Auckland District Health Board National Womens Health, 2017; Essentialbaby.com.au, 2015; Hartley, 2017; Ministry for Primary Industries, 2016; MOH, 2016; Nakhle, May 28th, 2015; Stephenson, 2017). There is no comment on the joy of motherhood or pregnancy or of the amazing achievement of women who can conceive, grow, and nurture healthy babies. There is no positive story where women achieve success in their pregnancies - even though most pregnancies have positive outcomes for mum and baby. Two articles have mothers specifically discussing their fears and their concerns in an emotional and dramatic discussion. One mother states "but more than anything I worried about the food I was putting into my mouth" this emphasis' a risk and fear based approach to healthy eating and overly dramatizes the risks of food safety and nutrition (Essentialbaby.com.au, 2015; Hartley, 2017). In this discourse the pregnancy is an abnormal life event which needs to be managed and becomes an issue of self-control and discipline. Women can "no longer enjoy" certain foods and should instead adhere, monitor and avoid or limit their eating (Australian Associated Press, 2011). The shifting and confusing narratives across the texts about what is permissible is emphasised and generates more fear with women, "doing something they are not really meant to" (Nakhle, May 28th, 2015; Stuff, 2017).

There is also a theme of monitoring women in their ability to adhere to guidelines. Pregnant women described feeling watched and having their decisions judged by people in society with comments like, "urgh look at her", "you'd get away with it" and an example of being told off by a midwife for being "naughty" (Paterson et al., 2016, p. 8). In one article a spokeswomen for Dietitian Association of Australia, admits that women "need to be very, very organised, and well-planned or have a strict diet" to meet the guidelines; she admits nobody in Australia is really meeting these guidelines but retains a high level of expectation that pregnant women will be able to conform to them (Corderoy, 2017, p. 1). The academic texts focus on monitoring women's nutritional status but only two explore with women their thoughts and beliefs around nutrition, indicating the importance of monitoring of, but not talking with women (Okesene-Gafa et al., 2016; Paterson et al., 2016).

6.7 Overarching theme: 'Walking a tightrope'

As previously defined a discourse is 'the social process in which texts are embedded" thus discourse is both establishing and creating meaning in the world (Locke, 2004). Critical discourse

analysis deepens this analysis by also revealing power structures which are being constructed and replicated (Fairclough, 1995). The phrase, 'walking the tight rope' describes a precarious situation, that demands careful and considered behaviour. This grand theme brings together the three themes found in the texts and reveals the power structures which position pregnant women in a vulnerable space of both being the target of an impossible expectation as well as not having a role or voice in responding to this situation. Thus, these discourses disempower women from providing responses to the very problems that researchers are seeking to answer. Research is increasingly dominant in health and healthcare practices but if the research and the wider discourses which surround its use are developed without reference to women's lived realities it can silence women and give an inaccurate portrayal of a context.

Reflecting further on this analysis it creates an expectation that women will be compliant and will follow instructions and directives. Thus further disempowering women's voices and identity which is also being subsumed by the pregnancy in the discourse. In comparison with the language and the frameworks of the SDGs from the previous chapters this discourse presents many points of conflict but also a chance to reframe how health professionals and the general public views nutrition in pregnancy. The potential for NGOs, health professionals and academics to work with frameworks identified in the goals of the SDGs to reframe this discourse could work to empower women's voices and focus on the importance of food security for women and their families from a national perspective as an issue of social and political policy. These key findings answer research question one, by identifying the current dominant discourse surrounding malnutrition for pregnant women in Aotearoa. Following from this, Chapter 7~~8~~ will answer question two by contrasting the current discourse with the frameworks identified in the SDGs.

Chapter Seven: Discussions, Challenges & Research Conclusion

You can't just have the knowledge you need to also have the belief (Midwife, 2016).

7.1 Introduction

This final chapter brings together the findings from Chapter 6 and the key points from the literature review in Chapters 1,2,3 & 4 to achieve the research aim and answer the research question. This concluding chapter will summarise the research approach and methodology and then discuss each of the research sub-questions in relation to findings for practice and finally how the research aim has been met.

The aim of the research was to critically assess the dominant discourse surrounding malnutrition experienced by pregnant women in Aotearoa with reference to the SDGs 2 & 5. The research question was: How can SDG 2 and 5, which seek to achieve 'food security' & 'women's empowerment,' reframe the dominant discourse on malnutrition of pregnant women in Aotearoa?

This was then broken down into two sub-questions:

i. What is the current discourse surrounding malnutrition of pregnant women in Aotearoa?

ii. Through the application of the Sustainable Development Goals 2 & 5 what challenges to this discourse become evident?

This research focused on the food security and empowerment frameworks and used critical discourse analysis to identify and review the current discourse. The literature review unpacked how the label of a 'developed nation' is overly simplistic in by identifying concerns with poverty and malnutrition in Aotearoa which challenge its developed nation status in Chapter 1. Chapter 2 & 3 critically reviewed the literature around food security and empowerment finding that the food security framework and an the empowerment framework which form the SDGs 2 & 5 are highly relevant for women in Aotearoa.

Chapter 4 concluded the literature review by describing the key aspects of the SDGs and identified the challenges for developed countries in implementing them. The next section will address each of the research sub-questions with discussion on the relevance for health practice, and to identify the wider issue of how the SDGs could potentially reframe the current discourse on pregnant women's malnutrition in developed countries.

7.2 Research sub-question 1

What is the current dominant discourse surrounding malnutrition for pregnant women in Aotearoa? This question was answered in Chapter 7. Three findings or themes found that, *pregnant women are singularly responsible for ensuring adequate nutrition; a healthy pregnancy requires women to be educated to adhere to complex food guidelines;* and t*he use of fear and monitoring of women to motivate adherence*. An overarching or 'grand theme' which is summarised as '*walking a tightrope*' found that women are expected to achieve unrealistic nutritional targets within the realities of everyday life. It was established that across a range of government materials, academic research and national media articles that there is a dominant discourse of individual responsibility. The proposed solution, most often discussed, was for improved education of pregnant women. This identified discourse is an example of the depoliticization of food insecurity which fails to address food distribution, food access, the commodification of nutrition, disempowering narratives of women and the need for accurate monitoring of food security in vulnerable portions of the population.

This has direct relevance for practice in health with assumptions and power structures behind these findings demonstrate that a solution needs to address the root causes which disempower women and impact on food security at the national and global level. The widespread and chronic nature of malnutrition in the developed world refutes the framing of malnutrition as an individual choice based problem and require a national political and social response.

7.3 Research sub-question 2

Through the application of the Sustainable Development Goals 2& 5 what challenges to this dominant discourse become evident? This question was discussed throughout the literature review

chapters which described the frameworks within the SDGs. The SDG frameworks reframe the 'problem' of malnutrition in pregnancy as one of food insecurity and disempowerment, which is distinctly political. The use of the food security and empowerment literature provides explanation of the problem of malnutrition in pregnancy linking into global research and globalised patterns which are affecting women. It allows for wider analysis of how global networks, institutions, and trade impact on wellbeing. It also provides policies and solutions which are informed by decades of theory and literature. This reframing of the current discourse enables a paradigm shift which would allow for the development of a national approach to food security which includes accurate monitoring and policies which tackle the root causes of food security for women in Aotearoa.

The measurement and understanding of food security concerns particularly in developed countries is limited. While there is considerable concern for parts of the population in many countries, food security is an issue where it is can be politically expedient to reduce concerns to reflecting individual deficit in capacity in the most vulnerable portions of a population. In conclusion the SDGs particularly, goal 2 & 5 provide a more nuanced understanding of the situation in Aotearoa which allows for a complex and in-depth look at the root causes of malnutrition in pregnancy from which political and social policies can be developed. This has implications for practice where the SDGs can be used by health professionals to appeal to more accurate analysis and a response which works to empower women from a food security perspective. The empowerment framework for food security provides an example for further research and for identification of local issues of food security in health practice.

7.4 Concluding statement & recommendations for further research

> Nutrition public policy must be linked to broader strategies that respect and empower non-discriminatory and economically secure livelihoods for all women and girls, and all men and boys…… nutrition policy must support and facilitate women's own plans— whether aligned to or separate from market-based nutrition products— for their own, their families', and their communities' nutritional health (Bellows, Lemke & Lara, 2016, p. 65).

This report has established that the current discourse around malnutrition in pregnancy is not working to resolve a chronic public health concern. Pregnant women as citizens require effective government action in the form of accurate monitoring, political and social policy provision which responds to problems of food security and empowerment to create transformative change. This approach views women as functioning citizens deserving of rights and of contributing to solutions rather than the narrow identity of women as seen in the discourse who are expected to conform and to *'walk the tightrope'*. This research provides an example of how the SDGs present an opportunity for developed nations to reframe and transform their approach to development in response to poverty and inequality.

7.5 Limitations & future research

As this was a desk-based methodology there was no engagement with women themselves or their families. A gap was identified within the research with a lack of research assessing the nutritional wellbeing of pregnant women which limited the conclusions being drawn in this report. It was beyond the scope of this report to assess the nutritional status of pregnant women, but this may be a useful area for further research.

Appendix A: Search Terms for Articles

Searches carried out in early July 2017

A.1 Academic articles

Search terms through Massey Discover platform: *"TI (New Zealand or Otago or Auckland) AND TI (Pregnant or pregnancy) AND SU (nutrition or food or food security or malnutrition or nutrients or deficiency diet or eating)"*

Limited to:

- First ten articles (order of relevance)
- 'Folate knowledge and consumer behaviour among pregnant New Zealand women prior to the potential introduction of mandatory fortification' – unable to find in English
- Limit to academic articles
- Limit to 2007-2017

A.2 Media articles

Search terms through google.co.nz news platform: *"nutrition OR diet OR malnutrition OR food OR security OR nutrients OR supplementation OR eating + "pregnancy "*

Limited to:

- Most relevant -celebrity, personal stories omitted.
- First 10 articles.
- Within New Zealand region only, under advance search settings.

A.3 Government articles

Search terms through google.co.nz - site: govt.nz: *"pregnancy" nutrition OR diet OR malnutrition OR food OR security OR nutrients OR supplementation OR eating"*

Limited to:

- First 10 articles
- Omitting repeats
- Omitted anything older than 2007

Appendix B: Articles Analysed

Table 11: Academic Articles

1.	Boland, R., & Gibbons, M. (2009). The cost of healthy eating for pregnant and breastfeeding women in Otago. *New Zealand College of Midwives Journal, 41*, 26-28.
2.	Brough, L., Jin, Y., Shukri, N. H., Wharemate, Z. R., Weber, J. L., & Coad, J. (2015). Iodine intake and status during pregnancy and lactation before and after government initiatives to improve iodine status, in Palmerston North, New Zealand: a pilot study. *Maternal & Child Nutrition, 11*(4), 646-655. doi:10.1111/mcn.12055
3.	Morton, S., Grant, C., Wall, C., Carr, P., Bandara, D., Schmidt, J., Camargo, C. (2014). Adherence to nutritional guidelines in pregnancy: evidence from the Growing Up in New Zealand birth cohort study. *Public Health Nutrition, 17*(9), 1919-1929. doi:10.1017/S1368980014000482
4.	Okesene-Gafa, K., Chelimo, C., Chua, S., Henning, M., & McCowan, L. (2016). Knowledge and beliefs about nutrition and physical activity during pregnancy in women from South Auckland region, New Zealand. *Australian and New Zealand Journal of Obstetrics and Gynaecology, 56*(5), 471-483.
5.	Paterson, H., Hay-Smith, E. J. C., & Treharne, G. J. (2016). Women's experiences of changes in eating during pregnancy: A qualitative study in Dunedin, New Zealand. *New Zealand College of Midwives Journal*(52), 5-11.
6.	Wall, C. R., Gammon, C. S., Bandara, D. K., Grant, C. C., Atatoa Carr, P. E., & Morton, S. M. B. (2016). Dietary patterns in pregnancy in New Zealand-influence of maternal socio-demographic, health and lifestyle factors. *Nutrients, 8*(5) 300. doi:10.3390/nu8050300
7.	Watson, P. E., & McDonald, B. W. (2010). The association of maternal diet and dietary supplement intake in pregnant New Zealand women with infant birthweight. *European Journal of Clinical Nutrition, 64*(2), 184-193. doi:10.1038/ejcn.2009.134
8.	Watson, P. E., & McDonald, B. W. (2009). Major influences on nutrient intake in pregnant New Zealand women. *Maternal And Child Health Journal, 13*(5), 695-706. doi:10.1007/s10995-008-0405-6
9.	Watson, P. E., & McDonald, B. W. (2014). Water and nutrient intake in pregnant New Zealand women: association with wheeze in their infants at 18 months. *Asia Pacfic Journal of Clinical Nutrition, 23*(4), 660-670.
10	Yin, S., Dixon, L., Paterson, H., & Campbell, N. (2014). New Zealand LMC midwives' approaches to discussing nutrition, activity and weight gain during pregnancy. *New Zealand College of Midwives Journal,* 50, 24-29.

Table 12: Media Articles

1.	Australian Associated Press. (2011). *Pregnancy diet overkill*. Retrieved from https://www.stuff.co.nz/life-style/4906565/Pregnancy-diet-overkill
2.	Corderoy, A. (2017). *Pregnant women 'mistaken' over healthy diet*. Retrieved from http://www.stuff.co.nz/life-style/parenting/71150687/pregnant-women-mistaken-over-healthy-diet
3.	Essentialbaby.com.au. (2015). *10 foods for a healthier pregnancy*. Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/expecting/69088493/10-foods-for-a-healthier-pregnancy
4.	Hartley, J. (2017). *Overeating in pregnancy: no more 'eating for two'*. Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/expecting/68407024/overeating-in-pregnancy-no-more-eating-for-two
5.	Lambert, C. (2017). *Eating in pregnancy: What's off the menu*. Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/84204237/eating-in-pregnancy-whats-off-the-menu
6.	Nakhle, A. (2015). *Pregnancy 'don'ts' - are they that different around the world?* Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/68914590/pregnancy-donts--are-they-that-different-around-the-world
7.	Stephenson, C. (2017). *Why iron is important during pregnancy and how to get enough*. Retrieved from http://www.stuff.co.nz/life-style/well-good/teach-me/91922774/why-iron-is-important-during-pregnancy-and-how-to-get-enough
8.	Stuff.co.nz. (2017). *Common probiotic may help reduce diabetes in pregnancy, study finds*. Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/91177691/common-probiotic-may-help-reduce-diabetes-in-pregnancy-study-finds
9.	Tasker, B. (2017). *Half of mums-to-be gain too much weight*. Retrieved from http://www.stuff.co.nz/life-style/parenting/pregnancy/93403337/half-of-mumstobe-gain-too-much-weight
10.	Warhurst, L. (2016). *Pregnant women told 'don't take fish oil' after 'dramatic' finding*. Retrieved from http://www.newshub.co.nz/home/health/2016/07/pregnant-women-told-dont-take-fish-oil-after-dramatic-finding.html

Table 13: Government Articles

1.	Growing up in New Zealand. (2014). *Nutrition and physical activity during pregnancy: evidence from Growing Up in New Zealand*. Retrieved from http://www.superu.govt.nz/publication/nutrition-and-physical-activity-during-pregnancy
2.	Auckland District Health Board National Womens Health. (2017). Eating Guidelines. *Maternity Services – eating well during pregnancy.* Retrieved from http://nationalwomenshealth.adhb.govt.nz/services/maternity/pregnancy-advice/eating-well
3.	Ministry for Primary Industries. (2016). *Food and pregnancy*. Retrived from https://www.mpi.govt.nz/food-safety/pregnant-and-at-risk-people/food-and-pregnancy/
4.	Food Standards Australia and New Zealand. (2016). *Pregnancy and healthy eating*. Retrieved from http://www.foodstandards.govt.nz/consumer/generalissues/pregnancy/Pages/default.aspx
5.	MOH. (2008b). *Food and Nutrition Guidelines for Healthy Pregnant and Breastfeeding Women: A background Paper*. Wellington: Ministry of Health.
6.	MOH. (2014). Healthy weight gain during pregnancy. Retrieved from http://www.health.govt.nz/your-health/healthy-living/food-and-physical-activity/healthy-eating/healthy-weight-gain-during-pregnancy
7.	MOH. (2016). Eating safely and well during pregnancy. *Helpful advice during pregnancy.* Retrieved from http://www.health.govt.nz/your-health/pregnancy-and-kids/pregnancy/helpful-advice-during-pregnancy/eating-safely-and-well-during-pregnancy
8.	MOH. (2017a). *Eating for Healthy Pregnant Women/Ngā Kai Totika mā te Wahine Hapū*. Retrieved from https://www.healthed.govt.nz/resource/eating-healthy-pregnant-womenng%C4%81-kai-totika-m%C4%81-te-wahine-hap%C5%AB
9.	MOH. (2017b). *Folic acid, iodine and vitamin D*. Retrieved from http://www.health.govt.nz/your-health/pregnancy-and-kids/pregnancy/helpful-advice-during-pregnancy/folic-acid-iodine-and-vitamin-d
10.	Davies, P., Funder, J., Palmer, D., Sinn, J., Vickers, M., & Wall, C. (2014). *Early life nutrition the opportunity to influence long-term health*. Retrieved from http://earlylifenutrition.org/pdf/EarlyLifeNutrition_FINAL.pdf

Appendix C: Quantitative Text Analysis

Table 14: Figures Showing Word Frequencies from All Documents Analysed:

Word	Frequency	%	Rank	Documents %
women	1979	1.64	1	96.67
pregnancy	1567	1.30	2	96.67
food	1200	0.99	3	93.33
pregnant	1026	0.85	4	96.67
health	1007	0.83	5	96.67
nutrition	803	0.67	6	60.00
intake	723	0.60	7	50.00
weight	565	0.47	8	63.33
vitamin	558	0.46	9	56.67
dietary	547	0.45	10	60.00
maternal	523	0.43	11	53.33
healthy	522	0.43	12	86.67
should	502	0.42	13	83.33
foods	467	0.39	14	83.33
g	421	0.35	15	50.00
risk	413	0.34	16	90.00
mg	385	0.32	17	30.00
guidelines	380	0.31	18	60.00
energy	372	0.31	19	40.00
intakes	331	0.27	20	36.67
eating	325	0.27	21	76.67
diet	323	0.27	22	66.67
iron	315	0.26	23	33.33
iodine	293	0.24	24	36.67
associated	279	0.23	25	36.67
ministry	276	0.23	26	80.00
fat	273	0.23	27	56.67
infant	272	0.23	28	33.33
recommended	272	0.23	28	66.67
eat	265	0.22	30	66.67
percent	264	0.22	31	40.00
gain	262	0.22	32	50.00
infants	248	0.21	33	40.00
activity	239	0.20	34	30.00
alcohol	238	0.20	35	53.33
birthweight	235	0.19	36	16.67
advice	234	0.19	37	50.00
birth	233	0.19	38	63.33
nutrient	230	0.19	39	40.00

age	225	0.19	40	50.00
fruit	225	0.19	40	53.33
breast	222	0.18	42	20.00
group	216	0.18	43	56.67
increased	216	0.18	43	60.00
vegetables	216	0.18	43	66.67
servings	208	0.17	46	43.33
number	205	0.17	47	50.00
fish	201	0.17	48	70.00
pacific	201	0.17	48	30.00

Table 15: Figures Showing Word Frequencies from Media Documents

Word	Frequency	%	Rank	Documents %
women	86	1.89	1	90.00
pregnancy	72	1.58	2	90.00
pregnant	64	1.41	3	90.00
fish	45	0.99	4	70.00
eat	37	0.81	5	70.00
food	37	0.81	5	80.00
eating	32	0.70	7	70.00
risk	30	0.66	8	80.00
says	30	0.66	8	60.00
she	28	0.62	10	70.00
health	27	0.59	11	90.00
said	26	0.57	12	50.00
should	25	0.55	13	80.00
weight	25	0.55	13	40.00
advice	23	0.51	15	50.00
healthy	22	0.48	16	70.00
need	22	0.48	16	70.00
alcohol	21	0.46	18	50.00
avoid	21	0.46	18	60.00
baby	21	0.46	18	50.00
gain	18	0.40	21	30.00
some	18	0.40	21	70.00
raw	17	0.37	23	30.00
research	17	0.37	23	70.00
guidelines	16	0.35	25	60.00
sushi	16	0.35	25	40.00
diet	15	0.33	27	50.00
do	15	0.33	27	70.00
drink	15	0.33	27	30.00
foods	15	0.33	27	70.00

meat	15	0.33	27	60.00
enough	14	0.31	32	40.00
just	14	0.31	32	60.00
half	13	0.29	34	50.00
babies	12	0.26	35	50.00
diabetes	12	0.26	35	30.00
dr	12	0.26	35	60.00
fruit	12	0.26	35	30.00
good	12	0.26	35	70.00
including	12	0.26	35	30.00
salmon	12	0.26	35	40.00
university	12	0.26	35	60.00
well	12	0.26	35	70.00
certain	11	0.24	44	60.00
drinking	11	0.24	44	40.00
many	11	0.24	44	60.00
mercury	11	0.24	44	50.00
might	11	0.24	44	20.00
much	11	0.24	44	50.00
only	11	0.24	44	70.00

Table 16: Figures Showing Word Frequencies from Academic Documents

Word	Frequency	%	Rank	Documents %
pregnancy	534	1.41	1	100.00
women	406	1.07	2	100.00
health	301	0.80	3	100.00
intake	264	0.70	4	77.78
dietary	253	0.67	5	88.89
weight	219	0.58	6	77.78
mg	210	0.56	7	44.44
maternal	206	0.55	8	100.00
g	199	0.53	9	100.00
food	197	0.52	10	100.00
nutrition	195	0.52	11	100.00
eating	182	0.48	12	66.67
pregnant	175	0.46	13	100.00
iodine	169	0.45	14	22.22
associated	135	0.36	15	77.78
nutrient	129	0.34	16	88.89
healthy	126	0.33	17	100.00
intakes	126	0.33	17	66.67
diet	125	0.33	19	88.89
median	118	0.31	20	66.67

mean	117	0.31	21	77.78
data	116	0.31	22	100.00
activity	115	0.30	23	44.44
birthweight	114	0.30	24	33.33
midwives	103	0.27	25	44.44
age	98	0.26	26	88.89
energy	98	0.26	26	66.67
group	96	0.25	28	100.00
pattern	95	0.25	29	33.33
vitamin	86	0.23	30	55.56
gain	85	0.22	31	66.67
number	82	0.22	32	100.00
wheeze	82	0.22	32	11.11
less	81	0.21	34	100.00
participants	81	0.21	34	55.56
would	81	0.21	34	66.67
bmi	79	0.21	37	77.78
status	79	0.21	37	66.67
being	78	0.21	39	100.00
association	77	0.20	40	77.78
patterns	76	0.20	41	33.33
risk	76	0.20	41	88.89
significant	76	0.20	41	66.67
using	76	0.20	41	100.00
education	75	0.20	45	88.89
infant	74	0.20	46	55.56
birth	73	0.19	47	77.78
subjects	73	0.19	47	44.44
only	72	0.19	49	100.00
smoking	71	0.19	50	66.67

Table 17: Figures Showing Word Frequency from Government Documents:

Word	Frequency	%	Rank	Documents %
women	1482	2.03	1	100.00
food	953	1.30	2	100.00
pregnancy	948	1.30	3	100.00
pregnant	784	1.07	4	100.00
health	676	0.92	5	100.00
nutrition	603	0.82	6	50.00
vitamin	463	0.63	7	70.00
should	460	0.63	8	80.00
intake	456	0.62	9	60.00
foods	403	0.55	10	100.00

healthy	361	0.49	11	90.00
maternal	314	0.43	12	40.00
weight	312	0.43	13	70.00
risk	304	0.42	14	100.00
guidelines	297	0.41	15	70.00
dietary	286	0.39	16	60.00
iron	284	0.39	17	30.00
energy	269	0.37	18	40.00
percent	241	0.33	19	20.00
recommended	241	0.33	19	90.00
g	222	0.30	21	60.00
ministry	209	0.29	22	100.00
fat	205	0.28	23	70.00
intakes	204	0.28	24	40.00
alcohol	200	0.27	25	70.00
infant	198	0.27	26	50.00
breast	192	0.26	27	20.00
eat	188	0.26	28	80.00
infants	186	0.25	29	40.00
diet	182	0.25	30	60.00
servings	181	0.25	31	80.00
fruit	180	0.25	32	80.00
vegetables	177	0.24	33	90.00
mg	175	0.24	34	50.00
aged	169	0.23	35	40.00
ma¯ori	169	0.23	35	10.00
advice	162	0.22	37	50.00
pacific	161	0.22	38	30.00
increased	160	0.22	39	60.00
use	155	0.21	40	70.00
likely	153	0.21	41	80.00
birth	152	0.21	42	80.00
products	151	0.21	43	80.00
gain	150	0.21	44	50.00
growth	149	0.20	45	60.00
deficiency	147	0.20	46	40.00
associated	144	0.20	47	40.00
development	144	0.20	47	70.00
meat	141	0.19	49	90.00
folic	139	0.19	50	80.00

Appendix D: Common Words Removed from Text Analysis

a	for	P
about	found	Paper
acid	from	pc9kaxy
al	groups	per
albert	had	pha
alison	has	pre
all	have	r
also	high	re
an	i	Ref
and	if	ref
are	In	s
as	in	see
at	is	so
background	it	study
be	J	such
because	Journal	t
been	l	Table
between	last	than
breastfeeding	low	that
but	M	The
by	may	the
C	milk	their
can	more	them
could	most	there
cutfield	n	these
D	New	they
day	no	this
doi	not	thisstudy
DOI	NZ	to
don	nz	too
during	o	two
e	of	was
each	on	water
et	one	were
when	or	with
which	other	years
while	out	Zealand
who		

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