

HOW HAVE HEALTH POLICY CHANGES  
RESPONDED TO THE RISE OF CHILDHOOD OF  
OBESITY IN NEW ZEALAND OVER THE LAST THIRTY  
YEARS?

BY

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*Ma to tatou tiaki kotahi ai i wa tatou*

*“taiohi”,*

*ka puta tatou ki te whai Ao,*

*ki te Ao marama.*

*By our collectively caring for our children that they will reach the ultimate pinnacle*

*in anything they do: education, health, social services...*

## **Abstract**

The prevalence of childhood obesity is growing at an alarming rate worldwide. New Zealand holds the record of having the second highest rate of childhood obesity in Organisation for Economic Co-operation and Development countries, behind the United States. About one third of New Zealand children are now overweight or obese. Additionally, ethnic disparities in the distribution of this health issue in New Zealand have been significant over the last two decade.

The purpose of this dissertation is to explore how health policy changes have responded to the rise of childhood of obesity in New Zealand over the last thirty years. Three key documents have been identified that influenced policy direction. These documents are: Public Health Services, Social Environments and Health Promoting Schools tier level two service specification (1997), Health and Physical Education in the NZ Curriculum (1999), and the National Children's Nutrition Survey (2002).

In spite of the recently introduced set of initiatives by the Ministry of Health on childhood obesity, it remains imperative to strengthen the New Zealand nursing workforce in schools while addressing child poverty issues.

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# Chapter One: Setting the Scene

## Introduction

Having relocated from France a decade ago I made New Zealand my home. I am the mother of three young children, two of whom are school aged. I have encountered and adapted to many cultural changes but I was taken aback when I discovered the high rate of childhood obesity in this country. This definitively clashed with the green and healthy picture I had. While undertaking my nursing studies, various papers focused on the exploration of public health issues (i.e. childhood obesity, immunisation, infection control). Therefore, I decided to further my interest in the topic of obesity in children.

The prevalence of childhood obesity is growing at an alarming rate worldwide, rose by 47.1% between 1980 and 2013 (World Health Organization, 2015). Obesity among children, under 19 years of age, is as prevalent in high-income countries as in middle-and low-income countries and is under-recognized as a public health issue. It is a complex condition which leads to psychological problems, gastrointestinal complications, and increases the comorbidities of cardiovascular diseases and diabetes later on in life (World Health Organization, 2015). Once diagnosed as a disease of adulthood, type 2 diabetes is rapidly emerging as a disease in children and youth.

New Zealand holds the record for the second highest rate of childhood obesity in the Organisation for Economic Co-operation and Development countries, behind the United States. About one third of New Zealand (33%) children are now overweight or obese compared to about one in four of their Australian counterparts (Vandevijvere & Swinburn, 2014). Ethnic disparities in the distribution of the disease in New Zealand have been significant over the last two decades. Children, and more particularly Maori and Pacific children, have been the most overrepresented in the most socioeconomically disadvantaged sector of the New Zealand

population (Ministry of Health, 2005). In 2007, the proportion of children who were overweight or obese was higher among Maori (11.8%) and Pacific children (23%) than European New Zealander children (Percival, Fuimaono, & O'Sullivan, 2012). In 2013, according to the latest figures, more than one in four (25.5 %) Pacific children and almost one in five (19%) Maori children are obese (Mann, 2014). In addition, despite these staggering figures, a report by the New Zealand Auditor General published in 2013 revealed a clear decline in the government's involvement in reducing obesity compared to the past (Provost, 2013).

Over the last thirty years, the World Health Organisation has worked towards the development of the concept of health promotion, developing policies at both national and international levels. Three major documents have underpinned this shift: the Lalonde report in 1974, followed by the declaration of Alma Ata in 1978 and the Ottawa Charter nearly a decade later.

### ***The Lalonde Report***

The first major document to provide a framework for a health care system was the Lalonde report, named after the Canadian Minister of Finance, published in 1974. This report laid out the theoretical framework of the "health field". Its aim was to develop a health care system that would prevent health problems while promoting good health (Lalonde, 1981). The health field framework was developed into four elements: human biology, environment, lifestyle, and health care organisation. These elements were identified as the causes and underlying factors of illness and death in Canada (Terris, 1984). The report proposed five strategies to address these health issues. The first one was the development of a health promotion strategy aimed at encouraging and assisting the health care organisation and the individual to accept more responsibility for their health. The second strategy encompassed regulatory aims to give powers to federal organisations to reduce mental and physical problems, while the third strategy was based on research. The fourth one was aimed at

providing and delivering an efficient health care strategy while the fifth outlined goal-setting strategies (Terris, 1984).

The Lalonde report is considered the first modern government document in the Western world to recognise that solely focusing on a biomedical model of health care was not working. It called for a strong emphasis beyond the traditional healthcare system was required (Hancock, 1985). In other words, this report was advocating for a “social” health care system rather than a disease orientated one, laying the foundations for the Alma Ata Declaration a few years later.

### ***The Alma Ata declaration***

The Alma Ata declaration, adopted in 1974, set out ten principles as key constructs of Primary Health Care, and coined the well-known phrase “health for all by the year 2000” (Richardson, 1998). Among these main constructs were the notions of equity, political action, health promotion and disease prevention. Health promotion was presented as a tool used by policy development makers, backed up by the WHO, and emphasising the need for political commitment and change. However, nearly forty years on, the “health for all” mantra is still a distant dream.

### ***The Ottawa Charter for Health Promotion***

The Ottawa Charter for Health Promotion conference was held in November 1986. This was the first international conference on health promotion and was in response to growing expectations for new public health movements around the world. It strongly reaffirmed that health is “*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*” (Corbin, 2005, p. 2). The objectives of the conference were to enable people to take control over their own health and improve it. Five areas were targeted for health promotion action: building healthy public policy; creating supportive environments; strengthening community action; developing personal skills; and reorienting personal health services. Contemporary health promotion objectives rely on the promotion of equity, respect

for social justice, and advocating for improved health outcomes. They also rest on the promotion of community engagement, supporting empowerment and embracing evidence based practice (World Health Organization, 2013). These five key action areas for health promotion, identified in the Ottawa Charter for Health Promotion in 1986, were reconfirmed in the Jakarta Declaration on Leading Health Promotion into the 21st Century in 1997.

Those three documents (the Lalonde report, the Alma Ata declaration and the Ottawa charter) were able to advocate for equity in health among the world's population. They acknowledged that the determinants of health imply activities and policy changes beyond the medical and health sectors. They advocated for community participation and intersectoral collaboration as a means to address these inequalities. Nonetheless, the growing number of non-communicable diseases, such as obesity, have been gaining attention around the globe, causing many nations to face the double burden of diseases.

Effective interventions, in the health sector and at a macroeconomic level, to improve health and reduce inequalities in health have been developed in New Zealand. The government's interventions and education have shown that with personal support and structural changes, healthy choices can be made. Working in isolation has limited impact and restricts the potential to improve health. Interventions at a microeconomic level and the implementation of social policies can significantly reduce health inequalities along with the collaboration of agencies and intersectoral health programmes working altogether (The National Advisory Committee, 1998).

As New Zealand, like other countries, has developed its own policy on health promotion, it must confront the problem of obesity. My area of interest is about obesity in children and I have explored the literature and various health policies that have responded to the rise of this health problem in New Zealand.

### **Dissertation focus**

Therefore, the purpose of this dissertation is to explore how health policy changes have responded to the rise of childhood obesity in New Zealand over the last thirty years. Three key documents that influenced policy direction, in regards to obesity in children, have been identified. These documents are: the Public Health Services, Social environments and health promoting schools tier level two service specification (Ministry of Health, 1997), the Health and Physical Education in the NZ Curriculum (Ministry of Education, 1999), and the National Children's Nutrition Survey (Parnell, Scragg, Wilson, Schaaf, & Fitzgerald, 2003).

I have chosen the **Public Health Services, Social Environments and Health Promoting Schools tier level two service specification**, as a key document within this dissertation, because it shows that schools are ideally placed to drive positive eating habits for younger people, early on in their lives. School children demonstrate greater awareness in regards with food and nutrition and are able to change their behaviour accordingly by choosing healthy food. This can only be done if schools set a an example in its policies rather than just in the classroom (Ministry of Health, 1995). Therefore, schools can be an ideal setting to address childhood obesity.

The second document, **Health and Physical Education in the New Zealand Curriculum**, was chosen because low physical activity is one factor that contributes to childhood obesity. Integrating a physical and health component as a mandatory requirement within the school curriculum can reduce the level of obesity and make children more active. Additionally, students' academic achievement can be affected by their health and wellbeing which can impact on the people living around them (i.e. family, whanau). This curriculum offered children and school staff the knowledge, skill and attitudes to appreciate a healthy

lifestyle, thus actively contributing to the well-being of others and within their communities. Learning about health and physical education empowered children to develop the knowledge, skills and attitudes to make informed decision and to act in ways that enhanced their personal well-being (Ministry of Education, 1999).

The third document is the **National Children’s Nutrition Survey**, was compiled in 2002. This was the first survey offering an in-depth analysis of nutritional food intakes, food security, and eating patterns among school-aged children in New Zealand. From a terminology perspective, the term “childhood obesity” was non-existent in the New Zealand literature pre-2000. Figures showed that obesity was growing in adults but there was no data available on the incidence of obesity in children. Epidemiological data on childhood obesity from the 2002 National Children’s Nutrition Survey, was a wake-up call. Research on the genesis and management of this “new” epidemic was initiated, leading to policy changes led by the Ministry of Health and the Ministry of Education.

I sought to understand the prevalence of obesity amongst children by analysing in depth these three key policy documents. The next three chapters each focus on a document, showing how policy has influenced strategies to address childhood obesity in New Zealand while also positioning these documents in an international context. Finally, the last chapter addresses the latest governmental initiatives around childhood obesity. The reintroduction of school nurses is proposed to help address this epidemic. It ends by linking the issue of poverty in New Zealand with obesity, as cheap, poor nutritionally food choices in the diet contribute to obesity.

## **Chapter Two: The Development of Health Promoting Schools**

### **A historical perspective on the creation of Health Promoting Schools**

The idea that schools have a role to play in promoting health in young children is not a new concept. In the United States, the terminology “healthful school environment” was commonly used in the school curriculum from the mid-1950s. This indicates an awareness of schools promoting health from that time onwards (Young, 2005). The understanding, that health education had to impact both on the individual and to interact with social, political and environmental factors that influence health, was reinforced by the Ottawa Charter for Health Promotion (World Health Organization, 2005; Young, 2005). Schools were identified to be the perfect settings that could contribute to someone’s health, by increasing the quality of life of their students. The concept of Health Promoting Schools (HPS) was introduced to empower individuals to take control over and improve their health, using theoretical frameworks derived from the Ottawa Charter (Cushman, 2008).

The Ottawa Charter advocated for building healthy public policy. The HPS concept implemented this policies by promoting the wellbeing of all school members and its wider communities. The reorientation of health services proposed by the Ottawa Charter has been implemented in schools through the collaboration and the delivery of health services to schools, while achieving greater coordination through the reorientation of health services (Edwards, Ward, & Heald, 2007). This was illustrated through the delivery of screening and prevention programs, established within schools, in an international context (World Health Organization, 1998; Young, 2005).

The Health Promoting Schools program was composed of three main categories: a formal curriculum, a “hidden” curriculum and the integration of school health services. The formal curriculum covered health related issues. These were taught through biology, home

economics, physical and social education, and health studies. The “hidden” curriculum emphasized staff/pupils relationships, interactions between the school and the community, the school environment and the range of services provided, such as the quality of school meals. The New Zealand Government was eager to develop the concept of health promotion in school settings. It took nearly a decade for this concept to be implemented, as discussed in the following part (Ministry of Health, 1995).

### **Introduction of HPS in New Zealand**

Health promotion in schools has been recognised as important by the health sector since its introduction in New Zealand in 1997 (Ministry of Health, 1997). It has been described as a useful means for addressing the physical, social, emotional and spiritual health needs of school-aged children (Cushman, 2008). The Health Promoting School initiative strongly focuses on schools as being parts of wider communities which offers “*practical ways for children and young people, teachers, managers, parents and community members to contribute to schools being healthy settings*” (Edwards et al., 2007, p. 3)

Its implementation into the New Zealand education system was a long journey. It was preceded by three major initiatives which sprawled over the 1990s. The first initiative was the development of a healthy school concept initiated by the New Zealand School Trustees Association in 1991. The second initiative was developed in 1994 by the Ministry of Health with the creation of the health promotion guideline called Healthy Schools-Kura Wairoa. The third initiative was the development of a three year Health Promoting School pilot project in Auckland and Northland, funded by the Health funding Authority in 1997 (Edwards et al., 2007). Finally, from 1997 onwards, the concept of Health Promoting Schools was established on a national level (Ministry of Health, 1997).

## **Chronological initiatives that preceded the implementation of Health Prompting Schools in New Zealand**

### ***New Zealand School Trustees Association and the concept of Healthy Schools***

In 1991, the New Zealand School Trustees Association developed the concept of Healthy Schools. This framework pulled together many initiatives that occurred in schools but its main focus was to call for a better co-ordinated school based health services. The lack of systematic auditing services for school based health education materials coupled with the lack of monitoring and the effectiveness of programme delivery prompted the development of new strategies. These strategies were published in 1995 by the Ministry of health under the title “Healthy Schools: Kura Wairoa: Health promotion guidelines for Schools” (Ministry of Health, 1995).

### ***Healthy School: Kura Wairoa***

In 1995, the Ministry of Health published some guidelines called “Healthy Schools: Kura Wairoa” which recognised the importance of schools to improve and protect public (Ministry of Health, 1995). These guidelines were developed as a tool for schools to understand and apply the concept of healthy schools. These guidelines were also designed to complement the existing *Syllabus for Schools, Health and Education in Primary and Secondary Schools (1985)*, with the approach of a new national health and physical education curriculum, which will be discussed in chapter 3.

### ***Accounting of a Health Promoting School pilot project in Auckland and Northland***

In 1997, the Ministry of Health commissioned a research into the introduction of a pilot study Health Promoting Schools in Auckland and the Northland region. This project was

established in three phases: the pilot project started in 1997, phase I was implemented from mid-1998 to early 1999, while phase II ran from late 1999 to early 2000 (Wyllie, 2000).

The project employed ten coordinators/facilitators who supported the selected schools. The main objectives of the study were to understand and determine the impacts on the school and its wider community of the difference of input between programmes, and to understand and analyse the key themes emerging from the schools and their communities in relation to health promotion.

The findings of this study were three fold. The first one demonstrated that a successful implementation of HPS was closely attributed to the schools who had a leader/driver committed to the success of the school. The second finding was the added value that the introduction of HPS brought to the school. Finally the third finding was characterised by the need to have a fully trained staff, in order to make the HPS work (Wyllie, 2000).

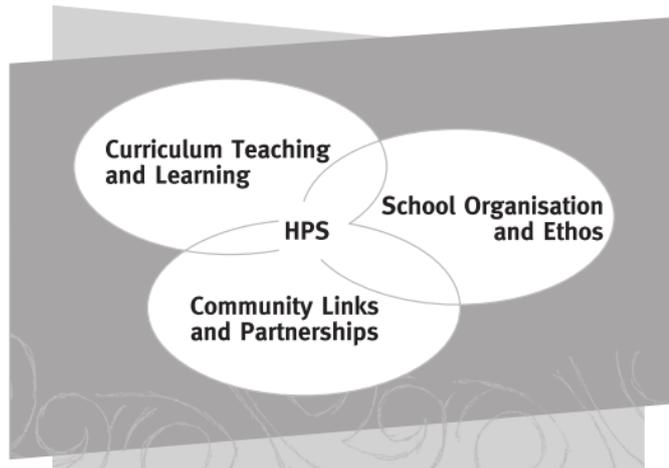
The pilot was perceived as a health initiative and advocated for the ongoing support of political will. Its positive outcomes led to the introduction of HPS at a national level.

### **The Health Promoting Schools Framework**

The underlying philosophy of the Health Promoting School concept in New Zealand laid on the constant strengthening of the school capacity to deliver a healthy setting for living, learning and working (Ministry of Health, 1995; Cushman, 2008; Keogh, Rummel, Benson, Hikuroa, & Farrell, 2012). The Ministry of Health offered its support to schools wishing to develop health promoting environments, and planned to reinforce the activities of health agencies involved with the schools.

The HPS's framework (as seen in figure 1, p 11) was dependent on the school curriculum, the school organisation and ethos and the relationships with parents and health

providers for implementation. The **curriculum** refers to the classroom teaching around health education and promotion, which is mandated by the Ministry of Education in New Zealand, and is taught by teachers (Cushman, 2008). **School organisation** and **ethos** encompasses the physical, social and emotional environment of the school, including policies.



*Figure 1: The HPS Framework (Edwards et al., 2007, p. 4)*

Cushman (2008) recognises that even though the school environment remains intricate to assess, there is enough evidence to suggest that being a health promoting school is a prominent element.

### ***HPS in the 2000s***

At the start of 2000, an estimated 350 New Zealand schools were enrolled in the programme but the exact number was unknown (Keogh et al., 2012). In 2009, around 67% of New Zealand schools were part of the HPS program. They were supported by advisors from public health units, district health boards or local governments, who were contracted by the Ministry of Health to support HPS. Fifteen contracts were signed between schools and District Health Boards, Non-Governmental Agencies and Territorial Local Authorities (Cognition Education, 2010-2011). Despite its long history in New Zealand, HPS has been limited by a

lack of infrastructure and robust evaluation. Research has shown a need for long-term strategic direction, evidence-based planning and delivery, evaluation and policy commitment (Cognition Education, 2010-2011; Keogh et al., 2012).

### **Introduction of HPS at an international level**

By contract, in Europe, the HPS programme was launched in 1991 into a dozen countries with three international European agencies: the European Commission, the European Council and the WHO Regional Office for Europe. These leading organizations have formed the European Network of Health Promoting Schools (ENHPS) to create within schools environments that foster health (Burgher, Rasmussen, & Rivett, 1999). The creation of this European network has facilitated the HPS implementation in Europe. It also provides strong support to countries willing to embrace this new educational model of thinking. Despite cultural, social, and economic disparities that composed the European Union at the time (it had 12 members), the ENHPS demonstrated that health promoting schools, while following the same principles, were able to adapt to cultural, political, and economic variables (Cheshlarov et al., 2002). For example, the United Kingdom chose to develop an eco-holistic approach of HPS based on external and internal generated factors, while the Scottish framework valued more independence in its HPS concept, due to the newly elected Scottish parliament. The Danish model based its HPS on ten principles. Among them were the notions of democracy, equity, empowerment, school environment, curriculum and sustainability while its neighbouring Finnish nation promoted values such as clarity, democracy, authority and autonomy (Cheshlarov et al., 2002).

In North America, both the US and Canada substituted the terminology HPS for Comprehensive School Health Program (CSHP) in 1991. A CSHP is defined as an “*integrated set of planned strategies, activities, and services designed to promote optimal physical,*

*emotional, social, and educational development of students*” (Deschesnes, Martin, & Hill, 2003, p. 338). Both HPS and CSHP concepts emphasize a school-based approach where the school environment provides a whole range of selected activities that come together to form an interrelated entity. However, the CSHP framework offers a more community-based approach, where the environment goes beyond the school perimeters (Deschesnes et al., 2003).

In Australia, the Commonwealth Department of Health and Family Services (CDHFS) commissioned the Australian Health Promoting Schools Association (AHPSA) to develop a national framework for HPS in 1996 (Rowling, 1996; D. E. Stewart et al., 2004). This framework was also built on the report “Effective School Health Promotion: Towards health-promoting schools” from the National Health and Medical Research Council (NHMRC). The health promoting concept in Australia has facilitated mentality changes from an education perspective. This has seen a shift from schools that only taught about health (as part of the curriculum) to schools that integrated contributing factors of population health issues in their curriculum, thus offering a more holistic approach to teach health in schools (Rowling, 1996).

### **How has HPS influenced NZ health policy?**

The introduction of Health Promoting Schools in New Zealand led the way to various initiatives introduced by the Ministry of Health. A significant and successful programme, launched in 2006, called Fruit in Schools, is detailed below.

#### ***The National Nutrition Policy***

##### **The Fruit in Schools initiative**

The Fruit in schools (FIS) initiative was introduced in 2006 and was part of the Ministry of Health’s overall strategy to address health disparities in schools and improve health outcomes for children. The FIS’s aim was to support schools to address four health priorities,

which were: healthy eating, physical activity, sun protection and smoke behaviour. The FIS programme had two main components: the first one was to provide all children from low-decile schools with a free piece of fruit a day, and the second aim was to take the HPS whole-school and community approach to addressing healthy eating and physical activity (Boyd, Dingle, Campbell, King, & Corter, 2007). According to the Post Primary Teachers' Association, the decile system in place in New Zealand schools, is *“used to identify the distribution of the children from the lowest socio-economic families and to target resourcing to schools which have high proportions of these students”* (Post Primary Teachers' Association, 2013, p. 2).

In the late 2005, at the start of the implementation of FIS's first phase, about 250 schools were taking part in the project. FIS schools worked in clusters, supported by co-ordinators and a range of partner agencies such as the National Heart Foundation. A year later, nearly 600 year 4 students (8 years old) completed a survey which demonstrated a significant change in their perception of healthy eating habits. This survey found an increased awareness of the importance of healthy eating and knowledge about options; an increase in the number of students who ate fruit and vegetables; and an increase awareness of the importance of physical activity and enjoyment of it (Boyd et al., 2007).

The student and school staff data concerning healthy eating were all consistent. Prior to FIS, despite learning activities related to healthy eating being taught in most classrooms, teachers were not recognising the potential for further development. When healthy eating was established in 2006, and it became a priority area of teaching for schools, it was noticed that staff were making changes regarding school policies, practices and connected actions to develop, for example, healthy lunchbox initiatives (Boyd et al., 2007).

Sustaining healthy lifestyle choices in school aged children can only be maintained with the help of the school, staff, parents and the wider community. Healthy dietary programmes, as cited above, have fitted well within existing classroom curriculum. At the same time,

physical activities were gaining momentum in schools. As Health Promoting Schools initiatives were being implemented, a similar push to introduce physical activity into the school curriculum was underway.

## **Chapter Three: The addition of the 1999 Health and Physical Education to the NZ Curriculum**

### **Why is this document important?**

#### ***From the Health Education Syllabus to the Health and Physical Education in the New Zealand Curriculum***

In the mid-1980s, the Ministry of Education began the revision of the New Zealand Health Education Syllabus which guided health education and health promotion within New Zealand schools (Ministry of Education, 2013; The Public Health Commission, 1995). The syllabus offered a multidimensional approach to health teaching, underpinned by the Alma-Ata conference reaffirming that health “is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity” (World Health Organization, 1978). It encouraged the involvement of communities in its needs-based approach to health but did not acknowledge the impact economic, socio-political, cultural and environmental factors were having on the health of children (Ministry of Education, 2013).

The Ministry of Education decided to publish some guidelines on health and education. These were underpinned by amendments to the Education Act in 1989 (The New Zealand Parliament, 1989). They required that all New Zealand schools must provide a comprehensive programme based on the syllabus (1985) in order to meet the health education needs for all school-aged children (The New Zealand Parliament, 1989). However, the Education Review Office (ERO) reviews found that out of 213 surveyed schools, only half of them were providing the health curriculum according to the national curriculum statement. In addition, many schools did not comply with their legal requirement to consult their health communities related to health education (The Public Health Commission, 1995). The reasons for such inadequacies were identified as due to the lack of training opportunities for teachers. Another negative aspect

was the lack of targeted incentives for teachers to lead school health activities (The Public Health Commission, 1995).

### *Introduction of the Health and physical education in the NZ curriculum*

As a result, in 1999, the Ministry of Education published the Health and Physical Education syllabus in the New Zealand Curriculum. These new guidelines replaced the health and physical education and home economics 1985's syllabuses. It looked at students gaining knowledge, skills, values and attitudes to enjoy a healthy lifestyle and contributing to the wellbeing of their communities and people (Ministry of Education, 1999). This curriculum incorporated health education, physical education and home economics. Its framework was based on general aims, strands, achievement aims, achievement objectives, underlying concepts, and key areas of learning. The achievement objectives were to start in year 1 and finish in year 13, with each level taking into account the student's development and maturity.

The new Health and Physical Education guidelines were underpinned by four interdependent components. The first one is **haurora** which is the Maori philosophy for wellbeing. The second one encompassed **attitudes** and **values** which were demonstrated by developing a responsible and attitude including care for self and others, and a sense of social justice. The third concept focused on **socio-ecological perspectives** represented by understanding interrelationships between people. Finally the fourth one related to **health promotion**, by maintaining physical activity (Ministry of Education, 1999).

The food and Nutrition section, incorporated into the health promotion component, was designed to help students to make informed decisions about food and choices that would contribute to their own wellbeing and that of other people. Conversely, the physical activity component encouraged students to enjoy movements and develop positive attitudes toward the

practice of a physical activity (Ministry of Education, 1999). It was the responsibility of the school to develop policies to reflect these components of the Health and Physical Education syllabus in the New Zealand Curriculum.

Research into the health-related physical fitness of young New Zealand children as taught in schools identified some concerning trends. A yearlong study of school children aged between 10 to 14 years demonstrated that both health and physical fitness have deteriorated over the 1990's (Ministry of Health, 2005). These figures were consistent with statistics provided to the Ministry of Health by Sport and Recreation New Zealand (SPARC) which indicated that activity levels for young people dropped from 69% active in 1997–98 to 66% in 2000–01. Of New Zealand children aged 5–17, 9% were sedentary (=no activity in last two weeks) and 22% were relatively inactive (=less than 2.5 hours physical activity in the last week) (Ministry of Health, 2005). The SPARC data demonstrated that one-third of young New Zealander were inactive. Similar inactivity rates were demonstrated for Māori children, Pacific young people were even less active, with 19% sedentary and a total of 48% classed as inactive (Ministry of Health, 2005). These figures clearly demonstrated that low physical inactivity is one factor that contributes to childhood obesity.

### ***The 2007 Revision of the New Zealand School Curriculum***

In 2007, the Ministry of Education introduced the revised New Zealand School Curriculum which incorporated a Health and Physical Education section, developed in consultation with teachers, health educators in physical education and home economics (Bailey, 2006). This curriculum was underpinned by the same components as the 1999 Health and Physical Education Curriculum. Its aimed was to enhance a student's personal health and physical development, by developing motor skills and positive attitudes towards physical activity, embracing their relationships with people, and through their participation in creating

healthy communities and environments by taking responsible and critical action (Education, 2007; Ministry of Education, 2006). These objectives were following the WHO recommendations, which advocated that health, nutrition, and physical activity education be taught in schools. The WHO also recommended daily physical activity as part of school curriculum. In health education, students would develop “*their understanding of the factors that influence the health of individuals, groups or society*” (Ministry of Education, 2006, p. 17).

### **Introduction of Health and Physical Education in schools at an international level**

An overview of the international literature, in regards with health and physical education in schools, demonstrates that New Zealand was not far behind other countries when it included these activities in its school curriculum from the late 1990’s.

In North America, and more specifically the United States, the number of schools offering physical and health education had dramatically dropped, attaining an all-time low of 43% in 1991. The authors of a report published in 1990, called *Healthy People 2000*, pointed out the level of physical activity, among primary and secondary school aged children throughout the country, and was decreasing. This report highlighted the exponential increase of inactivity and poor diet among children, leading to over 300,000 deaths per year (Boyce, 2012). National assessments, also called testing, were implemented to counterbalance this. The National Association for Sport and Physical Education was created to provide guidelines in the form of grade-level benchmarks. Terminology in these guidelines started to change, with the replacement of words such as fitness and health, in favour of wellness, which referred to a more holistic approach (Boyce, 2012). Despite the creation of governmental agencies promoting

physical education in schools, such as the *Let's Move Active Schools initiative*, only six states required physical education in every grade in 2013 (Krtnick, 2013).

In Europe, the European Commission lacked legal grounds to implement strong measures concerning health and physical education in schools, as each member state was responsible to implement such measures. Sport and health activities were not recognised as key measures for lifelong learning. Therefore, in 2008, the European Commission published some guidelines called “Health Enhancing Physical Activity”. The authors of these guidelines recommended that European school aged children should do at least one hour of physical activity per day, whether it was within the formal curriculum or extra-curricular (Kerpanova & Borodankova, 2013). In the UK, the introduction of physical education within the British school curriculum as a compulsory subject, came into effect in 1992. Its aim was to provide a balanced and wide framework for children aged 5-16 years to engage in exercise such as athletics, dance, games, swimming, gymnastics, outdoors and adventurous activities (Donovan, Jones, & Hardman, 2006). The UK model, based on grading with the creation of progression scales, has also been adopted by other European countries such as: Malta, Romania, Slovenia, Sweden and Wales (Kerpanova & Borodankova, 2013). The taught time of health and physical education, allocated by European schools, represented between 50 to 80 hours per year, a figure which has not much evolved since 2008.

### **How has this document influenced NZ policy?**

Research has shown that a lack of physical activity can be associated with lower academic achievement, poor school attendance and can contribute to childhood obesity (Bailey, 2006; Ministry of Education, 2015). The Ministry of Education has developed resources in consultation with the Ministry of Health to assist schools to focus on healthy eating and physical activities to address the above.

***The 2007 Physical Activity for Healthy Confident kids – A guidelines for sustainable physical activity in school communities***

In 2007, the Ministry of Education published a resource called *Physical Activity for Healthy Confident kids – A guidelines for sustainable physical activity in school communities*. These guidelines were edited in response to the growing concerns about youth engaging in less physical activity. They clearly stated that New Zealand children and youth should do more than sixty minutes of physical activity per day and spend less than two hours in front of the television or other screens. These guidelines stressed the importance of schools as having “*a unique opportunity to provide physical activity for children and young people*” (Ministry of Education, 2007, p. 15). It described how policies and procedures should be best developed with the whole school community. They should include a physical activity policy, policies for curriculum areas such as physical education and dance, sport policies, and finally funding and fund-raising capacities (Education, 2007).

Additionally, these guidelines also underlined the importance for schools to be part of a network of linked community services. Organisations with experts who have knowledge of physical activities in educational settings included School Support Services, Regional Sport Trusts and Health Promoting Schools Co-ordinators. The following programmes have been used by schools to promote health and physical environments.

### **5+ A Day**

Growing and Learning with 5+ A Day has been developed in conjunction with teachers and aligns with the New Zealand Curriculum supporting Health and Physical Education, Literacy, Numeracy and Science through practical learning experiences. The practical activities help create awareness, understanding and knowledge of the importance of healthy eating and

are supported by differentiated resource sheets. Lessons include cross-curricular links, achievement objectives, strands and appropriate learning objectives. This teaching resource can be incorporated in long, medium and short term planning. The rise in school gardens is one way this 5+ a day is being enacted, with the introduction to programmes such as Garden to Tables (Taylor, 2010).

### **The Heart Foundation: He Oranga Marama / Learn by Heart**

The Heart Foundation helps schools achieve healthier learning environments and provides physical activity challenges for students. It offers support to develop a nutrition policy, or strategies to engage parents, whanau and the wider community to support healthy eating and physical activity at school (The Heart Foundation, 2015). The Heart Foundation offers three awards: The Heart Start, The Heart Excellence and Heart Schools. These awards are tailored to support school engagement towards healthy eating and the promotion of physical activities. The Foundation provides the school with tools and resources, a one-on-one support from one of their Health Promotion Co-ordinator and their programmes are directly linked with the school curriculum (The Heart Foundation, 2015). It also coordinate the “Jump Rope For Heart” which aims is to get kiwi children physically active. This programme teaches children about leadership skills, communication, teamwork and above all keeping physically active. It also increased awareness of good nutrition and staying heart healthy.

The implementations of various health related programmes promoting physical activities have been successful over the years. Nonetheless, the lack of data can prevent programmes running smoothly. Nutritional food intake data has not always been available either, thus delaying the recognition of obesity in New Zealand children as a major health issue.

## Chapter Four: The 2002 National Children’s Nutrition Survey

### Why is this document important?

Up until 2002, no survey had been undertaken to determine the level of obesity in New Zealand children, regardless of their ethnicity (Barnfather, 2004; New Zealand Health Strategy, 2001; Parnell et al., 2003).

In 1989, a study on the prevalence of asthma was conducted in Havelock North and Hastings. A sample of 873 children aged 11-12 years found that 11 percent of the children were overweight. This is the only study which provides data on the percentage of Body Mass Index (BMI) in New Zealand children during the 1980s. The notion of obesity in children was absent from any child health related material before then. However, the start of the new millennium saw a dramatic shift in acknowledging that this was an issue which needed to be addressed.

In 2003, the New Zealand Ministry of Health published a report on *Tracking the Obesity Epidemic: New Zealand 1997-2003*, which provides detailed information on BMI distributional shifting by ethnic groups, gender, age as well as correlations between socioeconomic positions and BMI and the prevalence of obesity for over that period. In its foreword the author, Don Matheson (Deputy Director-General, Public Health Directorate), recognised that there had been a lack of description of the burden of obesity overtime related to BMI distribution. He added that the results of this survey “*can give some causes for optimism that the epidemic can be contained and even reversed*” (Ministry of Health, 2004, p. 3).

This report focuses on the full BMI distribution by using “innovative graphical methods” (Ministry of Health, 2004, p. 9) to visualise and quantify shifts over those three decades. The overall trend of obesity in New Zealand masks various discrepancies between

age groups, gender and analysed time period within the total population and the Maori population (Ministry of Health, 2004). A closer look at the figures revealed that the rise in obesity has grown very slowly throughout the end of the 1970s and up until the mid-1980s. In 1977, 42 percent of adult males (20-64 years old) were overweight while 9 percent of males were considered obese. Socioeconomic inequalities in relation with the distribution of BMI started to appear in males while being apparent in females. The greatest increase during that period was already affecting overweight people who then became even more overweight, and those who were overweight, moved up a category – they became obese. International data related to obesity in children started to emerge, with figures depicting exponential trends. Once only seen in adulthood, childhood obesity started to reach young individuals (World Health Organization, 2015).

### *The National Children's Nutrition Survey*

As a consequence, the first national survey related to nutrition in New Zealand children (aged between 5-14 years) was commissioned by the Ministry of Health and published in 2002. The National Children's Nutrition Survey (NCNS) was a cross-sectional population survey aimed at providing information that could be used to “improve, promote and protect the health status of New Zealand Children” (Parnell et al., 2003, p. 23). As the first national survey of this kind, there were no previous data to compare the findings with. However it was recognised that obesity among New Zealand children was increasing (Ministry of Health, 2005).

This comprehensive survey offered an in-depth analysis of nutritional food intakes of 3275 school-aged children, their food security, and eating patterns. It also took into account their dental hygiene and anthropometric measurement, which includes height, weight, waist circumferences and skinfolds, which helped determine their BMI index (Parnell et al., 2003). The CNS02 identified that one third of New Zealand school-aged children were either overweight (21.3%) or obese (9.3%) and that obesity was more prevalent among Maori

children, compared to European or other ethnic groups. This was supported by a 1989 study (Alcorn, 2001) which looked at children aged 11-12 years old in the Hawkes Bay region which found that the prevalence of obesity among this group of students had nearly quadrupled in the 1990s. Their BMI increased by nearly 10%, ranging from 18.1% to 19.8% (Ministry of Health, 2005).

Pathophysiological diseases, such as cardiovascular diseases or type 2 diabetes that once only affected adulthood, started to be identified in New Zealand children (Ministry of Health, 2005). Researchers (Carter & Swinburn, 2004) and the Ministry of Health (2005) started to analyse the obesogenic environment in which “modern” children live and noted a decrease in physical activities which promoted a sedentary lifestyle. The rate of New Zealand children biking and walking to school declined, suggesting that modern inactive lifestyles were as responsible as a change in diet in the aetiology of obesity (Ministry of Health, 2005). Parental obesity has been identified as a risk factor for future obesity. It more than doubles the risk of developing obesity in adulthood for children under the age of 10 (whether or not they are obese) (Ministry of Health, 2005).

### ***The Body Mass Index***

In order to gain a fuller picture of the obesity trends amongst children in New Zealand over the last three decades, it is essential to understand how obesity in children is measured. The Body Mass Index (BMI) is the gold standard in measuring a child’s obesity trend. The BMI is the ratio of body weight in kilograms to the square of height in metres (Bernardo & Crane, 2006). A child will be diagnosed as obese if their BMI is superior to 95<sup>th</sup> percentile for age and gender, and overweight if their BMI is comprised between the 85<sup>th</sup> and 95<sup>th</sup> percentile for age and gender (Rhodes et al., 2007; Witherington, 2011). According to the literature, the BMI seems to be an important parameter for measuring a child’s health (Bernardo & Crane, 2006; Small, Anderson, Sidora-Arcoleo, & Gance-Cleveland, 2009). However, it must take

into consideration the child's height, age, gender, and ethnicity) because body disposition changes with normal growth and maturation (Larsen, Mandleco, Williams, & Tiedeman, 2006;(Rabbit & Coyne, 2012). Therefore, the BMI-for-age must be calculated because as children grow to adulthood, distinct differences in fat distribution between men and women arise, which change overtime (Bernardo & Crane, 2006). Despite being recognised as a useful tool to determine a child's health status, BMI is not always used by nurses and other health professionals (Hopkins, DeCristofaro, & Elliott, 2011; Larsen et al., 2006; Small et al., 2009; Water, 2011).

Craig, Jackson, Han (2007), and the New Zealand Children and Young People Steering Committee in reported that it is more difficult to assess obese children or adolescents rather than adults, as both height and body composition change as children grow (Craig E Jackson, 2007). Furthermore, no BMI for age percentile charts are specifically designed to be used in New Zealand, therefore various scholars have questioned the appropriateness of the traditional BMI for age cut offs for New Zealand children from various ethnic origins.

### **Literature review of international articles that prompted changes**

The alarming increase in childhood obesity that has been occurring in all westernised countries continues. At the start of the new millennium, approximately 18 million children worldwide were overweight (Ebbeling, Pawlak, & Ludwig, 2002). European countries were not exempt but some geographical disparities were clearly visible. Two trends appeared from a geographical analysis of the phenomenon in Europe, which took place in 2003. The first was the lower level of overweight children found in central and Eastern Europe, due to economic recessions and political transitions that these countries went through during the 1990's. The second trend was the prevalence of overweight to obese children in European Southern countries, more particularly, those outside the former eastern bloc. Data revealed that non-

eastern bloc countries surrounding the Mediterranean had a prevalence of overweight children between 20% to 40%, while those in the northern areas showed a rate of 10% to 20% (Lobstein & Frelut, 2003). Overall, 10% to 30% of European children aged 7 to 11, and 25 % of adolescents were found to be overweight (Lobstein & Frelut, 2003).

In North America, and more particularly Canada, research suggested that there was a 17% increase in obesity rates among boys and a 15% increase among girls from 1981 to 1996 (Jadavji, 2006). While obesity rates in children were similar to other countries such as Scotland, England and Spain in the early 1980's, by the 1990's Canadian rates had risen alarmingly (Tremblay & Willms, 2000). Despite the fact that Canada did not have a health surveillance system to monitor the prevalence of obesity among Canadian children and youth, the most current data indicates that the prevalence of obesity is based on skinfolds thickness measurement and not BMI. Between 1981 and 1988, an increase from 15% to 26% among males was recorded while females went from 16% to 22% (Tremblay & Willms, 2000).

In the USA, the results published by the National Health and Nutrition Examination survey, found that between 1999 and 2002, 16% of children and adolescents aged 6-19 years were overweight. This data represented a dramatic increase of 45% from previous studies carried out between 1984 and 1994 (Ben-Sefer, Ben-Natan, & Ehrenfeld, 2009). The passage of the Child Nutrition and Women, Infants and Children Re-authorization Act of 2004 required all school entities receiving federal funds for breakfast and lunch programmes, had to develop wellness policies prior to 2006-2007 (Bahn, 2007).

A study led by Mukoma and Fisher in 2004 evaluated the Health Promoting School programmes in seven geographical areas (Scotland, England, Australia, The US, Finland and Norway). It was found that HPS could positively impact on several health domains within school communities and that it was possible to successfully integrate these domains into school policies (Mukoma & Fisher, 2004).

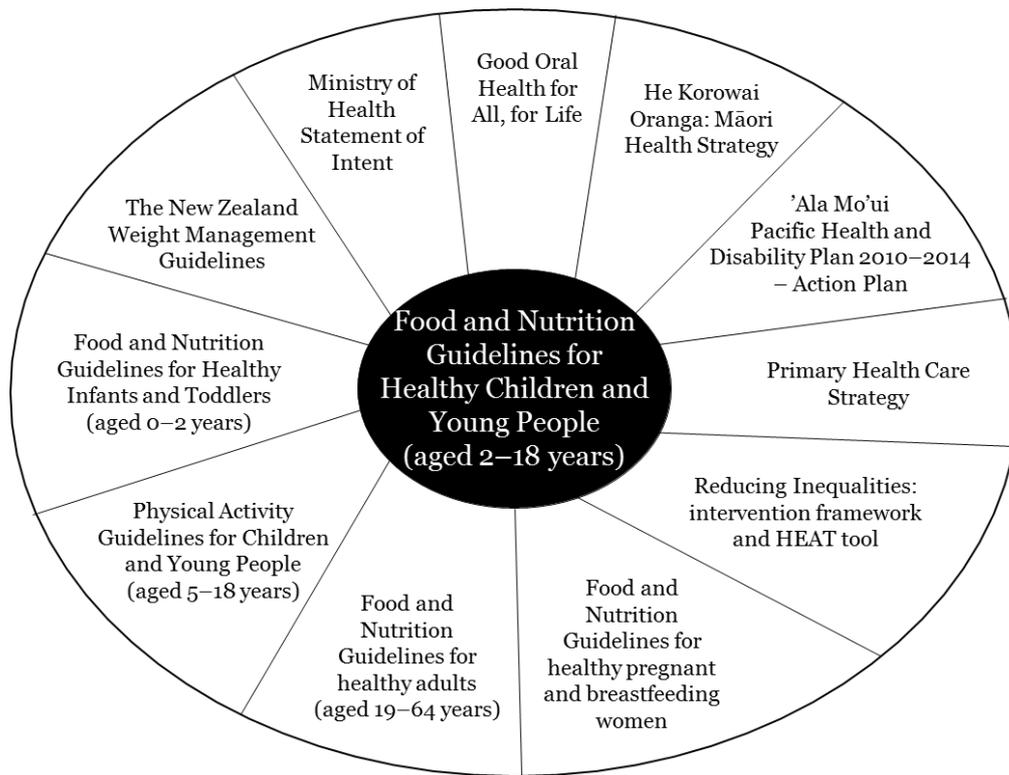
## **How has the National Children's Nutrition Survey influenced New Zealand policy?**

In response to the publication of the National Children's Nutrition Survey, the Ministry of Health issued some policy around food and nutrition with the publication of the Food and Beverage Classification System in 2008 and the Food and Nutrition Guidelines in 2010. In addition, the government created the agency Sport and Recreation New Zealand (SPARC) in 2002 and the Ministry of Health launched the costly health campaign Mission On, which are all discussed in the following section.

### ***Food and Nutrition guidelines Policy***

Following the publication of the National Children's Nutrition Survey in 2002, eight years later the Ministry of Health developed the Food and Nutrition guidelines Policy (Ministry of Health, 2010). These guidelines were produced and developed over the years in the context of other policies and strategies applied in New Zealand and internationally. Key strategies relevant to healthy children and young people were encompassed into a broader national policy context, as shown in Figure 2, (page 29).

As a member of the United Nations and the WHO, New Zealand takes part in a number of international strategies which relate to health, well-being, nutrition and the physical activities of children and young people. These guidelines have been adopted within the context of the *United Nations Convention on the Rights of the Child* (Unicef, 1990), *Diet, Nutrition and the Prevention of Chronic Diseases* (World Health Organisation, 2003a), *Global Strategy on Diet, Physical Activity and Health* (World Health Organisation, 2004), and a few more WHO conventions (Ministry of Health, 2012).



*Figure 2: New Zealand policy context for the Food and Nutrition Guidelines for Healthy Children and Young People (Ministry of Health, 2012, p.3)*

These guidelines focused on population groups throughout New Zealand, with an emphasis on populations at risk, i.e. Maori and Pacific people. These groups are: Infants and Toddlers (0-2), Children and Adolescents, Pregnant and breastfeeding Women, Adults and Older People (Pam Oliver and Associates, 2011).

The Food and nutrition guidelines for healthy children and young people offered an up to date nutrition and physical activity policy based on current evidence considered relevant for the New Zealand context. It provided data to support the development of strategic policy that aims to achieve and maintain the best possible health for New Zealand's children and young people. It gave valuable and reliable detailed background information for health practitioners who provided nutrition advice to develop nutritional programmes. And finally it offered current

dietary patterns, and nutritional status and behavioural patterns of young New Zealand children (Ministry of Health, 2010). For the purpose of these guidelines, children were represented as aged 2-12 years while young people referred to those aged between 13-18 years old.

In 2011, the Ministry of Health contracted a consultant to undertake an independent evaluation of the Food and Nutrition guidelines series, in order to determine whether the current guidelines were meeting the users' needs and how they could provide better information to health practitioners. The review found that the food and nutrition guidelines were highly used by dietitians and nutritionists. The guidelines boosted health practitioners' confidence when giving advice to patients while also improving their knowledge of nutrition (Pam Oliver and Associates, 2011).

### ***Food and beverage classification system (user guide) year 1 -13***

The second document that was influenced by the National Children's Nutrition Survey was the Food and Beverage Classification System. The 2002 NCNS, along with acknowledging the importance of the school environment, found that 32% of the daily energy intake was consumed at school. On average, about 45% of the school children surveyed, were consuming food bought from the tuck shop or the school canteen. Only 60% of the children ate the recommended three or more serving of vegetables, while 40% ate the recommended two or more servings of fruit each day (Ministry of Health, 2007; Parnell et al., 2003).

In 2007, the Ministry of Health, supported by the Ministry of Education's *Food and Nutrition for Healthy, Confident Kids: Guidelines to Support Healthy Eating Environments in New Zealand Early childhood and schools*, edited a Food and Beverage Classification System for Years 1-13. These guidelines, effective from June 2008, requested that all state and state-integrated schools were required to promote healthy food and nutrition for all students. It also

stated that food and beverages sold on school premises should be healthy. The guide summarised how to identify healthier options for food and drinks commonly consumed at school. It also provided an introduction to the Ministry of Health's food and nutrition guidelines for children and young people. It offered advice on how to select foods and drinks according to three categories: everyday foods, sometimes foods and occasional foods. It provided the nutrient criteria for identifying occasional foods and detailed where to get additional information (Ministry of Health, 2007).

### ***Sport and Recreation New Zealand (SPARC)***

Sport and Recreation New Zealand was created by the Sport and Recreation Act 2002, as a government agency responsible for sport and recreation policy and funding. Prior to the Act coming into force on 1 January 2003, this entity began operating under the brand name SPARC (mentioned previous chapter) following the merger from late 2001 to early 2002 of the Hillary Commission for Sport, Fitness, and Leisure, the New Zealand Sports Foundation, and the policy arm of the Office of Tourism and Sport. The first financial review examination of the new organisation occurred in 2001/02 with SPARC receiving funding predominantly through Vote Sport and Recreation of \$9.894 million, with \$28.217 million from the New Zealand Lottery Grants Board in 2002/03 (Government Administration Committee, 2003). In 1996, SPARC was chosen to run, in conjunction with the Mission-On initiative, an interactive website aimed at children aged 5-12, to get them active, improve nutrition information, and increase physical activities. In 1998, the \$3.7 million spent to set up the SPARC website was examined before a select committee to review its performance (The Dominion Post, 2008). There had been robust debates about whether it was a good idea for SPARC to spend over \$10 million on websites between 1996 and 2000. SPARC underwent a major restructure, closed the

website and from January 2012, it started to operate under the name Sport New Zealand (The Dominion Post, 2008).

### *The Mission-On Programme*

Mission-On was created in 2006 by the Ministry of Health, led by the Labour government, within a \$67 million broad-based package of initiatives. The aim was to give young New Zealanders and their families the tools to improve their nutrition and increase physical activity while promoting healthy choices (Gower, 2009; Mitchelhill, Cals, Legge, Olds, & Ridley, 2010). The rationale behind this initiative was acknowledging that New Zealand children now live in an environment with increased options for sedentary leisure activities, such as using computers or watching television. These increased barriers to physical activity, coupled with the consumption of food and drinks high in sugar, fat and sodium, were reflected in the rising levels of childhood obesity (Mitchelhill et al., 2010). The Mission-On programme built on existing cross-government initiatives within schools and communities around the country, such as Push Play, Active Schools, Fruit In Schools and Active Communities.

The Mission-On initiative contained various key initiatives which aimed at improving nutrition within schools and Early Childhood Education by changing the National Administration Guidelines. This action required school Board of Trustees to develop policies that promote and achieve healthy nutrition and reduce the consumption of unhealthy food and drinks. Another initiative was the promotion of student health, with the creation of high profile events to encourage students to lead and get involved in learning about nutrition. Lastly, Mission-On also offered Lifestyle Ambassadors, new guidelines on advertising food to children, a youth focused websites, and a screen-free time. It also looked at expanding the Green Prescription Programme which would provide general practitioners and practice nurses

with the option of prescribing physical activity where it may be considered beneficial in long-term health care (Ministry of Health, 2006, p. 5).

Despite being well received at first by communities, families and schools, growing concerns started to emerge by late 2009. Opposition leader, John Key labelled the Mission-On campaign unnecessarily bureaucratic and too expensive. Along with tax payers, politicians questioned the relevance of the \$15.7 million a year campaign against any perceived benefits of this initiative (Gower, 2009). In spite of this being a good initiative, the Mission-On programme was abandoned for fiscal reasons rather than the goal of long term health gains.

Over the last fifteen years, various initiatives have been implemented to address the rise of obesity in New Zealand children, with some programmes being more successful than others. The following chapter will explore the latest childhood obesity plan from the Ministry of Health (October 2015), followed by a position statement on the reintroduction of school nurses in New Zealand schools. Finally, this dissertation will end by acknowledging the impact of poverty and poor health on nutrition. While beyond the scope of this dissertation, it is important to acknowledge socio-political determinants impact on health.

## Chapter Five: So What?

### **Introduction of the Childhood obesity initiative by the Ministry of Health in October 2015**

On 20<sup>th</sup> October 2015, the Ministry of Health announced the creation of a package of initiatives to “*prevent and manage obesity in children and young children people up to 18 years of age*” (Ministry of Health, 2015, p. 1). This package, encompassing government agencies, the private sector, communities, schools, families and whanau, focuses on three main areas. The first area proposes targeted interventions for those who are obese, the second offers increased support for those at risk of becoming obese and the third e focuses on broad approaches to make healthier choices for all New Zealander (Ministry of Health, 2015).

From July 2016, new health targets will be implemented related to screening for obese children in the Before School Check (B4SC) programme. Access to nutrition and physical activity programmes for families will be improved along with increased support through KiwiSport and Regional Trust Sport, while clinical guidance for weight management as used by health professionals will be increased. Broad population approaches will be taken into consideration, such as: marketing and advertising for children, partnership with the Food and Beverage industry, development of additional nutrition and physical activity advice and the launch in November 2015 of a national media campaign focusing on Childhood obesity called Play Sport.

Play Sport will be implemented in schools during the first term of 2016, and Health Promoting School programmes will be expanded into a further 150 decile 1-4 primary and intermediate schools. Finally, District Health Board (DHB) food policies will also be implemented, and all DHBs will be encourage to remove sugar sweetened beverages from their premises, by January 2016.

These initiatives are yet to be implemented and it will take a long time before any benefit will be seen. Nonetheless, policies are only one aspect to deal with the rise of childhood obesity in New Zealand. Two beneficial aspects would be the reinstatement of school nurses in all low decile school in New Zealand and addressing poverty issues. While the latter is beyond the scope of this dissertation it should be mentioned as poverty contributes to obesity through cheap, poor nutritionally food choices in the diet.

### **Implications for nursing**

#### ***Historical background of the New Zealand nursing workforce in schools***

The development of the New Zealand nursing workforce in schools was strongly linked with the development of the Public Health Service. Interestingly enough, the early school initiatives were under the control of the Ministry of Education rather than the Department of Health (Dow, 1995, p. 79). This still reflects today's funding pattern of the school system, where school nursing is usually funded by the Ministry of Education rather than the Ministry of Health (Alcorn, 2001; Kool et al., 2008).

### **Public Health Nurses**

Since 1953, date of the creation of the Public Health Nursing Service, public health nurses have played a major role in schools, linking education and health, and being the interface between the school, the family, whanau and caregiver of children (Alcorn, 2001). According to the report addressed to the Minister of Health from the Public Health commission (1995), the involvement of public health nursing in primary and secondary school in New Zealand has received considerable support from principals and teachers. This reflected the trust of the schools in public health nurses, the accessibility of the nurses responding to the school's needs and the good relationship that nurses had with families and carers. The Public Health sector encouraged and supported schools to develop health policies (such as food and nutrition) that

reflected a commitment to the healthy school's framework. However, the implementation of health reforms in the public health sector in the early 1990s, has undermined the optimisation of the delivery of personal health care standards to school children. While the Public Health nursing service has remained a free one, it had to change in response to these reforms.

### **School nurses**

At the same time, changes to funding patterns to schools resulted in some schools having to make some financial adjustments which saw the school nurse role downgraded to a first-aid ancillary position. The erosion of the Primary Health Nurses' role and the implementation of health reforms together reduced the availability of nursing contribution to offer primary health care services within schools (Alcorn, 2001).

### **The way forward to school nurses in New Zealand**

Over the last couple of years, the New Zealand Nursing Organisation (NZNO) along with the Green Party have been advocating for a policy to fund school nurses in every decile 1-4 primary and intermediate school (Campbell, 2013; Kai Tiaki, 2014); a school's decile rating being the proportion of students from low socio-economic background (Education Office Review 2013). The NZNO strongly believes that school based-nursing services will improve access to health and social care for children and their families. Enabling early intervention and support for children and families facing health issues would ultimately increase health and education outcomes (Kai Tiaki, 2014).

Many international governments or federal states have acknowledged the importance of the role of school nurses, and the positive impacts they have on children's health. For these shift to occur in New Zealand, adequate funding from the Ministries of Health and of Education must be met. Nurses need to be better supported both within the health and education sector. Studies on nurse-led primary health care clinics in New Zealand have demonstrated that the establishment of school clinics can make a difference in people's life (Clendon, 2005). They

provide a safe and accessible service to people for whom transport or income may be an issue and offer a holistic approach with specific health promotion messages and actions. Appropriate funding allowing for local flexibility is one way forward to develop national-level policy for nurse-led school health clinics (Buckley et al., 2012).

### **Overseas evidence that supports the reintroduction of school nurses**

Tackling childhood obesity in the UK has been incorporated into government policy. The role of UK school nurses has been recognised as being the first point of contact for parents with concerns about their child's weight. Their roles have been pivotal identifying children with an unhealthy weight but research pinpointed that further education was required in order to deliver the best of care so that children grow up with a healthy lifestyle while maintaining a healthy weight (Stewart, 2008).

In the United-States, school nurses have been collaborating with school staff, primary care providers, students, families, community resources and coalitions to help reduce the growing rate of childhood obesity. Such collaboration is aimed at preventing related health issues, such as the growing number of children with type II diabetes, for example (Schantz, 2007).

In Australia, from July 2015, the Tasmania government has been reinstating child health and youth health school nurses. The federal government did a U-turn from its 2013 policy which favoured a model offering checks for three to five year old through the Child Health and Parenting Service or the family GP. At the time, the Tasmanian branch of the Australian Nursing and Midwifery Federation (the equivalent of the NZNO) was concerned that the introduction of this model would see at least 10% of the families not engaging with the service. This new initiative will see each of the nurses allocated a number of schools (ANMF, 2015). Their role will be to focus on nutrition, vision and hearing checks, a role which is

allocated to practice nurses in New Zealand since the introduction of the Before School Check (B4SC) initiative in 2007.

### **Poverty is a contributing factor to ill-health and poor health access**

It has been well documented that children living in more deprived areas have poorer health and report greater unmet health needs (Ministry of Health, 2013). The 2012/13 survey New Zealand Health Survey found that children living in socioeconomically deprived areas have higher levels of acute and chronic health risks. It also reported that those children were less likely to eat breakfast at home every day and are more likely to be obese and that they were nearly three times more likely to have had fast-food more than three times a week. In 2012, children living in low socio-economic areas were also seven times as likely as children living in the least deprived areas to have an unfilled prescription due to cost (Ministry of Health, 2013).

In New Zealand, child poverty can negatively affect a child's development in many ways. One consequence is the inability for the parents to properly invest in their child's development via a lack of resources to provide simple provisions such as nutritious food and educational opportunities. The negative consequences of child poverty include poor child health, poor educational outcomes and poor cognitive, psychological and social functioning. Additionally, a lack of healthy food has been associated with higher cholesterol intake and obesity (Expert Advisory Group on Solutions to Child Poverty, 2012).

Child poverty is a complex social problem with various causes and consequences, which therefore requires multiple solutions. The topic of child poverty goes beyond the scope of this dissertation. Nonetheless, according to the recommendations offered by the advisory

group on child poverty, a broad package of proposals will have the greatest effect on childhood obesity for these children (Expert Advisory Group on Solutions to Child Poverty, 2012).

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