The Health Select Committee's inquiry into Obesity and Type ll Diabetes - examining the Nursing response

Brighid McPherson

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Primary Supervisor: Deborah Payne

Abstract

Like almost every developed and developing country New Zealand is faced with an increasing health burden in respect of obesity and type ll diabetes. Physical activity and nutrition initiatives play an increasingly important role in combating the effects of obesogenic environments, yet these approaches fall outside the traditional boundaries of nursing/midwifery practice. The aim of this research was to explore how New Zealand nurses/midwives, who have an interest in the treatment of obesity and associated type ll diabetes, have embraced the importance of physical activity and nutritional interventions and/or if hidden tensions exist within their narratives.

In regards to New Zealand obesity and associated type ll diabetes, initiatives have been proposed at an individual, community and population level. The 2006 New Zealand Health Select Committee (HSC) Inquiry into Obesity and Type ll Diabetes was a review of the effectiveness of current strategies and elicited a wide range of submissions. It presented an opportunity to examine nursing and midwifery beliefs on physical activity and nutritional initiatives at all of the above levels.

When examining the research on obesity, two main themes emerged. One theme of the literature was from a positivist approach and discussed obesity in terms of crisis and risk with an emphasis on diagnosis and treatment. The second theme emerged from the feminist and post-structuralist literature, this discussed obesity in terms of power relationships, Foucault's 'medical gaze', and feminine subjectivities. To fully encompass both of these themes, a mixed method approach was employed. The mixed methods approach comprised two studies: a quantitative descriptive analysis, and discursive analysis using a feminist post-structural lens.

Study 1 examined submissions to the 2006 New Zealand Health Select Committee Inquiry into Obesity and Type ll Diabetes by nurses/midwives, to determine how holistic and public health orientated their opinion is to proposed nutrition and physical activity solutions to obesity and type II diabetes.

Study 2 examined through discursive analysis of the same submissions; objects, subjects and power relationships that manifest the nurses/midwives constructions of *obesity* and *nursing*.

The descriptive analysis of the nursing/midwifery submissions to the HSC inquiry in Study 1, demonstrated that the nursing submissions were both holistic and public health orientated in their approach. Nutritional initiatives were more widely supported than physical activity initiatives. 'Children and youth' were identified as most in need of obesogenic initiatives to reduce future health consequences. The nursing/midwifery submissions further believed that political initiatives would have more impact than other current health modalities.

Study 2 suggested that while some of the nursing and midwifery submissions appeared to support improved nutrition and increased physical activity initiatives. Other submissions viewed diet and exercise regimes as regulatory and/or disciplining. Additional the *nursing* role within the particular subjectivities of the submitters was blurred with the *mother's* role this was most evident when the nurse/s submissions spoke as mothers.

Implications of the above findings suggest that to create transformational opportunities for vulnerable groups affected by obesity and type ll diabetes, nursing/midwifery practice must continue to lobby cohesively and at a political level.

It also presents health policy makers and lobbying groups with an opportunity. If policy makers and lobbyists are genuinely interested in the promotion of physical activity and nutritional initiatives, using the health benefits for women and children as a catalyst, will result in nursing and midwifery practice being more fully engaged with such initiatives.

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Attestation

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institute of higher learning.

Chapter 1: Introduction

1.1 Background to the Research

Effective obesity initiatives are particularly important within a New Zealand context. The World Health Organisation (WHO) reports that obesity and associated Type ll diabetes have recently emerged as major national and international health concerns (WHO, 2002, 2007a). These concerns are also reflected within the New Zealand health environment. For example, the Organisation for Economic Development (OECD) reports that obesity rises in New Zealand are above those of many other OECD countries (OECD, 2008e). From a developmental standpoint 'at risk' groups have been identified by the Ministry of Health (MOH) as the young and the chronically ill (MOH, 2008). However, rises in rates or levels in obesity also vary with ethnicity, with Maori and Pacific Peoples particularly affected (Salmond, Crampton, & Atkinson, 2007). Unfortunately this data is compounded by evidence of growing inequalities of health that also position Maori and Pacific Peoples as adversely affected (Blakley, Kawachi, Atkinson, & Fawcett, 2004; MOH, 1999; Tobias & Howden-Chapman, 2000).

One piece of the lack of success in finding solutions to the obesity epidemic is that it remains difficult to treat. A number of researchers have explored theoretical avenues that, whilst shedding some light on the aetiology, have not lead to successful treatment modalities (Davey Smith, Gunnell, & Ben-Sholomo, 2001; Forsdahl, 1977; Kuh & Ben-Shlomo, 2004). Diets and pharmacological therapies have had some success in the short term, but the goal of sustained weight loss in large cohorts still eludes researchers (National Institutes of Health/National Heart, 1998; Rothacker, 2000; WHO, 2000). Exercise regimes in conjunction with diets have also been shown to be effective at maintaining weight loss, but the levels of exercise necessary appear to be much higher

than those generally recommended and associated lifestyle change appears to be an important component of success (Ash, et al., 2006; Mulvihill & Quigley, 2003). Newer surgical techniques have also been explored, but at present are only considered a treatment for the morbidly obese (Pannala, Kidd, & Modlin, 2006). Consequently, the field of inquiry has widened beyond medicine in an effort to make some impact, for example, Architects, Social Scientists and Lawyers have all made recommendations. This has lead to the effects of obesogenic environments being investigated (Egger & Swinburn, 1997; WHO, 2005a). The term "obesogenic environment" refers to an environment that promotes gaining weight and/or is not conducive to losing weight. Within New Zealand, and discussed in more depth in chapter two, physical activity and improved nutrition initiatives have played an increasingly important role in combating the effects of obesogenic environments. To coordinate these initiatives in 2003, the New Zealand Ministry of Health launched a strategy entitled, 'Healthy Eating Healthy Action (HEHA) (MOH, 2003a).

An increase in the levels of obesity and associated type ll diabetes has multiple areas of effect for nursing services. Obesity impacts on such a wide range of aspects related to human health, both of the disciplines of nursing and midwifery and almost all of their sub groups might have an interest in reducing it. Yet the New Zealand nursing and midwifery response, I suggest, has been fragmented, with no multi-sectorial, coordinated guidelines to address rising obesity levels. The literature suggests that primary health nurses and diabetes nurses, with their health promotion focus, have the most potential to impact on addressing obesity (Counterweight Project Team, 2004; Kenealy, et al., 2004; MOH, 2004a; Ross, Laws, Reckless, & Lean, 2008). Midwives have also become alerted to the wider implications of obesity on mothers and children (Baldwin & Friedman, 2006; Bordo, 1993; Derbyshire, 2008; Linné, Dye, Barkeling, & Rössner, 2004). While there has been one conference on obesity, in 2007 facilitated by

the New Zealand College of Nurses, as a body, New Zealand nurses do not appear to prioritise obesity initiatives in their practice.

The majority of literature that informs nursing on disordered eating focuses on under-nutrition rather over-nutrition (Bordo, 1993; Burns & Gavey, 2004; Malson & Ryan, 2008). Internationally, nurse researchers with an interest in obesity tended to concentrate their inquiry on the lived experience of the obese person, finding links between the obese and other groups who face discrimination and marginalisation. For example, Carryer (2001) writing from a New Zealand standpoint has corroborated these findings. Nursing and midwifery literature has also been informed by social science researchers who have explored obesity as a discursive category; often using a poststructuralist paradigm, they have examined how obesity is created, produced, and reproduced, through various social practices such as medicine and the health care system, schools, religions and the media (Bordo, 1991; Foucault, 1979a; Orbach, 1978; Wolf, 1991). These social science researchers often positioned obesity as gendered, using a feminist lens to examine diet and exercise regimes, constructing them as phallocentric regulatory mechanisms imposed on women to propel them towards 'warped' idealisations of beauty and health (Rice, 2006 ; Sykes & McPhail, 2008). Influenced by both the nursing literature and the social science research that informs it, I suggest that New Zealand nursing and midwifery may have concerns that the promotions of diet and exercise regimes as obesity interventions play an increasingly important role. Lobbying at a political level is a mechanism for nurses and midwives to have their voices heard. One way in which nurses and midwives can engage at a political level is through the Select Committee process.

The New Zealand political structure incorporates Select Committees for the purpose of examining proposed legislation and issues of concern. Select committees are seen by

international political researchers as a particular strength of the New Zealand democratic process (Ganley, 2001). Such a system offers a real opportunity to take part in the "democracy" of health and health policy in New Zealand. Health professionals or any other citizen have the opportunity to make formal submissions to a Health Select Committee inquiry. In 2006, the Health Select Committee (HSC) initiated an inquiry into New Zealand on obesity and associated Type ll diabetes, including initiatives such as the Healthy Eating Healthy Action (HEHA) strategy. This would allow politically astute interested parties to evaluate current policy initiatives on obesity.

1.2 Research Aim

The aim of this research is to explore how nurses and midwives, who have an interest in the treatment of obesity, have embraced physical activity and nutritional initiatives at individual, community and population levels, and if hidden tensions exist within their narratives.

Study1 of this research examines submissions to the 2006 Health Select Committee Inquiry into Obesity and Type ll Diabetes by nurses and midwives, to determine how holistic and public health orientated their opinion was in respect to nutrition and physical activity.

Study 2 examines, through discursive analysis of the submissions, objects, subjects and power relationships that become manifest in their constructs of *obesity* and *nursing*.

Essentially I argue that nurses' and midwives' conceptualisation of obesity initiatives, in respect of increased physical activity and improved nutrition, differs from that of political decision makers, but this should not prevent them from influencing policy at a political level.

1.3 Assumptions

Within a poststructuralist paradigm the reader is prioritised over the author (Barthes, 2010). Disclosure from the author then becomes an important prerequisite for the purposes of methodical rigour. Reflexivity locates the centrality of the researcher within the research (Holloway, 2005). I therefore acknowledge three subject positions I occupy as important to this discussion. Firstly my position as 'Irish child', secondly my position as a gastroenterology/endoscopy nurse, and lastly my position as a scholar and educator.

In the space I occupy as 'Irish child', I am a third generation Labour-voter of Irish working-class parents. I was brought up to believe that the rise of social democracy in the developed world after 1945 afforded me educational and health opportunities only dreamed of by my forefathers, freeing lower socio-economic groups from the yoke of poverty and the attendant fear of starvation. A thread of Gaelic fatalism is interwoven with my political/social upbringing. The double-edged sword of free will, best articulated as 'Be careful what you wish for, you might get it,' I believe the developed world to be at a crossroads, in endeavouring to achieve the aforementioned goals it finds itself with no strategies, historical, cultural or social, to deal with the resulting negative health consequences. The radical decrease in exercise opportunities and the increase in cheap, pre-prepared meals of poor nutritional value have been major contributors to the current surge in obesity-related ill health in lower socio-economic groups. Though I never experienced the actuality of hunger, the anxiety it induced echoed throughout my childhood and is carried through into my own parenting. This causes me, despite all of my professional and academic knowledge, to struggle with wanton waste of food by my children. I continue to insist that they eat everything on their plate, regardless of their satiety levels.

During my thirty-year career as a registered nurse, I worked for thirteen as a gastroenterology/endoscopy nurse. Supporting good nutrition was an important part of my nursing practice within this specialty. Historically, it was primarily concerned with supporting the under-nourished, using such tools as the Malnutrition Universal Screening Tool. This tool, although it purports to assess risk for both undernourished and obese hospital patients, uses BMI, co-morbidities and recent weight loss as its primary indicators (Elia, 2003). As one of the primary indicators is weight loss not weight gain, I suggest that it prioritises health risks associated with under-nourished rather than the obese patient. More recently, the gastroenterology research focus has come to include the obese. The focus primarily evaluates the downstream health consequences of bariatric surgery and steatohepatitis, both discussed in Chapter Two, but there is little research within a gastroenterology setting on obesity as a disease (El−Serag, Ergun, Pandolfino, Fitzgerald, Tran, & Kramer, 2006; Pannala, Kidd & Modlin, 2006; Shoelson, Herrero & Naaz, 2007).

In my position as scholar and educator, I have been working towards a Masters degree in Health Science. For the last five years I have lectured in a Bachelor of Nursing programme, and through this I have come to realise the importance of primary health care and the nurse/midwife as an advocate for change. My new appreciation of the importance of health promotion, made me aware that nurses, midwives and other health professionals continued to view obesity, as a self-imposed condition not requiring clinical support. In order to maintain clinical credibility I continue to work clinically on a casual basis. It is through this work, often in an acute setting, that I began to notice the prioritising of care for the undernourished and the absence of education and support, particularly for non-acute obese patients. For example, my practice was questioned when I initiated a dietician referral for nutritional supplements for an obese patient in an attempt to support their weight loss efforts. This was regarded by nursing colleagues,

dieticians and managers as a waste of valuable health funding; obesity interventions were believed to dwell solely within the practice dynamic of primary health care, not gastroenterology. My academic studies had reinforced for me that gastroenterology is a specialty that is fundamentally concerned with the health problems of the ingestion, digestion, absorption, and elimination of food (Brown & Edwards, 2008). Therefore it seemed strikingly obvious to me that treatments for obesity should be initiated and supported within a gastroenterology setting. In addition to a question of health funding, I sensed that my caring, intelligent, expert nursing colleagues viewed obesity as a position of personal choice and personal responsibility. Yet those same colleagues genuinely supported health in its broadest sense, espousing holistic care and the importance of culturally safe practice, in which those marginalised by difference were supported and cared for in a way that reflected their world-view.

As mentioned earlier, I had also become increasingly interested in the nurse as an agent for change within the health arena. I thought that obesity presented an opportunity for the practice of nursing to demonstrate its point of difference from other health professions. Continued increases in obesity figures, which have confounded medical researchers and politicians alike, created a space for nurse-mediated care which has proved successful in other chronic disease initiatives (Royal College of Physicans, 2004).

I therefore decided to examine what nurses and midwives who were interested in obesity had to say, where they spoke and what initiatives they supported. My ultimate aim is to raise awareness of the importance of effective obesity initiatives/interventions across all scopes of nursing and midwifery practice.

1.4 Justification for the Research

Effective obesity initiatives are particularly important to New Zealand societal health, as it is experiencing faster rising obesity levels than a number of other countries (MOH, 2003a; OECD, 2008e). Within New Zealand, researchers believed that the relative risk of diabetes mellitus was significantly increased in ethnic groups such as Maori and Pacific Peoples and that obesity was a contributing factor to these increases (Scragg, Baker, Metcalf &Dryson, 1991). Obesity has become of increasing importance as a risk factor associated with two of the world's most prevalent health conditions, ischaemic heart disease and depression (WHO, 2002). Research has demonstrated the impact on ischaemic heart disease, alone, and with its sequalea of type II diabetes (Campbell & Haslam, 2005; Eckel, Grundy, & Zimmet, 2005; Markowitz, Friedman, & Arent, 2008) More recently, links to depression have also been demonstrated although causality remains unclear (Markowitz, et al., 2008). Thus obesity crosses the divide of cartesian duality, affecting both physical and mental wellbeing.

Treatment of obesity is an important goal for national and international health policy makers (WHO, 2007a). From a national perspective, OECD statistics report an increase in New Zealand obesity from 19% in 1997 to 25% in 2006/2007 (OECD, 2008e). Although more recent data from the Ministry of Social Development (Social Report-Health, 2009) suggests that New Zealand obesity levels have reached a plateau, 25% is almost double the OECD median for the same period.

In response to OECD figures and socio-economic data demonstrating growing inequalities in health, the New Zealand Health Strategy (NZHS) was implemented in 2002 (MOH, 2000). As part of the NZHS aim to reduce health inequalities, a number of health objectives were identified: included were improving nutrition, increasing

physical activity, and reducing obesity. Treating obesity was also identified as a strategy in the majority of these objectives.

The widening field of scientific expertise examining micro and macro aspects of obesity has shown that the most successful contemporary approaches are social, ecological, and multi-levelled. The Ottawa charter provides just such a multi-layered approach and has been widely adopted by a number of countries including New Zealand (MOH, 2003a). Using this framework, international and national strategies have been developed to reorient primary and secondary health services; nursing comprises a major part of these health services (Black, 1980; Lalonde, 1974; WHO, 2005a).

Nurses and midwives comprise the largest proportion of health professionals working in primary and secondary care settings (Statistics New Zealand, 2007). Yet there is a lack of studies exploring how nurses and midwives as health educators influence health policy at a political level. Within the context of obesity, there is also a lack of research on the beliefs of nurses and midwives about obesity. A HSC inquiry on obesity presented an opportunity to examine both the beliefs of nurses and midwives who submitted on obesity and the ways they attempted to influence policy through their submissions.

Such an inquiry had a number of advantages for nurses and midwives with concerns over health policy, as it asked for expert opinion, thus valuing the body of knowledge and experience that they as experts brought to bear on the topic. It allowed for both public and private submissions, freeing them from the restraints of contractual mandates that may be in conflict with personal or professional beliefs.

There are multiple reasons why nurses and midwives should engage with the subject of obesity. Nurses and midwives are involved in all areas of health decision-making from

strategic policy implementation to discharge planning. Nurses and midwives work across the entire spectrum of health care delivery and are ideally placed to formulate and evaluate care at all levels. Furthermore, obesity with its wide-reaching initiatives enables New Zealand nursing and midwifery the opportunity to renegotiate its role in health promotion. Whitehead (2004) felt the role was supported in theory but not in practice. If nurses' and midwives' views on obesity differ from that of current health policies surely an investigation is warranted.

White (2007) had produced an analysis of the HSC inquiry on obesity and associated type ll diabetes on behalf of 'Fight the Obesity Epidemic,' an obesity action group. Two aspects that became evident from reading this analysis were: no submissions were identified as being from nurses or midwives, and individuals who were known to be nurses, identified themselves as mothers first rather than nurses. This conundrum gave rise to the question about which research method would be best?

1.5 Methodology

The above section outlined the justification for this study, examining why the nursing and midwifery voice within obesity initiatives was worthy of inquiry, and identified gaps in the current evidence. The following is an outline of the research approach, more comprehensively covered in chapter four.

The complexity of the aim of this research did not lend itself to a single research methodology. One wing of the literature discussed obesity in terms of crisis and risk with an emphasis on diagnosis and treatment, and cure as an endpoint; the other discussed obesity in terms of power relationships, Foucault's 'medical gaze', and feminine subjectivities. The former constitutes a large body of work from a positivist

paradigm, and the latter comprises literature gathered from a feminist poststructuralist paradigm, in which Foucault's theories are a major influence.

To explore this field of inquiry comprehensively, a mixed method approach offered the potential to produce a more complete and multi-layered understanding of the research problem (Schneider, Whitehead, & Elliott, 2007). Firstly, by quantitatively examining how and where the nursing/midwifery submissions ally with national and international initiatives. Secondly, by examining if nursing and midwifery as gendered professions and often informed by feminist poststructuralist research, add layers of meaning to obesity that might not be revealed by a quantitative study. Although mixed method studies from such widely differing paradigms are rare, they do appear in nursing and midwifery research, as these disciplines, by nature of their multifaceted practices, are often interested in both the humanistic and bioscientific contexts of health (Foss & Ellefsen, 2002; Annells, 2007).

Study 1 employs a positivist approach which involves the objective observation, prediction and testing of causal relationships (Schnieder, Whitehead & Elliott, 2009). The value of such an approach is it allows for the value neutral examination of phenomena, within this study it enables a statistical evaluation of obesity initiatives. Whilst a positivist approach can observe and deduce, it can only measure quantifiable variables, non-quantifiable variables such as the effects of gender, culture or history do not lend themselves to a positivist analysis.

Discourse analysis, employed in Study 2, is widely used in nursing and midwifery research. Crowe (2005) believed discourse analysis is an important tool for nurses as discourses impact on the practice of nursing and the experiences of those receiving care. Ceci and others suggested it allows nurses to explore the broader social, cultural and historical impacts on the creation of nursing discourses (Ceci, 2003; Rankin &

Campbell, 2006). It brings to light taken-for-granted practices in health care delivery that sometimes work to the disadvantage of patients or health professionals themselves (Freidson, 1994). By exploring assumptions that nurses and midwives make about obesity this thesis will explore how nursing and midwifery knowledge and judgment is informed by medical, political and social agendas.

It is anticipated that by using both quantitative and qualitative approaches, a more in-depth exploration of the interrelationships between nurses/midwifes and obesity will be enabled. Study 1 quantitatively analyses nursing and midwifery submissions to the 2006 Health Select Committee Inquiry into Obesity and Type ll Diabetes to determine how holistically and public health orientated their opinion was in respect to nutrition and physical activity. Study 2 utilises using a feminist poststructuralist analysis and identifies discursive objects, subjects and power relationships that manifested in the nursing and midwifery constructs of *obesity* and *nursing*.

1.6 Structure of the Thesis

The thesis is divided into six chapters.

Chapter One: This chapter introduced the background to and reasons for, the research approach. It discussed the current relevance of the study. It described positions I, as author, occupy, to allow for honesty and transparency within the discussion. Lastly it provided the structure of the argument.

Chapter Two: In this chapter I explore the research issues arising from the positivist literature concentrating on chronic disease and emerging obesity problems, treatment modalities, and obesity within a New Zealand context, New Zealand obesity initiatives, and the New Zealand nursing and midwifery response to obesity.

Chapter Three: This chapter explores the discursive constructs of obesity evident with the feminist poststructuralist literature, drawing on the writings of Bordo, Foucault, Orbach and Wolf. It examines the spaces obesity occupies within the nursing and midwifery literature, the discourses that inform this literature and the power relationships therein.

Chapter Four: Here more in-depth rationale for a mixed method approach is outlined, as is the methodology for each study. The reasons for each particular research paradigm are reviewed. Details of the data collection process, the methods of analysis, and the ethical considerations are examined.

Chapter Five: This chapter discusses the findings generated from each part of the study. Part one examines what a descriptive non-experimental quantitative analysis of written nursing and midwifery submissions reveals. Part two unpacks the speaking positions and identities that are taken up by the nursing and midwifery submissions, and the power discourses enmeshed within their discourses.

Chapter Six: Is a discussion of the research findings from both studies, examining the spaces where they resonate and the spaces where there is dissonance. From the discussion and examination, an approach to obesity initiatives that will fit within a nursing and midwifery philosophy will be identified.

1.7 Definitions

Chronic Disease: Chronic disease is usually understood to include non-communicable diseases that are chronic in nature. A number of interchangeable terms are used in the literature; chronic illness, modifiable chronic disease, and chronic disease of lifestyle. For the purposes of this thesis, the term ‘chronic disease’ will be used throughout.

Nursing: In examining the discursive constructions of *obesity and nursing* by the qualitative literature, definitions of the word *nursing* were examined. Makin (1997), defined *nursing as*, "to look after (a sick person), to breast-feed (a baby), (of a baby) to feed at its mother's breast, to try to cure (an ailment)" (p.585). Although nursing and midwifery are separate and distinct professions and Makin's definition could be considered simplistic to modern nurses and midwives. It highlights the commonalities between the professions and makes the point that for both professions the active care of their client/patient is most often described as *'nursing'*. Therefore for the purposes of the qualitative literature review and Study 2 the construct *nursing* will refer to both nurses and midwives unless otherwise stated, and to allow for clarity, always be written in italics.

Chapter 2: Literature Review

2.1 Introduction

As the research approach is mixed method, separate literature reviews for each of the two paradigms utilised in this study, positivism and feminist post-structuralism, will be presented. This chapter will explore the positivist literature in which obesity arises as a construct requiring scientific control. The literature in this chapter is concerned with the measurement and treatment of obesity, for example, through the regulation of food. Discourses of risk are also evident in the writings of national and international scholars, particularly in respect of children and ethnic groups. The research issues that arise from the positivist literature will be explored, where the collection and analysis of data is prioritised, for example, obesity constructed in terms of energy-in energy-out, and treatments evaluated on weight loss rather than health improvement. This chapter will include: the emerging problem of obesity, international obesity interventions/initiatives; obesity within a New Zealand context, New Zealand obesity interventions/initiatives, and the New Zealand nursing/midwifery response to obesity.

2.2 Why is Obesity a Problem?

Obesity and associated type ll diabetes have recently emerged as major national and international health concerns, particularly their impact on those who also have a chronic disease, 'at risk' cultural groups, the poor, and the young (WHO, 2002). All these impacts are of particular interest to nursing and in order to examine them more comprehensively it was necessary to firstly examine chronic disease and its relationship with obesity.

2.2.1 Chronic disease and obesity.

Chronic diseases such as Ischemic Heart Disease and associated conditions such as hypertension have been identified as an area where nurse-led clinics can make a difference, both in reducing the frequency of episodes of care, and improving the quality of life (Broers, et al., 2003; Royal College of Physicans, 2004; Wagner, 2000). This is of increasing importance given that researchers predict that' by 2030, the three leading causes of illness will be HIV/AIDS, ischaemic heart disease, and depression (WHO, 2002, 2005b).

There has been abundance of research published, demonstrating the impact of obesity on ischaemic heart disease, both alone and with its sequelae of type II diabetes (Calle, Thun, Petrelli, Rodriguez, & Heath, 1999; Campbell & Haslam, 2005; Mokdad et al., 2003). More recently, increasing links between obesity and depression have been demonstrated (Forman, Yankey, Hillis, Wallace, & Wolinsky, 2007; Markowitz, Freidman & Arent, 2008). Although the causal relationships between obesity and depression have not been established. The fact that many pharmaceuticals used in the treatment of depression are also appetite stimulants, further complicates the linkages. Nonetheless, rises in rates and levels of obesity on an international scale have the potential to negatively impact on world morbidity and mortality levels.

Researchers have concurred that obesity levels rose markedly in the first world over the last forty years (Mann, 2002; Mendez, Monteiro, & Popkin, 2005; WHO, 1998, 2004a; Zaninotto, Wardle, & Stamatakis, 2006). A number of first world governments, New Zealand included, have suggested that the developed world was in the grip of an obesity

epidemic (James, Leach, Kalamara, & Shayeghi, 2001; WHO, 2007b). This use of statistics to generate action is frequently seen within positivism, and frequently constructed as a discourse of risk/crisis. For example, the Surgeon General of the United States famously described obesity as a crisis. "It's the fastest-growing cause of disease and death in America...nearly two out of every three Americans are overweight or obese …..One out of every eight deaths in America is caused by an illness directly related to overweight and obesity" (Carmona, 2004). Although subsequent researchers questioned the Surgeon General's figures, they agreed that extreme obesity contributed to increasing levels of mortality and morbidity (Flegal, Graubard, Williamson, & Gail, 2005; Mokdad, Marks, Stroup, & Gerverding, 2004; Mokdad, Marks, Stroup, & Gerverding, 2005).

Increased morbidity in obese individuals has also been linked to earlier retirement, younger ages of entry into nursing homes, higher work absenteeism rates, and increased likelihood of being disabled (Kim & Popkin, 2006). Leading researchers in the United Kingdom (UK) examined the fiscal implications of rising obesity levels (British Heart Foundation, 2004; McPherson, Marsh, & Brown, 2007). Examining the effectiveness of nurse-led clinics to the management of obesity, New Zealand researchers found nurse support was more cost-effective and just as effective as a more resource-intensive programme for weight maintenance over a 2-year period (Dale et al., 2009).

2.2.2 Ethnicity and obesity.

There are significant differences in the prevalence of obesity across ethnic groups (Hedley et al., 2004). These differences placed ethnic minority populations at increased risk for obesity-associated chronic diseases, such as type II diabetes, cancer, and hypertension (Sullivan, Morrato, Ghushchyan, & Wyatt, 2005). For example, researchers found significantly higher body masses for non-Hispanic Blacks, Native

Americans, Puerto Ricans, and Mexican Americans, compared to non-Hispanic Whites, and among very obese individuals the incidence of higher body mass was more pronounced in females (Denney, Krueger, Rogers, & Boardman, 2004).

With regards to the New Zealand population, and more fully explored in section 2.4, obesity was initially found to be more prevalent in Pacific Peoples and Maori (Social Report-Health, 2009). New Zealand researchers were able to demonstrate that susceptibility of Maori to the adverse effects of Type II diabetes was greater than other ethnicities, even if the degree of adiposity was similar (McAuley, Williams, Mann, Goulding, & Murphy, 2002). From an international perspective, these findings added to doubts about the specificity of Body Mass Index (BMI). Another issue highlighted by the prevalence of obesity in certain ethnicities was that of pathogenicity, suggesting that obesity was less of a modifiable risk factor than had been previously thought. The question of appropriate diagnostic tools will now be explored.

2.2.3 Obesogenic risk and measurement tools.

Before discussing obesity and its impact on the young, the specificity of BMI and other anthropometric measurements in determining obesogenic risk is critiqued. It is important to note that much of the above data used BMI as a prime diagnostic indicator of obesity as it relied on measurements of height and weight (BMI= kg/m2), which made it an easy, cheap, and a widely applicable anthropometric measurement, often used in nursing assessments. Its limitations included: that BMI did not differentiate between fat and muscle, nor did it differentiate between central adiposity and peripheral adiposity. This is an important limitation, as central adiposity is more strongly correlated with insulin resistance, glucose intolerance, hypertension, and dyslipidaemia (Eckel et al., 2005). In addition, BMI changes with linear growth and sexual maturation reducing its reliability in analysis of childhood and adolescent cohorts (Duncan, 2008).

Lastly, BMI cut-off points for overweight and obesity were developed for European populations (WHO, 2004b). Carryer (2001) a New Zealand nurse researcher, critically examined these cut-offs, pointing out that they were determined by an insurance company survey of over four million Americans who took out life insurance policies between 1934 and 1959, mostly males. The Centre for Disease Control (CDC) and WHO also acknowledged limitations to the BMI and recommended the use of amended ethnic, cultural, and developmental cut-off points (Kuczmarski et al., 2000; WHO, 2004a). Yet there is still a lack of empirical evidence on specificity of BMI as a gold standard measure of obesity risk, particularly in young and ethnic populations.

An alternative measurement, waist-to-hip ratio, has been shown to be more indicative of morbidity risk, as it determines visceral obesity (Lean, Han & Seidell, 1998). Central or visceral adiposity has been shown to be a factor associated with increased risk of diabetes independent of weight changes (Kern & Rasouli, 2006; Koh-Banergee et al., 2004). In 2001, the National Cholesterol Education Program (NCEP) suggested waist circumference along with high-density lipoprotein, blood pressure cholesterol, triglycerides, and fasting plasma glucose levels, as a clinical definition for metabolic syndrome, a condition which strongly impacts on patient morbidity and mortality. Waist circumference, consequently has grown in popularity as an indicator of obesogenic risk (Alexander, Landsman, Teutsch, & Haffner, 2003; Laaksonen et al., 2005; Lakka et al., 2002).

2.2.4 Obesity and Children.

Obesity presenting in child and adolescent cohorts prompted science to examine maternal adiposity, with most of the research concentrating on the scenario of gestational diabetes mellitus (GDM) (Doria, Patti & Kahn, 2008; Singh & Rastogi, 2008). Other areas of scholarly interest in respect of obesogenic risk in children include

length of gestation, birth weight, breast-feeding, and rebound adiposity, with findings often supporting a hypothesis of pathogenicity (American Academy of Paediatrics, 2005; Villamor & Cnattingius, 2006; WHO, 2002).

Maternal glucose crosses the placental barrier but maternal insulin cannot; fetal insulin is produced to synthesize this glucose and also acts as a growth hormone. One hypothesis suggested that foetal exposure to hyperglycaemia would result in a growth surge and resultant high birth weights (Frienkel, 1980). Conversely, the association between lower birth weight and a later central obesity was established by several early epidemiological studies (Barker, Robinson, Osmond, & Barker, 1997; Law, Barker, Osmond, Fall, & Simmonds, 1992). This led to a theory of 'fuel-mediated teratogenesis,' that was supported by the Pima Indian study (Dabelea et al., 2000).Whilst the causal pathways remain unclear, the above studies all demonstrate an increased risk for adiposity at both ends of the birth weight spectrum.

Another important factor believed to contribute to obesogenic risk in early childhood is the type and duration of infant feeding (Harder, Bergman, Kallischnigg & Plageman, 2005). A number of studies showed a reduced risk of obesity among children and adolescents who had been breast-fed as infants, with duration of feeding also inversely proportional to risk (Armstrong & Reilly, 2002).The presence of rebound adiposity was also investigated. The BMI of children naturally rises after birth until the developmental period of middle childhood, after which it falls before increasing again in response to the rising hormonal levels of preadolescence. Investigators noticed that children whose 'BMI resting period' occurred early had higher BMIs as adolescents (Freedman, Kettel Khan, Serula, Srinivasan, & Berenson, 2001; Rolland-Cachera et al., 1984).

The above findings led researchers to examine the effects of restricted fetal growth, low/high birth weight, and rapid postnatal growth (catch-up), on later disease. Findings

demonstrated increased risk for cardiovascular disease and type11 diabetes with these scenarios (Cole, 2004; Eriksson, Forsen, Tuomilehto, Osmond, & Barker, 2001; Yajnik, 2004). They also strongly supported the premise that childhood BMI was a strong predictor of adult adiposity, and a stronger predictor for type ll diabetes in adulthood (Eriksson, Forsen, Tuomilehto, Osmond, & Barker, 2003).

2.2.5 Obesity and environmental risk factors.

Critiquing arguments that supported a hypothesis of pathogenicity, other researchers questioned if obesity was genetically determined and why the exponential increase in the last thirty years has occurred? If most strongly associated with high and low birth weights, and catch-up periods in early infancy first world medical diagnostic tools have the ability to pick up and initiate follow up of these paradoxical scenarios. For example, primary healthcare databases were tracking children through their early years at regional, national and international levels (WHO, 1960). Early identification and correction of these anomalies should/could have led to a reduction in obesity levels. Continued increases in obesity levels suggested other factors at play.

As mentioned previously, researchers were also finding links between low socioeconomic groups and obesity (Baltrus, Lynch, Everson-Rose, Raghunathan, & Kaplan, 2005). Increasingly sedentary lifestyles and the availability of cheap, nutritionally deficient, calorie-dense foods were suggested as having contributed to an increasing energy imbalance, resulting in obesity (Goldberg et al., 2004). This data was backed up by the National Health And Nutrition Examination Survey (NHANES) 1959-2001 period, which showed that calories expended by individuals in America had dropped and calories consumed had risen markedly (Cutler, Glaeser, & Shapiro, 2003). Researchers identified reduced exercise and nutritionally deficient, calorie-dense foods as major contributors to obesogenic environments (Swinburn, Egger, & Raza, 1999).

Other researchers believed that those most affected by obesogenic environments were low socio-economic groups (Gortmaker, Must, Perrin, Sobol, & Dietz, 1993; Wang & Beydoun, 2007).

In summary, obesity is an emerging problem because it is linked to two of the three most prevalent chronic diseases, depression and IHD. Its effects on ethnic groups and child populations are particularly problematic, in part due to the inappropriateness of BMI as an indicator both of obesity and obesogenic risk in these populations. Environmental factors and low socio-economic status have been shown to place an additive burden on those at risk of obesity and suggest the need for multilevel initiatives.

2.3 International Obesity Interventions/ Initiatives

Treatment options for obesity have been the goal of scientific scrutiny for over forty years. In the simplistic term of 'energy-in energy-out' the solution is obvious; a reduction will be achieved by either a reduction in energy-in or an increase in energy-out. Current modalities to achieve a reduction in obesity take two forms; individual interventions and population initiatives. Individual modalities are generally treatment-based, whereas population modalities are generally prevention-based. Nursing is involved in both these modalities, at an individual level with dietary and behavioural coaching and health assessment of patients selected for pharmaceutical or surgical interventions, and at a population level through public health education and promotion.

2.3.1 Individual interventions.

These include dietary intervention, physical activity, behaviour therapy, pharmacological intervention, and bariatric surgery. With the exception of physical

activity, four of these interventions traditionally fall within the normal scope of nursing and midwifery practice.

With dietary interventions two types predominate, low calorie diets and very low calorie diets. In low calorie diets, the goal of treatment is to maintain an energy deficit of 500-1000 kcal/day and induce a weight loss of 0.5-1kg/week. In evaluating these factors it was suggested that the provision of structured meal plans induced greater weight loss than behaviour therapy with diet or diet alone (Wing et al., 1996). In very low calorie diets, calories were restricted to 200-800 kcal/day, with large amounts of protein to preserve lean body mass. Often in the form of liquid meal replacements, they demonstrated success in the short term, but were costly and more strongly associated with weight regain (National Institutes of Health/National Heart, Lung & Blood Institute, 1998; Rothacker, 2000).

Physical activity was also evaluated as a mode of inducing a negative energy balance by increasing caloric expenditure, sparing fat free mass during weight loss, and improving cardiovascular fitness (Laaksonen et al., 2005). It was most successful when used in conjunction with diet and of greatest benefit in facilitating maintenance of weight loss in the longer term, a recognised problem (WHO, 2007a).

Behavioural approaches include such techniques as self-monitoring, stimulus control, lengthening ingestion times, cognitive restructuring, problem-solving and relapse prevention. Some success was gained when these approaches were in conjunction with other treatments and in response to difficulties in maintaining losses (Shaw, O'Rourke, Del Mar, & Kennedy, 2005).

Pharmacotherapy offers some potential as a treatment of the morbidly obese. The morbidly obese are identified by the National Institutes of Health/National Heart, Lung

and Blood Institute (NHLBI) as those with a BMI ≥30kg/m², or those with a BMI ≥27 and presenting with two or more obesity related co-morbidities (NHLBI, 2000). Of those approved by the Food and Drug Administration of America (FDA), the major benefit was thought to be as a maintenance agent rather than an induction one (Hansen et al., 2002).

Bariatric surgery also has had some success in morbidly obese cohorts, the two most common surgical procedures for obesity being vertical banded gastroplasty and gastric bypass. These modalities have been shown to result in weight reduction of 25-30% and have been associated with significantly better maintenance of weight loss (Livingstone, 2002). Interestingly Pannala, Kidd and Modlin (2006) reported a disparity in the literature where complication rates reported by FDA-monitored studies were much higher than those of other studies. Of concern was a study showing oesophageal dilatation in 71% of patients (Ren, Horgan, & Ponce, 2003). The long term side effects of 'Dumping syndrome', cirrhosis, and GORD have not yet been fully evaluated in the literature (Pannala et al., 2006).

Weight cycling, whereby weight loss is not sustained long term, but lost and regained several times, often gives rise to eating disorders and highlights weaknesses of obesity treatment modalities. Weight cycling has been shown to increase health risk to levels above that of the initial obesogenic risk (National Task Force on the Prevention and Treatment of Obesity, 2000). Diaz, Mainous lll and Everett (2005) reported detrimental effects of weight cycling on cardiovascular mortality. The QUOVADIS study supported Daiz et al.'s findings, adding that hypertension and increased risk of diabetes were also linked to weight cycling though the causal effects were much weaker (Marchesini, et al., 2004). The QUOVADIS study also suggested obesogenic eating

disorders such as ‘binge eating’ were more prevalent in those who were repeated or chronic dieters (Marchesini, et al., 2004 s).

2.3.2 Population initiatives.

Some researchers in the wider scientific community looked at political, economic, and environmental hypotheses and used these as a blueprint for public health initiatives. The Lalonde (1974) and Black (1980) reports gave credence to the idea that social and physical environments had a major impact on health behaviour and pioneered the setting of specific health targets. The health targets were ratified by the WHO Ottawa Charter for Health Promotion which underpinned the majority of international and national strategies in respect of rising obesity levels (MOH, 2003d). The Charter identified five levels of intervention: building healthy public policy, creating supportive environments, strengthening community action, developing personal skills, and reorienting health services (WHO, 1986). The WHO’s Adelaide recommendations reinforced the Ottawa Charter, by placing responsibility directly on governments for achieving these goals. Regarding obesity, the WHO Healthy Cities (2005a) project indicated the increased emphasis being given to environmental obesogenic influences. Using the Ottawa Charter’s five intervention levels, the researcher evaluated the nursing/midwifery submissions for a holistic approach to obesity initiatives/interventions in Study One.

To support public health initiatives within the European Union (EU), the Treaties of Amsterdam and Maastricht gave legislative support to public health initiatives (Treaty of Amsterdam, 1997; Treaty on European Union, 1992). Other ways of strengthening accountability cycles included direct ministerial responsibility, linking auditing to funding, and through the select committee process. This strengthening of accountability cycles resulted in renewed commitment to national strategies to combat obesity

(National Obesity Taskforce, 2004; National Taskforce on Obesity, 2005). Strategies suggested by the WHO included: a national committee of obesity prevention, a multi-layered approach: nutritional and physical activity policy initiatives in schools, taxes/bans on 'unhealthy foods' (usually defined as calorie-rich and nutritionally deficient), subsidies for healthy foods, and economic incentives for increased physical activity. As global public health initiatives, the WHO obesity strategies were used by the researcher to evaluate the public health orientation of the nursing/midwifery submissions in Study One.

To determine how the WHO suggested public health strategies for obesity initiatives, mentioned above, had been adopted at a international level, the researcher evaluated a number of national obesity strategies. Of the six countries evaluated (summarised in Table 1) Denmark, Sweden, Australia, Ireland and Spain supported a multi-layered approach. Five of the six countries supported nutrition and physical activity initiatives in schools. Only Sweden and Spain supported taxes/bans on unhealthy foods. Australia, Sweden and Ireland supported subsidies for healthy foods. Four of the six countries supported economic incentives for increased physical activity. Overall, the country that gave the lowest support to these initiatives was the UK, supporting only two initiatives. Sweden on the other hand was most supportive of the initiatives endorsing all six initiatives. Only Sweden had the promotion of breast-feeding as part of its national anti-obesity initiatives (Folkhälsoinstitut, 2005).

All the countries evaluated concurred with WHO that the most urgent need was prevention, with children as its target group (WHO, 2004a). Yet despite a large body of literature that positioned infants at particular risk both in utero and postnatally, there were no national initiatives that supported the antepartum or post-partum mother and her baby. Increasing evidence of both obesity, and its co-morbidity type ll diabetes, in

school-aged populations supported a policy-driven approach (WHO, 2004a). Some public health advocates believed that ‘evidence-based’ initiatives would be too narrow in their focus. The number of robust pieces of research on which to design an evidence-based approach to obesity treatments was also questioned, for example, a Cochrane review evaluated a number of scientifically controlled anti obesity trials and found only ten that were worthy of inclusion (Campbell, Waters, O'Meara, Kelly, & Summerbell, 2002). A number of health advocates believed that the most effective initiatives would be population-wide and address both micro and macro-environmental factors (Lobstein & Baur, 2005).

TABLE 1 NATIONAL ANTI-OBESITY STRATEGIES SUPPORTED BY THE WHO

Country	National committee for Obesity prevention	Multi layered approach	Nutrition/Physical Activity policy initiatives in Schools	Taxes/bans on unhealthy foods	Subsidies for healthy foods	Economic Incentives for increased Physical Activity	References
Denmark		√	√			√	(NATIONAL ACTION PLAN AGAINST OBESITY Recommendations and Perspectives, 2003)
Australia	√	√	√		√	√	(National Obesity Taskforce, 2004)
Sweden	√	√	√	√	√	√	(Folkhälsoinstitut, 2005)
Ireland	√	√	√		√	√	(National Taskforce on Obesity, 2005)
Spain		√	√	√			(Spanish strategy for nutrition, 2005)
UK	√	√					(Obesity: Third Report (2003-2004) volume 1) , 2004)

As there was virtually no literature concerning potential effects of obesity on social, commercial and agricultural policies, researchers proposed a number of tools to evaluate initiatives. One such tool, the 'Analysis Grid for Environments Linked to Obesity (ANGELO) provides a matrix for evaluating both micro and macro environmental strategies at four levels, the physical, the economic, the political, and the socio-cultural (Egger & Swinburn, 1997). Swinburn and colleagues further developed this concept using a 'financial investment portfolio model', where differing strategies can be evaluated in terms of risk and benefit (Swinburn, Gill, & Kumanyika, 2005).

A recognised weakness of this approach, and one that was increasingly felt by those advocating for stronger obesity interventions, was the effect of external commercial pressures. These pressures were being brought to bear on policy makers as national and international health promoters increasingly targeted commercial interests such as food manufacturers and restaurant chains, whom they believed contributed to an obesogenic environment (Lang, Rayner, & Kaelin, 2006).

To reiterate, the literature suggests that individual interventions are most successful when offered in combination. Pharmacotherapy and bariatric surgery are seen to be treatment modalities in morbidly obese cohorts. Rebound weight gain and disordered eating are problematic, often leading to increases in cardiovascular and diabetes risk. National and international pressure groups favour environmental approaches, but recognise that evaluation of such strategies would be difficult, and resistance from commercial food interests would further weaken efforts.

2.4 Within A New Zealand Context, Why is Obesity A Problem?

As discussed in Section 2.2, those of low socio- economic status, ethnic groups and younger cohorts demonstrate a higher risk for obesity and concomitant type ll diabetes.

These findings are also evident within a New Zealand environment, international and national data demonstrated that New Zealand obesity figures were higher than many other countries between 1997 and 2003 and that they were rising at a faster rate (OECD, 2008e). The New Zealand literature also acknowledged that an increasing percentage of the New Zealand population fell into all three of the above high risk categories, specifically the young ethnic poor.

2.4.1 International and national data.

OECD statistics reported an increase in New Zealand obesity from 19% in 1997, 24% in 2002/2003 to 25% in 2006/2007 (OECD, 2008e). This latter figure of 25% is high compared to an OECD median of 13% for the same period though the Ministry of Social Development's (MSD) Social Report-Health (2009) suggested that New Zealand obesity levels were beginning to plateau, widening inequalities in health data suggested that obesogenic disease burden was not. Pearce and Dowling (2006) found that geographical inequalities in health within New Zealand have reached historically high levels, with socio-economic status an important indicator. Earlier researchers had argued that, within a New Zealand context, socio-economic position was to some extent predetermined by ethnicity, positioning Maori as doubly disadvantaged (Pearce, Pomare, & Marshall, 1993). Other researchers believed health disparities could also be better explained on an ethnicity basis, specifically differentials between Maori and non-Maori (Blakley et al., 2005). With respect to the impact on obesity of socio-economic status, New Zealand Health Survey data, summarised in Table 2, showed that obesity levels rose proportionally to quintiles of deprivation in adults (MOH 2003d, 2004a, 2008)**.** Between adult males and females there are only small differences across all quintiles in the 2002/2003 data set. However, by 2006/2007, obesity prevalence for females in quintile V is 4% greater than for males. This suggests that socio-

economically disadvantaged females have the greatest obesogenic risk. The argument now addresses obesogenic risk in New Zealand children, with Table 2 suggesting that obesity prevalence has plateaued in child cohorts. This data is supported by Olds, Tomkinson, Ferrar and Maher (2009), who found that the prevalence of childhood overweight and obesity between 1985 and 2008 has similarly plateaued.

2.4.2 Obesogenic risk and New Zealand youth.

There is need for caution when using the figures in Table 2 as a predictor of obesity stabilization in children. The 2006/07 figures for children have been calculated based on the amended BMI cut-off points introduced by WHO in 2004, therefore a subsequent data set would prove useful to properly evaluate the effect of these cut-offs on the overall trends. Duncan (2008) made the point that recent child data sets have all had differing age parameters. For instance, early regional surveys on childhood obesity carried out in 1989/2000 used 11-12 year old children, the first national survey 2003/04 sampled children from 5-14 years and the latest national survey 2006/07 sampled children from 2-14 years (MOH, 2004b, 2008; Turnbull, Barry, Wickens, & Crane, 2004). Rising childhood obesity levels are indisputable but the differing data collection methods and the affect of amended BMI cut-off points casts doubt on the accuracy of the figures in Table 2 and consequently the reliability of the trends.

TABLE 2 OBESITY PREVALENCE (AS A PERCENTAGE) IN NEW ZEALAND CHILDREN (2002/ 2006) AND ADULTS (2002/03, 2006/07) BY NZDEP 2001/2006

NZDEP quintile	Adults (15+ years)				Children 5-14 years)			
	Female		Male		Female		Male	
	2002/03	2006/07	2002/03	2006/07	2002/03	2006/07	2002/03	2006/07
I	15.8	20.4	14.0	21.4	4.3	5.2	5.1	5.7
II	19.8	21.4	19.6	19.8	3.6	5.4	4.3	4.5
III	22.2	22.7	21.5	23.3	8.5	6.6	6.7	7.5
IV	22.8	27.0	20.5	25.1	11.5	9.2	9.5	8.3
V	22.7	39.7	24.6	35.4	19.5	16.4	16.1	13.9

Sources: Ministry of Health 2003d, 2004a, NZ Health Survey 2006/07

2.4.3 Obesogenic risk by ethnicity.

A number of findings make the application of across-the-board obesity intervention/initiatives difficult within a New Zealand environment. Looking firstly at percentage body fat (%BF), researchers have shown that for the same BMI, Maori and Pacific Peoples have a lower %BF although the difference is more pronounced in Pacific Peoples (Rush et al., 2007; Rush et al., 2004). In contrast, Asians Indians have a higher %BF, specifically abdominal fat, a possible explanation of increased cardiovascular disease in Asian Indians (Rush et al., 2004; WHO, 2004b). Regarding diabetes, researchers found that irrespective of age, income and BMI, within the New Zealand population, the relative risk of diabetes mellitus was significantly increased among Maori, Pacific Peoples and Asians (Scragg, Baker, Metcalf & Dryson, 1991). Scragg et al. believed that for Maori and Pacific Peoples increased levels of obesity was a contributing factor. More recently the prevalence of diabetes was found to be 2.8 times greater for Maori, and 4.1 times greater for Pacific Peoples compared with Europeans (Sundborn et al., 2007). Other researchers examined insulin resistance as an alternative to BMI when determining chronic disease risk in Maori. One finding was that Maori with insulin resistance had a higher waist circumference, higher blood pressure and lower high-density lipoprotein (HDL) cholesterol, all risk factors in both cardiovascular disease and metabolic syndrome (McAuley et al., 2002).

In summary, international and national data demonstrate rising obesity levels in New Zealand, with socio-economically disadvantaged women at greatest risk. National data suggests obesity levels have plateaued in child cohorts, but New Zealand researchers have critiqued the reliability of these findings especially in Maori, Pacific Peoples and Asian Indian populations. The discussion now turns to New Zealand's response to rises in these obesity levels.

2.5 Within a New Zealand context what anti-obesity initiatives were supported?

Like many other countries, New Zealand data on socio-economic disparities have demonstrated growing inequalities in health (Blakely, Kawachi, Atkinson & Fawcett, 2004; MOH- taking the pulse, 1999; Tobias & Howden-Chapman, 2000). In response, the then Labour government put in place policy initiatives such as 'The New Zealand Health Strategy' (MOH, 2000) and the New Zealand Disability Strategy (MSD, 2001), prioritising the reduction of health inequalities. As part of the 'New Zealand Health Strategy' and aiming to reduce disparities, thirteen population health objectives were identified; improving nutrition, increasing physical activity, and reducing obesity are three of them. Treating obesity remains core to the NZHS as it was identified in 10 of above-mentioned objectives. A number of initiatives were suggested to address rising obesity levels and to support vulnerable groups, both at an individual and a population level.

2.5.1 Individual interventions.

New Zealand, at an individual level, prioritized increased physical activity and improved nutrition above more conventional dietary interventions (MOH, 2004a). A number of New Zealand researchers examined the relationships between obesity and improved nutrition and increased physical activity, particularly in children and ethnic groups. Waikato Clinical School researchers, Simmons et al. (2005) examined whether choice and availability of takeaway and restaurant food consumption were associated with increased obesity, and found that obesity related strongly to reduced physical activity, but not to consumption of takeaway food.

The Mann group, from the Department of Human Nutrition at Otago University co-ordinated the, A Pilot Programme for Lifestyle and Exercise (APPLE) study. A

community intervention designed to prevent obesity in children by enhancing extracurricular opportunities for physical activity and reinforcing simple dietary messages in the school and local community. This project suggested that providing activity coordinators and basic nutrition education in schools significantly reduced the rate of excessive weight gain in children, although they conceded such interventions were more successful in children not already obese (Taylor et al., 2007). Auckland University of Technology's Division of Sport & Recreation produced a number of papers examining the correlation between levels of physical activity, body fatness and ethnicity in child and adolescent populations (Duncan, 2008; Rush, 2003, 2004, 2007).

The above findings aligned with the main government strategy, Healthy Eating - Healthy Action (HEHA), which was multi-layered in its approach. At an individual level, HEHA supported the targeting of high risk cohorts: those with chronic disease, low socio-economic groups, the young, Maori and other ethnic groups (MOH, 2004a).

Primary healthcare initiatives included 'Care Plus' which targeted people with high health needs, usually with two chronic co-morbidities. Although not obesity specific, the obese often met the inclusion criteria through their obesity-related co-morbidities. Care Plus allowed for the development of individual care plans for those with high health needs to set realistic, achievable health and quality of life-related goals, with regular follow-ups (MOH, 2007a). Care Plus was often facilitated through nurse-led clinics within a GP practice, a MOH review of the implementation of care plus supports this suggesting that "half of practices in the survey of practices reported that Care Plus was a nurse-led or exclusively nursing service" (MOH, 2006, p 57).

The Green Prescription was another primary health care tool that was aligned with HEHA. Arising out of a study by Swinburn et al. (1998) and adopted by Sport and Recreation New Zealand (SPARC), patients were given written advice from a health

professional to become more physically active. Though obesity was not identified within the inclusion criteria, the scheme encouraged practitioners to target medical conditions associated with inactivity (Handcock & Jenkins, 2003).

On a regional scale there was a small number of proactive groups often targeting single ethnicity, high-risk cohorts. One initiative demonstrated that a moderate-intensity, community-based diabetes awareness and lifestyle programme had the ability to minimize weight gain but was dependent on ongoing participation and monitoring (Simmons, Voyle, Fout, Foet, & Leakehet, 2004). Another 'Project Replace', in the Bay of Plenty, targeted an identified Maori population. Embedding of obesity initiatives within a Maori framework was later evaluated as important to the ongoing sustainability of the lifestyles changes initiated by Project Replace (Hamerton, McPherson, Mercer, Morrison & Rinii, 2009).

In 2009, the Ministry of Health through its Clinical Trials Research Unit published guidelines for weight management both for adults and for 'children and young people' in an effort to inform health professionals (Ministry of Health and Clinical Trials Research Unit, 2009a; Ministry of Health and Clinical Trials Research Unit, 2009b). These guidelines were presented as "a statement of best practice based on the available evidence and expert consensus (at the time of submission to the Ministry of Health)". Interestingly, the summary algorithms and key messages for both groups, adults and 'children and young people', continue to rely on BMI as the primary diagnostic tool despite the recognised problems with BMI in child and ethnic cohorts, discussed earlier. The guidelines do go on to discuss clinical need in more depth. However, the point at which the health professional engages is based on a raised BMI.

Options of actions within the algorithms are stated as FAB, food/diet, physical activity and behaviours strategies. Yet within the adult guidelines, the Green Prescription gets

only a brief mention on page 22. The ‘children and young people’ guidelines suggest the use both the Green Prescription and Active Families initiatives but in both sets of guidelines these are the last suggestions offered under the physical activity best practice points. Reasons for this could be: that a number of the initiatives mentioned above were not specific to obesity, such as Care Plus, and a number were small local studies whose national applicability was as yet untested. An alternative reason could be that the authors struggled with the concept of physical activity as a treatment option for health professionals dealing with obesity.

2.5.2 Population initiatives.

From a population perspective, the then government’s main initiative was the HEHA strategy. In 2002 the HEHA consultation document was open to discussion on key issues, priorities and actions to address rising New Zealand obesity levels. After feedback, the HEHA strategy was published in 2003 with SPARC named as the partners in the document (MOH, 2003a). This was followed up in 2004 with an Implementation plan (MOH, 2004a). It was to have at least a six-year perspective and to be reviewed after five years. The eighty-seven identified actions were divided into three, two-year phases with room for local modification.

HEHA, like a number of other national initiatives, it used the Ottawa charter’s five outcomes as a framework to identify specific outcomes as actions (MOH, 2004a). It was aligned to the NZHS population health goals of improved nutrition, increased physical activity and the reduction of obesity. Table 3 evaluates HEHA against six other countries, in terms of national strategies supported by WHO. Of the six initiatives supported by international health bodies, the HEHA implementation plan supported only two as key messages: a multi-layered approach and nutrition and physical activities initiatives in schools (MOH, 2004a).

TABLE 3 NEW ZEALAND ANTI OBESITY INITIATIVES THAT SUPPORT WHO' NATIONAL INITIATIVES EVALUATED AGAINST SIX COUNTRIES

Country	**National committee for Obesity prevention**	**Multi layered approach**	**Nutrition/Physical Activity policy initiatives in Schools**	**Taxes/bans on unhealthy foods**	**Subsidies for healthy foods**	**Economic Incentives for increased Physical Activity**	**References**
Denmark		✓	✓			✓	(NATIONAL ACTION PLAN AGAINST OBESITY Recommendations and Perspectives, 2003)
Australia	√	√	√		✓	✓	(National Obesity Taskforce, 2004)
Sweden	√	√	√	√	√	√	(Folkhälsoinstitut, 2005)
Ireland	√	√	√		√	√	(National Taskforce on Obesity, 2005)
Spain		√	√	√			(Spanish strategy for nutrition, 2005)
UK	√	√					(Obesity: Third Report (2003-2004) volume 1) , 2004)
New Zealand		√	√				(MOH, 2004a)

When examining the detail of the 87 specific actions within the implementation plan, all except, "creation of a national committee for obesity prevention" where deemed worthy of exploration" (MOH, 2004a, p. 19). Breast-feeding promotion was the fifth specific action identified within the document. Nursing/midwifery groups were not listed as being involved in the development of the implementation plan (MOH, 2004a, p.45-47); nor were nursing/midwifery mentioned within the specific actions for 'reorientation of the health sector (MOH, 2004a, p. 33). Interestingly, the HEHA website in December 2010 now has "fully breast-fed infants for at least six months" as a key message (www.moh.govt.nz). On a historical note, the change of government in 2008 shifted the emphasis of the HEHA strategy, prioritising physical activity initiatives above those of improved nutrition.

In summary, New Zealand researchers mostly concentrated their inquiry on the effects of obesity in children and ethnic cohorts, critiquing the usefulness of BMI for these groups. In adults, initiatives such as Care Plus and the Green Prescription were used to impact on obesity, though not specifically designed with obesity in mind. HEHA, although purporting to align with the WHO, was less supportive of its anti-obesity strategies than five other evaluated countries. Nursing/midwifery involvement in the strategic development of HEHA was not evident within the HEHA implementation plan document. Having discussed how the government developed and evaluated obesity initiatives, the argument now turns to mechanisms by which the health democracy of New Zealand critiqued the government's response.

2.5.3 Accountability cycles.

As mentioned earlier, there were international calls for the strengthening of accountability cycles at a political level (WHO, 2007a). The New Zealand political

structure allows for a swifter response to issues of national importance and the New Zealand health care structure also presents a unique opportunity to tackle emerging health concerns (Ganley, 2001). Its singular framework, both geographically and politically, has allowed for the development of national strategies to address epidemiological challenges that affect the lives of every New Zealander at some level. HEHA is one example, others include 'Nutrition and the Burden of Disease, New Zealand1997-2011' (MOH, 2003c) and the 'New Zealand Palliative Care Strategy' (MOH, 2001). A supporting mechanism for this is the New Zealand government's unicameral structure, which allows for rapid legislative response to emerging national problems. However, a recognised weakness of this function to enact laws quickly is the possibility that they are not thoroughly thought through at the time (National Democratic Institute, 1996). To address this issue, thirteen select committees provide the alleged necessary checks and balances. Some strengths of a select committee are that they are composed of MPs from all parties, they can examine the evidence more thoroughly than the debating chamber timetable allows for, and members of the public can make submissions (Tanner, 2006). It could be argued that the Health Select Committee (HSC) process forms part of an accountability cycle, as mooted by WHO. It has the power to launch inquiries on its own initiative. The public can influence select committees, and this direct contact of public and MPs on legislative matters is seen by many as a distinctive strength of the New Zealand democratic process (Ganley, 2001). Additionally, it allows for external evaluations of the submissions by interested parties, for example, White's (2007) initial analysis of submissions for 'Fight the obesity epidemic'.

Perhaps the most important aspect of this accountability cycle is that the government is obliged to respond to HSC recommendations. On a historical note, and outside the parameters of this study, the then Labour government produced a response document

that accepted or rejected recommendations by the HSC inquiry. One consequence of this response was a decision to introduce free fruit in primary schools. After the change in government in 2008, this initiative was to be stopped by the incoming government. Intensive lobbying by interest groups resulted in it continuing but the funding was cut (www.moh.govt.nz). This highlights that accountability at the highest levels is constrained by the government's term of office and reinforced by public demand.

2.6 New Zealand Nursing Response to Obesity

New Zealand nurses/midwives response to rising obesity levels from a practice setting perspective focuses on Primary Health Care nurses, nurses with a diabetes focus, and nurses with a 'mother and baby' focus.

2.6.1 Primary health care.

In situating these nurses it was firstly necessary to examine the socio-political context of their practice. The New Zealand Primary Health Care Strategy (NZPHCS) led to a reorganization of the delivery of health within community settings (King, 2001). Nurses were singled out as especially important to its success, "Primary health care nursing will be crucial to the implementation of the Strategy, and will therefore be best addressed at the national level" (King, 2001, p. 23). Primary health nurses were envisioned as the first point of contact for disease management across the lifespan, "working with individuals, whānau, communities and populations – to achieve the shared goal of health for all, is central to primary health care nursing" (MOH, 2003b, p. viii).

Primary Healthcare nurses are employed by a number of stakeholders, such as the District health Boards (DHBs), Primary Health Organisations (PHOs), GP Practices, Maori Health Trusts, charitable organisations and Non Government Organisations (NGOs). Their work covers 14 practice settings, with some nurses working in more than

one role and delivering care dictated by more than one health strategy (Hughes & Calder, 2006). It is a practice requirement within New Zealand for all public health nurses to work within national and international frameworks such as Te Tiriti O Waitangi and the WHO Ottawa charter (Public Health Association, 2007). The WHO Ottawa charter sought to promote health through an international process of advocacy, enablement and mediation (WHO, 1986).

To enable the evolving role of nursing within the NZPHCS, The Primary Health Care Nursing Innovation Fund was set up (King, 2002) which encouraged nurses to develop innovative projects. Some of these were showcased in Evolving Models of Primary Health Care Nursing Practice (MOH, 2005b). Of the eleven nurse-led initiatives described within the document only two acknowledged diabetes as part of their core work and none mentioned obesity specific interventions.

Searching the EBSCO database, to date there has been little New Zealand nursing literature published on the effectiveness of primary health care nurses in obesity initiatives/ the interventions. Nonetheless, the HEHA implementation plan, discussed in section 2.5, saw obesity management strategies as being firmly in the domain of Primary Health Care. One New Zealand study supported this positioning of obesity management strategies, informing readers that primary healthcare nurses were the largest group of nurses providing primary care for patients with diabetes in New Zealand (Kenealy et al., 2004).

International literature, particularly that of the UK, also identified obesity management as being initiated and supported by primary care nurses (Counterweight Project Team, 2004; Dick, 2004). Other researchers examined the effectiveness of obesity management by primary health care nurses in the UK reporting, "that a broad, somewhat holistic, approach with less emphasis on dieting plans may have been

favoured (by default) by the nurses in the NHS" (Brown & Psarau, 2008, p25). Brown and Psarau's literature review found that at best 10% of patients entering a nurse-led support programme achieved a clinically significant weight loss of 5% or more. However, to put these results in context, a 7% decrease in initial weight has been shown to reduce the risk of developing type ll diabetes by 58% in individuals with impaired glucose tolerance, demonstrating that micro weight changes can have macro health benefits (Diabetes Prevention Program Research Group, 2002).

Douketis, Macie, Thabane, and Williamson (2005) exploring the effectiveness of differing types of primary care interventions and their target groups, concluded that obesity interventions were most effective when focused on those with a higher risk of morbidity such as diabetes and heart disease. These findings place obesity management firmly within the scope of nursing practice.

2.6.2 Diabetes nursing.

Diabetes is an important health problem in New Zealand, particularly for Maori and Pacific Peoples populations (MOH, 1999; 2002a). Obesity and type ll diabetes are strongly linked through pathogenic sequalae, and treating diabetes is both one of thirteen population health objectives and one of three disease priority areas identified in the New Zealand Health Strategy (MOH, 2000). As described above, the findings of Kenealy et al. (2004) informed us that GP practice nurses were the largest group of nurses providing primary care for patients with diabetes in New Zealand, and that this role was likely to increase as a consequence of the NZPHCS. This proved to be the case and led to the development of national standards of practice for nurses practicing in diabetes. The National Diabetes Knowledge and Skills framework (2009) provided an accreditation framework for differing levels of practice, from Diabetes Nurse through to Diabetes Nurse Educator (DNE) to Diabetes Nurse Specialist (DNS) (Snell, 2009).

Obesity was of interest to diabetes nurses for a number of reasons. The literature increasingly reported that the presence of visceral fat was most strongly associated with increased risk of insulin resistance and type ll diabetes, and even a small weight loss in patients with abdominal obesity was shown to decrease the metabolic risk profile for type ll diabetes and cardiovascular disease (Desprs, 2006; Eckel et al., 2005). Obesity interventions that involved increased physical activity were demonstrated to lower the incidence of type ll diabetes with only small losses in weight (Laaksonen et al., 2005).

Some international nurse authors believe that, as front-line healthcare providers, nurses were particularly well-suited to play an integral part in future applications of diabetes prevention programmes that involved reducing obesity and increasing physical activity (Madden, Loeb, & Smith, 2008). Such prevention programmes offered opportunities for education, promotion of self-care and psychological support, all of which lie within the perceived role and function of diabetes nurses (Kenealy et al., 2004; Siguardardottir, 1999). The nursing literature also supported the effectiveness of nurse-led care in diabetes, a literature review of twenty two published studies concluded that nurse-led interventions resulted in: improved glycaemic control, reduced diabetic symptoms, cost effectiveness, and reduced length of hospital stay (Carey & Courtney, 2007).

Diabetes nurses have positioned children and pregnant women as vulnerable groups, often as a consequence of GDM. Discussing children, the literature demonstrates that diabetes has increased in child populations to the extent it is one of three most prevalent chronic diseases of youth (Allen & Vessey, 2004). Type ll diabetes in adolescents has increased dramatically in the last decade, especially in minority populations (Dabelea et al., 2007; Liese et al., 2006; Shaw, 2007). Although the causal relationships between obesity and type ll diabetes are more clearly understood, the high incidence of obesity and type l diabetes is still under investigation (Reinehr et al., 2005). The incidence of

disordered eating practices amongst adolescent type l diabetics is also being explored (Neumark-Sztainer et al., 2002; Peveler et al., 2005). The following section examines the nursing/midwifery response to obesity presenting in the mother and her baby.

2.6.3. Mother and baby

Within a New Zealand environment, the care of the 'mother and her baby' is the responsibility of a number of groups, however midwives were strongly presented within all of these groups, consequently, the discussion focuses on midwifery practice. The Nurses Amendment Act (1990) established the professional and legal separation of midwifery from nursing and established midwives in New Zealand as a separate and distinct profession. However, nursing and midwifery continue to share core values such as the concepts of holistic health and negotiated care. The New Zealand Midwifery Council's website states that, "New Zealand midwives work in partnership with the woman and her family in a relationship of trust, shared decision making and responsibility, negotiation and shared understanding." The midwifery scope of practice further positions midwives as giving women support, care and advice during their pregnancy, labour and up to six weeks postpartum. This includes health and wellness promotion and education at an individual, family and community level (Midwifery Council of New Zealand, 2004a).

The Midwifery Council is the regulatory body for over 2800 midwives in New Zealand. The Council works alongside a number of other maternity interest groups such Plunket, Parents' Centre New Zealand, the Home Birth Association and La Leche League. It sets standards for practice and review processes and is actively involved in ongoing education. It has consensus statements on a number of topics, of which gestational diabetes is one. The College of Midwives website is a source for a number of New Zealand research studies on the impact of gestational diabetes mellitus (GDM) on

obesity (www.midwife.org.nz). Obesity and midwifery intersect most commonly in three places; the care of the obese pregnant woman, the care of the women with GDM, and lastly the reduction of obesogenic risk as a consequence of breastfeeding.

A recurring problem in 'pregnancy and obesity' arguments is the question of pathological weight gain. The Institute of Medicine (1990) in America, made recommendations for weight gain during pregnancy across the entire spectrum of BMIs. However ideal weight gain in pregnancy is still under discussion, with the literature increasingly reporting that actual maternal weight gains are higher than any of the recommendations, with levels of between 20-40% reported (Derbyshire, 2008; Kanagalingam, Forouhi, Greer, & Sattar, 2005; Wells, Schwalberg, Noonan, & Gabor, 2006). Rössner (1992) estimated that postnatally 10kg of maternal weight gain was retained. In respect of the mother's health, obesity has been associated with increased maternal morbidity, emergency caesarian section, pre-term labour, pre-eclampsia within the pregnancy, and increased longer-term morbidity and mortality (Lewis, 2004). Data from the 'Stockholm Pregnancy And Women's Nutrition' (SPAWN) longitudinal study in Sweden also reports that for some women above average weight gain during pregnancy acts as a springboard toward ever increasing BMIs (Linné et al., 2004). In addition to negative outcomes for the mother, other authors suggested that retained weight may affect the health of subsequent children (Villamor & Cnattingius, 2006). Accepting pregnancy was an important contributor to obesity, some researchers argued that the postpartum period also provided a teachable moment that could an important motivator for anti-obesity initiatives (Østbye et al., 2008).

Breastfeeding has also been widely reported as reducing a number of health risks in both mothers and babies (American Academy of Pediatrics, 2005; WHO, 2000). Long-term benefits for infants include decreased incidence of obesity, diabetes, allergies, and

asthma (Baldwin & Friedman, 2006). One meta analysis of 14 studies found that each month of breastfeeding was associated with a 4% reduced risk of obesity for the infant (Harder, Bergmann, Kallischnigg & Plagemann, 2005). Another meta analysis examined 43 studies of the maternal benefits of breastfeeding and reported a reduced risk for type 2 diabetes and breast and ovarian cancer, but the effects of breastfeeding in mothers on 'return-to-pre-pregnancy weight' were negligible, and the effect of breastfeeding on postpartum weight loss was unclear (Ip et al., 2007). There appear to be clear implications for the practice of midwifery to promote breastfeeding as an obesity management strategy for infants, but not as yet for mothers.

The obesogenic effects of GDM on both the mother and child have been examined. In normal pregnancy the mother's body initiates a hyperglycaemic state to ensure the ready availability of glucose for the growing fetus. This is done through a mechanism of insulin resistance, which may decrease sensitivity to insulin by as much as 20% and a prioritizing of lipids over carbohydrates for normal maternal metabolism (Singh & Rastogi, 2008), making it difficult to establish at what point raised or uncontrolled glycaemic levels constitute a diagnosis of GDM. What has been established is that prolonged hyperglycemia during pregnancy, regardless of a diagnosis of gestational diabetes mellitus, negatively impacts on the mother's postpartum health and that diabetogenic nature of pregnancy is diagnostic for development of type ll diabetes (Doria, Patti, & Kahn, 2008). Lifestyle modifications have been shown to be effective (Cheung et al., 2007). Studies have also examined the impact of hyperglycaemia on the fetus in utero, reporting an increased risk for both diabetes and obesity (Sobngwi, Boudou, & Mauvais-Jarvis, 2003).

In summary, New Zealand obesity strategies were evaluated, as being within the practice dynamic of PHC but there was little evaluation of New Zealand PHC nurse-led

obesity clinics. A number of international studies have suggested that although nurse-led clinics have targeted obesity and diabetes, they have struggled to achieve significantly clinical weight-loss in patients. However, other researchers have shown, in respect to diabetes in adults, that even micro-weight reduction can have significant health benefits. It has also been demonstrated that prolonged breastfeeding is a protective factor against future obesogenic health consequences for the child but not for the breastfeeding mother. Lastly, that prolonged hyperglycaemia during pregnancy increases risk for both obesity and type ll diabetes, for both mother and baby. The discursive literature is now reviewed.

Chapter 3: Discursive Literature Review

3.1 Introduction

Having explored the positivist literature this chapter explores the discursive constructs of obesity evident with the feminist poststructuralist literature. The rationale for reviewing the positive and feminist post-structuralist data separately, is the premise that it could result in a more in-depth appreciation of contrasting facets of obesity, as each paradigm asks differing/ent questions of the literature. For example, the feminist post-structuralist literature often positions obesity as a gendered identity, whilst the positivist literature does not make that distinction. The majority of literature that has examined feminist poststructuralist constructions of disordered eating has been published from a social science perspective rather than nursing/midwifery one. A search of journal publications revealed that of the nurse researchers who examined disordered eating and nursing utilising the Foucaultian lens, few were from New Zealand. This was also the case when examining obesity, Carryer (1997) being a notable exception. Therefore, both the nursing/midwifery literature and literature that informs nursing/midwifery were examined.

An overview of Foucault's conceptualisation of the fluid nature of power relationships will be provided followed by an examination of the ideas of French feminists Kristeva, Irigaray and de Beauvoir. An exploration of feminist post-structuralist literature, informed by the above authors examining how the feminist subject was produced and reproduced within the discourses of obesity will follow. Discursive constructions of *obesity* and *nursing* were then unpacked to examine how they align/differ to interpretations reviewed in the previous chapter. The dominant constructions of *obesity* that emerged included: obesity as a health construct, the feminine 'other' of obesity,

obesity as a disordered eating practice, the soft but fit body, and obesity as crisis and risk. The dominant constructions of *nursing*, as it reacted and interacted with these discourses of obesity were: nursing as an agent of power and nursing as good motherhood.

3.2 Foucault

In examining knowledge/power relationships from a feminist post-structuralist approach, it was first necessary to explore the ideas of Michel Foucault, a major source of reference for authors exploring the lived experience of obesity and disordered eating (Foucault, 1979a; 1980; 1991). Concepts of interest were *biopower*, *governmentality*, *the clinical gaze*, and *power and resistance*.

3.2.1 Biopower.

Foucault, in a historical analysis of power relationships in modern times, argued that as absolute power vested in a sovereign individual waned with the rise of political liberties a counter movement arose in the vacuum. Physical punishments were no longer countenanced to discipline the citizen towards normative behaviour. The emerging disciplining mechanism he termed "*biopower"* (Foucault, 1979a, p.144) Foucault saw *biopower* as a series of disciplinary practices used to regulate citizens' bodies without the use of force and believed these disciplinary practices emerged most clearly in institutions such as the army, schools, prisons, factories and hospitals.

Within the context of obesity, *biopower* explored the broadening of state's interests to include population welfare, and operates around two poles, an *anatomo-politics of the human body* – the shaping of the body to optimise its capabilities, usefulness, efficiency and docility, and *biopolitics of the population* – regulatory control of and interventions

into biological processes of life (McDermott, 2007). Foucault described the interactions between these two poles as *governmentality* (Foucault, 1991).

3.2.2 Governmentality.

Crucial to this understanding of *biopower* was Foucault's positioning of governance. For Foucault *government* operated only as a verb, and is concerned with, " men in their relations to wealth, resources, means of subsistence; men in their relation to customs, habits and thinking; men in their relations to accidents, famine, epidemics, death etc." (Foucault, 1991, p.93). *Government* is consequently a meeting point where techniques of domination and self-determination interact and where the *docile body* will habitually obey the normative subject position (Johnson, 1993, p. 142).

Foucault accepted the omnipresence of power, both as a positive, productive force and a negative, subjective one. He also saw the interactions of these techniques of power as fluid and fluctuating according to historical, cultural and social epistemes (Foucault, 1980). Within the texts of obesity, the *anatomo-politics of the human body*, that is the shaping of the body to optimise its capabilities, usefulness, efficiency and docility. This concept emerges as a discourse of personal responsibility, for example, the regulating of the obese through penalties such as increased insurance premiums. The *biopolitics of the population*, that is the regulatory control of and interventions into, biological processes of life. This concept arises as a discourse of collective responsibility, for example, legislation to promote 'healthy cities.' Within obesity initiatives these two discourses, personal and collective responsibility, are also imbued with political, cultural, and engendered connotations.

3.2.3 The clinical gaze.

In reflecting on disciplinary practices Foucault in his book *The Birth of the Clinic* (1994) established a parallel between biopower and the human sciences. He saw this as a consequence of the movement of the sick from their homes to a hospital environment for care. In a later book, *Discipline and Punish* (1997a), he posited similarities between the layout of hospital wards and Bentham's panopticon, a prison design that allowed the constant surveillance of prisoners without their knowledge (Bentham, 1995). When the focus of gaze was the body, and not the prisoner, Foucault argued that biopower and scientific knowledge became inextricably linked. Thus clinicians, as purveyors of scientific truths, became the authorities of delimitation, in determining what could be construed as contributing to population and individual health and what could be construed as disease (Foucault, 1992). For example, the widespread use of Body Mass Index (BMI) to determine obesity, has become the norm despite recognised problems with its applicability both generally and specifically in child and ethnic cohorts (Carryer, 2001; Mann, et al., 2004).

Surveillance and regulation were disciplining mechanisms by which the *clinical gaze* exerted its influence. In constructing obesity, epidemiological statistics, and unilaterally applied biophysical parameters, were mobilised to propel *the obese body* towards clinicians' normative constructions of health (Nettleton, 1997).

3.2.4 Pathology and resistance.

If one accepts Foucault's positioning of the fluid nature of power then one must also accept his premise that, "there are no relations of power without resistance" (Foucault, 1980, p.142). One method used by the *clinical gaze* when dealing with resistance to their normalizing disciplines exerted on the body, was to pathologise that resistance. An

example of this was the rise of another meaning of obesity, which was that obesity was pathological, embedded with moral and parenting choices (Burrows & Wright, 2004a; McDermott, 2007; Orbach, 1978). Other ways of meaning in which obesity arose was as an engendered discourse.

In an attempt to address engendered power relationships, Foucault in *The History of Sexuality (1979b)* turned his attention to sex. In volume one, *An Introduction*, he examined reductive Christian constructs of sex that placed it in the bedroom of the legitimate heterosexual couple. He understood sex as a political issue, "a pivot of the two axes along which developed the entire political technology of life" (Foucault, 1979b, p 145). As the pivot of these axes of *biopower* and the *anatomo-politics of the human body*, Foucault believed sex fitted in both categories at once, "giving rise to infinitesimal surveillances, permanent controls, meticulous ordering of space, indeterminate medical or psychological examinations, to an entire micro-power concerned with the body" (p 145). In examining feminine disordered eating at both ends of the spectrum - obesity and anorexia/bulimia, authors, for whom Foucault was a universal referent, saw phallocentric ideations of beauty as attempts to regulate and control women's bodies (Orbach, 1978; Wolf, 1991).

Foucault *(1979b)* distinguished four mechanisms of knowledge and power that centered on sex, the hysterical woman, the masturbating child, the malthusian couple, and the perverse adult. Two of these are pertinent to this analysis: the hysterical woman and the malthusian couple. *A hysterization of women's bodies* he situated as " a threefold process, firstly, whereby the feminine body was analysed - qualified and disqualified - as being thoroughly saturated with sexuality; whereby it was integrated into the sphere of medical practices, by reason of a pathology intrinsic to it" (p.104). Secondly, the feminine body was constructed as a social body, whose primacy was

ensuring regulated fecundity, existing within the family space, which mostly provided her substance and function. Lastly, as solely responsible for the life of children, her sole biologico-moral responsibility was constructed as a nervous woman, constantly on guard, always at fault. Discipline was achieved through a thorough medicalisation of her body and sex, carried out in the name of the responsibility she owed to the health of her children, the solidity of the family institution, and the safeguarding of society. These concepts emerge in the disordered eating literature, which posits *mother blaming* within the anorexia/bulimia discourses (Caplin, 1990; Maisal, Epston, & Bordon, 2004; Malson & Ryan, 2008).

The second mechanism of interest, the Malthusian couple, posited a socialization of procreative behavior, whereby social and fiscal measures were brought to bear on the fertility of couples. This consisted of a political and medical socialization that attributed a pathogenic value for the individual and species to birth control practices. Within obesity arguments, later authors would also argue that pregnancy was similarly pathologised (Catalano, 2002: Sadikot, 2008). This concept has been addressed earlier where it was suggested that the normative hyperglycaemia of pregnancy has been pathologised within some sections of the positivist obesity research. One criticism of post-structuralism and Foucault's writings was that they lacked emancipatory intent, this was further explored by feminist post-structural scholars.

3.3 Feminism and Post-Structuralism.

Feminist theory positions women as its subject, and the goal of its endeavours is to examine what constitutes the subject of women in a number of different representations. Within the disordered eating literature a number of seminal authors are universally referenced. Julia Kristeva (1982) attempted to bring the body back into the discourses of human sciences. She positioned the maternal body operating between nature and

culture. When discussing oppression, she believed that within a patriarchal culture the subject must gain independence from the maternal body. That is, as part of psychosexual development the subject *me* must separate itself from the object *me and mother*. Kristeva called this process abjection (1982). She suggested that distorted abjection is one cause of women's oppression (p. 374), where women's worth has been reduced to solely the maternal function (Kristeva, 1987). She also believed that in abjecting the maternal, women, maternity, and femininity were also rejected in patriarchal societies, often leading to oppression and degradation of women (Kristeva, 1982; 1897).

Irigaray in *The Sex Which Is Not One* (1997) believed, " all western discourses present a certain isomorphism with the masculine sex: of the visible, of the specularisable, of the erection "which" does not correspond to the female sex" (p. 64). This phallocentrism, whilst allowing two gender categories man and woman, favoured a unitary truth that accepted only man as the universal referent. Irigaray thought that women, whilst remaining faithful to their biology, must interrogate those gender identities constructed by a phallocentric, philosophical tradition. Bordo (1991), Wolf (1991) and others used these ideas, suggesting obesity was a construct of phallocentric ideations of beauty and health.

Simone de Beauvoir, in *The Second Sex (1984,)* famously wrote, "one is not born a women, but rather becomes one" (p.13). De Beauvoir also positioned woman as *other* to man, accepting that this positioning was a stratagem also used against other categories of identity such as race, class and religion. In designating women as *other,* they then arose as deviant to normal male, as outsiders always attempting to emulate normality. She believed this concept of *other* was most powerful when men used it to stereotype

women, as an excuse to organise society around patriarchal values. A number of authors similarly positioned obesity as *engendered other* (Harjunen, 2003; Orbach, 1978).

Butler (1999), critiquing the identity categories proposed by Kristeva, Irigaray, and de Beauvoir in her book *Gender Trouble*, suggested establishing the "I" and its "other" in binary confrontation, weakened opportunities for knowability and agency, "That they work to constrain in advance the very cultural possibilities that feminism was supposed to open up" (p. 187). Informed by Foucault, she believed the critical task for feminism was, "to locate strategies of subversive repetition enabled by those constructions, to affirm the local possibilities of intervention through participating in precisely those practices of repetition that constitute identity and, therefore, present the immanent possibility of contesting them" (Butler, 1999, p. 185). She moved beyond the constricting binary identities of Kristeva, Irigaray and de Beauvoir, and problems with Foucault's lack of intent, to advocate for feminism as a discourse for transformational possibility. The theoretical positions posited by Foucault, Kristeva, Irigaray, de Beauvoir and Butler have influenced the discursive constructions of obesity and gender that they inform.

3.4.Feminist discursive constructions of women and larger body size.

Feminist authors have examined how obesity has foregrounded and backgrounded women's behaviour. Rather than mimicking positivism, each author's contribution will not be positioned in isolation, as many offered insights across a number of discursive constructs. The constructions that emerged were obesity as a health construct, the feminine other of obesity, obesity as a disordered eating practice, the soft, fit body, and obesity as crisis and risk.

3.4.1 Obesity as a health construct.

The quantitative data acknowledges, and feminist poststructuralists concur, that there is no simple correlation between ill health and body weight (Bender, Trautner, Spraul, & Berger, 1998; Gard & Wright, 2005). Ernsberger and Koletsky (1999) suggested that correlations between ill health and obesity could only be proven when body weight is in the morbidly obese range (BMI ≥ 35). A study from the Centres for Disease Control CDC corroborated these findings. The study also found that people in the overweight category (BMI 25-30) have the lowest rate of mortality but suggested that early intervention was a likely cause of this finding (Flegal, et al., 2005).

In examining the production of obesity as an illness, Cohen (1972) was among the first authors to question that fatness was being pathologised and that obesity had metamorphosed into an epidemic. She suggested that medical discourses, through pathologising fatness, resulted in obesity interventions being connected with a moral imperative. They became the disciplining techniques that propelled the body towards a normalised construction of health. Murray (1972) was also one of the first to draw links between *the obese body* and *the feminine body*

Carryer (1997), a New Zealand nurse researcher, interrogated BMI 'cut-offs' for overweight and obesity in her PhD thesis entitled *Embodied Largeness*. She argued that the cut-offs were derived from an American life insurance company's survey of new policyholders, who were mostly male and from information gathered over a twenty-three year period. Carryer made the point that no consideration was given to gender, ethnic or life course differences; important considerations when one examines the obesogenic risk profiles described in Chapter Two.

Lupton (1996), using a Foucaultian analysis, discussed how the use of the emerging biomedical categories 'clinical obesity' and 'morbid obesity,' endorsed constructions of fatness as disease. Feminists also explored how obesity initiatives often propelled *the body* towards ill health. Putting disordered eating practices aside, feminist authors, for example, Rice (2006), argued that dieting is, "ineffective in long run, but it is now clear that they have their own set of hazards"(p. 414). Diabetes and heart disease, which are often primary reasons for dieting, are cited as two of these hazards. Sykes and McPhail (2008) concurred, positioning 'fat phobia' as being more unhealthy than 'fat' itself. They looked at how in physical education it is oppressive from two perspectives, firstly by amplifying 'fear of fat discourses' which reinforced normalizing constructs of sex and gender and secondly how weighing and measuring techniques worked to humiliate and discipline fat bodies.

3.4.2 The feminine other of obesity.

The feminine other, posited by Simone de Beauvoir, harked back to Cartesian dualism and Lacanian theories of binary logic, with the feminine was always positioned as *other* to the singular, stable, ever present male (Lacan, 1982a). Within the disordered eating literature a number of social science researchers, that inform nursing, used de Beauvoir's ideas to deconstruct the medical and positivist literature. Orbach (1978) in *Fat is a Feminist Issue*, writing about compulsive eating, positioned *fat* as a social disease, refuting ideas that it was about a lack of self-control or willpower. Orbach (1978) further posited that *female fat, "*expressed a rebellion against the powerlessness of the woman, against the pressure to look and act in a certain way and against being evaluated on her ability to create a certain image of herself" (p. 32).

Cohen's (1972) contention, that obesity had been constructed as a moral issue, was addressed by Wolf (1991) who built on the biomedical discourse that *fat is female* in her

seminal book, *The Beauty Myth*. She asked the question of why should female fat should be a moral issue articulated with words like 'good' and 'bad'? Wolf made the point that if *fat* were the issue and not *female fat*, "Public debate would be far more hysterically focussed on male fat than on female, since more men (40 percent) are medically overweight than women (32 percent) and too much fat is far more dangerous for men than for women" (p. 186). Bordo (1993) concurred with the gendering of obesity, pointing to health propaganda on weight and size that were gender biased, for example advertisements aimed at women suggesting 'you can never be too thin'. Rice (2006) argued that the "the war on fat" was a "war on women." Monaghan (2005) suggested that obesity and femininity were so clearly interwoven that men were feminised by their obesity.

Harjunen (2002), writing on the lived experiences of obese women, examined the social constructions of obesity that situated it as a marginal and liminal experience. Harjunen hypothesised that obesity was an ongoing, gendered, embodied, often a marginalizing and violent cultural process. Examining discourses of obesity as an illness, Harjunen made the point that obesity initiatives were as much about making the individual socially more acceptable as gaining health benefits. Society stigmatised obese women for failing to comply with the normative ideal of thinness set for the female body. In expecting the obese woman to be toiling toward normative goals, by endlessly dieting or indulging in diet-talk, her embodied subjectivity and identity already threatened as *other* was further destabilized (Harjunen, 2003).

Carryer (1997) writing on the nurse's role contended that nursing/nurses needed to address support mechanisms for obese women, rather than disciplining and regulatory ones, such as dieting, saying, "There is sufficient evidence to suggest that nurses cease

to support reduction dieting and actively work to prevent young women from embarking on a life-time involvement with reduction dieting" (p.165).

The obese woman was also constructed as being subjected to doctrines of personal responsibility in which the modern liberal subject was conceived as disciplined, self-actualising, rational, and financially astute (Lupton, 1997). This doctrine of neoliberalism allowed the state to redraw the lines of social responsibility and promote doctrines of self-examination, self-care and self-improvement (Petersen, 1997). By removing possibilities of blame from itself, the state then attempted to push the obese woman towards its normalised constructions of health by provoking moral panic against the *feminine obese*. Where the woman was propelled toward constructs of blame and responsibility, often situating her as having let herself, her children and society down (Saguy & Almeling, 2008).

Thus the *feminine other* was pressured to look and act in a certain way. Her subjectivity was regulated and disciplined by normative discourses that equate thin with beautiful, and fat with female. She was doubly stigmatised when she also failed to conform as a good citizen and was encouraged into proactive and reactive measures that made her ill, for example, anorexia and repetitive dieting. It is often within these illnesses, described in the literature as 'disordered eating practices, that *nursing* and *obesity* overlap.

3.4.3 Obesity as a disordered eating practice.

Wolf (1991), and a number of other authors, have argued that the western cultural construction of health/beauty constrains and regulates normative femininities, acting to propel *the female body* toward 'disordered eating practices (Bordo, 1993; Orbach, 1993). At one end of the disordered eating continuum is obesity and at the other anorexia and bulimia. Feminist post-structuralist authors tended to concentrate their

inquiry on the undernourished end of the continuum, but it could be argued that their findings also have value in constructing obesity. For example, Bordo (1993) and Orbach (1993) positioned anorexia as a rebellion against femininisation, that in its particular form expressed both a rejection of and an exaggeration of stereotypical femininity. Obesity could be similarly constructed.

Chernin (1981, 1986) and Wolf (1991) described how femininities, in which food replaces sex and where both anorexia and bulimia become religious rites of passage. Anorexia was also positioned as a self-production and self-destruction in which starvation became the bodily control axis (Bordo, 1993), and as both a rejection of abundant consumerism and collusion with it (Turner, 1992). Some authors reported that the treatment practices used to combat anorexia and bulimia disorders often act to reproduce them (Burns, 2004; Malson, Finn, Treasure, Clarke, & Anderson, 2004; Ryan, Malson, Clarke, Anderson, & Kohn, 2004). New Zealand psychologists, Burns and Gavey (2004) concluded that healthy weight discourses were inextricably linked with a cultural imperative of slenderness for women, and that, paradoxically, these 'health' practices supported disordered eating mechanisms such as binge eating and compensating. There is little in the literature that addresses the role of *nursing* within these 'health' practices.

One of the few studies by Malson and Ryan (2008), analysed hospital-based treatment for eating disorders, attempted to trace a matrix of feminine possibilities constructed by nurses caring for anorexic and bulimic patients. They found that, "both patients and nurses were constituted in terms of culturally engendered binary oppositions such that patients figured both as vulnerable good 'little girls' and, as rather more threatening, 'bitchy little bad girls.' These findings suggest that nurses support both the feminist and positivist constructions of obesity; firstly as marginalised docile bodies requiring

support and latterly as morally deficient beings who require discipline. An alternative discursive construction within the feminist literature on obesity is what could be described as the soft but fit body.

3.4.4 The soft but fit body.

Feminist writers situated the fitness boom in the last two decades of the twentieth century as an attempt to normalise women toward an embodied maleness - an androgynous ideal. They voiced concern that regulating mechanisms of control and self-mastery, also seen in hunger discourses, ultimately propelled women toward disordered eating practices (Bordo, 1993; Duncan, 1994; Hall, 1997; Spitzack, 1990). Duncan in collaboration with Robinson continued with this theme in a later paper, suggesting that the 'body ideal' advocated by dominant medical biomedical models was based on white European women and thus was culturally, as well as gender stigmatising (Duncan & Robinson, 2004).

Markula (1995), researching female exercise regimes at the University of Waikato, concurred that the public discourse around aerobics was a 'voice of oppression' but added that the aerobics experience itself allowed different and competing voices to emerge that were often supportive, and sometimes confusing, for women. These findings add weight to both Foucault's argument, and the feminist poststructuralists informed by him, that there is no meta-narrative to power relationships and transformative opportunities can be small and individual (Butler,1999).

In critiquing earlier feminist constructions of fitness, where exercise was seen as a disciplining and regulatory mechanism, Barbazon (2006) was reluctant, "to leave women's sporting bodies pathologised in the discourse of eating disorders, because if all women's athletic experiences are positioned thus, then it becomes lost in an agenda

of blaming and shaming for women, including narcissism, obsessions with nutrition, fitness, hygiene, calorie counting, fat grams or body shaping" (p 68).

Scott Dixon (2008) accepted that many women's fitness projects were merely cosmetic, for example fat purging. Scott Dixon also suggested that feminists pledging an allegiance to "health at any size" failed to provide a model as to what this might look like. She concluded her argument suggesting that, "strength-and-power-based sports provide a possible model for articulating a feminist politics of empowerment through activity that is not dependant on negatively disciplining the body nor achieving thinness/leanness" (p 44).

Carryer (1997) speaking from a New Zealand perspective, believed that being healthy was important, but she also argued commercial fitness enterprises often worked to marginalise those most in need of their help. For example, limited opening hours in evenings and the use of conventional stereotypes in advertising put unwritten barriers in place (p.166).

The concept of 'health at any size' has feminist support yet there has been little feminist research into its limitations. The soft, fit body has opportunities for empowerment through involvement in sports and physical exercise opportunities, but it is often marginalised by commercial practice. Another way in which obesity is marginalised is through discourses of crisis and risk.

3.4.5 Obesity as crisis and risk.

In constructing obesity as disease, statistics were often employed to construct positions of crisis, the aim being to mobilise populations toward normative goals (Sykes & McPhail, 2008). This was often a gendered construct, for example, Burman (1991) noted the mother was positioned as most responsible for the monitoring and

surveillance of children eating and their exercise patterns. The language used in describing obesity had also become increasingly associated with moral choices, the use of emotionally laden metaphors and imbued with fear and aggression: "The war against obesity", "Fight the obesity epidemic" were and continue to be, two well-used phrases. Extremes of this approach, the promotion of hysteria against obesity, were particularly evident when talking about childhood obesity for example "Honey we are killing our kids", a television programme that first aired on 'The Learning Channel' in 2006.

Such hysteria was also echoed in rise of treatment/punishment strategies for those who were seen to lose the war, namely obese children and their parents. Leaghy and Harrison (2004) discussed the use of "fat laps" in some Australian schools, were overweight/obese children were instructed to run laps of the school playing fields, supposedly to curb obesogenic risk. Within New Zealand, Burrows (2005) reported a number of similar strategies such as children and their parents being graded on the 'healthyness' of their lunch boxes (p 11). Evans and Davies (2004) were concerned that such strategies would/could result in disordered eating patterns presenting in younger cohorts, as the body became 'an outward marker of value'. Within New Zealand, Gard and Wright (2005) critiqued physical activity regimes that arose solely to combat western biomedical constructions of obesity. They were critical of the certainty with which data was produced on contemporary childhood levels of obesity and physical activity, as it fuelled discourses of crisis and risk. Burrows and Wright (2004a) analysed media articles, identifying uncertainty and risk discourses, which they believed incited a sense of panic regarding children's health and promoted the cult of the body. They suggested that the proliferation of obesity-related health risks contributed to discourses of blame and responsibility. Burrows (2005) also made the point that by tailoring physical activity to combat obesity it was becoming less culturally and socially

appropriate and parents were being encouraged to train their children rather than play with them.

McDermott (2007), in a governmental analysis of childhood obesity strategies, suggested that discourses of collective responsibility, when looking at childhood obesity and inactivity, allowed health concerns to be addressed in an holistic way, taking into account class, gender, race and environment. When discourses of personal responsibility were invoked, risk discourses became moral technologies to shape and guide people's conduct. McDermott (2007) believed that "risk discourses increases a perceived sense of crisis, but also induces a sense of moral panic about the health of its children that can be ordered only through expert knowledge and practices" (p. 318). Like Evans and Davies (2004), she was concerned about the 'collateral damage' to children of such strategies.

Moral panic was also evident in discourses that positioned commercial food manufactures as culpable for childhood obesity. Opalinski (2006), a nurse researcher, examined 'pouring rights' contracts for high energy soda drinks in schools, and suggested that personal responsibility discourses allowed these companies to perpetuate profit taking and to remain unexamined and uncriticised. She also argued that her research allowed for the enlightenment and empowerment toward effective social change.

Other authors, for example, Saguy and Almeling (2008) questioned the role of the media in promoting discourses of crisis and risk, finding that media coverage reported alarmist and individual-blaming studies more frequently. Holme's (2009) study reached similar conclusions but believed media coverage of obesity had the opportunity to swing the pendulum of blame away from the individual and back toward the collective responsibility of the state.

In summation, crisis and risk discourses within obesity most often have the child in danger, with the parent/s being blamed. The cited authors argue that this has reinforced regulatory and disciplinary behaviour around food, when the child intersects with the state. They believe this had also occurred with physical activity, which was seen to have more value as training than as childhood play. Commercial food interests are believed to support discourses of personal responsibility in the hope of perpetuating company profits. The media coverage was supportive of responsibility and blame discourses but threw its net wider than the individual to include the state as being culpable. The role of *nursing* within these varying constructions of obesity provides another dimension

3.5 Discursive Constructions Of *Nursing* Within Obesity Discourses.

A commitment to the development of a nursing theory, that could articulate the position of difference that nursing makes, has led researchers to examine nursing through a Foucaultian lens (Carryer, 1997; Gastaldo & Holmes, 1999; Perron, Fluet, & Holmes, 2005). Exploring how *nursing* is positioned within professional power relationships and with their patients is part of that research. The aforementioned authors, and other social researchers, identified that *nursing* was constructed in conflicting ways, both as an agent of power and as being disempowered. As professions that have always reflected femininity, nurse/midwife relationships with those they care for, was similarly conflicted, pivoting around an axis of maternal care (Davies, 2003; Grimillion, 2003). There was little to be found in the literature that looked at where such constructions of *nursing* overlapped with those of *obesity* within New Zealand, Carryer (1997) again was an exception. Due to this finding the literature review was widened and studies in which discourses of *nursing* overlapped with those of other disordered eating practices such as anorexia and bulimia were examined. This was done in the hope of finding applicable possibilities.

3.5.1 *Nursing* as an agent of power.

Nurse researchers, Gastaldo and Holmes (1999), in a meta analysis of 27 studies that employed a Foucaultian perspective to nursing, suggested that "Nursing care becomes a political event, nursing knowledge contributes to the dissemination of regimes of truth and nurse, rather than being powerless, are perceived as professions who exercise disciplinary power over life in society" (p 231). The authors expressed concern that there was little in the nursing literature that challenged the idea of nursing as a disciplining practice. Gastaldo and Holmes (1999) further believed that by placing nursing at the centre of power discourses it allowed for possibilities of constructive power and forms of resistance that were congruent to the nursing ideals of patient-centred care.

An interesting feature of the Foucaultian literature, that Gestaldo and Holmes (1999) reviewed, was the predominance of nurse researchers from Australia. The authors attributed this to a strong grounding in social and behavioural sciences in undergraduate nursing courses in Australia since 1994. It is beyond the scope of this thesis to examine the effect the above might have on New Zealand nurses' and midwives' perceptions of power dynamics within therapeutic relationships. Yet it may have been an influencing factor that coloured the discursive lens of nurse/midwife submitters. In a later paper that analysed nursing as a means of governmentality, these authors also suggested that nursing as a profession hid behind a shield entitled "powerless profession" as a protection from possible societal censure. However in reinforcing this regime of truth, constructive opportunities were weakened (Holmes & Gastaldo, 2002).

Carryer (1997) also used a Foucaultian lens to exam how larger body size arose in nursing discourses. She found that the nursing literature in general was supportive of biomedical discourses about body size. Carryer felt this weakened opportunities for

nurses to support the large woman to maximise her health potential in ways other than weight reduction regimes.

Holmes, in collaboration with Perron and Fluet,(2005) examined bio-power and nursing practice. They found that nursing operated at the crossroads of anatomo-political and bio-political ranges of power; as the cogwheels within the healthcare system. As such, nurses' actions often appeared contradictory to the concept of autonomous patient care. Although nurses wished to be regarded as apolitical, the nursing profession in fact, was profoundly political (Perron et al., 2005).

A number of authors have added to this concept. Falk-Rafael (2005) believed nurses were morally obligated to speak truth to power. That nurses practice at the intersection of public policy and personal lives and this unique position requires them to fulfil social mandates for health through socio-political activism. Also within the international obesity literature, Reto (2003), discussing psychological aspects of delivering nursing care to bariatric patients, looked at the interplay between societal pressures and fat stigma that left bariatric patients with heightened feelings of powerlessness and 'lack of self control.' She cautioned nurses, as 'agents of power,' against further alienating this vulnerable group. Within the undernourished, disordered eating literature, Malson and Ryan (2008) looked at these relationships between nurses and anorexic patients as multiply feminised and political.

From a feminist perspective, Ceci (2004), examining gender, power, and nursing within the context of an inquiry into the deaths of twelve children in Canada, thought that nursing was situated within a discourse of caring and compassion, "Of emotionality, which in our culture is recognizably and in many (unfortunate) respects uncontroversially, a gendered discourse and gendering discourse"(p76). Ceci felt this operated to cast doubt on the validity of nurses' concerns, as 'credible knowers'

suggesting that the femininities of nursing worked to weaken their knowledge, authority, and ultimately effectiveness. Although Ceci was not speaking from an obesity perspective, in examining the femininities of nursing, mothering as a gender/power construction is often explored within the discourses of disordered eating.

3.5.2 *Nursing* as good motherhood.

Ceci (2004) in her research, supported the above suppositions, believing the femininity of nursing to be consolidated within a maternal framework; exploring 'eating disorders nursing' she positioned the nurses as, "good therapeutic mothers" (p. 121). In Mason and Ryan's study (2008) the nurses emerged as both,

> …idealized maternal carers and bullying, and as both pivotal and marginalised in their ability to deliver care. The nurse-patient relationship also demonstrated binary oppositions; the nurse was constituted as normative femininity and the patients as pathologically feminine. In unpacking pathogenic femininity, the nurses constituted the patients and sometimes their pathological mothers as 'bad mothers', with themselves positioned as good mothers in their normal families and therapeutic maternal mothers in the hospital ward (p.123).

This concept of 'mother blaming,' echoes Foucault's (1979b) construction of the *nervous mother*- she must be constantly vigilant, always at fault. She was held responsible for the health of her children, the solidity of the family institution, and the safeguarding of society (p 104). The disordered eating literature supports this *disordered parenting* concept, constructing eating disorders as familial pathologies, with anorexia and bulimia positioned as maladaptive coping mechanisms for dysfunctional family relationships (Minuchin, Rosman, & Baker, 1978; Palazzoli, 1985). Literature that supports this supposition also has a tendency to equate family

dysfunction with maternal, rather than paternal, dysfunction (Caplin,1990). It is suggested that the nurse/patient relationship also emerges as a construction of good mother/bad mother within disordered eating studies.

In conclusion, Foucault's understanding of the fluid nature of power offered particular insights within the discourses of obesity. Discourses of personal and collective responsibility towards health/slenderness, understood through the mechanisms of biopower, governmentality and resistance, allow a more complete understanding of the multiple complexities involved and the possibilities for transformation. His construction of the mother as a hysterical/nervous mother within the doctrines of neoliberalism may be particularly pertinent to this study.

French feminist post-structuralists' constructed women as other to the normal male body. Irigaray believed psychosocial development required rejection of the maternal in all its guises- a painful but necessary process. Later scholars expanded on these ways of knowing, suggesting that societal constructions of health and beauty were phallocentric. That feminine disordered eating was either a means of resistance to, or an attempt to embrace, phallocentric constructions of femininity that was intrinsically pathogenic to the feminine subject.

The majority of feminist literature posited obesity, defined by BMI, as reflecting male norms. Physical activity and dietary regimes were seen as ways to normalise women's bodies towards a reflection of the male body rather than health itself. Obesity initiatives, such as dieting and exercise, were in essence a societal conditioning mechanism, aimed at women and often resulting in anorexia and bulimia. That women and their families were propelled towards these initiatives by crisis and risk doctrines often constituted as personal responsibility. A smaller group of authors believed that in rejecting physical

activity as regulatory and disciplining, feminists were weakening transformational opportunities for women through sports and other exercise-based activities.

In examining the role *of nursing* within the discourses of disordered eating, two constructions of interest to this study emerged; *nursing as an agent of power* supporting phallocentric biomedical discourses, and the *nursing as good motherhood*. These understandings of the feminist post-structural discourses provide a clearer ability to see how they may or may not be taken up and deployed in the nursing/midwifery submissions.

Chapter 4 Method

4.1 Introduction.

Having examined the obesity literature in chapters two and three, two somewhat contradictory camps appeared to emerge, the obese body as requiring scientific control and the obese body marginalised by scientific control. Reading the literature reveals that there seems to have been little attempt to move beyond this impasse. It reveals that there is a need to synthesise the medical positivist and feminist literature and look for a possible overlap. One way to achieve this was to utilise a mixed methodology approach to the research. The strength of mixed method research is that it provides the most comprehensive findings (Schnieder, Whitehead & Elliott, 2007). Recently nursing and midwifery researchers have begun to embrace mixed method research as a means to understand the richness and complexity of the issue under investigation (Whitehead & Elliot, 2007).

In this chapter the data collection process is explained, as is how the nursing submissions were identified. The methodological approaches for the differing parts of the study are explored and what each method adds to the goal of the inquiry. The triangulation methods for each part of the study and any ethical considerations are discussed.

Study 1 examined alignments between national and international anti-obesity policies and the nursing submissions, looking at how holistic and public health oriented the submissions were and who the nursing scopes of practice identified as at particular risk of obesity in New Zealand. To achieve this a descriptive non-experimental design was employed.

Descriptive studies lie within the positivist research paradigm; both positivism and the usefulness of descriptive studies are explored. The instrument used for analysis is described and the key words or phrases used to identify nutritional and physical activity initiatives and priority groups are discussed.

Study 2 used a qualitative approach and looked for the additional layers of meaning within the submissions; the ways in which obesity was constructed the power relationships, the subject positions, and subjectivities that were evident within the nursing and midwifery submissions. Such insights are not offered by quantitative methods. To achieve this, a feminist poststructural framework was selected in order to analyse the above submissions through a discursive lens. The concepts and rationale for this approach will be explained and strengths and weaknesses will be identified. The post-structuralist concept of discourse will be discussed, as is discursive analysis, and its relevance to nursing/midwifery. Finally, how the discourses within the submissions were examined and the questions that were asked of them will be described.

4.2 Data

This study arose from an analysis by White (2007) of submissions to the HSC inquiry on diabetes and type ll diabetes by Fight the Obesity Epidemic (FOE) a charitable trust working to stop and reverse the rise of obesity and type ll diabetes in New Zealand.

The submissions were obtained under the Official Information Act 1982. The HSC inquiry's terms of reference for the submissions were as follows:

1. To examine the causative factors likely to be driving increases in obesity and type ll diabetes, including nutrition and physical activity.

2. To identify the effects of obesity and type ll diabetes on the health of both children and adults and across ethnic and socio-economic groups and potential future costs.

3. To inquire into the effectiveness, particularly for children, of current obesity prevention approaches and interventions including primary prevention and screening, information provision, education, physical activity and voluntary steps taken by the food industry.

4. To inquire into whether additional interventions aimed at changing features of the environment that promote obesity are required.

5. To consider what policy or legislative mechanisms, if any, should be used to give effect to any findings of the inquiry.

6. To report the inquiry's findings and recommendations to the House of Representatives

White (2007), in his initial analysis of the submissions, classified the submissions into six categories with 43 sub-categories: Health, Nutrition, Breastfeeding, Physical activity, Industry and Other. In total 312 submissions were received by the HSC, with 141 classified under the Health category. They constituted 45% of all the submissions received.

Within Health, thirteen (13) were identified as generic health groups and individuals. Dieticians and 'Medically-qualified health professionals' were identified separately, but nursing/midwifery submissions were not, a moot point. In addition, breastfeeding was classed as a group separate to health, and nine submissions were focussed on this aspect but no nurses or midwives were identified from the nine submissions. These findings appeared incongruous, as nursing is the largest group of health professionals within New Zealand (Statistics New Zealand, 2007). This thesis re-examines the HSC submissions, firstly, to see if nurses and/or midwives had indeed

submitted to the HSC inquiry and how their views differed/aligned with international and national obesity strategies.

To determine the nursing/midwifery voice only those submissions that identified with nursing/midwifery were examined. Nursing/midwifery submissions were identified by acknowledgment within the submission, or by the suffix RN/RM after signatures. In the case of professional bodies, the word Nurse/s/ing, Midwives or Midwife/ry in their title was deemed to be sufficient identification. Using this inclusion criteria, (summarised in table 4), eighteen submissions were identified as being from nursing and/or midwifery.

Two of the submissions were duplicates; therefore one was removed leaving seventeen. All seventeen submissions spoke to the femininities of obesity and initiatives to prevent it. Of the seventeen, another was excluded from the quantitative study, as it did not identify improved nutrition or physical activity as a possible initiative/intervention. All of the remaining submissions identified one or more "at risk" group within their text. This left a total of sixteen submissions for analysis in Study One and seventeen in Study Two. The sixteen submissions were from either an individual or a group: six were from individual nurses and ten were group submissions. A professional registration perspective was used to identify the six individual submissions as nurses. Of the group submissions, four of the submissions were from midwifery and two represented nurses. Using a ' scope of practice' perspective, six groups were identified: Education, Diabetes, Paediatric, 'Mother and Baby', 'Primary Health Care' and 'Professional Bodies'. The largest number of submissions, three, came from the 'Primary Health Care' group; this was also the largest number of individual submissions.

TABLE 4 INCLUSION CRITERIA FOR SUBMISSIONS

Identified as from nurse/s and/or midwife/s/ry by:	Author/s acknowledged their profession as nurse/s and/or midwife/midwives within the submission
	The submission had the suffix RN/RM after the author/s signature
	The words nurse/s/ing, midwives or midwife/ry within the submissions title
Nutrition initiatives/interventions were identified within the submission/s.	Key search words or phrases: nutrition/al, food, feeding, eating, breast-feeding and 'healthy eating.'
Physical activity initiatives/interventions were identified within the submission/s.	Key search words or phrases: active, inactive, sports, fitness and 'physical activity.'
At risk groups were identified within the submission/s using key search words or phrases:	For low socio-economic groups the key search words/phrases were: decile and/or 'socio-economically disadvantaged'. For ethnic groups the key search words/phrases were: Maori, Pacific or Asian. Child groups the key search words/phrases were: child/ren, kids, youth, infant, baby, childcare.
The femininities of obesity were identified within the submission:	The submission spoke only about women The submission spoke to normative feminine work practices e.g. the care of children, preparing and cooking family meals The submission spoke to breastfeeding, a gendered experience Where pictures were used within the submission, they featured only women

From a group perspective the ‘Professional Bodies’ scope of practice had the greatest numbers of submissions, also three (Table 5- Summary of scopes of practice).

TABLE 5 NUMBERS AND TYPE OF SUBMISSION BY ‘SCOPE OF PRACTICE’

Main scope of practice	**Individual**	**Group**	**Total**
Education	1	1	2
Diabetes	1	2	3
Mother and Baby	0	2	2
Paediatric	1	0	1
Primary Health Care	3	2	5
Professional Body	0	3	3

Two of the group submissions appeared to straddle more than one scope of practice. One multidisciplinary submission spoke exclusively to Gestational Diabetes Mellitus (GDM). A more in-depth examination of the submission revealed that fourteen group members identified as midwives and five identified as nurses from a diabetes scope of practice, this submission was coded as a ‘Mother and Baby’ group submission. Another group submission, mostly spoke to a ‘Mother and Baby scope of practice, however, as it was generated from a university research department, it was coded to education.

4.3 Study 1

This was a descriptive non-experimental study of written submissions made to the 2006 New Zealand Health Select Committee Inquiry into obesity and type ll diabetes by nurses and midwives.

4.3.1 Quantitative research question:

The research for the quantitative part of the study was: Have nurses and midwives, who have an interest in the treatment of obesity embraced physical activity and nutritional obesity initiatives at individual, community and population levels; and whom they identify/prioritise as 'at risk'

4.3.2 Methodology

In describing the methodology, positivism is examined, as are descriptive studies. The instrument used is discussed and the means of analysis detailed.

4.3.2.1 Positivism

A positivist research approach involves the objective observation, prediction, and testing of causal relationships (Schnieder, Whitehead & Elliott, 2007). Its basis is the scientific method and the underlying principles that include the unity of the scientific method where phenomena identified can be examined by one method and do not occur by chance. The goal of inquiry is to explain and predict, therefore all scientific knowledge should be testable and outcomes deductible. The research should be observable with the human senses and be as value-neutral as possible, not subject to any politics, morals, or values held by those involved in the research. Lastly results should be reproducible. This type of research is usually described as quantitative.

4.3.2.2 Descriptive studies

Descriptive studies are used to identify patterns in defined human populations. They are often used within health research to identify groups at high risk. Helpful at a strategic level to plan future health services, they are often used to generate hypothesis about determinants of health that can then be tested in more empirical studies (Bonito, Beaglehorn & Kjellshorn, 2006,). The strength of descriptive studies is the ability to investigate participants' knowledge, beliefs or attitudes about a particular concept; the weakness are that comparisons cannot be made between groups nor causality determined (Schnieder, Whitehead & Elliott, 2007).

Within this study, the research question will determine whether the nurses' and midwives' beliefs about obesity strategies are aligned with and support current national and international health policy. If the nurses' and midwives' beliefs do not, it could be argued that the potential for success of such policies will be weakened, as nurses and midwives are the largest group of health professionals in New Zealand.

4.3.3 Instrument

Having identified submissions using the inclusion criteria detailed in Table 4. The three main variables of interest were then examined. Firstly, how holistic were the nursing submissions with respect to nutrition and physical activity initiatives. The quantitative literature reviewed in Chapter Two demonstrated that the WHO's Ottawa Charter for Health Promotion underpinned the majority of international and national strategies in respect of rising obesity levels (MOH, 2003d). The Charter identified five levels of intervention incorporating individual, group, and populations initiatives (WHO, 1986). Using the Charter as a framework for a holistic evaluation, a tool was developed using

the Charter's five levels: building healthy public policy, creating supportive environments, strengthening community action, developing personal skills, and reorienting health services, to identify interventions specifically aimed at improving physical activity and nutrition.

Secondly, to determine how public health orientated the submissions were, they were examined against the recommended WHO national initiatives identified in Chapter two and reviewed at international and national levels in Tables 1 & 3. Thirdly, the nursing submissions were evaluated to determine whom the submitters identified as the 'at risk' groups and whom they prioritised within these groups.

4.3.4 Analysis

Data analysis was firstly achieved by measuring the frequency of nutritional and physical activity initiatives in each of the five intervention levels, identified above. Nutritional initiatives were identified using the following key search words or phrases: nutrition/al, food, feeding, eating, breast-feeding and 'healthy eating.' Physical activity initiatives were similarly identified using the following key search words or phrases: active, inactive, sports, fitness and 'physical activity.'

Secondly, the submissions were analysed for inclusion of the six (6) national initiatives recommended by WHO detailed in chapter two: a national committee for obesity prevention, a multi-layered approach to obesity at a political level, nutritional and physical activity policy initiatives in schools, taxes/bans on 'unhealthy foods (usually defined as calorie rich and nutritionally deficient), subsidies for healthy foods and economic incentives for increased physical activity.

Chapter two identified that low socio-economic, ethnic and child groups were at particular risk of negative health outcomes as a consequence of obesity and type ll

diabetes. The submissions were then examined to identify how nurses and midwives prioritised these 'at risk' groups from a scope of practice perspective. The initiatives in respect of these groups were identified by the following key words or phrases; for low socio-economic groups they were: decile and/or 'socio-economically disadvantaged'. For ethnic groups the key words/phrases were: Maori, Pacific or Asian. For child groups the key words/phrases were: child/ren, kids, youth, infant, baby, childcare. As in the first analysis, frequency distribution was measured.

4.3.5 Validity and reliability

External validity and reliability limitations of the study are discussed in Chapter Six. Internal validity measures were mostly ascertained through evaluation by academic supervisors. Both academic supervisors independently coded three random sample submissions during the study against the three variables of interest detailed above: a holistic approach, a public health oriented approach and inclusion/prioritization of 'at risk' groups. The supervisors' results were moderated against the researcher's result for all three sets of samples and there was an 85% correlation.

4.4 Study 2

Study two was an interpretative study of the nursing and midwifery submissions to the HSC select committee inquiry on obesity and type ll diabetes. Using a feminist post-structural paradigm and a Foucaultian framework, overlapping discursive constructions of *obesity* and *nursing* within the context of health democracy in New Zealand were identified. This was achieved by examining the texts for repeated, coherent sets of statements, and similarities and contrasts within the linguistic detail.

4.4.1 Qualitative research question

The qualitative research question was: what objects, subjects and power relationships manifest in the nursing and midwifery submissions constructions and interplays of *obesity* and *nursing*.

4.4.2 Methodology

The research approach for the qualitative arm of the study used a feminist post-structuralist methodology.

4.4.2.1 Post-structuralism

Post-structuralism first emerged as a movement in post-war continental philosophy. Its main criticism and point of difference was its rejection of the metaphysical commitment to *presence* as a point of value from which all reality is judged (Dreyfus & Rabinow, 1983). It refuted the two major philosophical paradigms of the time, structuralism and phenomenology. Structuralism proposed that the human experience could be understood by relating it to pre-existing linguistic, cultural and social systems. In contrast, phenomenology was based on the premise that reality consists of objects and events as they are perceived or understood in human consciousness and not of anything independent of human consciousness (Husserl, 1970). A major influence on the development of post-structuralism was Martin Heidegger who maintained that one's reality *being* is actually *being there*, that reality is shaped by the moment as it exists and every different moment has a different reality. Fundamentally we exist *as time* and not within time (Heidigger, 1962). Two important aspects of Heidegger's *being there* is that it is open to all possibilities, thus straddling both structuralism and phenomenology, and it also refutes the concept of *common sense*.

These two concepts, derived from phenomenology, are integral to post-structuralist thought, that is that multiple possibilities exist and that there is no core of accepted reality common to humanity '*common sense'*, that *sense* is a construct of both cultural, social, temporal and political influences that are accepted at an individual and group level. Thus post-structuralism rejects the ideas of truth, reason, and meaning as singular and absolute, believing that the reader's culture and society shares an equal part in the interpretation (Barthes, 2010; Gavey, 1989). Foucault, another major influence on post-structuralist thought, focused on how knowledge has been intertwined with power throughout history. In his later writings he discussed how dominant discourses and power relationships work to subjugate individuals (Foucault, 1980; 1991).

There are a number of criticisms of post-structuralism. One is that it is an end unto itself, and, whilst bringing forth multifaceted concepts of reality, reason and truth it supports no consequential actions. Although Foucault's later works did address this criticism by suggesting that an awareness of the differing layers of meaning was empowering, he was cautious to distance himself from any emancipatory intent (Foucault, 1980). Feminists suggested using a poststructural framework as a means of creating opportunities for transformational change (Weedon, 1997).

4.4.2.2 Feminism and post-structuralism

Feminist post-structuralism has one question of interest, 'what is self' and 'what is difference?' It may be suggested that these are two questions. Feminist post-structuralists believe they are two halves of the same question; without knowing self how does one recognise difference? Feminist post structuralism is concerned with 'ways of knowing' that are historical, social, cultural, and gender specific, its underpinnings are trans-disciplinary in origin. Weedon (1997) explained it as a conceptual framework, "a mode of knowledge production which uses post structural theories of language,

subjectivity, social processes and institutions to understand existing power relationships and identify strategies for change" (p.40). The above ways of knowing are often described as discourses.

4.4.2.3 Discourse

Discourse within the poststructuralist lexicon comprises groups of words or ideas that are shaped by layers of meaning. Discourse can be situated within written, visual or spoken communication, in ideas or experiences. Foucault examined discourses of power and legitimization within historical texts, arguing that power discourses can both produce and constrain the truth (Foucault, 1980). Feminists argued that knowledge potentiates action. That by revealing competing discourses, those subjugated by dominant discourses are empowered by their new reality toward transformational change (Butler, 1999). Within the context of this study, discourse refers to “a coherent set of words or ideas that is shaped according to social functions that it serves for the community that uses it” (Salmon & Hall, 2003, p. 1969).

4.4.2.4 Nursing, midwifery and feminist post-structuralism

A feminist post-structural framework acknowledges the personal as political (Dreyfus & Rabinow, 1983). Nursing and midwifery are largely feminine professions; this is borne out within the submissions. From the submissions analysed, where the author(s) were identified, their given names were female.

Professional development is a consequence of both history and culture and given that the majority of nurses and midwives are women, the effects of gender cannot be ignored (Colyer, 2004). Discursive constructions that have been attributed to nurses are 'nurses as hand maidens,' and 'nurses as invisible' (Watson, 1988; Latimer, 2000; Treacy, 2005). In examining power relationships, Atwal and Caldwell (2006) reported that

differing perceptions of teamwork, different levels of skills and the dominance of medical power, resulted in ambiguities in the way individuals position themselves in relation to multidisciplinary health team. Atwal and Caldwell, believed that competing discourses acted to destabilize the professionalism of the multidisciplinary team (2006). Conversely, other researchers suggest the strengthening of interpersonal and professional relationships as a result (Iversen, Ellertsen, Joacobsen, Raheim & Knivsberg, 2006)

4.4.3 Discourse analysis

Discourse analysis is a tool that allows for examination of the multiple discourses inherent in texts. These multiple discourses are fragmentary and offer competing and colliding ways of meaning. In examining objects Foucault advised, "We must grasp the statement in the exact specificity of its occurrence; determine its conditions of existence, fix at its limits, establish its correlations with other statements that may be connected with it, and show what other forms of statements it excludes" (Foucault, 1992, p. 6). In thinking about where the object, *obesity* overlaps with the object *nursing*, it becomes impossible to give the overlap a fixed meaning across time and place. They can only be constructed within the language of a given text at a given point in time. For example, a Plunket nurse might constitute that the overlap between *obesity* and *nursing* is within the context of childhood obesity and developmental milestones. Alternatively, a nurse working in a peri-operative environment might construct the overlap between *obesity* and *nursing* in terms of anesthetic or cardiovascular risk.

Foucaultian discourse analysis explores ways in which dominant discourses are maintained, refreshed and supported by both themselves and associated marginalized discourses (Foucault, 1992). Given that any interpretation of meaning is transient, specific to the discourse in which it occurs and open to challenge; its meaning's

vulnerability is dependant on the power relations of the discourse in which it is situated (Weedon, 1997). Discursive analysis's ability to reveal discourses of vulnerability and power has led to its wide use as a feminist research tool.

4.4.4 Coding

In analysing the data, how *obesity* and *nursing* were discursively constructed within the nursing and midwifery submissions, what subjectivities and power relationships were associated with them, and where they overlapped was addressed. In Study 2, subjectivity, describes individual's personal feelings, world-view, or opinions. Power relationships are examined using Foucault's understanding of the fluid nature of power and his conceptualisations of: *biopower*, *governmentality*, *the clinical gaze*, and *power and resistance*, described in Chapter Three. Foucault's concept of discourse analysis, described above, was employed to explore how relationships between dominant and marginal discourses emerged and were submerged within particular submitters' subjectivities. This involved using the poststructuralist Foucaultian framework as a theoretical lens to examine the linguistic detail of the submissions looking for recurrent phrases, the words and/or themes that revealed gendered power relationships. As proposed by McCloskey (2008), moving back and forth between the submissions, while coding and analyzing to examine contextual features that reinforced consistencies, contradictions, and disparities in each discursive construction assisted in providing greater depth of understanding. Excerpts of text were identified: firstly with the prefix S referring to a submission, a submission number, the paragraph (para), and page number within the submission (p.), the scope of practice of the submitter/s and lastly whether the submission was from an individual (I) or a group (G). Scopes of practice are identified as: PHC- Primary Health Care, PB- Professional Bodies, E- Education, D- Diabetes and M&B- Mother & Baby. For example, (S223, para 1, p.5, PB:G) is

submission number 223, the excerpt is taken from paragraph two, page five of the submission. It was a submission coded to Professional Bodies and was from a group rather than an individual.

4.4.5 Rigour

The potential of discourse analysis to inform nursing and midwifery practice is weakened by the interpretative problems of truth and action, as it relies on the interpretive stance of the reader (Dreyfus & Rabinow, 1983). This raises the question of how the rigour and validity of the findings can be argued. It was achieved in this study using two perspectives, internal and external. Internally, the framework of the research questions, the appropriateness of the sample in relation to the questions, the methodology of coding, and interpretation had to be congruent, clear and transparent. Crowe's (2005) framework was utilized. Crowe believed key questions that needed to be considered to ensure rigour in discourse analysis were:

Methodological rigour

Did the research question 'fit' discourse analysis?

Did the texts under analysis 'fit' the research question?

Had sufficient resources been sampled?

Had the interpretative paradigm been described clearly?

Were the data gathering and analysis processes congruent with the interpretative paradigm?

Was there a detailed description of the data gathering and analytical process?

Was the description of the methods detailed enough to enable readers to follow and understand context?

Interpretative rigour

> Had the linkages between the discourse and findings been adequately described?
>
> Was there adequate inclusion of verbatim text to support the findings?
>
> Were the linkages between the discourse and the interpretation plausible?
>
> Had these linkages been described and supported adequately?
>
> How were the findings related to existing knowledge on the subject?
>
> (Crowe, 2005, p. 61).

Although Crowe speaks from a critical social paradigm, establishing rigour is problematic across all interpretive discourse research (Schnieder, Whitehead & Elliott, 2007).

Externally, the reliance on critique was obtained from academic supervisors and from a presentation of the findings from this study at a conference entitled 'Critical and feminist perspectives in health and social justice,' held in Auckland in 2009.

The conference had been designed to allow dissemination of presenters' topics prior to the conference via a website, giving the audience an opportunity to read the research and discuss it with the author from a more informed standpoint. To strengthen rigour, findings were stripped of their supporting references and posted to the website, theorizing that well constructed arguments should stand alone and survive interrogative peer scrutiny without the props of normative academic practice. The resultant peer review was incorporated into the final discussion segment of the thesis.

In addition, the findings were presented at the Australasian 'Women in Psychology conference' in Nelson in December 2010. Psychology is a paradigm that often publishes research from a feminist post-structuralist perspective, therefore the conference

participant's critique of the findings strengthened interpretative rigour. Again peer review was incorporated into the final discussion segment of the thesis.

4.4.6 Reflexivity

Reflexivity is an awareness of the researcher's own construction of meanings and an acknowledgement of the difficulty in remaining value-neutral during the research process. Nightingale and Crombie (1999) suggested researchers explore the ways in which their personal ways of knowing influences, acts upon, and informs their research. Hence the assumptions section in chapter one. Additionally, through a process of ongoing discussion with my academic colleagues and supervisors reflexivity has been attempted and maintained throughout the research.

4.5 Ethical Considerations

From a New Zealand legislative/ethical standpoint and a quantitative perspective, as the submissions were public documents and the research did not involve human subjects, there was no requirement for confidentiality. However it was important to maintain the confidentiality of the nursing/midwifery submitters and a number was therefore assigned to each submission as a reference. Additionally, there was no obligation to inform the nursing/midwifery submitters that their texts had been subject to scrutiny, however, in keeping with feminist tenets, there is hope that the dissemination of the findings will allow opportunities for honesty, transparency and transformational change (Drefus & Rabinow, 1983). Any correspondence elicited will be scanned and incorporated into the final electronic version of the thesis.

Having outlined the data collection process and the inclusion /exclusion criteria employed, the methodology for each part of the study was described.

Questions of validity and rigour were addressed. Reflexivity was defined. Lastly, ethical issues inherent in the study were explored from legal, quantitative and qualitative viewpoints.

Chapter 5: Findings

5.1 Introduction

Study 1 is a descriptive non-experimental quantitative analysis of written submissions made to the 2006 New Zealand Health Select Committee inquiry into obesity and type ll diabetes by nursing and midwifery. Its purpose is to determine how their opinion was holistic, and public health orientated and whom the submitters' identified/prioritised as the 'at risk' groups, in respect to nutrition and physical activity.

Study 2 is a qualitative discourse analysis of the nursing and midwifery submissions and was guided by a feminist post structuralist paradigm looking specifically at power relationships within the text and their historical, cultural, scientific and gendered positions. Employing a post-structuralist approach enabled the unpacking of the speaking positions and identities that were taken up by the submitters when drawing on, or positioning, themselves in their particular discourse of obesity.

5.2 Quantitative analysis.

Sixteen submissions met the inclusion criteria. That is, they could be identified as being from nursing and/or midwifery from what had been entered within the document, and they mentioned nutritional and physical activity initiatives within their submissions.

As discussed previously, the WHO Ottawa Charter for Health Promotion was core to a number of national anti-obesity strategies, including New Zealand's. The New Zealand anti-obesity strategy, HEHA, had two main tenets; healthy eating and healthy action. To determine how holistic the nursing and midwifery submissions were, their recommendations in respect of nutrition and physical activity were analysed using the Ottawa Charter's five levels: building healthy public policy, creating supportive

environments, strengthening community action, developing personal skills, and reorienting health services (WHO, 1986).

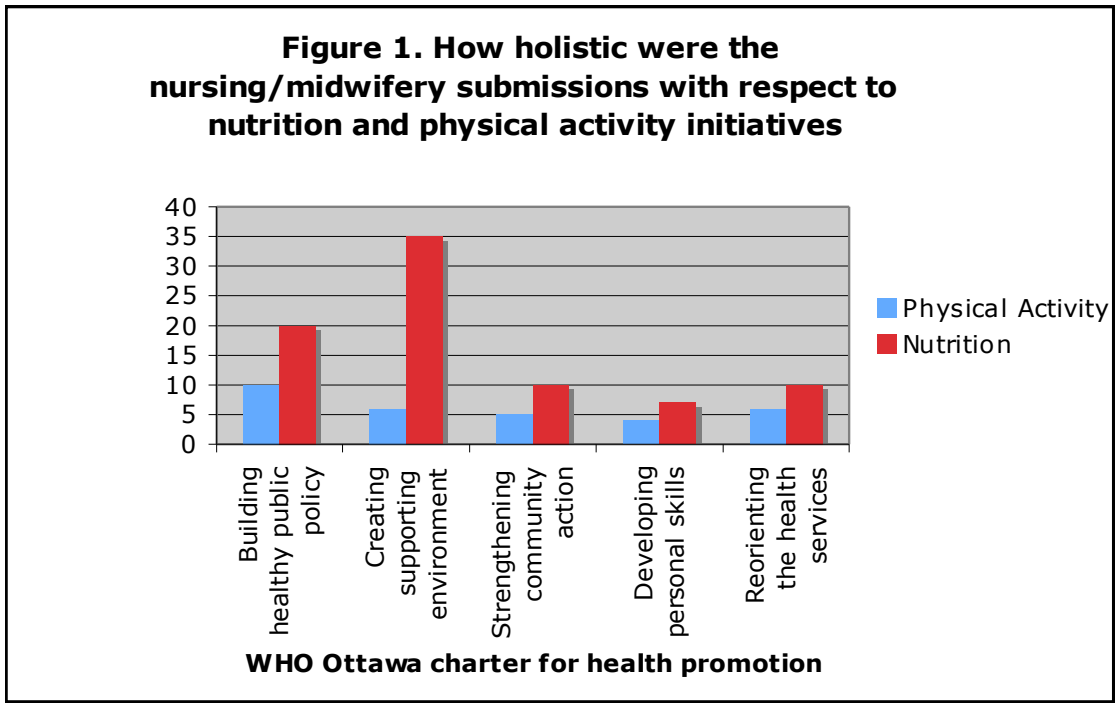

FIGURE 1

Data analysis showed that the nursing and midwifery submissions included all five of the Ottawa charter's five levels and therefore demonstrated a holistic approach. Analysis also revealed that the nursing and midwifery submissions prioritised nutritional initiatives above physical activity initiatives in all five Ottawa Charter intervention levels (illustrated in Figure 1). The nursing/midwifery submissions most supported 'creating supportive environments', both in respect of physical activity and improved nutrition. They placed 'building healthy public policy' second, 'reorienting the health services' and 'strengthening community action' were third and 'developing personal skills' was least supported. Within the 'creating supportive environments' level, the ratio of improved nutrition to physical activity initiatives was greatest at a ratio of 4:1.

Samples of initiatives suggested by the nursing/midwifery submissions, were catagorised using the Ottawa charter's five intervention levels (Table 6). These sample initiatives were then further analysed against national public health strategies suggested by the WHO (illustrated in Figure 2). These included: a multi-layered approach, nutritional and physical activity policy initiatives in schools, taxes/bans on 'unhealthy foods' (usually defined as calorie-rich and nutritionally deficient), subsidies for healthy foods, and economic incentives for increased physical activity.

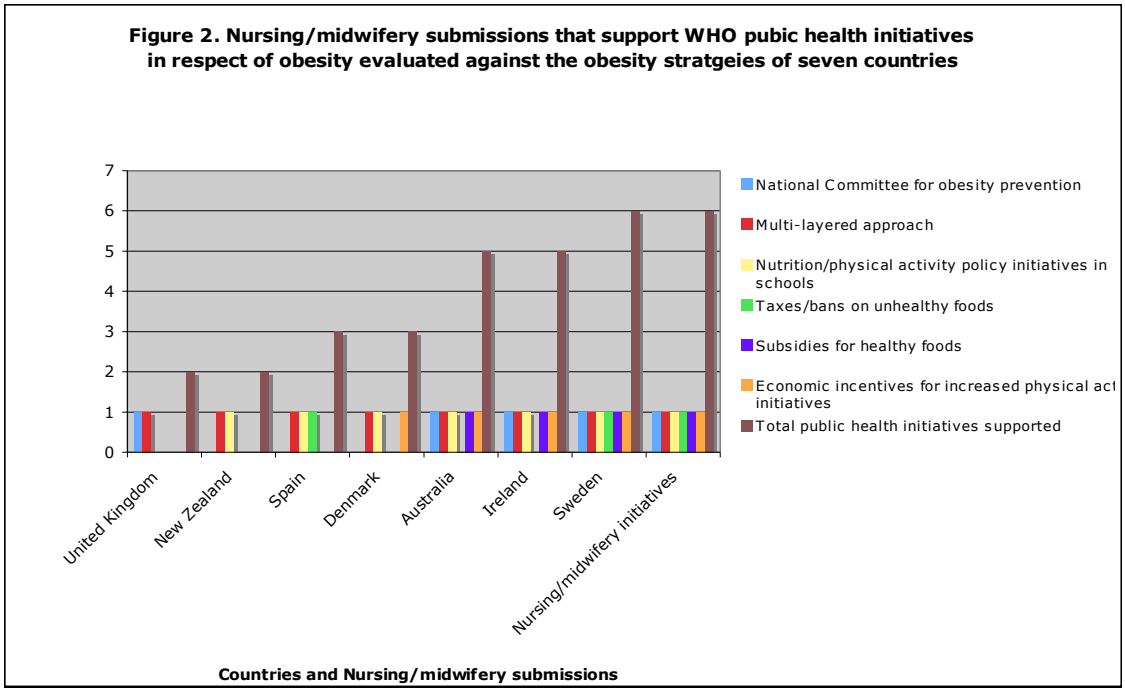

FIGURE 2

The national anti-obesity strategies of six countries have been compared against HEHA, the New Zealand national anti-obesity strategy in chapter two. Of the seven countries examined only Sweden supported all six initiatives, and New Zealand, along with the UK, gave the least support to the WHO strategies. When comparing initiatives suggested by nursing submissions, (see Table 7), I found that nursing and midwifery supported all six of the WHO's strategies. Compared to HEHA, which only supported two WHO strategies as key messages: a multi-leveled approach and nutritional and

physical activity policy initiatives in schools. This suggests that the writers of the nursing and midwifery submissions believed more anti-obesity strategies than those espoused by HEHA were needed.

Lastly, the submissions were analysed for identification/prioritisation of 'at risk' groups. This was achieved by examining the priority groups identified in Chapter Two, namely lower socio-economic scale (SES), ethnic and child/youth groups and comparing the frequency of nursing and midwifery submission initiatives for each group. When discussing 'ethnic groups' only Maori and Pacific Peoples were identified within the submissions. They have been identified specifically within Figure 3, rather than under the general heading of 'ethnic groups'.

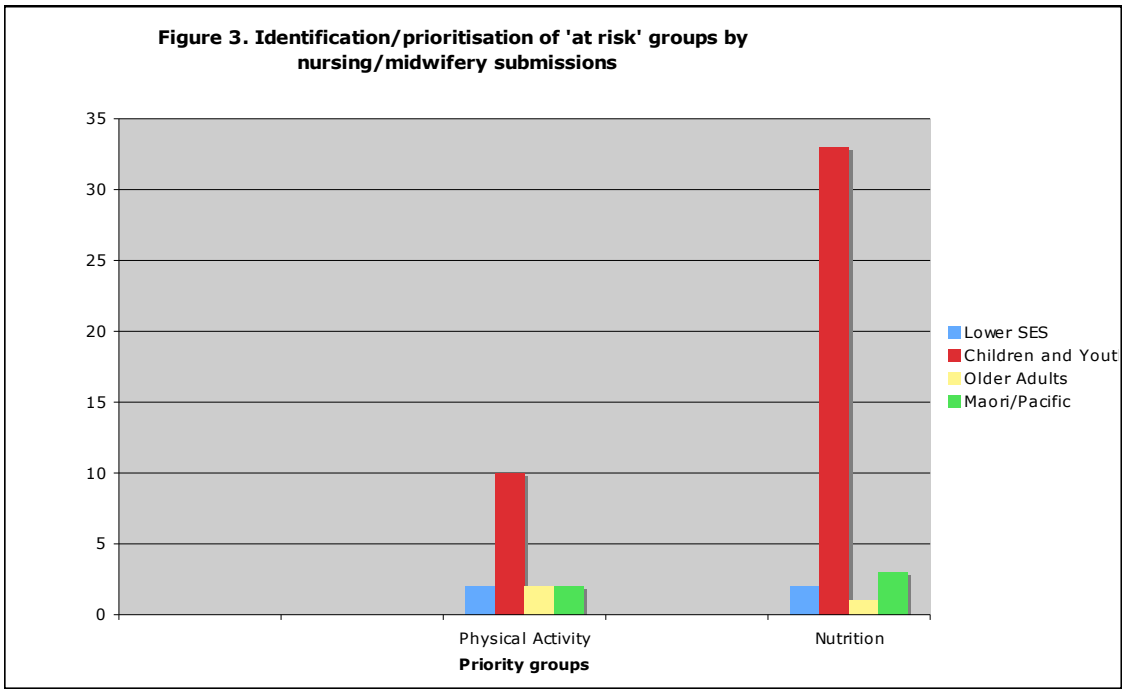

FIGURE 3

The findings (illustrated in figure 3) illustrated, that the nursing and midwifery submissions identified all of the above groups within their initiatives. An unexpected finding was their support for initiatives aimed at older adults; to allow for a more robust discussion these initiatives were also included in the analysis. The nursing and

midwifery submissions prioritised child cohorts as being at special risk. For example, the nursing submissions support for physical activity initiatives for child/youth cohorts was greater than their support for Maori/Pacific Peoples by a ratio of 3:1.

TABLE 6 SAMPLES OF INITIATIVES SUGGESTED BY THE NURSING/MIDWIFERY SUBMISSIONS IN RESPECT OF PHYSICAL ACTIVITY AND IMPROVED NUTRITION

Strategy	Physical Activity	Nutrition
Building healthy public policy	• Health impact assessment on all central and local government policy to ensure positive effects in respect of physical activity (S176) • Ban sports sponsorship from fast food outlets (S269)	• An NGO, expert taskforce on obesity is required to advocate for strategic direction on policy, research and promotion of food and nutrition issues in the health and non-health sectors. This taskforce must be independent of the food industry influence. (S71) • Tax exemptions given to the marketing of energy-dense foods to children should be revised (130)
Creating supporting environment	• Subsidize physical activity programs for older adults and the socio-economically disadvantaged people and youth/children. Provide subsidies for public transport to recreational/sporting activities. Standard government subsidy on all gym/recreational memberships. (S269) • Creation of physical activity and nutrition groups supporting and educating pregnant women (relevant to the individual cultural and educational needs (S226)	• Legislation/regulation is needed to prohibit marketing, across all media types, of energy-dense, low nutrient foods (S176) • Traffic light food labelling system (S71) • Restriction of food advertising during children's television viewing times. Regulation of the food industry to lower amounts of fat and sugar in the foods and penalties if they don't comply (fat and sugar tax). (S99) • Paid breastfeeding breaks and extended access to quality childcare be provided to support women and families to maintain breastfeeding and return to paid work. (S151)
Strengthening community action	• Promote active travel plans within workplaces and educational institutions (S176) • Primary health care providers to include a physical activity assessment at specific age-related encounters (S130)	• Taxes on high-energy foods, removal of GST from appropriate foods and zoning of fast food outlets. Primary health care providers to include a nutritional assessment at specific age-related encounters (S130)
Developing personal skills	• Education/awareness campaigns will fail unless environmental changes which support and encourage increased physical activity are also implemented (S71)	• Developing and implementing services to support women of child bearing age to make healthy nutritional choices (S223)
Reorienting the health services	• That the health commission focuses on physical activity targets prior to any population weight targets (S42) • That acknowledgment is required of the groups and individuals currently undertaking to provide education and support to communities about nutrition and physical activity (268)	• There is an inadequate workforce capacity to undertake promotion of good nutrition in the health and education sectors, and in the community. Priority must be given to recruiting, training and retaining appropriate people to work in these roles (S71) • That the health commission focuses on healthy eating targets prior to any population weight targets (S42)

TABLE 7 NURSING/MIDWIFERY SUBMISSION INITIATIVES THAT SUPPORT WHO' NATIONAL INITIATIVES EVALUATED AGAINST SEVEN COUNTRIES INCLUDING NEW ZEALAND

Country	**National committee for Obesity prevention**	**Multi-layered approach**	**Nutrition/Physical Activity policy initiatives in Schools**	**Taxes/bans on unhealthy foods**	**Subsidies for healthy foods**	**Economic Incentives for increased Physical Activity**	**References**
Denmark		✓	✓			✓	(NATIONAL ACTION PLAN AGAINST OBESITY Recommendations and Perspectives, 2003)
Australia	✓	✓	✓		✓	✓	(National Obesity Taskforce, 2004)
Sweden	✓	✓	✓	✓	✓	✓	(Folkhälsoinstitut, 2005)
Ireland	✓	✓	✓		✓	✓	(National Taskforce on Obesity, 2005)
Spain		✓	✓	✓			(Spanish strategy for nutrition, 2005)
UK	✓	✓					(Obesity: Third Report (2003-2004) volume 1) , 2004)
New Zealand		✓	✓				(MOH, 2004a)
Suggested nursing initiatives	✓	✓	✓	✓	✓	✓	Table 4

These findings were similar for low SES and older adult groups. Interestingly, the nursing and midwifery submissions that suggested physical activity initiatives placed the older adult at a similar level of obesogenic risk as the low SES and Maori/Pacific Peoples groups.

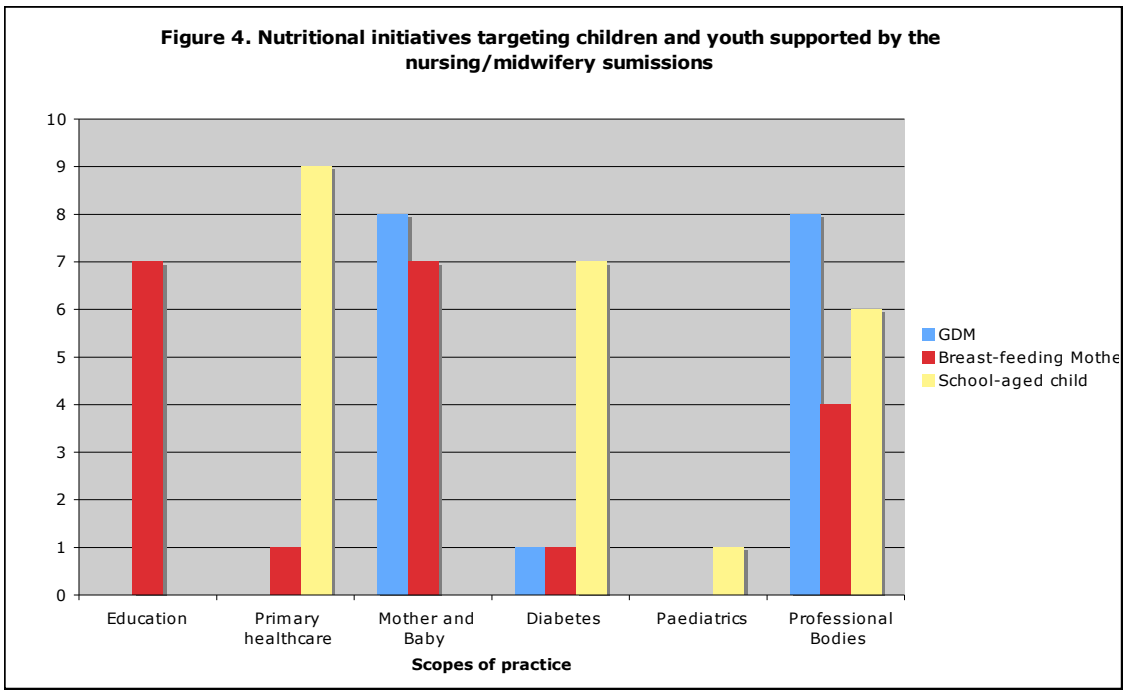

FIGURE 4

A more in-depth examination of the differences between child/youth cohorts and other groups within the submissions reveals the levels of nutritional initiatives supporting child/youth group approximately were 10 times greater than those of the other groups. Although breast-feeding initiatives could contribute to these findings, they show that, in respect of improved nutrition, nursing and midwifery identified the young as the priority. When examining the other 3 cohorts, Maori/Pacific Peoples received most support and the older adult least.

Examining nutritional initiatives targeting children and youth in more detail, the initiatives fell into three main groups: those at risk of those at risk of Gestational

Diabetes Mellitus (GDM), the breast-feeding mother and the school-aged child. The three types of initiative were examined from a 'scope of practice' perspective (illustrated in figure 4). Data analysis revealed that five of the six identified 'scopes of practice' supported initiatives in respect of the breast-feeding mother. Four of the 'scopes of practice' supported initiatives targeting the school-aged child, yet only three 'scopes of practice' supported initiatives in respect of GDM: 'Mother and Baby', 'Diabetes' and 'Professional Bodies'. 'Education' and 'Primary Health Care' initiatives in support of GDM were not evident. 'Diabetes' and 'Professional bodies' supported all three categories and 'Paediatrics' only supported the school-aged child. The discursive findings are now examined

5.3 Qualitative Analysis

The discourse analysis was guided by a feminist post structuralist paradigm. From the analysis of the data, two constructions of obesity arose as pertinent; *obesity as a feminine state of lack* and *obesity as embodied consumeris*m. Further analysis revealed how the submitters positioned *nursing*, defined in 1.7, within their particular discourses of obesity. Whilst submitters proffered articulate, specific, and impassioned identities for *the obese body*, the identities available for *nursing* within obesity discourses were more difficult to tease out. Two possibilities emerged that were of interest to this study; *nursing as good mothering*" and *nursing as an agent of power*.

Whilst not attempting to suggest these discourses comprise all the possibilities inherent in the text, they were multi layered, offering insights and possibilities not explored by the quantitative analysis in Study 1. The discourses and their inherent subjectivities and power relationships are discussed and supported by relevant excerpts of text. Described in Chapter Four, excerpts of text were identified: firstly with the prefix S a submission

number, the paragraph and page number within the submission, with the scope of practice of the submitter/s and lastly whether they were from a group or an individual.

5.3.1 Obesity as a feminine state of lack.

Obesity as a feminine state of lack was one of the stronger discursive constructions to emerge from the nursing submissions. Within the texts and structures of the submissions the obese body was constructed, not as excess, nor as a consequence of bountiful abundance nor freedom from manual toil, but as a state of lack, on multiple levels: of knowledge, of self-determination, of healthy nurturing practices and of financial health. These constructions emerged across all nursing interest groups.

Lack of knowledge emerged in several submissions. For example, a group submission from midwifery spoke about support for breastfeeding mothers. Although described as women within the excerpt, they could be identified as mothers by their attendance at a Baby Café:

> Women desperately need ongoing support as is evidenced by our local Baby Café, which provides professional breastfeeding help. Promoting timely, adequate, safe and appropriate complementary feeding with continued breastfeeding. In our practices we are finding women not aware of the importance of delaying introduction of solid foods until 6 months.
>
> (O+D62w, para 3, pg 3, M&B:G)

The midwives constitute the mothers in the above excerpt, as being in desperate need of support. They are portrayed as having a lack of knowledge about the importance of delayed weaning and when to introduce solid foods into their infant's diet. In requiring 'professional breastfeeding help," they are constructed as needing the guidance of the *clinical expert,* exampled here as *health expert*. Foucault's understandings of biopower are evident within this excerpt; the modern neo-liberal subject is propelled towards

health by the discourse of *clinical expert*, an expert who decides which behaviours constitute wellness and disease (Foucault, 1992).

A lack of self-determination was also evident in the individual nurse submissions. For example, one individual submission suggested the following health promotion advertisement:

> What about some **TV ADVERTISMENTS CALLED "R U THE 1?"** e.g. an overweight women walking down a crowded street, stops someone and says "I have diabetes and I need some help, are you the one?" The other person stares at her blankly and walks off. This is repeated a number of times. Each time she asks. "are you the one." Then she comes across some people who are willing to help, eg a nurse, a man digging a vege garden, a mum cooking a healthy tea for her family, a woman out walking. All the people in second group say "yes I'm the one" and take her along with them, teaching her new skills.
>
> (S206, para 7, p. 1. PHC: I)

Obesity was reproduced here as both a female issue and a consequence of a lack of knowledge. Two constructions of *the obese body* are presented. Firstly, one in which the woman is depicted as blindly seeking assistance, unable to differentiate between those who could offer aid and those who couldn't, unable to move towards wellness without help. She is also portrayed as not being able to determine what she needs to set in place to change this unwanted state. In this excerpt, the woman in the advertisement and those who came to her aid were constructed as binary opposites. The woman is presented as inferior and subordinate to the others who she approaches in her knowledge level and ability regarding strategies to maintain her own health and the health of her family. The others had the expertise and knowledge that the woman did not. In this way, Foucault's (1979b) *hysterical woman* was similarly constructed, with the *nervous woman* the most visible form of this hysterization. She was constituted both as biologico-morally

responsible for maintaining her health, and unable to do so without help due to the pathological nature of her gender.

An alternative possibility within this excerpt was that of a woman driven by her desire to change her state; she is shown to have agency, to have the insight to go out and actively seek help. Despite being rebuffed several times, she did not accept failure but continued to look for aid and was finally successful. The transformational nature of this process is echoed in some of the feminist literature. For example, Scott Dixon (2008), in critiquing feminist theories arguing the regulatory and controlling nature of women's fitness projects, suggests that striving for wellness has empowering possibilities for women that should not be discounted.

Similar to the first interpretation, another individual submission, who identified herself as both a mother and a children's nurse, also portrayed *the obese body* as lacking the ability to self-actualise. Of all the submitters, she was the only one who positioned herself as overweight:

> As a ten year old in the United Kingdom my mother took me with her to weekly Weight Watcher's meetings. I have spent the years since then to the present, now aged 44 fully aware of the calorific value, fat, carbohydrate and protein content on most food. I am still overweight.
>
> (S224, para 2, p. 1, P: I)

The literature describes how in relation to power relationships, the disciplining of the individual body was aided through the technique of surveillance, a technology of domination explained in chapter three (Foucault, 1979a). In the submitter's case, her mother initiated surveillance, and, although later reinforced by her own efforts, in her final sentence she deemed this surveillance ultimately unsuccessful. Foucault's anatomo-politics of the body (the body's ability to shape itself to optimise its

capabilities, usefulness, efficiency and docility), operating here through a weight watching mechanism, is portrayed as incapable of achieving independent weight control. Having deemed self-actualisation through surveillance techniques as unachievable the submitter continues:

> The healthy choice is too hard for people today. Solutions to make healthier choices easier need to come from Government, directing a coordinated effort across all agencies and communities at all levels
>
> (S224, para 6, p.2. P: I)

Despite the supportive tenure of the submission, it is suggested that *the obese body* was positioned, as beyond individual agency, self-determination was doomed to failure without the support of external bodies. Only by relinquishing personal control to experts would the rise in obesity be overcome. Foucault identified the taking up of knowledge produced by experts as governmentality (Rose, 1996). This concept of governmentality also arises in the construction of *nursing as an agent of power*, discussed later in the chapter.

Another facet of *obesity as a feminine state of lack*, is a lack of healthy nurturing practices. One group submission focused on community wellness:

> Eating habits of some kids are very poor, and when the teachers tackle the parents on this, they provide lots of excuses. It is difficult for teachers to do much beyond this. They can teach kids as to what they should eat, how to exercise, but if it is not followed up at home, it makes behaviour changes impossible. What foods kids may be learning about at school, may not be what is in the fridge at home
>
> (S268, para 4, p. 2, PHC:G)

Despite the use of the identity *parent/s* as opposed to *mother* in a number of submissions, food preparation and supply, and the care of children and home are seen in the literature as normative feminine work practices. For example, Burman (1992), speaking from an 'undernourished disordered eating' perspective noted that the mother was represented as most responsible for monitoring and surveillance of children's eating and exercise patterns. Caplin (1990) reported a tendency in the literature that has examined 'undernourished disordered eating' to equate family dysfunction with maternal dysfunction. The above authors contributions support Foucault's construction of *the nervous women* mentioned earlier, a woman who must be constantly on guard, solely responsible for familial health. Therefore by inclusion of this excerpt, the nurses endorsed the positioning of healthy nurturing as an essentially feminine and positive endeavour, unhealthy nurturing then emerges in binary opposition as a feminised pathology (Ceci, 2003; Malson & Ryan, 2008).

Socio-economic lack was also positioned as important. A number of submissions made recommendations in support of the feminised nurturer who they also identified as poor. Such suggestions included improved access to low cost nutritious foods, removal of Goods and Services Tax from healthy foods, and subsidized transport to healthy food outlets. The following excerpts demonstrate possibilities of *the obese body* as a consequence of poverty and in need of external support:

> Many of the causes of obesity lie outside the control of the parent and individual, particularly people of low socio-economic status since their choices are heavily constrained by cost, availability and location
>
> (S71, para 3, p. 3, PHC:G)

> Finance has a big part to play in caring for yourself. If you are working all day and a second job in the evening how can you prepare meals and often people are buying in takeaways for the easy option

(S166, para 4, p. 4, D: G).

The above excerpts portray the impoverished feminised nurturer as caught in a paradox in which historical values are superimposed on modern ones. She is a financial contributor to the home, meal provider, giver of time and energy, yet simultaneously constructed as weary, uneducated, and beset by multiple poverties. Having analysed how the *obese body* was constructed by the nursing and midwifery submissions at an individual level, possibilities of *obesity* at a societal level are now explored

5.3.2 Obesity as embodied consumerism.

Within the possibilities of *the obese body* as described in the literature, society normalises the hard muscular body, with its disciplined work ethic (Rose, 1990, Turner, 1997; Bordo, 1993; Sykes and McPhail, 2008). However, it also normalises good consumers, positioning 'I want it all' as positively contributing to a capitalist society (Snailberg & Gould, 1994, Carolan, 2005). Scholars such as Opalinski (2006) believed commercial food/drink manufacturers promoted the normalisation of obesogenic consumerism using doctrines of personal responsibility to perpetuate their profits.

The nursing/midwifery submissions supported constructions of *obesity as embodied consumerism*, where individuals and families, in their unwitting support of capitalism, had increased their obesogenic risk. Submitters provided evidence that reflected Opalinski's belief, that those who made and distributed 'junk food' or 'high energy/low nutrient foods,' specifically 'fast food' companies, were culpable. For example, a submission from a Well Child/Tamariki Ora Nurse and District Nurse:

> Immediate removal of McDonald's outlet from Starship Hospital. This is our leading children's hospital and it is appalling that it has allowed itself to become allied with a well known junk food outlet. Starship is not sending the right

> healthy eating messages to our community… it should be part of the solution, not assisting the public in its unhealthy eating practices….
>
> Over a long period of time fast food outlets such as McDonalds, KFC, Burger King, etc. have contributed to the growing obesity crisis. Portions and soft drinks have increased in size over the years and various tactics have been employed to encourage more sales and increased consumption of these unhealthy foods. (S243, paras 5 & 6, p. 1, PHC: I)

This submission positioned *obesity* as a consequence of 'fast food' companies' pursuit of profit. Unhealthy eating practices are being foisted not only on an unsuspecting public but also on sick, vulnerable children and their families. This theme of unscrupulous selling practices was one identified as problematic by 5 other submissions. Opalinski (2006), one of the few nursing researchers who examined obesogenic consumerism, looked at pouring-rights contracts between soft drink companies and schools. She believed that these companies used discourses of personal responsibility to block attempts by health advocates to introduce policies banning the sale of obesogenic foods on school grounds.

Submitters identified low socio-economic groups as being most vulnerable to the easy availability of low cost 'fast food'. The following excerpt positioned commercial interests as preying on the weary poor. It is a diabetes group submission written by a Diabetic Nurse Specialist:

> Did you know that in South Auckland you can have KFC delivered to your home? It is the only place in New Zealand to have this option. There are some places in South Auckland that do not have good quality food shops. I challenge you to come to Otara and see if you could purchase a healthy lunch.
>
> (S166, para 4, pg 4, D:G)

This excerpt asserts that, in one of the poorest areas of Auckland, fast food is delivered thus making it widely available, even to those for whom transport is problematic. The submitters also infer that commercial interests in Otara conspire to sell unhealthy foods. The assumption is that there is an accessibility barrier to healthy foods, a factor the Ottawa Charter believes is important to health (WHO,1986).

5.3.3 Nursing as good mothering.

In constructing the object *nursing* as it related to *obesity* in the particular subjectivities of the nursing/midwifery submitters *nursing as good mothering* emerged as discursive construction. Within this construction differences appeared between the nurses and the midwives conceptualisations of *obesity*. The midwives strongly supported the maternal nurturing of breastfeeding, whereas the nurses supported the maternal nurturing of the child.

In examining *the breastfeeding mother* the following excerpt was from a midwifery group submission that identified itself as a research centre. Their concerns were centred on pregnant and postpartum women, and all their recommendations were in support of breastfeeding, an exclusively feminine practice,

> That legislation be adopted which supports flexibility in return to work; significant increases be made to the period of paid maternity leave; that paid breastfeeding breaks and extended access to quality childcare be provided to support women and families to maintain breastfeeding and return to work.
>
> (S151, para3, p.3, M&B:G)

In this excerpt the submitters appear to position breastfeeding mothers as unsupported by legislation and commerce, and financially disadvantaged by a commitment to maintain breastfeeding. Mother's efforts to provide the best nutrition for their babies go

unrewarded by society. The midwives are politically supportive of strategies that aid the *good mothering* of breastfeeding.

In examining the Nurses submissions, *nursing as good mothering* emerged in an individual submission, in which a children's nurse spoke of her experiences:

> I am shocked and saddened at the increase of childhood obesity and other conditions related to malnutrition. I have seen children under five years of age with type ll diabetes, children aged two with difficulty walking, children who eat dry pot noodles from the bag, the same children with purulent running ears who may not have enough iron or vitamin C for their immune systems to fight infection well enough. I have seen children under five with so many dental caries from sugary drinks that they are in pain and wouldn't chew.
>
> (S224, para 3 p.2 PHC:I)

In this extract the nurse speaks of the consequences of poor nurturing that she has seen in her practice. It should be noted that she doesn't identify either the mother or the parent/s within the paragraph. Yet in the immediately following paragraph she speaks solely of her own mothering practices:

> As far as my own family, I have three children age 7, 9, and 11 who would all prefer chocolate and ice cream if it was available. At home I try to limit treats and never buy carbonated drinks. My kids are lucky-I have just asked them what their favourite foods are the 11 year old said lasanga, the nine year old pumkin soup and the seven year old a Willy Wonka bar with a golden ticket in it. Some families are not as fortunate as us.
>
> (S224, para4, p. 2, PHC:I)

In this latter extract, the nurse's own *good mothering* practices arise in binary opposition to the aforementioned poor nurturing practices. Her mothering is constituted as good practice countering the bad practices detailed in the previous paragraph. Malson and Ryan (2008) found that nurses repeatedly constituted nursing in terms of 'good

mothering,' and the nurse participants of their study prominently and positively valued 'mothering'. As a *good mother* she regulates the food choices of her children, limiting their access to 'bad foods,' such initiatives should normally form part of her *nursing role* as health educator. Yet here the *nursing voice* has been muffled by the *mother's voice.* Other ways *nursing* was constructed, were within power relationships.

5.3.4 Nursing and agents of power

The discursive constructions of *nursing* within the power relationships of *obesity* had two facets. The first is *nursing as an agent of power*, as *health expert*, guiding and regulating towards wellness. The subjects who required such regulation were the *obese body* and the *body politic*. Secondly, *nursing* emerged as an advocate for the *obese body* **against** agents of power such as the *health expert*, speaking against practices that marginalised and disempowered those living with obesity.

In the first construct, the nursing/midwifery submissions position themselves as *health experts*. As an interpreter of 'the common good of wellness' they work to propel the *obese body* toward wellness practices under expert guidance. The *obese body* as *other to the common good* emerges as requiring governing, restricting, targeting and regulating through penalties. An excerpt from an individual nurse submission appears to support this concept:

> Although individual freedom of choice may be reduced it should be noted that legislation to enforce seat belts, bicycle helmets and reduce smoking also reduce individual choice but nevertheless contribute to the overall common good and public health.
>
> (S243w, para 3, p. 2, PHC: I)

The nurse *as health expert* attempts to normalize the reduction in the individual's ability to self-determination. The *obese body*, positioned as *other to the common good"*, is

constructed as negatively impacting on the normalised construct of 'health of the general public.' In this way Foucault's anatomo-political approaches were privileged, whereby the *obese body* is regulated to optimise its capabilities, usefulness, efficiency and docility. Another submission from a midwifery group spoke of the effects of GDM on pregnant mothers and their babies:

> The literature suggests that women with poorly controlled diabetes and obesity during pregnancy, contribute to the obesity and diabetes epidemics through their babies. This may be the accelerant to the current epidemic.
>
> (S223, para 1, p. 5, PB:G)

In this excerpt, discourses of crisis and risk are amplified. The *health expert* emerges from the literature to raise awareness of the health risk. The mother is constituted as *other to the common good*, as an accelerant that will fuel the fires of obesogenic ill health as they spread through society. In this instance, Foucault's construction of the mother as *hysterical women* emerges, as a mother irresponsible for her own health, her children's health and society's health.

In another excerpt from a nursing group submission, the *health expert* is supportive of the training of the body by the removal or limitation of options. Here the training occurs at a societal level:

> Programmes targeting obesity in children in our schools that are integrated into the curriculum and are supported and resourced by the Ministry of Education and the Ministry of Health National food policy for schools that is enforced and includes canteen foods for sale, fundraising activities and sponsorship. Restriction of food advertising during children's television viewing times. Regulation of the food industry to lower amounts of fat and sugar in the food and penalties if they don't comply ('fat and sugar tax').PHOs funded for specific obesity reduction programmes in schools.

(S99w,para 4, p. 4, D:G)

As *health experts* regulating the *body politic*, the submissions also positioned the government as inept and/or tardy in its efforts to combat obesity. The 'inept government' emerged as requiring surveillance from the *health expert*. For example, in an excerpt from a research unit, the following two recommendations summarised their concerns:

> Ensuring that the Ministry of Health is held accountable for implementing its plans including Healthy Eating, Healthy Action 2004 and breastfeeding: A guide for Action 2002 ….
>
> Passing legislation protecting the rights of breastfeeding mothers and children, as already recommended by the health select Committee last year.

(S151, para 2, p. 3, M&B:G)

In these excerpts the submitters argue both against delays in implementing guidelines and legislation and for failing to act decisively, thereby chastising the government. This censure was evident in submissions from both nurses and midwives. Here, the submitters have chosen to contest the political regimes of truth, resistance is evident. Adding weight to Foucault's belief, "there are no relations of power without resistance" (1980, p. 142)

Feminist literature, when discussing the idealization of thinness, has reported how the *obese* continue to be marginalized through labelling (Bordo, 1993; Lupton, 1997; Harjunen 2002, 2003). This concept of labelling also emerged within the nursing submissions, when they speak against the dominant positivist literature. In the next excerpt, there is no referral to the nurse's role, yet the submission was from a large professional nursing group. It is suggested therefore that the submission speaks for nursing as a body:

> …labelling a person as overweight or diabetic does not assist any person to make healthy lifestyles choices.
>
> (S176w, para 1, p. 1, PB: G)

Here labelling is construed as a barrier to successful anti-obesity initiatives at an individual level. Another individual nursing submission also questioned the positivist literature and their agents of power such as the health commission:

> That the health commission realise that guilt and anxiety about weight may lead to poor diet patterns (yoyo dieting, binge eating), poor exercise adherence and low self esteem which does not lead to good health.
>
> (S42, para, 3, p. 2, E:I)

This positioning, that the moral imperative of dieting as not always in the interests of wellness is supported by a number of authors (Carryer, 2001; Wolf, 1991). Burns (2004) noted that treatments within disordered eating practices often acted to reproduce the very behaviours they sought to cure. Sayuy and Almeying (2008) discussed how feelings of blame and responsibility were used to evoke shame in the feminine obese.

In constructing themselves as advocates for the marginalised *obese body* the individual nurse submitters took issue with diet and exercise regimes, which they construed as unhealthy. For example:

> ....and exercise patterns by those trying to lose weight are often unsustainable and unhealthy, as they focus on "fat burn" rather than health. The body of literature defends this is getting bigger and bigger.
>
> (S42, para, 4, p. 1, E:I)

Interestingly they infer that the health literature supports their viewpoint, thus they both reject the dominant constructions of the *health expert* and continue look to the *health expert* for verification. Thus the submitters construct two roles for *nursing as an agent*

of power within *obesity*, as *health expert* and *as health advocate*. Their advocacy is at a societal level as an auditor of policy makers, using their position as a dominant discourse to resist/promote policy. At an individual level; as a supporter of the marginalised, gendered *obese body.* How these findings answer the research questions, and what they add to the New Zealand body of knowledge on obesity, is addressed in chapter six.

Chapter 6: Discussion and Recommendations

6.1 Introduction

The aim of this research was to explore how nurses and midwives, who had expressed an interest in the treatment of obesity through submissions, embraced the wider concept of care that obesity presented. In addition the concept of whether hidden tensions existed within their narratives was examined.

Study 1 examined submissions to the 2006 Health Select Committee Inquiry into Obesity and Type ll Diabetes by nursing/midwifery, to determine how holistic and public health orientated their opinion was and for inclusion/prioritization of 'at risk' groups, in respect to nutrition and physical activity. Study 2 examined, through discursive analysis of the submissions, objects, subjects, and power relationships that manifested in their constructs of *obesity* and *nursing*.

This chapter discusses the findings of both studies and the implications for future nursing/midwifery practice.

6.2 Study 1

The holistic orientation of the nursing/midwifery submissions was analysed using the Ottawa Charter's five interventions levels, a core international public health document (WHO, 1986). Population-focused recommendations were found to be more prevalent than individual recommendations. Examining nutritional initiatives, the highest frequency of recommendations was for 'creating supportive environments' followed by 'building healthy public policy.' Both of these interventions levels would require political mandates, suggesting that the nursing/midwifery submissions believed that

active engagement with the health democracy of New Zealand was core to the success of obesogenic initiatives. If political approaches were prioritised, a corresponding lower frequency of individual-focused initiatives would be anticipated: this was found to be the case. 'Developing personal skills' had the lowest level of recommendations for both nutritional and physical activity initiatives.

Two measures were used to determine how public health oriented and whether nursing/midwifery identified/prioritised 'at risk' groups within their submissions. First, to determine public health orientation, the nursing/midwifery submission recommendations were evaluated against six (6) WHO national initiatives. These were identified as; a national committee for obesity prevention, a multi-layered approach, nutrition/physical activity policy initiatives in schools, taxes/bans on unhealthy foods, subsidies for healthy foods, and economic incentives for increased physical activity. All six (6) of these national initiatives were evident within the nursing/midwifery submissions (see Table 6). Using this measure, the nursing/midwifery submissions were shown to be more public health oriented at an international level than the New Zealand national obesity strategy HEHA, which had only two of the WHO initiatives as key messages. It could be concluded therefore that the nursing/midwifery submissions did demonstrate a public health orientated approach when evaluated against suggested WHO obesity initiatives.

The second measure was to evaluate the nursing/midwifery submissions for recommendations targeting 'at risk' groups as identified by the literature (MOH, 2008; Salmond, Crampton, & Atkinson, 2007). 'At risk' groups were specifically identified: as children and youth, ethnicities, and low socio-economic groups. This further evaluation would provide additional evidence that the nursing/midwifery submissions were both holistic and public health orientated. As a holistic public health approach

should prioritise all of these ‘at risk’ groups. This was found to be the case, as the nursing and midwifery submissions identified all of the above ‘at risk’ groups. In addition nursing submitters also identified ‘the ‘older adult’ as an ‘at risk’ cohort (see Fig 3).

Overall the descriptive analysis revealed that nutritional initiatives were more widely supported than physical activity initiatives at all five of the Ottawa Charter’s intervention levels. One possible reason for this was that the nursing/midwifery submissions viewed nutritional initiatives within, and physical activity outside of their normal scope of practice. For example, the number of nursing/midwifery submission recommendations in respect of nutrition, for ‘the older adult was one, with two for lower SES, and three recommendations for Maori/Pacific Peoples groups, this was a relatively small amount of support of all three groups. In contrast, ‘children and youth’ were seen by nursing/midwifery to be at most risk for poor nutrition with thirty-two (32) recommendations in support of this.

The prioritising of children and youth was also reflected in the literature (WHO, 2007a; MOH, 2008). Refining this further, the submitters identified strongly with three scenarios; the mother experiencing GDM, the breast-feeding mother and the school-aged child.

6.2.1 Nutritional initiatives

As discussed above, the frequency of recommendations was highest in support of nutritional initiatives for the ‘children and youth’ cohort. Subsets of the children and youth cohort were identified as: the mother experiencing GDM, the breast-feeding mother and the school-aged child. Interestingly, two of these subsets saw the mother as pivotal to their children’s nutritional health, a finding that was also evident in the

discursive analysis. The analysis revealed that although all of the individual submitters identified as nurses, four of the six group submissions were from midwifery: one a professional body, one from education and the remaining two coded to 'mother and baby.'

When examining the mother experiencing GDM from a scope of practice perspective, the 'mother and baby' and 'professional bodies' scopes of practice generated sixteen initiatives each in respect of GDM (Figure 4). The remaining initiative came from 'diabetes'. Given recent dissemination in the international literature of the risks of GDM (Doria, et al., 2008), which demostrated that regardless of a diagnosis of GDM, hyperglycemia negatively impacts on the mother's and baby's postpartum health and results in an increased risk of Type ll Diabetes in later years, there was a dearth of acknowledgement of this information

The large number of recommendations from submissions coded to 'mother and baby' was not surprising. Professional nursing/midwifery bodies would have access to such literature and be current with international health trends and initiatives, so again not a surprising finding. However, the low number of submissions coded to 'diabetes' that spoke to GDM was surprising. It is reasonable to presume that as health professionals working within a New Zealand environment, 'diabetes' submitters would have been aware of the particular risks of type ll diabetes for Maori and Pacific Peoples, both in terms of morbidity and mortality (Scragg, et al., 1991; Sundborn, et al., 2007). However, the 'diabetes' submissions may not have been aware of the findings from authors such as Doria et al. (2008), and Cheung et al. (2007) who had demonstrated the effectiveness that lifestyle modifications could have in moderating the downstream effects of GDM. Both were published concurrent to or after the HSC inquiry date.

In analysing the nursing/midwifery recommendations in respect of the breast-feeding mother, it is worthy to note that the only country that had the promotion of breast-feeding as part of its national anti-obesity initiatives was Sweden (National Institute of Public Health, 2005). Yet the literature provides increasingly strong evidence that breast-feeding reduces risk of obesity in later years (American Academy of Pediatrics, 2005; WHO, 2000). Armstrong and Reilly (2002) showed that duration of feeding was inversely proportional to risk. The positive obesogenic effects for the baby were shown to be stronger than those of the mother (Harder, et al., 2005; Ip, et al., 2007).

Recommendations in respect of breast-feeding generated a large number of recommendations, twenty (20) in total, as well as the most widespread support, with recommendations from five of the six identified scopes of practice. The most supportive scopes of practice were, 'mother and baby,' 7 recommendations, 'education', 7 recommendations and 'professional bodies', 4 recommendations (see Figure 4). A high level of support from the 'mother and baby' scope of practice was an expected finding, as supporting breast-feeding is both a Ministry of Health requirement and a practice requirement for midwives. As stated earlier, four of the six group submissions were from midwifery.

There were no recommendations from 'Paediatrics.' 'Primary health care' and 'Diabetes' had only one recommendation each, despite increasing evidence in the literature that chronic diseases such as Type ll Diabetes and Ischaemic Heart Disease have their beginnings in pregnancy and that breast-feeding has been shown to reduce the risk for the infant (Harder, et al., 2005; Ip et al., 2007). This suggests that while the positive health benefits of breastfeeding in respect of obesity are understood by midwives and at a national nursing level by professional nursing bodies, this understanding had not filtered down to other scopes of practice with an interest in

obesity. A possible reason for this is that breastfeeding was and is seen by nurses as being in the practice domain of midwives. The lack of submissions from Plunket society nurses, a nursing body whose practice domain includes the breastfeeding mother, weakens both the applicability and strength of these findings.

The rises in obesity levels in school-aged children have been of concern to researchers, international health bodies, and governments (WHO, 2004a). Within New Zealand there is overall agreement within the scientific community that childhood obesity levels have risen in the last twenty years (MOH, 2003d, 2004b), although the specificity of the data has been queried (Duncan, 2008). Analysis of the submissions revealed that twenty-three (23) of the proposed recommendations, in respect of children and youth, supported improved nutrition in school-aged children. This totalled 38% of the total recommendations. From a scope of practice perspective, 'primary health care' generated 9, 'diabetes' 7 and 'professional bodies' 6. Recommendations included anti-obesity initiatives and healthy food policies embedded within school curricular, reduction of food advertising during children's television viewing times, and 'fat and sugar taxes' aimed at commercial groups for whom children were a target market. All of the above recommendations required a political solution, adding to the evidence that the nursing/midwifery submissions utilised political activity in their approach.

6.2.2 Physical activity initiatives

The literature in chapter two supports increased physical activity as an important treatment option in combating both obesity and type ll diabetes. As well as inducing a negative calorie balance, increased physical activity has been shown to have other health benefits and has been judged most effective as a means of maintaining weight loss (Laaksonen, et al., 2005; WHO, 2007a). Yet there was no evidence, within the submissions, of any nursing or midwifery involvement in measures that increased

physical activity opportunities for their clients. Physical activity treatments within a health setting are often initiated by a Physiotherapist, therefore it's possible the nursing/midwifery submitters did not view such initiatives as being within their practice dynamics. Their recommendations did support multi-layered, socio-environmental measures that aimed to counteract obesogenic environments. As with nutritional initiatives, when evaluated against the Ottawa Charter's five intervention levels, 'building public policy' and 'creating supportive environments' scored highest (see Figure 1). Once again, the nursing/midwifery submissions supported political measures over treatment-based initiatives.

The findings demonstrated an equal level of support for physical activity initiatives, recommendations in support of 'the older adult', lower SES, and Maori/Pacific Peoples. This finding is not reflected in the New Zealand literature, which places Maori/Pacific Peoples at greatest risk (Salmond, Crampton, & Atkinson, 2007; Social Report , 2009). There were three recommendations in support of physical activity initiatives prioritising 'children and youth' for every one recommendation prioritising Maori/Pacific Peoples or 'older adult'.

In summary, the descriptive analysis of the nursing/midwifery submissions to the HSC inquiry demonstrated that their submissions were both holistic and public health orientated in their approach. Nutritional initiatives were more widely supported than physical activity initiatives. The priority group identified as most in need of both nutritional and physical activity initiatives to reduce future obesogenic health consequences were 'children and youth.' The nursing/midwifery submissions believed that political initiatives would have more impact than other current health modalities.

6.3 Study 2

Study 2 of this research examined, through discursive analysis of the submissions, objects, subjects, and power relationships that were manifested in nursing submission constructs of obesity and nursing. This was done in order to discover whether hidden tensions existed within their narratives. Tensions not revealed by the quantitative descriptive analysis.

Within the nursing/midwifery submissions, a number of discursive constructions of *obesity* and *nursing* of interest to this discussion emerged. Two constructions of *obesity* emerged: as feminine, and as consumerism. Within the discursive constructions of *nursing*, the *nursing* role as both empowering and regulatory emerged. Woven through theses constructions were two overarching discourses, a discourse of lack, and a discourse of the maternal.

6.3.1 Discursive constructions of obesity

Obesity, as a state of lack, emerged in a number of the nursing submissions and at a number of levels. For the purposes of this research the obese body was constructed as both feminised and feminine. Feminised means positioned within normatively feminine work practices, such as the care of children or the preparation of food for the family. For example S206 speaks of "a mum cooking a healthy tea for her family." Feminine relates to occurrences that only women experience, for example, GDM, only women breastfeed. For example, S62 states, "women desperately need ongoing support as is evidenced by our local Baby café which provides professional breastfeeding help." Both of these examples, S06 and S62, reflect a discourse of the maternal care. Yet within this discourse of maternal care, the obese body does not arise as a bountiful giver of life, of continued nurturing. Rather, it emerges as lacking, in S62 as lacking knowledge of

optimal infant feeding, in S206 as lacking of self-determination, as blindly seeking assistance, assistance the woman in the advertisement "**R U THE 1?**" was unable to determine or realise without help. Lack emerged as an inability to self-actualise in S224's submission; her mother's strategies to promote weight loss through surveillance techniques were unsuccessful.

The above excerpts echo Foucault's (1979b) construction of the *hysterical woman*: desperate, blindly searching for help, in need of surveillance. She was seen as needing to be taken in hand, led, and educated towards wellness, both biologically and morally responsible for her own obesogenic health and that of her children. Obesity emerges almost as a state of self-sabotaging femininity. De Beauvoir's (1984) concept of the positioning of 'woman as other', as deviant to male was evident. The obese woman was constructed as a mirror image to the neo-liberal subject, conceived as disciplined, self-actualising and rational (Lupton, 1997). There was also support within the texts for the moral imperative of dieting and Orbach's (1978) construction of obesity as a lack of willpower or self-control. Other nurses may reject this interpretation as it precludes opportunities for agency and transformational change, which Butler saw as pivotal to feminist endeavor (1999).

Lack at a societal level appeared as a discursive construction of obesity as *embodied consumerism,* in which commerce and politicians are seen as conniving to maintain the *obese body's* positive contribution to capitalism through support of 'fast food' chains and the manufacturers' of energy-dense nutritionally low food products. For example, S243 cited, "…various tactics have been employed to encourage more sales and increased consumption of these unhealthy foods." S166 believed accessibility was a factor, by making unhealthy foods readily and cheaply available in poor areas such as Otara; manufacturers and commercial interests preyed on the weary poor. One of the

few pieces of nursing research in this area was from Opalinski (2006), a nurse researching pouring rights in US schools. Opalinski found that commercial lobbyists often blocked policies whose intent was to ban the sales of obesogenic foods on school grounds, in an attempt to protect sales volumes.

6.3.2 Discursive constructions of nursing within obesity initiatives

As stated earlier the *nursing* role within the discursive constructions of obesity emerged as both empowering and constraining. The overarching discourses of obesity as 'lack' and as 'maternal' continued to flavour the texts.

In one discursive construction *nursing as good mothering,* differences between midwives and nurses conceptualisations of obesogenic risk, as a consequence of nurturing, emerged. Within the nurses' conceptualisations of obesogenic risk, the nurturing of the child was prioritised. Here S224, when speaking of the consequences of poor nurturing that she as nurse had seen in her practice, then positioned her own mothering practices in binary opposition to the poor nurturing. Malson and Ryan (2008) discuss how nurses were constituted as binary oppositions of patients' mothers, and as therapeutically necessary substitutes for them within hospital-based treatments for eating disorders. As discussed earlier, White's (2007) analysis of all of the HSC enquiries submissions for FOE did not identify individual nurses as a submitting group. This was because they identified themselves as mothers first, adding weight to the above construction. Thus the *nursing role* is muffled by the *mother's role* in the individual submitters subjectivities of obesity.

Other nurses may reject this construction of *nursing as good mothering*, arguing that if nursing constitutes good mothering, then the only space available for the mother of the obese patient was that of 'bad therapeutic mother'. This concept of *mother blaming* as a

discursive construction does appear within the therapeutic relationships of disordered eating (Caplan, 1990; Ceci 2003). This concept is further discussed when examining *nurses as agents of power*.

As the midwifery submissions were all group submissions, they spoke to the collective responsibility of society to support the breastfeeding mother. For example, S151 called for legislation that supported paid maternity leave, extended maternal leave, and flexible work hours for breastfeeding mothers, to enable them to maintain extended breastfeeding at home and/or return to work. Within the excerpt from S151, the breastfeeding mother was portrayed as disadvantaged, but not pathologised as in some alternative constructions of obesity, that will be discussed later in the chapter. The breastfeeding mother emerges as unsupported in her decision to stay at home and care for her baby, and hindered by barriers to recommencing employment while still breastfeeding.

Yet the promotion of breastfeeding is a stated government goal (MOH, 2000). S151 suggests that this is not actualised in government practice, that the government resists the regimes of truth proffered by the *health expert,* by not implementing agreed strategies in a timely manner. Foucault's (1980) belief in the fluid nature of power is supportive of such tensions between dominant discourses, in which a dominant discourse can both resist the power plays of the other stakeholders and reinforce them.

In calling for societal change, the midwives also reinforced beliefs of such authors as Perron, Fluet and Holmes (2005) and Falk-Rafael (2005), that by engaging in socio-political activism nurses/midwives are enabled to fulfil the social and ethical mandates of their profession. The midwives, in their support of the mother experiencing GDM, spoke to the longer-term health consequences for both mother and baby. They moved beyond the constraining influence of their scope of practice, in which the midwife's

responsibility ends six weeks post-partum (Midwifery Council, 2004a). By participating in practices such as submissions to the HSC they both affirmed the possibilities of intervention and created spaces to contest them (Butler, 1999,; Gestaldo & Holmes, 1999). This concept of contesting the possibilities of intervention to bring about transformational change is further explored when examining *nursing as an agent of power*.

Within the constructions of *nursing as agents of power*, *nursing* acts both as a regulatory and empowering force in the lived experience of the obese. As a regulatory power at an individual level, nurses propel the obese towards concepts of wellness dictated by the *health expert*. It could be argued that although obese women have been constructed as needing the ability to be self-determining, the solutions proffered within the texts act to minimise the very opportunities they seek to create. For example, S243 supports the reduction of individual freedom through legislation privileging "the overall common good and public health." The obese are thus legislated (requiring legal control) and marginalised. S223 uses "the literature," the science of the *health expert*, to construct the fecund *obese body* as an unwitting conduit for the spread of obesogenic risk. "Poorly controlled" pregnant women are presented as unable to take responsibility, both for their own health and the future health of their child/ren. The tenor of the excerpt amplifies and exemplifies discourses of crisis and risk, frequently described in the literature (Coveney, 1998; Hall, 1997; Gard & Wright, 2005; Burrows & Wright, 2004a; McDermott, 2007). To reduce this perceived risk, training of the *obese body* is necessary. Such training and regulation mechanisms are integrated into the *nursing* role in this construction as *an agent of power*. For example, S268 is supportive of teachers trying to educate recalcitrant parents; these parents, though not identified as women, are feminised by the context of the text, teaching children about food choices and putting

food in the fridge. Glimpses of the *bad mother* emerge, in need of training and surveillance.

Alternatively, *nursing* emerges as *an agent of power* in support of the feminine obese. In one of the speaking positions taken up by the individual submitters, as nurses, they speak of the hardship of obesity, of how the obese are marginalised. Harjunen (2003) also suggested links between obesity and cultural or social discrimination. The midwifery literature addressed in chapter two supports this concept, concerned that the normative hyperglycaemia of pregnancy has also been pathologised within some sections of the positivist obesity research (Catalan, 2002; Sadikot, 2008). S 176 speaks of labelling, S42 of the guilt and anxiety that medical and societal ideations of thinness create and the negative health consequences that can result. Carryer (1997) believed nurses should not reinforce weight loss measures through repetitive dieting. She suggested that in caring for the larger women nurses must move beyond the dynamics of individual care and concentrate their efforts at a socio-political level. In contesting constructions of *obesity* mooted in the positivist literature, such as the pathologising of the *obese body*, the submitters' ability to bring about transformational change is strengthened (Butler, 1999). For example, one success of the HSC inquiry was a recommendation, strongly supported by nursing, for the restricting of unhealthy food and drink advertising to children. In its response to the select committee inquiry, the government of the time largely agreed with this, but qualified its support stating, "it cannot direct industry to extend restrictions in advertising time" (MOH, 2007b, p.57). In July 2008, the Broadcasting Standards Authority introduced a food rating system that made the advertising of these foods more difficult (New Zealand Television Broadcast Standards Authority, 2008).

In rejecting the pathologising of feminine obesity, the moral imperative of diet and physical exercise regimes were also rejected by the individual nursing submissions. S42 believed both dieting and physical exercise regimes to be unhealthy and unsustainable. Yet within New Zealand, reduced physical activity has been strongly related to obesity, and providing physical activity opportunities in schools has been shown to significantly reduce excessive weight gain in children (Simmons, et al., 2005; Taylor, et al., 2007). A possible reason for this rejection may have been because feminist literature, as described in chapter three, constructed physical activity as a regulatory mechanism to propel the *feminine obese body* toward the normative *hard male body* (Bordo, 1993; Duncan, 1994; Hall, 1997; Sykes & McPhail, 2008). Beauty was constructed as mirroring male beauty with its hard musculature rather than the softness and curves of the feminine body.

Dieting was similarly constructed as a new means to control women, as they became more sexually and legally empowered (Wolf, 1991). These concepts had widespread dissemination among women when Wolf's text was published in the last decade of the twentieth century, so their presence within the submissions was not unexpected. Additionally, within New Zealand, scholars who informed nursing supported the positioning of physical activity as both regulatory and surveillance driven (Sykes & McPhail, 2008; Carryer, 1997).

There was little support within the submissions for Barbazon (2006) or Scott Dixon's (2008) beliefs that physical exercise provided empowering opportunities. There were no recommendations supporting particular types of physical activity during pregnancy, or initiatives to involve parents in children's exercise opportunities.

What can therefore be suggested is that whilst the individual nursing submissions may appear to support improved nutrition and increased physical activity initiatives, when

these are constituted as dieting and physical exercise regimes, the above findings suggest that individual nurses acting *as agents of power*, acting on behalf of the obese, may look for ways to contest them.

In chapter four the initial findings from Study 2 were presented at the Critical and Feminist Perspectives in Health and Social Justice,' held in Auckland in 2009. In addition, the findings were presented at the Australasian 'Women in Psychology conference' in Nelson in December 2010. These presentations initially were intended to form part of the interpretive rigour, however the nature of the discussion generated offered an alternative lens to the submissions being examined rather than a critique of the research methodology. I therefore include their feedback as part of the findings. formed part of the interpretive rigour.

At the Critical and Feminist Perspectives in Health and Social Justice conference feedback from the participants was summarised as follows: that the *nursing* voice supported dominant medical discourses in their role as agents of power and that *nursing* had no distinct voice within obesity discourses. The medicalisation of 'big bodies' was supported more than the gendered/gendering of those bodies. Research on the positive obesogenic effects of prolonged breastfeeding for the infant, were known by only a small number of attendees. Support was greatest for strategies that impacted on obesogenic environments and access to healthy foods for 'high risk' groups. Current Ministry of Health responses such as HEHA and bariatric surgery were felt to be ineffective in the longer term.

At the Australasian 'Women in Psychology conference' attendees' were more aware of the positive effects of breastfeeding on obesity risk and there was a greater degree of acceptance for the gendered/gendering discursive constructions that emerged from the texts. Also, there was support for the mixed method approach employed for both

studies. With these considerations in mind, the implications for current nursing/midwifery will now be explored.

6.4 Implications for Practice

In examining the findings, from both quantitative and qualitative methodologies, a number of implications for nursing/midwifery practice emerged.

A major finding was that nutritional initiatives were prioritised over physical activity initiatives. The nursing/midwifery submissions' support for nutritional initiatives was mainly at a socio-political level, yet despite some early success, such as the change to advertising rules during scheduled children's programming, few socio-political initiatives in respect of nutrition have emerged. One reason for this might be the change of government, resulting in a prioritising of physical activity initiatives by the new Minister of Health (NZPA, 2009). This political privileging of physical activity over nutrition highlights a weakness of accountability cycles discussed earlier. While health remains on the political agenda, terms of office dictate policy, demonstrating that whilst having a voice within the health democracy is important, being heard is equally important. Other ways in which the nursing/midwifery voice may have been silenced within New Zealand, as suggested by McCloskey and Diers (2005), were changes in the political structure of health where the public health focus of nurses/midwives was/is weakened. Addressing the marginalisation of the nursing within health politics would be one way to ensure that nursing/midwifery voice is heard.

Nonetheless, this study suggests that nursing can be effective within the health democracy. In order to continue to create the transformational opportunities mooted by Butler (1990), nursing/midwifery practice must continue to lobby cohesively and at a political level if they wish to impact on the health agendas of policy makers.

The submitters supported physical activity initiatives less than nutritional initiatives. The quantitative findings were unable to identify reasons for this; the most obvious conclusion was that physical activity initiatives lay outside the nursing/midwifery practice dynamic. The discursive analysis revealed that nurses, but not midwives, constructed physical activity initiatives as being regulatory, often arising as a surveillance mechanism against women. However the qualitative findings also suggested that, within the *nursing* role for obesity initiatives, a duality existed that was both disciplining and empowering. If physical activity initiatives were constructed in a way that minimised regulatory and surveillance mechanisms and strengthened opportunities for empowerment and self-agency, for example, supporting increased physical activity though play and dance rather than a training mentality. They would fit better with *nursing* concepts of care.

On examination of the submissions from a scope of practice perspective, it can be seen that midwives in their support of the mother experiencing GDM, looked beyond their assigned scope of care to the ongoing health of the mother and her baby. The ongoing care of the mother with GDM and her baby was evident in the 'diabetes' and professional bodies' submissions, but not in the 'primary health care' and 'education' submissions. Possible reasons for the absence of submissions in respect of GDM from 'primary healthcare' were that they did not view pregnancy as a pathological state, more as a natural healthy event. Therefore the concept of pregnancy, as inducing long term chronic illness for obese mothers and their babies, had not gained acceptance within the 'primary health care' scope of practice.

An implication for nursing/midwifery practice in New Zealand raises the question of who should manage these potentially lifelong 'at risk' women and their children and whether a practice gap exists. This study demonstrates that nurses supported the

importance of breast-feeding only in the short term and that midwives, diabetes nurses and professional bodies were beginning to grapple with the chronic condition of obesity as it presents, increasingly, in fertile women. A cohesive integration of care, in respect of the women experiencing GDM and/or type ll diabetes, between midwives/nurses is one important way forward in preventing the downstream consequences of familial obesity trends. The challenge is to have a forum where collegiality between nurses and midwives is reflected in the development of common goals for the greater good of women.

Currently the Plunket Society, a voluntary organisation, is a major provider of well child health services for children under the age of five; over 90% of babies born in New Zealand are seen by Plunket. Whilst Plunket is partially government funded, whether it can meet the increasing need of addressing and acting on obesity issues is debatable. Additionally, its assessments are generally based on developmental milestones rather than chronic disease risk (The New Zealand Plunket Society, n.d.). Within Primary Healthcare initiatives such as Care Plus, which often have nurse-led diabetes clinics, are aimed at the older adult rather than the young (MOH, 2007a). Hospital-based diabetes nurses and paediatric nurses are usually involved in the more acute presentations. Yet these hospital-based nurses/ing groups were not well represented in the nursing submissions, with one ‘paediatric’ submission and none from hospital-based diabetes nurses. Neither were there submissions from mental health nurses nor cardiac nurses, who when examining the links between obesity and depression and obesity and ischaemic heart disease, one could argue have a vested interest in obesity initiatives (Markowitz et al., 2008;WHO, 2002).

With no designated funding, a variety of funding structures, and little support from nurses working in secondary care, this study suggests that children showing the

downstream consequences of familial obesity are in danger of falling through the gaps of existing health structures. Ways to address this danger could be better nursing/midwifery education at undergraduate and post-graduate levels that highlights the importance of nurse/midwife collaboration, particularly the inclusion, where appropriate, of the midwife in multi-disciplinary team decision-making. Lobbying, by professional nursing/midwifery bodies, to initiate discussions between stakeholders. An end point to these initiatives would be a care pathway for these children's lifelong health.

The care of the child at risk of obesity was prioritised over ethnic groups specifically Maori/ Pacific Peoples by the nursing/midwifery submissions. This privileging of the care of the child was also evident within the data (MOH, 2008; WHO, 2007a), and the discursive analysis also revealed an overarching maternal discourse within the submissions. This was surprising from a New Zealand perspective, as Maori, Pacific Peoples and Asian Indians are identified as high-risk groups. From a practice perspective, this study highlights a knowledge gap and the need for further education opportunities for nurses/midwives about obesity risk, ethnicity, and treatment strategies.

6.5 Limitations

A limitation of the studies, for quantitative purposes, was the small sample size, the nursing submissions comprised of only 17submisissions, out of total of 312. Qualitative analysts disagree; they do not believe analysis is weakened by a small sample size, as the research interest is in detailed exploration of the texts (Boles & Bombard, 1998). Some as a weakness might question the historical nature of the HSC inquiry, for example, those who prioritise the currency of medical and nursing research may not value the recommendations or subjectivities of nurses or midwives made 5 years earlier. The studies were also weakened by an absence of nursing/midwifery submissions from

key groups and individuals: submissions from Plunket Society nurses and individual midwives were not identified by the inclusion criteria. Submissions from hospital-based nurses, who see the downstream consequences of obesity in their patients' are also absent, for example, oncology, cardiac, renal, and diabetic nurses. This weakens the applicability of the findings, as although the 'professional bodies' may position themselves as speaking for the whole of nursing/midwifery, a large section of nurses/midwives were not represented within the submissions.

6.6 Conclusion

This thesis demonstrates that primary care strategies were deemed to be important by those New Zealand nurses and midwives who submitted, and that, by engaging with the health democracy they could influence the political process in ways other than casting their vote. The findings demonstrate quantitatively that the nursing/midwifery submissions 'talk the talk' of government health policy. However, by using a feminist post-structural analysis to discursively examine the texts, Foucault's belief in the fluid nature of power discourses emerged, whereby dominant and marginal discourses work to stabilise and destabilise each other dependant on the context of their construction. Analysis revealed that within the *nursing* discursive constructions, tensions existed between the varying nursing and midwifery roles within obesity initiatives. That some individual nurse submitters,' may not be entirely committed to 'walking the walk' of New Zealand obesity health policy, this finding was supported by conference attendees who provided interpretive rigour for Study 2.

From a scope of practice perspective, it is hard to visualise a domain of nursing or midwifery practice on which obesity and its co-morbidities do not impact. It was therefore surprising to find an absence of submissions from key nursing stakeholders such as Plunket nurses, mental health nurses and cardiovascular nurses. Another

surprising findings was the muffling of the *nursing* voice by the *mother's* voice in those nurses/midwives who did submit. Ceci (2004) believed that gendered-emotionality discourses, such as the *mother's* voice, were a part of nursing culture. She further believed they operated to cast doubt on the validity of nurse's concerns, weakening their knowledge, authority and ultimately effectiveness. Should this be true, the presence of the *mother's* voice within the nursing/midwifery submissions lessened their ability to be heard within the health democracy as Ceci's 'credible knowers'.

However, it also presents health policy makers and lobbying groups with an opportunity. If such groups are genuinely interested in the promotion of physical activity and nutritional initiatives by nurses and midwives, to combat the negative health effects of obesity and associated type ll diabetes. Perhaps by engaging nursing and midwifery at those very points where their emotionality is engaged with obesity, and promoting policy/initiatives that use the health benefits for women and children as a catalyst. This will help to further educate and reorient nursing and midwifery services to obesity risks across all their scopes of practice.

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